Employee Wellbeing and Performance

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Abstract

The association between employee wellbeing and employee performance is a focal point for researchers and local and national governments. This focus has grown rapidly since the end of the Second World War. The research concerned with this relationship is beginning to catch up with the theoretical discussions and debates surrounding the topic, which have been ongoing since Ancient Greece.

Moving beyond the research perspective, the idea that employee wellbeing affects employee performance is beginning to be widely recognised by local and national governments, as is evidenced by the number of local workplace wellbeing charters that currently exist within the UK in addition to the national health and wellbeing charters in place.

However, the existing literature provides inconsistent results regarding the potential effect of employee wellbeing on employee performance. The purpose of this thesis is to investigate the association between employee wellbeing and employee performance using an original employee-level dataset collected across organisations implementing the Bristol City Workplace Wellbeing Charter (the Charter).

This study originated from Bristol City Council seeking to evaluate their own charter and assess the potential benefit for participating organisations. The Charter is comprised of eight standards; healthy eating, physical activity, tobacco use and cessation, alcohol and substance misuse, leadership, attendance management, health and safety and mental health and wellbeing. The Charter and these eight standards form the foundation of this study, informing the data collection criteria and methods as well as the sample of organisations participating in the study.

An in-depth analysis and review of the literature reveals numerous gaps which have shaped the core research questions of this thesis. These research questions are:

Research Question: Is there a relationship between employee wellbeing and employee performance and, if so, to what extent do employee wellbeing factors affect employee performance?

Sub Question: What impact does an organisation's engagement with the Bristol Workplace Wellbeing Charter have on its employee's performance and, if so, what are the policy implications?

A major issue concerns the measurement and calibration of employee wellbeing and employee performance. Informed by the literature, this thesis grounds its analyses on three measures of employee-level performance: presenteeism, absenteeism (short and long term) and employee turnover. The thesis also extends the literature by capturing and analysing a variety of employee-level wellbeing measures including, but not restricted to, mental health, job satisfaction, engagement, flexible working, healthy eating and physical activity. An unusually comprehensive measure of wellbeing is used that combines typical Human Resource Management (HRM) policies with aspects of individual behaviour.

This thesis has a repeated cross sectional multi-level design for a sample of organisations participating with the Charter. Design instruments include two questionnaires that capture manager and employee level data. In the absence of panel data, this approach allowed for a discussion regarding possible changes over time at participating organisations, while examining the evolving importance of managers in influencing employee wellbeing and employee performance.

Results suggest that employee wellbeing is associated with employee performance but different aspects of employee wellbeing are associated with different types of employee performance outcomes. Many employee-level behavioural factors were found to be associated with employee performance. These results suggest that health charters should incorporate a wide range of wellbeing issues to better reflect the individual nature of the concept of wellbeing. Moreover, the results suggest that future research needs to broaden its conceptualisation of employee wellbeing and employee performance to include variables that are often omitted. This would allow for more in depth and specific knowledge to be gained which could result in health interventions being better informed and more practical for practitioners.

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CHAPTER 1: INTRODUCTION

1.1 BRISTOL CITY COUNCIL AND THE WORKPLACE WELLBEING CHARTER

This study was conducted in collaboration with Bristol City Council who were the main funding body of this study. Bristol City Council had begun implementing their own Workplace Wellbeing Charter (referred to as the Charter) and aimed to use this study to evaluate the Charter and help build the business case to encourage more organisations to participate in the Charter. This broad objective was the initial aim of this study, which sought to accomplish this through the use of qualitative and quantitative methods. However, the broad and far reaching nature of this aim allowed for considerable flexibility in how this was achieved, leading to the aim and scope of the study changing and being refined over time.

Several key aspects of the study changed over time to refine its direction and these mainly concerned the type of data that was to be collected as well as the approach to be taken. Arguably the greatest change that occurred was the measurement of employee performance as the original intention was to collect data on Gross Value Added (GVA). However, this measure could not be used when conducting the econometric analysis as not all participating organisations were able to provide the required information due to concerns regarding transparency and public opinion.

Additionally, the measurement of wellbeing changed over time to include other factors of employee wellbeing. This change happened to ensure that employee wellbeing was sufficiently captured within the data and to reduce the potential for omitted variable bias, which is a common concern within the literature and is discussed in further detail in Chapter 5. Furthermore, the scope of the study expanded to also include the role of management. This was due to the substantial amount of qualitative studies examining the role of management within the employee wellbeing and performance relationship and the lack of empirical studies analysing this relationship.

Regarding the research methodology to be taken to evaluate the Charter, as stated the original intention was to use a combination of qualitative and quantitative measures. This was an ideal approach and the original intention was to combine survey results with an interview and/or focus groups. The importance of combining these forms of data is discussed at length throughout this study but it was not possible to implement the qualitative approaches as originally intended. This was due to resource limitations concerning time and personnel as only one researcher actively worked on this study in a full time capacity. This meant there

was not enough time to plan, conduct and analyse the qualitative data gained as well as the quantitative data in the detail required for a mixed methods approach.

While some of these changes over time may have limited the scope and breadth of the study they also refined the study and allowed the aims and objectives to become more focused over time. The refinement allowed for a study that met the original aim of evaluating the Charter and building an effective business case for further participation in the Charter while also discussing other important issues that contribute and build upon the current literature.

Such issues include the role of effective management within the employee wellbeing and performance relationship as well as an evaluation of the employee wellbeing and employee performance relationship when including aspects of employee wellbeing that are usually omitted from broad empirical wellbeing studies. These could be discussed ina more focused evaluation of the Charter as it is now possible to discuss the role of the Charter within a broader employee wellbeing framework, whether or not other aspects of employee wellbeing could be included in the Charter in addition to, or instead of, the current standards of the Charter and the policy implications of these findings.

The role of Bristol City Council was integral to the success of this study and played a key role in many stages of this study. This was most notable when forming the sample to be used within this study. Bristol City Council provided quick access to participating organisations in a number of ways such as providing contact information to facilitate direct contact with organisations about the study, allowing presentations at celebrations events as well as contacting organisations about the study to encourage them to participate.

Bristol City Council also helped review the data collection instruments to ensure the Charter was adequately represented and also provided funding for attendance at conferences and events to help combine the academic and real world knowledge of the topic. Bristol City Council also helped facilitate the pilot process. This all shows that Bristol City Council did more than just fund this study and actively contributed towards the study at critical phases and immeasurably helped towards the success of this study.

Bristol City Council's Workplace Wellbeing Charter is now a nationally recognised and endorsed charter. Originally, the Charter was produced in Liverpool in 2009 and later adopted and altered by a variety of city councils, with Bristol City Council being one of these local councils. When first adopted by Bristol City Council the Charter was not in place on a national scale, whereas Wales and Scotland both had a national charter in place. The localised nature of the Charter allowed local councils some flexibility in their adoption of the Charter

and were able to augment it to suit their own needs. Since the Charter became a national Charter in 2014 this has changed with a nationally agreed set of standards being applied.

The Charter is made up of eight standards including:

1. Leadership
2. Attendance management,
3. Physical activity,
4. Healthy eating,
5. Tobacco use cessation,
6. Alcohol and substance misuse,
7. Health and safety
8. Mental health and wellbeing.

Three of these standards are core standards (leadership, attendance management and health and safety) meaning any organisation participating in the organisation must seek to attain accreditation for these three core standards at the commitment level of accreditation. It does not appear that this core requirement has been maintained when the Charter moved to a national charter, however it is noteworthy as organisations participating in this study are likely to have been required to meet this minimum requirement. Beyond these core standards, participating organisations are free to choose which of the remaining five standards they wish to pursue meaning organisations can be accredited on between three and eight standards.

The standards are nationally agreed and are measured on 3 scales; commitment, achievement and excellence. Commitment means the organisation has health and safety and wellbeing policies in place, achievement means the organisation are actively encouraging employees to improve their lifestyles and have some interventions to identify serious health issues and excellence means the organisation is fully engaged in wellbeing and there are a number of intervention programmes and mechanisms in place.

Progression from one level of accreditation to another is based on four options; not applicable, not met, partially met and fully met. An organisation can only progress from one level of accreditation to the next, i.e. from commitment to achievement, when they have been deemed to have fully met the requirements of that standard. This means the organisation must be able to provide documented evidence and practical examples that they have fully met or exceeded every aspect of the chosen standard.

At the time of this study's inception the Charter in Bristol included 27 organisations, however according to data provided by Bristol City Council, there were 18 Charter accredited organisations with 17 in the process of being accredited, giving a potential sample of 35

companies and 38,233 employees. There were eight large accredited organisations (250+ employees) with three more large organisations in the accreditation process, these eleven organisations employ 36,110 employees. There were ten accredited small and medium sized enterprises (SMEs) with fourteen in the accreditation process, these 24 organisations employ 2,123 employees.

1.2 THE DEBATE

As previously discussed, the original purpose of this study had been set out by Bristol City Council who sought to evaluate the effect of an organisation's participation within the Workplace Wellbeing Charter. The purpose of this evaluation from Bristol City Council's perspective was to motivate new organisations to participate with the Charter. The Council hoped that the findings of this study would help facilitate this and thereby help grow the presence of the Charter within the City of Bristol, improve the wellbeing of employees in the city and reduce the cost of low wellbeing to the Council.

This type of evaluation means the study's original overall purpose was to answer a real world question set out by Bristol City Council; have organisations benefited from their participation with the Charter via improved performance? If so, to what extent have they benefited?

From a research perspective, the Charter could also serve as an effective foundation to perform a unique empirical evaluation of the relationship between employee wellbeing and employee performance. The Charter allows this study to challenge, and improve upon, key long term confounding issues that are present within the literature regarding if a relationship exists between employee wellbeing and performance and, if so, what type of relationship this is.

This places the study in a unique position as this study is able to answer a real world question that is growing in national importance and provide policy recommendations while also contributing to a relatively new, and growing, area of research. The importance of these contributions can be seen when examining the cost to national governments of low wellbeing and the prevalence of mental health and general wellbeing issues.

As stated, the relationship between employee wellbeing and employee performance is a relatively new area of research that is complex, varied and one that differs from person to person. This is despite the subject matter being discussed and theorised since Ancient Greece with the first documented workplace change to improve employee health being the use of

animal bladders to protect miner's lungs as suggested by Hippocrates (Health Management, no date).

In the modern day, there are an abundance of workplace charters that seek to implement changes in organisations with the same aim of Hippocrates'; to improve the health and wellbeing of employees. Although, this subject matter has been the focus of debate and discussion for millennia's it is now becoming a prominent focus for socio-economic research, with the need for more empirical evaluations of the relationship between employee wellbeing and employee performance.

The importance of improving employee wellbeing can be further outlined by the finding from Mcdaid et al. (2008) that 1 in 4 Europeans will experience a mental health issue in their lives, or 22.3% (Cooper and Dewe, 2008). The severity of this is further emphasised as Biron et al. (2006) found that employees attend work when ill 51.5% of the time.

Further research into the relationship between employee wellbeing and employee performance is needed as various studies outline that between 22.1 million working days and 550 million working days are lost due to ill health, depending on the country that is analysed (NICE, 2012; Hafner et al., 2015; Black, 2008; NICE, 2009; Danna and Griffin, 1999). These days lost, along with other outcomes of poor employee wellbeing and health, can cost between £15 billion and $576 billion (£427.3 billion[1]), (Garrow, 2016; CDC, 2013; Hafner et al., 2015; McDaid et al., 2008; Shreeve et al., 2015; Black, 2008). These figures may show a negative affect is present but the substantial range between the figures shows the inconsistencies present within the literature.

The cost of poor employee wellbeing is even greater when it is considered that presenteeism is said to be between 1.8 and 5 times more costly than absenteeism, however 40% of organisations are experiencing rising stress related absences (NICE, 2009; McDaid et al., 2008). The cost of high presenteeism is outlined by Medibank's study of Australia (2011) in which it was estimated to be AU$34.1 billion, four times the cost of absenteeism. In the US, Levin-Epstein (2005) found the cost of presenteeism to be $180 billion. The numbers are not insignificant and clearly show that efforts to improve worker wellbeing through reducing presenteeism is worthy of further study.

Employee turnover is the most under-researched outcome measure within the wellbeing enhancing literature, which is a significant gap within the literature given the costs

[1] This figure is for the US only. US Dollar amounts converted into British Sterling for comparison. Exchange rates were accurate as of May 2018.

to the economy and to individual organisations associated with employee turnover and replacement. According to Campbell (2014) the average cost of replacing an employee in the UK is over £30,000.This study contributes to the literature by empirically analysing the effect of employee wellbeing on employee turnover, the importance of which is outlined within the literature as depression and stress are associated to between 5 and19% of all employee turnover (ERS, 2016; Lerner and Henke, 2008; Sainsbury Centre for Mental Health, 2007). In the UK, employee turnover has an annual cost of between £2.4 and £42 billion (Pangallo and Donaldson-Feilder, no date; Sainsbury Centre for Mental Health, 2007)

The amount of research that empirically analyses the relationship between employee wellbeing and employee performance is small but growing and the general consensus is that a relationship does exist. The literature is ambiguous but gravitates toward showing a positive relationship (for example, Datta et al., 2003; Boxall and Macky, 2009; Vandenberg et al., 1999; Mackie et al., 2001). However, there are also a significant amount of studies that reveal a negative relationship or no association (for example, Bloom et al., 2006; Neumark, 2001; Guest et al., 2003; Wright et al., 2005; Godard, 2004).

This inconsistency, combined with a scarcity of empirical research, emphasises the need for more research to examine the extent to which there is a relationship between employee wellbeing and performance. This is a gap within the literature that this study attempts to solve by empirically analysing the effect of employee wellbeing on absenteeism, presenteeism and employee turnover using advanced econometric methods.

Some aspects of wellbeing are so important and complex they form their own strand of literature and when these are studied in isolation the trend of ambiguity and inconsistency is still observed for most wellbeing concepts. For example, job satisfaction has been found to have a positive association with employee performance by various authors (Bajorek et al., 2014; Garrow, 2016; Sparks et al., 2001; Diener and Seligman, 2004) while others have found a negative or no association with performance (Shaw et al., 1998).

This trend is observed across both qualitative and quantitative approaches and is often due to differences in how wellbeing and performance are defined and measured, how narrowly the terms are conceptualised due to the importance placed on organisation context, the widespread omission of various key wellbeing factors and the over reliance on similar research and sample designs.

These are gaps within the literature that have been addressed by this study as this study gathered data from a wide range of wellbeing concepts (such as job satisfaction, engagement, pay, performance appraisal, health and safety, leadership, work-life balance and

physical activity amongst others) and from a variety of organisations that included all sectors, sizes and various industries within a longitudinal design. This design approach is missing from the literature as this does not narrowly conceptualise employee wellbeing and has enabled a broad analysis of employee wellbeing and employee performance over time that is not limited to one sector or industry.

These limitations, along with the long history of theoretical discussion surrounding the relationship, justify the need for more empirical research to analyse the relationship between employee wellbeing and performance which does not focus on one specific industry or organisation size. Studies should instead focus on analysing this relationship over at least two data collection periods for a sample of organisations based in a variety of sectors, industries and organisation sizes. Such studies also need to be more comprehensive and include many of the widespread omitted variables as a means to resolve some of these conflicting issues.

Once more, this is a gap within the literature that this study has sought to resolve by not focusing on just traditional aspects of employee wellbeing but also including aspects such as physical activity, healthy eating, alcohol misuse, health and safety and smoking. These are aspects of wellbeing that are studied in isolation despite having been found to have an effect on employee performance (Hafner et al., 2015; NICE, 2008; NICE, 2012; Black, 2008; NHS, 2014; CDC, 2013; Baicker et al., 2010). Moreover, this study also includes aspects of employee wellbeing that are largely omitted from empirical studies despite being studied in-depth theoretically, namely leadership and the role of effective management (Purcell, 2004; Gorman, 2006; Lockwood, 2007; Robinson et al., 2004; Towers Perrin, 2003; Park, 2002).

1.3 Employee Performance

The literature defines employee performance in two distinct ways. Human Resource Management (HRM) literature defines employee performance as employee productivity and is often measured via a financial ratio such as net sales divided by employees, log net of sales divided by employees or even Tobins Q (Huselid et al., 1997; Konrad and Mangel, 2000; Koch and Koch and McGrath, 1996). This is in contrast to studies on employee wellbeing where employee performance is often measured via absenteeism, presenteeism and/or employee turnover (McDaid et al., 2008; Burton et al., 2004, Allen, 2008; Escorpizo, 2008).

Despite the literature differentiating between measures of employee performance, there are many similarities between these two literatures with both referring to the same aspects of wellbeing. There is a slight dominance in the literature towards those studies that

use productivity based measures and with fewer empirical studies using absenteeism, presenteeism and employee turnover (Garrow, 2016; Medibank, 2011; Baker-McClearn et al. 2010; Huver et al., 2012; Baba et al., 1998; Ryan, 2011; Paile, 2011; Public Health England, 2013; Unum 2014).

Despite this, both perspectives of employee performance have inconsistencies across empirical results regardless of which performance outcome measure is examined. This may be due to the measures used for employee performance, such as the lack of differentiation between the short and long term despite the possibility that this could affect the results. Often definitions rely on basic assumptions such as using workforce averages rather than individual level data or the assumption that someone who is ill is unable to perform and maintain their normal levels of efficiency.

In this study employee performance is measured via absenteeism, presenteeism and employee turnover. One way this research contributes to the literature is by measuring absenteeism in two ways: short term (i.e. general) and long term absenteeism. This division enables an analysis of the employee wellbeing and performance relationship across both types of absenteeism that could be encountered by all organisations.

This approach, when combined with the inclusion of many omitted variables and a repeated cross-sectional research design, augments the literature by analysing the employee wellbeing-performance relationship using more concepts than is normally included in empirical employee wellbeing studies. This research contributes to the literature by providing a more complete and rounded analysis of this relationship while showing its nuance and complexity over time in a way that is currently lacking.

1.4 Data and Methods

This study uses the Bristol Workplace Wellbeing Charter as the foundation of the research process as using existing data sources was not possible or suitable. Individual level data were collected using a repeated cross sectional approach via two questionnaires aimed at the employee and the manager level. It is acknowledged throughout this study that in the absence of panel data causality cannot be evaluated and is not being alluded to at any point. That being said, changes over time have been discussed as repeated cross sectional data does allow for this, but not at the individual level.

Questionnaires have been used extensively throughout the literature (Robertson Cooper, 2015; Farquharson et al., 2012) as the main data collection method as they allow for large quantities of data to be collected quickly across a large sample. Several limitations with

this approach are recognised, such as selection bias, respondent bias, social desirability bias as well as respondent fatigue.

A common data collection method employed within the current literature is to use secondary sources. These data collection methods are often used as it allows for large amounts of data to be accessed simply and quickly. As these have been used previously in other studies (Whitfield, 2002; White et al., 2003) the data sets and data collection instruments are likely to have been tested ensuring the internal and external validity of the data.

While these are notable benefits, collecting a new data set allows for the analysis of existing relationships but also the identification of new relationships across a wider set of variables. Furthermore, a study using an existing data set is also subject to the same limitations and biases of the original study but without the ability to control for and counter these limitations.

1.5 Policy Relevance

The Bristol City Workplace Wellbeing Charter is a nationally recognised and endorsed Charter and was adopted in Bristol in 2013. The Charter consists of eight standards that organisations can engage with and are accredited using nationally agreed criteria. Thirty-five organisations engaged with the Charter and they vary in terms of their size, sector and industry, which highlights the flexibility and applicability of the Charter.

The use of the Charter as a foundation for this study allowed for many important policy questions to be discussed and analysed. The findings of this research provide an insight into the effect of engaging with health interventions similar to the Charter while also indicating if interventions affect employee performance and, if so, to what extent they have an effect. Specifically, the findings show if the Charter's current standards are the most effective elements of wellbeing for improving employee performance and if it could be restructured. This study informs future policy decisions across organisations of all sizes and sectors.

1.6 Research Questions

Given the gaps within the literature this thesis sought answers to the following research questions:

Research Question: Is there a relationship between employee wellbeing and employee performance and, if so, to what extent do employee wellbeing factors affect employee performance?

This is an important research question as it is unclear from the literature what this relationship is and to what extent it could exist. This study also allows us to test the different wellbeing factors that can impact employee performance, whether these relationships change over time and whether these relationships are affected by the measurement and the short and long term nature of employee performance.

Sub Question: What impact does an organisation's engagement with the Bristol Workplace Wellbeing Charter have on its employee's performance and, if so, what are the policy implications?

Health interventions, such as the Charter, are not often empirically analysed and are instead used as case studies in qualitative approaches. These interventions could be a way to integrate many of the often omitted variables into the literature. The use of the Charter as the foundation for this study provides a useful opportunity to explore this while also exploring the wider policy implications of engaging with a health intervention such as the Charter.

1.7 Structure of the thesis

This section details what is included within each chapter while providing an overview of each chapter's importance.

Chapter 2: Literature Review

The literature review describes and debates the research from the HRM performance literature and the employee wellbeing enhancing literature of the employee wellbeing and performance relationship. These two areas of the literature have been combined as both examine the same aspects of employee wellbeing but define employee performance differently. This holistic review is important because it shows how under-researched this area of research is, which is emphasised when the focus is on specific outcome measures. It highlights gaps in the literature and justifies the need for more research.

There are various ways in which the literature could be improved. The literature review reveals inconsistencies across the literatures, which are likely to be due to the definition and measurement differences used between individual studies, suggesting that the

same concepts are not being measured and comparison is problematic. Methodological design issues also extend to the omission of short and long term measures, meaning that all results are treated as equal even though the outcome measures vary.

The literature review shows the role of management is often neglected from empirical studies, as are many behavioural aspects of wellbeing, despite these being key factors affecting employee wellbeing and performance. This is likely to be due to the importance placed by studies on the organisational context, studies narrowly conceptualising performance and only focusing on aspects of wellbeing that are deemed to be relevant to the aims of the study.

The literature review also highlights that due to the use of single cross section analyses, there is a lack of discussion about causality and that presently there is a significant gap regarding the direction of causation within this relationship. Given all of the gaps in the literature, further research is needed to improve the clarity, remove inconsistencies and identify the nuance of the relationship.

Chapter 3: Methods

The methods chapter provides an overview of the methodology that was undertaken, providing a holistic view of the research design and the rationale for the choices made. The chapter also details the research tool design, the data collection process, the potential for self-selection bias and the final sample.

Data are collected across two data collection periods using an employee and manager questionnaire which allows for a large data set to be generated quickly and simply, while also enabling a discussion about any changes observed over time. The questionnaires are detailed along with the eight standards of the Bristol Workplace Wellbeing Charter. In addition to data relating to all eight standards of the Charter, data on other aspects of employee wellbeing that have been identified as being important within the literature were collected, such as job satisfaction, engagement, flexibility, and commitment to employer.

A broad conceptualisation of employee wellbeing is used within this study and suggests that, when compared to the current literature, this could provide a more rounded analysis of employee wellbeing. As well as discussing the alternative data collection methods that were possible, an in-depth review of the final sample is provided which shows that the chosen method did generate a high response rate amongst organisations. Specific measures of employee performance are also outlined and are cross-referenced with the literature.

Pilot studies were carried out and the discussion of these outlines the process the employee and manager's questionnaire went through to ensure that the content of the questionnaires was relevant, understandable and important when analysing the employee wellbeing-performance relationship. The questionnaires went through three pilot processes with common issues concerning the length of the questionnaires, the use of terminology and the clarity of these terms, and the flow and structure of the questionnaires.

This was an important process as this allowed for numerous issues to be highlighted and resolved prior to the questionnaires being used as data collection instruments. This process ensured that the response rate and the completion rate would be as high as possible, which enables the required depth of data to be collected while minimising the drop-out rate.

No negative feedback was received from the questionnaires once they were sent to respondents which indicates that the pilot process was worthwhile and improved upon the original design of the questionnaires.

Chapter 4: Data Description

This chapter focuses on describing the data by comparing the managers and the employee's data sets across both data collection periods and also outlines the data management steps taken prior to data analysis, including the final sample, and provides a rationale for the use of repeated cross sectional data, factor analysis and the original modelling approach to be used in Chapter 5.

The results outline that there is a significant difference between how managers perceive their own, and the organisations, performance and how employees perceive and experience their manager's performance. While this is a phenomena that is widely known and experienced in the real world, these results are one of the first set of results that empirically show this gap exists and the extent to which it is present.

The results suggest that it is not enough for an organisation to introduce a wellbeing enhancing policy and expect it to work; it is the nuance of this policy that matters, such as how it is aligned with employees needs and wants, how it is delivered by the organisation and whether or not it improves the feeling of being supported and valued by the organisation.

While these results highlight trends and are not based on an econometric model, they are very important as they not only show the discourse that exists between managers and employees but they also reveal that the type of employee engaged could greatly affect the results gained, which could be driving some of the issues observed within the literature.

Chapters 5: Empirical Chapters

Chapters 5 provides the results of the econometric analyses where presenteeism, absenteeism and employee turnover are used to represent employee performance. Absenteeism is separated into two analyses using general and long term absenteeism to analyse if the aspects of employee wellbeing that affect absenteeism are different based on the type of absenteeism that is experienced by organisations.

Chapter is separated into three sub-chapters for each outcome measure where each sub-chapter is structured in a similar way with each providing a review of the literature associated to that outcome variable. All three literature reviews re-emphasise that despite the outcome measures being different they all suffer from the same limitations which were outlined in the main literature review in Chapter 2.

Chapter 5 also outlines the specific methodological approaches taken for each measure and re-emphasises that all econometric analyses are based on a factor analysis of the employee wellbeing data. This process allowed for the large amount of data that had been collected to be reduced into a manageable amount by focusing on the underlying trends of each employee wellbeing concept.

Chapter 6: Discussion

The results for each outcome variable are discussed within this Chapter. The discussion is split by the individual outcome measures in order to reflect the different results identified in Chapter 5 for each measure. This discussion is important as each outcome variable showed some results that contrasted with the theory underpinning the employee wellbeing-performance relationship. These results also justify policy recommendations as they outlined the extent to which omitted variable bias could be dominating the results previously observed in the literature, as well as highlighting various Charter specific outcomes. These recommendations are discussed in detail within Chapter 6 and are also split by outcome measure.

Chapter 6 also discusses in detail the limitations that exist within the study and how many of these form the basis for recommendations for future research. As employee wellbeing studies are time intensive and the effects of any policy change or implementation will take time to be felt, future policy evaluations need to commit to a longer longitudinal design than has been observed here but maintain the nuance and breadth of the measures used.

Furthermore, many recommendations are informed by the results outlined in Chapter 5 and suggest that future studies should be incorporate broader measures of employee wellbeing, short and long term perspectives for performance measurement and utilise the actionable measure of employee turnover when using self-reported employee turnover data.

Chapter 6 concludes by outlining the potential contributions to knowledge made by this study which ultimately centre on the research design utilised, the sample generated and the finding that employee wellbeing is associated to employee performance but this relationship has a number of factors that can change the association identified, if identified.

Chapter 7: Conclusion

The conclusion summarises that the current literature is limited in many ways and the possible reasons as to why the current literature is inconsistent and ambiguous towards particular aspects of employee wellbeing is largely due to methodological issues. The various definitions and measurements, along with the narrow conceptualising, of the specific aspects of wellbeing all combine to mean the literature is not measuring the same outcome. This is reinforced by the results that show that many important wellbeing variables have a negative or no association with various elements of employee performance.

The results also show that the current literature is wrong to *not* differentiate between the short and long term nature of employee performance as the results for absenteeism showed this to be an important factor in what determines which aspects of employee wellbeing affect absenteeism. The results highlight the role of managers in influencing the employee wellbeing and performance relationship with further research required to properly examine the role this has on performance.

The conclusion provides a summary and discussion of the policy implications gained from the results presented in Chapter 5as it was shown that omitted variable bias could be a factor behind the inconsistencies and ambiguities in the literature. Moreover, the results suggested that the Workplace Wellbeing Charter could be reviewed and restructured to include other aspects of wellbeing that have greater effects on employee performance.

The conclusion summarises the contributions to knowledge made by this study based on the methodology and the findings. All contributions are to the best of the author's knowledge and outline that this study has added value to an important area of research in a time where it is growing in national importance and focus.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

Employee wellbeing is very broad, complex, varied and personal to the individual, which makes it hard to measure, quantify and is likely to be why the literature analysing the relationship between employee wellbeing and performance is inconsistent. The literature is separated into studies that use HRM practices and studies that state they are looking at employee wellbeing (wellbeing enhancing studies). This is despite the fact these two classifications of the literature use the same explanatory variables (job satisfaction etc.) and follow the same item structure (questions/statements). The real difference between the two approaches is observed in the employee performance measures as HRM based studies use financial approaches, such as productivity ratios, whereas wellbeing enhancing studies use behaviour outcome measures, such as absenteeism, presenteeism and employee turnover.

The importance of improving employee wellbeing is noted by various studies where it is outlined that between 28 million and 550 million working days are lost due to ill health, depending on the country that is analysed (Hafner et al., 2015; Black, 2008; NICE, 2009; Danna and Griffin, 1999). These days lost, along with other outcomes of poor employee wellbeing and health, can cost between £15 billion and £103.6 billion[2], which is noted as being more than Portugal's GDP in 2006 (Hafner et al., 2015; McDaid et al., 2008; Shreeve et al., 2015; Black, 2008).

This highlights the negative effect of ill health on the macroeconomy but the magnitude of this effect varies and is inconsistent, suggesting that future studies could standardise such figures for effective comparison across countries. These costs are mainly associated to sickness absence, which means the cost of poor employee wellbeing is even greater when it is considered that presenteeism is said to be between 1.8 and 5 times more costly than absenteeism (NICE, 2009; McDaid et al., 2008).

Within the current literature the wellbeing enhancing approach appears to be a relatively new development as there is a lack of empirical studies that use absenteeism, presenteeism and employee turnover measures. Where these measures have been used, they have been used in isolation to one another, and when combined only one or two of these measures are used. It is only in qualitative studies where case studies or interview data are used, and these tend to focus on all three outcome measures. Not only does this highlight that

[2] This is stated to be €118 billion by McDaid et al. (2008) and has been converted to pounds for comparison. Exchange rates based on rates in March 2018.

within the literature there is a lack of wellbeing empirical studies to base any theoretical expectations upon, there is also a significant gap within the literature regarding an analysis of all three outcome measures contemporaneously.

Despite the separation between HRM and wellbeing studies, the literature suffers from many confounding issues. Due to this, and to the lack of wellbeing empirical studies, the focus of the literature review will be on those confounding issues that are applicable to both HRM and wellbeing enhancing studies as well as the possible reasons why they are present.

The remainder of the literature review is split into two broad sections; what has been found and the possible reasons why these issues are present. The general purpose of the former is to highlight the confounding issues within the literature and to do so this section is separated into four distinct sections: what has been found, causality, sectors and the role of management.

Overall, this discussion focuses on what the literature has found concerning the relationship between broad health and wellbeing interventions and performance as well as specific wellbeing concepts such as satisfaction, job enrichment, health, mental health, work-life balance (WLB), flexible work and employee performance. These are aspects of wellbeing that are consistently included in analyses of employee wellbeing and performance so the literature review also draws upon literature that focuses on omitted variables such as physical activity, healthy eating, alcohol misuse and smoking.

The subsection on causality focuses on the causal relationship between employee wellbeing and employee performance, i.e. does employee wellbeing drive employee performance or vice versa? This discussion is borne out of the wealth of literature failing to acknowledge, discuss and empirically test this relationship including its direction and the extent to which any relationship is present. This section discusses the potential issues caused by the reliance on studies within the literature in specific sectors and industries, mainly manufacturing, health and/or education. This subsection also discusses why this narrow focus occurs and why empirical studies tend not to include the role of effective management in their empirical analyses.

The four subsections outlined above all present various confounding issues that are present within the literature. The second broad section discusses the possible reasons why these issues are present and includes issues such as the variation in definitions and measurement, the narrow conceptualisation used by studies, the lack of a discussion about the short and long term nature of wellbeing concepts and the possibility that health interventions

follow a product life cycle. These aspects of the literature are not only reasons why so many confounding issues occur but are also gaps as these issues are rarely discussed.

2.2 The Literature Review Process

The subject of employee wellbeing covers multiple fields of study ranging from economics to psychology and sociology, and even biology depending on the research perspective adopted. Due to this, generating a comprehensive literature review was a difficult task. The initial approach taken to complete this task was to read as much literature as possible with the aim to absorb as much information from as many different perspectives as possible. This enabled the study to present a well-rounded review of the literature but also ensured the study could represent as many perspectives as possible throughout.

Over time the process of building the literature review became more precise as the direction and desired outcome of the study became more refined. The refinement of the study with respect to the direction and overall aims became the main reasons why studies were omitted from the overall literature review. This mainly concerned the employee performance measures that were used as well as the source of the literature.

Absenteeism, presenteeism and employee turnover were chosen to be the employee performance measures to be used in this study. Therefore, studies that focused on these performance measures were to be the main focus of the literature used within this study. Studies that used different measures of performance were included in the study if they served a specific purpose which was usually to show how the literature segments studies based on the performance measure used, to show inconsistencies within the literatures findings and to show the inconsistencies with how employee performance is defined and measured.

The source of the literature was also considered a factor as to what studies were included in the review to ensure the evaluation is based on, and effectively builds upon, previously published academic work. Therefore, the decision was made to mostly use published journal studies and articles throughout the literature review. Where the literature review includes references to websites and other source material it is only done so if the work adds to the debate within the academic and journal literature, rarely have these been included on their own within the literature review.

Overall, it was a conscious decision to have a literature review that was broad and varied regarding the field of research the study is based in, the specific industry the study evaluates and the age of the study. This approach was chosen to facilitate a discussion of the confounding issues at a conceptual level and how these could be the cause of specific gaps

that are identified within the literature. Moreover, the age of a study was not considered a reason for omission from the review as the inclusion of older and newer studies shows that what factors of wellbeing are measured, how these factors are conceptualised and what relationship they have with employee performance has seen little change since the 1980s, which provides extra motivation for the changes suggested in Chapter 6.

Throughout this study four key terms are discussed in great detail and are the nucleus of this evaluation between employee wellbeing and employee performance. Therefore, a clear explanation of how these terms have been defined previously and what definitions are to be used in this study is required. These have been outlined below.

Wellbeing: Wellbeing is a broad, complex and nebulous concept with a meaning that is dynamic and varying from person to person. The nuance and complexities of this are discussed in more depth within this chapter, however due to the ongoing debate about what wellbeing means and what constitutes wellbeing a broad definition is required.

For this reason the following definition taken from Carol Black's 2008 review is to be used as the definition for this study; "The subjective state of being healthy, happy, contented, comfortable and satisfied with one's quality of life. It includes physical, material, social, emotional ('happiness'), and development and activity dimensions" (Black, 2008, p.124).

This definition is a far-reaching view of what wellbeing is and encapsulates almost every aspect of what gives a person a sense of wellbeing and value. This allows for a measure of wellbeing that goes beyond a core focus on an employee's mental and physical health, enabling a comprehensive measure of wellbeing to be evaluated.

Absenteeism: the term is rarely defined within the literature and in some cases the measure to be used is often not explicitly stated (Sparks et al., 2001; Bockerman et al., 2011; Lerner and Henke, 2008; Garrow, 2016; ERS, 2016; Bajorek et al., 2014). However, by examining the studies that have explicitly stated a measure it is clear to see that the most common measurement of absenteeism is to examine the number of days of work missed over a defined period of time (Farquharson, 2012; Angle and Perry, 1981; Schaufeli et al., 2009; Braun et al., 2014). From these measures it can be inferred that the generally accepted definition of absenteeism within the literature, and the definition to be used within this study, is that absenteeism represents the number of workdays lost due to ill health.

Employee turnover: Similar to absenteeism, a definition of the term employee turnover is usually omitted from the literature but a generally accepted definition can be observed via the measurements that have been used. The literature often uses turnover intentions as a self-reported measure for employee turnover in the absence of turnover data, with a specific focus on measuring the employee's intention to leave their current employer (Chen et al., 2011; Tschopp et al., 2013; Guthrie, 2001; Alfes et al., 2012; Liou, 1998; Singh et al., 2014; Batt and Valcour, 2003; Cho and Lewis, 2011; Joarder and Sharif, 2011; Hemdi and Nasurdin, 2006; Baba et al., 1998).

Therefore, the generally accepted definition for employee turnover, when absent actual or accurate turnover data, is the extent to which employees wish to leave their current form of employment. This is the definition to be used for this study and will be referred to as employee turnover throughout. However, it is acknowledged that this is the definition for employee turnover intentions rather than objective employee turnover.

Presenteeism: In contrast to absenteeism and employee turnover, presenteeism is an outcome measure that is well-defined within the literature. The generally accepted definition is that presenteeism is the productivity loss due to attending work when ill or disabled relative to productivity when well (Demerouti et al., 2009; Cooper and Dewe, 2008; Biron et al., 2006; Holt and Powell, 2015; Garrow,2016). This is the definition to be used for this study, and the nuances and complexities of this definition are discussed further in Chapter 5.

2.3 History of Wellbeing and Health Interventions

To understand the current day debate surrounding the effectiveness of workplace health charters and health interventions it is important to understand the history and origins of workplace wellness in the UK. Importantly, to understand and appreciate how the term "wellbeing" was first conceptualised, theorised and practically considered a brief literature review has been generated to understand how this has, and has not, changed over time. The concept of wellbeing is not a new concept with respect to theoretical discussions regarding what is wellbeing and what the term wellbeing constitutes, but research seeking to answer these questions are very recent. Research evaluating the relationship between wellbeing and the workplace, and the effects of workplace health interventions, have only become a main focus for social science researchers since the early 1900s, specifically after the 1950s.

This finding will become clear throughout the following discussion and could explain why there is a lack of empirical studies evaluating the relationship between employee

wellbeing and employee performance, as noted in section 2.1 in Chapter 2. The remainder of this discussion focuses on four specific time periods; The Ancient World, the 17th, 18th and 19th century, the 20th century and present day.

2.3.1 The Ancient World

The theoretical discussion about the term wellbeing has been ongoing for several millennia as the first known attempts to theorise the concept of wellbeing go back to ancient Greece, Rome and Asia. From a theoretical perspective, Stoll (2014) describes how in Ancient Greece philosophers would discuss what could constitutes wellbeing and what steps people would need to take in order to obtain this. The general approaches discussed by Stoll (2014) and Dodge et al. (2012) were hedonism, Eudaimonia and Stoicism.

Specifically, it was Socrates who was the first to discuss what was needed for humans to be happy, as did Aristotle, although they did have differing views on the paths taken. Both appear to agree on what constitutes happiness as both state that aspects such as good health, familial love, friendships, learning and wealth accumulation are all required. However, Aristotle accepted that only a fraction of the populace could achieve Eudaimonia (Stoll, 2014).

While, the view of happiness as an emotion that can be achieved or obtained seems slightly dated by modern perspectives on wellbeing, it is clear that little has changed. This brief overview of the discussion had by Socrates and Aristotle highlight that what was considered then to be the pathway to happiness are considered foundational aspects of a person's wellbeing today. Moreover, the idea that wellbeing is a multidimensional and individual concept was beginning to emerge within these discussions through the discussion of three different general ideas of what wellbeing meant.

From a practical perspective there is also evidence of the beginnings of occupational health in these ancient periods. Hippocrates was one of the main drivers of change as he observed lead poisoning in miners which led to the use of animal bladders for respiratory protection (Health Management, no date). Hippocrates was also the first documented person to try to prevent disease by noting that disease is a result of diet, lifestyle and environmental factors, a perspective that led to the introduction of aqueducts, sewers and public baths (Global Wellness Institute, 2019). Personal approaches to improving wellbeing go back even further as the Global Wellness Institute (2019) state that practices such as yoga, meditation, tai chi and acupuncture were developed between 3000-1500 BC.

While the evidence documenting the practices and steps taken by people to improve their health and wellbeing is limited, it is clear that the need to protect and improve one's health and wellbeing is not a new idea. This need has been known for thousands of years, as has the possible effect of the workplace on a person's health and wellbeing. This makes the absence of a deep literature base that mirrors established macroeconomic constructs and mechanisms when discussing wellbeing (for example, government funding and its effect on the economy) confusing. This is because it is clear the concept of wellbeing has always promoted debate and theorising and the potential for the workplace to effect a person's health and wellbeing has always been known.

2.3.2 The 17th, 18th and 19th Century

The concept of workplace wellbeing and occupational health developed little from these ancient world discussions until the 17th and 18th Century. Many studies cite the industrial revolution as the catalyst for this change and making occupational health, and consequently workplace wellbeing, in the UK a national discussion (Rucker, 2016; Health Management, no date; Harrison, 2012; Gorsky et al., 2014). This change occurred due to the changes we faced when moving from agricultural production towards industrial production and urbanisation (Gorsky et al., 2014).

A famous example of the needs brought on by this change is the building of Port Sunlight by the Lever brothers in 1888, who built a model village to house the workers of a nearby soap factory (Historic England, 2018). However, not all could benefit from such a development, meaning for many the changes that occurred at the start of the industrial revolution resulted in the reduction of the general populations' life expectancy (Gorsky et al. 2014), which was below 30 years old in 1880 (OECD, 2014).

This was due to changes in working and daily living such as the use of dangerous machinery, appalling factory and living conditions which led to the rampant spread of disease, long working hours and the use of child labour (Gorsky et al., 2014; Health Management, no date).

This led to intervention by the government with the first piece of legislation specifically addressing the condition of the workplace being the 1802 Factories Act: The Health and Morals of Apprentices Act (Harrison, 2012). This was the first of many pieces of legislation introduced to address the conditions of the workplace. In 1833 inspectors with the power of prosecution were established (Harrison, 2012; Health Management, no date) and in

1832 occupational medicine was established after Charles Thackrah documented the health problems of workers (Rucker, 2016; Health Management, no date).

While these changes began a modernised focus on occupational health, the changes tended to lag behind the developments that were taking place from a research perspective. For example, the first account of occupational diseases was published in 1700 by Bernardino Rarmazzini (Health Management, no date; Rucker, 2016) and in 1775 the first association between the workplace and cancer was found among chimney sweeps (Health Management, no date). This does pose the question why did it take at least 27 years for legislation to come into place to address the concerns of the then modern workplace? Especially considering these are not isolated pieces of research.

Stoll (2014) highlights the numerous pieces of research that occurred during this time period, which were borne out of the idea that wellbeing could be researched as a science. Stoll (2014) outlines that pleasure was seen as the basic substance and that research could measure, analyse and quantify this, which led to the concept of happiness becoming a main focal point for many scientific studies. Voltaire and Diderot in 1734 and 1749 both wrote about their disagreement that happiness was only achieved in the afterlife and in 1772, Francious Jean de Chastellux attempted to write the history of happiness, where he stated that he needed information on complex variables to be able to do this (Stoll, 2014).

Furthermore, in 1789 what is considered to be the origin of subjective wellbeing occurred as Jeremy Bentham attempted to construct a felicific calculus where an individual's net pleasure or pain due to public policy choices could be calculated based on values associated with the effect of the policy (Stoll, 2014).

While these pieces of research may seem dated they were the origin for the current debate that exists within the workplace literature. Within the current debate it is clear to see that many concepts and issues are still present as there remains great variation in how wellbeing is perceived and measured. Moreover, these pieces of research all occurred in advance of any changes in legislation regarding workplace wellbeing which is a model that is still implemented today.

The role of research that seeks to examine wellbeing empirically and philosophically appears to highlight the potential effects of society and workplaces on our wellbeing, which should then lead to changes in policy. This is a reactionary approach and is one that has existed since the industrial revolution, based on this evidence. The role of research needs to change as studies need to be used as a means to prevent worsening health and wellbeing, not

as a justification for treatment. However, this can only happen with more research that explores the concept of wellbeing and its relationship to the workplace.

2.3.3 The 20th Century

The 20th Century saw further developments regarding occupational health and wellbeing. As has been made clear within previous time periods, the real roots of workplace health and wellbeing in the UK is health and safety. Therefore, the two main drivers for these developments appear to be the UK joining the European Union in 1973 and the implementation of the Health and Safety Act in 1974 (Health Management, no date; Harrison, 2012).

These two events caused organisations to meet basic health and safety standards by law, meaning legislation was implemented to help protect the health of employees at a time where, according to Health Management (no date), deindustrialisation was occurring and the economy was moving towards a service economy.

The 1974 health and safety act would form the foundation for many new pieces of legislation later in the nineteen nineties (Harrison, 2012) but, these were not the only legislative and practical changes that occurred during this century. Health Management (no date) outline a number of changes that occurred prior to these two events as the Foundation of International Labour Organisation and Association of Industrial Medical Officers were formed in 1919 and 1935, respectively. Also, in 1951 the Dale report recommended a national occupational health service and in 1972 the Roben's committee report is published, which led to the 1974 Health and Safety Act (Health Management, no date).

While these are important milestones in the history of workplace wellbeing in the UK there are some persistent trends. The first is that changes in legislation occurred due to major changes in the structure of the economy and that changes in legislation reacted to the recommendations of research. This was the same in the previous two centuries as it was the industrial revolution and the research of the time that prompted new legislation.

The economy is currently experiencing a new age, digital revolution where the type of work being conducted and how jobs are performed are beginning to see significant change, in a similar vein to the industrial revolution. This change will likely bring about new pieces of legislation that seek to limit the harm to employees health and wellbeing from this change in structure, just as has happened for the previous three centuries. Therefore, the role of research

should be to help identify the potential challenges to people's health and wellbeing and prevent these from becoming systemic issues.

Within the 20th century it is interesting to note that in the early part of the century, research on the topic of workplace health and wellbeing was very limited but this was the starting period for occupational wellness programs. The stagnation in the amount of research in the 19th century, according to Stoll (2014), could be due to the perspective of mainstream economists within this generation which undertook a statistician approach, leading to subjective measures of wellbeing being under researched. However, it could be argued that it was the actions of organisations' in the earlier part of the decade that prompted a change post World War 2 in how wellbeing was researched.

Limeade (2016) outline that in 1926 Ford introduced the 40 hour week and Hershey Foods built a recreation complex in the 1930s. Post World War 2, private organisations began to focus more on workplace wellness as employers began to pay for employee healthcare (Limeade, 2016). This, according to Stoll (2014), was the same time in which subjective measures of wellbeing began to be featured in surveys again; albeit in the form of simple measures. Over the rest of the century Stoll (2014) states that these would go on to be developed into multi-item measures, but workplace wellness and research would not begin to develop further until the mid-1970s, around the introduction of the health and safety act.

At this point in time, workplace wellness would begin to really exist in organisations (Rucker, 2016), with specific examples being the Johnson and Johnson Live for Life program in 1979 and Boeing becoming the first organisation to ban smoking in the workplace in 1984. From a research perspective, it was not until 1982 that the Journal of Occupational Health began to feature studies that focused on workplace wellness programs (Rucker, 2016) and it was not until 1984 that the Berkeley wellness letter was established as a means to present evidence based articles on wellness approaches (Global Wellness Institute, 2019).

While, these are specific examples these are also the starting point of the modern literature used to formulate current public policy. As is, according to Stoll (2014), Warner Wilson's 1967 study focusing on the correlates of happiness is considered the starting point of the empirical study of wellbeing. These origin points show just how recent the study of workplace wellbeing is, which explains why a study in 1969 that sought to conceptualise wellbeing is considered an early attempt by Dodge et al. (2012). This overview also suggests that research, changes in legislation and changes in occupational structure and policy have always worked together to create changes for employees with the aim of improving their health and wellbeing.

2.3.4 The Modern Day

Since the turn of the century, the profile of the UK economy has changed dramatically with 78% of GDP accounted for by the service sector (Health Management, no date). As with previous periods of time, a wholesale change on this scale has prompted widespread changes in legislation and public policy strategies to tackle the new challenges facing employees. The changes in the working environment highlight many potential challenges that organisations and employees now face.

As part-time work and working from home become more prominent (Harrison, 2012; Health Management, no date) they bring about new health issues such as mental health issues, musculoskeletal diseases and increased risk of fatal diseases such as heart disease and diabetes (Health Management, no date).

In 2000, a 10 year health and safety strategy was implemented by the UK government in a bid to tackle these new challenges while reducing ill health and absenteeism (Health Management, no date; Harrison, 2012). Later, in 2004, another new health and safety strategy was devised in the same vein as the 1974 Health and safety Act that focused on employee health and safety up to 2010 (Harrison, 2012). In 2012, the Health and Social Care Act was introduced which reconfigured public health in the UK by granting more powers to local governments (Gorsky et al., 2014). In addition to these changes, other pieces of legislation were introduced such as the Equality Act in 2010 (Fenton et al., 2014), a sugar/soda tax in 2016 (Global Wellness Institute, 2019) and a smoking ban in public places in 2007 (Institute for Government, 2007).

While these changes show how the turn of the century brought with it a change in wellbeing perception, it could be argued that this new perspective is dated. All of the above pieces of legislation were important to the development of our current working culture and attitudes towards wellbeing, but these are mostly concerned with the health and safety of the workplace.

The conceptualisation of workplace health needs to move beyond focusing on health and safety to also include more aspects of the term such as physical activity, job satisfaction and personal development among many other aspects of wellbeing. This change can be encouraged by new research focusing on workplace health and wellbeing that includes physical and mental health that accounts for more than health and safety.

One study that did this in 2008 was Carol Black's seminal review of the UK workplace that evaluated workplace health and wellbeing with a broad conceptualisation of wellbeing and with a forward thinking perspective. This review could be seen as the foundation for the new focus on wellbeing as an important area of research. Stoll (2014) tentatively highlights this by stating that wellbeing is now receiving more attention from prestigious economic journals. This is highlighted within Chapter 2 of this literature review as many of the studies referenced are published within the last decade, likewise most UK reviews of the populations mental health and wellbeing or general health cited in Chapter 2 have taken place within the last 10 years.

Moreover, the focus on employee health and wellbeing is reflected in the current number of local government health and wellbeing charters that exist in addition to the national Workplace Wellbeing Charter. Middlesbrough, the City of Bristol, East Sussex Council, Burnley Borough Council, Birmingham City, Croydon, Oldham, Northampton and Coventry City all have a health and wellbeing Charter or a health and wellbeing strategy in place (Institute of Health Equality, 2014; Iosh, 2015; Hurrel et al., 2017; Northampton County Council, 2019; Coventry City Council, 2018). Organisations in London have the option to participate in four different health and wellbeing Charters (London Assembly, 2019; London Assembly, 2019b; City of Westminster, 2019).

Likewise, there are also Charters for specific forms of employment such as the mental health charter for sport and recreation (Sport and Recreation Alliance, no date) and the health charter for social care providers (Public Health England, 2017). This change in perspective is also reflected in the private sector as CIPD (2018) found that two-fifths of organisations from a sample of 1021 have a wellbeing strategy in place and in a study by Cavill et al. (2014) all twenty organisations reviewed provided organisational health support and confidential programmes, such as employee assistance programmes.

While this shows that workplace wellbeing is becoming an important focus for local authorities in the UK, it also highlights how recently the change in national perspective happened. This is emphasised further when it is considered the concept of wellbeing and the role the workplace has in effecting people's health and wellbeing was identified by Ancient Greek philosophers over 2000 years ago. The current change highlights that now is a time of great importance as we are currently within the first period of time where workplace health and wellbeing is at the forefront of people's mind with widespread recognition of the associations discovered in the Ancient world and during the 17th Century.

Currently, so much change has happened there are now organisations dedicated to workplace health and wellbeing such as the Work Foundation (The Work Foundation, 2019), Joseph Rowntree Foundation (Joseph Rowntree Foundation, 2019), Happy City (Happy City, 2019) and Schwartz Rounds, Making Every Contact Count, One You, Mindful Employer and Time to Change (NHS Employers, 2019). Moreover, there are numerous organisations that seek to help other organisations develop health and wellbeing strategies and help organisations collect health and wellbeing data. Effectively, a health and wellbeing industry is beginning to form and is growing.

2.3.5 Conclusion

The role of research with respect to these changes in the UK economy is key. While it can be noted that since research and theorising about wellbeing began there has always been debate about what wellbeing is and what it constitutes, one aspect of this has always remained constant; that it is a personal and individual concept.

Throughout this short overview of the history of wellbeing, as will be reflected in Chapter 2, wellbeing has always been conceptualised as a personal feeling and idea, which can be affected by our environments, beliefs and personality. This has never changed and this individual and complex structure should be reflected in future studies, especially empirical evaluations of the concept, in order to improve upon the knowledge that already exists regarding the relationship between wellbeing and the workplace.

The use of research is critical to moving beyond a reactionary model of workplace health and wellbeing and towards a preventative perspective, but for this to happen future research has to diversify the conceptualisation of wellbeing and the context in which workplace health and wellbeing is evaluated.

2.4 What Has Been Found?

There is a lack of studies that assess the effect of broad employee wellbeing interventions on employee performance, which highlights the need for further research. Many studies found there are positive associations between HR interventions and/or wellbeing plans and employee performance (Datta et al., 2003, Boxall and Macky, 2009; Vandenberg et al., 1999; Mackie et al., 2001; Macky and Boxall, 2008; Lee and Fontenberry, 2013; Alfes et al., 2012; Balaji and Balachandran, 2012; Danna and Griffin, 1999). But there are inconsistencies which question the usefulness of these policies and stress the need for more empirical research.

While the research supports the logically accepted belief that broad wellbeing enhancing policies are associated to higher levels of employee wellbeing and performance, inconsistencies have been found within these studies. Some studies have shown a negative association or no association between wellbeing policies and performance (Bloom et al., 2006; Neumark, 2001; Guest et al., 2003; Wright et al., 2005; Godard, 2004).

Specifically, Godard (2004) and Barker (1993) supports Macky and Boxall (2008) and Godard (2001) who found that wellbeing policies increase levels of work stress and intensity. For example, although different methodologies were used, Macky and Boxall (2008) and Godard (2001) found that wellbeing enhancing practices are linked to more pressures at work and negative intensifications of stress, while Applebaum et al. (2000) found no association between these policies and stress intensification.

These studies support the idea that there could be negative consequences to implementing wellbeing policies and shows that for broad wellbeing interventions there is a lack of sound and concrete results that point towards a general consensus. This is enhanced further when it is considered that Van de Voorde et al. (2012) found the same HR dimension can have both positive and negative outcomes, as commitment was found to be positively associated with quality and employee enhancement attributions but negatively associated with exploitation attributions. The duality of some HR dimensions casts more doubt on the reliability of the results generated within the current literature.

These inconsistencies have impacts that reach beyond a theoretical issue. While they do show how the theoretical arguments being made within the current literature are not supported by consistent evidence, they highlight the issues facing practitioners as well as researchers who seek to use the current literature as a justification tool. For practitioners, these results show that it is not possible to use the current literature on broad wellbeing policies as the single justification for investment and implementation of policies as many of the positive associations found are debatable and highly contextual.

For researchers, these findings suggest that the current literature is not an effective tool to base theoretical expectations on, as there is a lack of a general consensus on how these interventions affect performance. A slight consensus at the broad policy level may offset the inconsistencies found when examining specific concepts because the literature could provide an effective justification for theoretical studies and for practical implementation.

There is a sub-set of the current literature that focuses on the effect of work-life balance (WLB) enhancing policies and performance. As with broad interventions, there are many studies that have found there is an association between employee wellbeing and WLB

(Devasheesh et al., 2013; Kinman and Jones, 2008). Some studies have found that WLB is positively associated to various performance dimensions (Perry-Smith and Blum, 2000; Eaton, 2003; Penna, 2007), which suggests that organisations can improve employee performance by improving employee wellbeing via ensuring a positive work-life balance.

In slight contrast to these studies, Levy et al. (2012) found no correlation between the levels of work family conflict experienced and the intention to quit. While this result highlights there are some inconsistencies present within the literature, the finding is only found for employee turnover intentions.

The literature presents many studies that support the almost general consensus that improving WLB has a positive effect on both wellbeing and performance (White et al., 2003; Bauer, 2004; Canibano, 2013) but there are studies that support Levy et al. (2012) by finding that flexible working practices are associated to many negative outcomes and worsening WLB, including lower social cohesion, worsening mental and physical health and working longer hours (White et al., 2003; Canibano, 2013; Steadman and Taskilla, 2015).

While results support the general findings that WLB has both positive and negative associations, as with Van de Voorde et al. (2012), some WLB focused studies support both types of associations. Fleetwood (2006) identified that flexible practices can be employee friendly (including flexible times, part-time and job sharing) and employer friendly (including unsociable hours, involuntary part-time and call out arrangements). The latter of which is referred to as "flexploitation" due to the costs that are incurred to the employee even if the employee volunteers to undertake the work such as spending time away from their family and friends.

This may support the notion that WLB focused policies can have positive and negative associations with performance, but this also shows that not all wellbeing policies will have a positive effect on performance. Moreover, future research should take into account the specific WLB policies being analysed and practitioners should monitor the effect WLB policies have without the expectation that all WLB policies will benefit employees. This reinforces the limitations discussed throughout regarding the theoretical and practical applications of the literature.

Mental and physical health are the most widely researched aspects of employee wellbeing, and the knowledge surrounding associated policies is small and conflicted. Unlike broad interventions around WLB, there is more of a general consensus that there is a positive association between mental and physical health and employee performance, although most studies illustrate this by showing that deteriorating employee wellbeing is associated to

worsening mental and physical health and employee performance (American Psychological Association, 2011; NICE, 2009; Goetzel 2004, Allen et al., 2005; Weisberg and Sagie, 1999; Goetzel et al., 2002; Chan, no date; Taris and Schreurs, 2009; Pirzada et al., 2013; Prochaska et al., 2011; Sainsbury Centre for Mental Health, 2007; Ryan et al., 2011; Centres for Disease Control and Prevention, 2013; Braun et al., 2015; Hafner et al., 2015; McDaid et al., 2008; Steadman and Taskila, 2015; Davidson, 2016; Young and Bhaumik, 2011; Black, 2008).

While this does show there is an association, the strength of this association is debatable as the effect of poor mental health has been shown to have a wide ranging effect on many outcome variables. For example, poor mental health has been found to be associated with between 10% and 40% of all absences (Braun et al., 2014; SAMH, 2006).

This shows that while there is an agreement that a negative effect is present, the magnitude of this effect is inconsistent. It is not expected that a consistent effect would be found, as the effect could vary from one employee to another, but a range of 30% is particularly large. Those who use the literature to justify policy implementations or further theoretical study could have a distorted view of how much poor employee health affects employee performance.

In contrast, there are some studies that show there is no association between employee health, employee wellbeing and performance (Paile, 2011; Farquharson, 2012; SAMH, 2006). SAMH (2006) found that the rate of absences was declining over time with the average rate now around 6.5 days per year. Whilst this finding does highlight inconsistency within the literature, as the extent to which mental and physical health causes absenteeism is so varied and broad, it is not possible to say with certainty how important these conflicting results are.

Despite there only being three studies in this review that provide conflicting results regarding employee health and wellbeing, the fact this is present given the numerous studies that state a positive association shows the effect of employee health on employee performance has not been evaluated enough empirically and is not yet fully understood.

Many studies have shown that improved job satisfaction is associated with improved employee performance (Cassar, 2010; American Psychological Association, 2011; Chugtai and Zafar, 2006; Hsu et al., 2003; McIntosh and Doherty, 2010; Paile, 2011; Farquharson, 2012; Chen, 2011; Liou, 1998; Devasheesh et al., 2013; Gaertner and Nollen, 1992; Binoy, 2003; Canibano, 2013), but studies have found there is no, or a negative, association between job satisfaction and employee performance (RobertsonCooper, 2015; Wood and De Menezes, 2011). While there is limited support for a negative or non-association, as stated above

regarding mental and physical health, its limited presence signals there is some debate as to how effective it is to improve job satisfaction and employee wellbeing in order to enhance worker performance.

A natural consequence of greater job satisfaction is improved engagement and the current literature highlights that greater employee engagement (including employee commitment and organisational citizenship behaviour) has a positive effect on employee performance (Unum, 2015; Harter et al., 2002; Saks and Rotman, 2006; Markos and Sridevi, 2010; Gorman, 2006; Zhang, 2011; Chugtai and Zafar, 2006; Chi et al., 2013; Sutanto, 1999; Wright et al., 2005). However, like job satisfaction there are some studies that show employee engagement is not associated to improved employee performance (Kehoe and Wright, 2010; Bartol, 1979; Ayree et al., 1991).

Employee wellbeing policies are not the only method an organisation can use to improve employee wellbeing and performance. One of the greatest determinants of employee performance relates to the workplace itself where it was found that improving autonomy, control and job demands improves employee performance (Hafner et al., 2015; Grant et al., 2007; Kinman and Jones, 2008; White et al., 2003; Unum, 2015; RobertsonCooper, 2015; Lee and Fontenberry, 2013).

In contrast to this some studies found that there was no association (Hafner et al., 2015; Taris and Schreurs, 2009). Grant et al. (2007) go beyond this to state that while there is research that points to a positive association between job enrichment and employee performance, there is also research which shows that enriched jobs lead to increased fatigue, strain and overload, leading to cardiovascular disease.

While these results show it is not just wellbeing factors that have conflicting results, the results also magnify the issue of the literature's usefulness to inform policy development. There is no element of wellbeing that has been shown to have a consistent impact on employee performance, whether that be a positive or negative affect.

Similar findings were found for employee compensation with Liou (1998) and Devasheesh et al. (2013) both finding that improved employee compensation is associated with improved employee wellbeing and performance. Whereas Gardener et al. (2004) found that changes in pay had no relation to employee performance.

While these results do show some inconsistency, two important points should be stated. Firstly, the effect of employee compensation on employee performance is an under-researched aspect of employee wellbeing, especially when compared to other aspects such as mental and physical health, meaning the findings are only tentative indications of a

relationship. Secondly, it should be noted that only Gardener et al. (2004) outline that the focus is on the actual change in employee compensation.

The inconsistencies observed within the literature also extend to the findings for control variables. The literature shows that control variables such as gender, age and education have a positive association with employee wellbeing and performance (Angle and Perry, 1981; Wood and De Menezes, 2011; Devasheesh et al., 2013; Hafner et al., 2015; Young and Bhaumik, 2011; Liou, 1998; White et al., 2003) but have shown that a negative or no correlation may exist (Angle and Perry, 1981; Weisberg and Sagie, 1999; Lee and Fontenberry, 2013).

While these findings do reveal inconsistencies throughout the literature for control variables, they also show that practitioners who wish to use the literature to justify policy implementation or evaluation are faced with conflicting results about how demographic information can affect employee wellbeing and performance. If an organisation wishes to implement a health intervention, knowing the demographic breakdown of their workforce will not help them to form accurate expectations of how the intervention could benefit them, as the research is so inconsistent and varied.

Furthermore, as the effect of control variables are under-researched and under-discussed in empirical wellbeing studies the inconsistent findings highlighted here serve as a further reason for research and justifies the need to conduct more empirical research on the effect control variables can have on employee wellbeing and performance.

Another confounding issue focuses on the omission of important employee wellbeing concepts from empirical studies. Despite being one of the most researched concepts of employee wellbeing, mental health is one of the most narrowly defined concepts focusing on three main aspects: depression, stress and anxiety.

Insomnia, and post-traumatic stress disorder (PTSD) are examples of common mental health conditions that have been found to have a substantial impact on employment. For example, McDaid et al. (2008) state that 40% of the €10.4 billion costs in England due to mental health are associated with the unemployment costs of schizophrenia. Also, insomnia has been linked to increased presenteeism and pressure (Hafner et al., 2015; RobertsonCooper, 2015; Boyd, 1997). Danna and Griffin (1999) state that due to workplace pressures panic attacks and PTSD, as well as other mental and physical health issues, are experienced by 88% of respondents to a survey. They also state that PTSD is the most common condition diagnosed after a work-related injury.

While there is limited evidence supporting the use of these mental health variables the information provided is enough to critically debate why the literature focuses on depression, anxiety and stress. These conditions may have been found to be important and widespread amongst the population's workforce but these are not the only conditions that are commonly experienced that affect employee performance. The scope of what defines mental health needs to be broadened if our understanding of the relationship between employee health and employee wellbeing and performance is to improve.

Another aspect of mental health that is commonly overlooked within the literature is the relationship it has with other mental and physical conditions. This is overlooked despite there being research stating that people with a mental health condition are most at risk of having a substance problem (Lim et al., 2000; Naylor and Bell, 2010; Engs, 1987). Carnegie (2012) add to this by stating the effects of stress can be worsened due to insomnia, reduced exercise, unhealthy diet and increased tobacco use.

While the literature overlooks the finding that mental health conditions can deteriorate other conditions, i.e. have a multiplier effect, the omission is likely to be due to the consequences of poor mental health being overlooked as important wellbeing concepts in empirical studies. It is also possible that reverse causality is present, for example it could be that substance problems cause mental health conditions rather than the implied causality that is stated within the literature.

Physical activity is one of the overlooked important concepts stated above, despite it being the most researched behaviour concept. The literature has found the consistently positive association that increased physical activity leads to increased employee wellbeing and performance (Centres for Disease Control and Prevention, 2013; Hafner et al., 2015; NICE, 2008; NICE, 2012; NICE, 2012b). Specifically the results found that those who are physically active take 27% fewer days off work (NICE, 2012; NICE, 2012b) and that increased physical activity is associated to reductions in numerous health conditions such as depression, obesity, cardiovascular disease, stroke, diabetes and cancer.

While these results show a significant relationship between physical activity and employee wellbeing and performance, Shi et al. (2013) did find that physical health was not a predictor of absenteeism. This does point to some inconsistency within the findings, reinforcing the need for further study. Furthermore, the effect of physical activity on employee performance has yet to be empirically tested along with those traditional variables outlined above. By including physical activity within a traditional analysis it could improve the current understanding of how physical activity affects performance.

Physical activity and nutrition are often discussed together as both tend to enhance the benefits of the other when considered logically. However, the effects of improved nutrition and employee performance are researched and discussed less than the effects of physical activity. This reinforces the need to research the effects of healthy eating on employee wellbeing and performance, especially when there is consistent evidence that the effects are positive (Centres for Disease Control and Prevention, 2013; Hafner et al., 2015; Black, 2008; NHS, 2014). Specifically, the Centres for Disease Control and Prevention (2013) found that a healthy diet can decrease the risk of heart disease, stroke, type 2 diabetes, high blood pressure, osteoporosis and some cancers.

While these results do highlight the potential benefits on employee performance of improving an employee's nutrition, the number of studies that have analysed this association is limited. Including healthy eating when assessing employee wellbeing is vitally important when trying to improve the current literature and our understanding of how employee wellbeing relates to employee performance.

Tobacco use is another behavioural concept that has been overlooked by almost all empirical wellbeing studies, despite some of the literature outlining the benefits that reducing tobacco use can have on employee performance. The literature has found that reducing tobacco use can reduce absenteeism as well as providing cost benefits for organisations who implement tobacco cessation policies (NICE, 2007; CDC, 2013; NICE, 2012; Baicker et al., 2010). Like physical activity and improved nutrition, tobacco use has been linked to severe health conditions with CDC (2013) finding it a leading cause of cancers, stroke, heart disease, pregnancy complications and chronic obstructive pulmonary disease.

In contrast, Hafner et al. (2015) found there was no direct association between work impairment and smoking. While the lack of research into this relationship is enough to justify further study, the inconsistency highlighted by Hafner et al. (2015) reinforces the need to better understand this relationship.

The most under-researched behavioural factor is the effect of alcohol and substance misuse on employee wellbeing and performance. The research available on this relationship is limited and fragmented which makes it difficult to ascertain a strong perception of how alcohol misuse affects employee health and how this can affect employee performance. Like tobacco use, this is justification enough that more empirical research is required.

This is compounded when it is considered that CDC (2013) have found that 15% of employees have had their work impaired due to alcohol use and that 9% of employees have

been to work hungover. The Centres for Disease Control and Prevention (2013) found that alcohol misuse can cause many medical and social problems without the signs of dependence.

This is supported by Hafner et al. (2015) who note that it is a recognised cause of long term health conditions despite finding no empirical association between alcohol misuse and work impairment. To improve the present understanding of how employee wellbeing affects employee performance, alcohol misuse must be included in a study with traditional wellbeing factors and should not be studied in isolation.

2.4.1 CAUSALITY

The above findings presented for traditional wellbeing concepts and for behavioural concepts only discuss if an association between employee wellbeing and performance is present and if present, to what extent is there an association. One key debate missing from this analysis is that of causality, namely that there is almost no empirical evidence that explores the causality within this relationship, i.e. there is no empirical evidence exploring if changes in employee wellbeing cause changes in employee performance or vice versa.

While discussing causality is a key step in progressing the current literature towards a general theory of wellbeing, it is accepted that it is difficult for any study to provide enough empirical support using standard cross sectional approaches to prove or strongly suggest what the causal relationship may be.

This is due to the practical assumptions and limitations that come along with conducting any econometric model which are relatively universal such as that each respondent is thought of as independent to one another, that each respondent thinks and behaves rationally, that each respondent is always honest and introduces no bias into the model and that the sample reflects the entire population. For wellbeing studies there is the added assumption, which is discussed in more depth in Chapter 6, that the organisational context is assumed to have no role or has been sufficiently accounted for within the model and/or the modelling process.

These are all possible reasons to explain why no empirical study could prove causality. However, these reasons are not enough to justify why the literature does not acknowledge causality. Despite this, the literature does largely ignore causality as only a handful of studies explicitly discuss the issue of causality (Oyeranti, 1991; Wright et al., 2005; Hesketh and Fleetwood, 2006; Heady et al., 1991; Cappelli and Neumark, 1999). The importance of being able to discuss causality is highlighted by Hesketh and Fleetwood (2006) where it is stated that the non-existence of a causal link does not mean that it is not there and likewise an association between two variables does not mean that a theory or explanation has been found.

While these studies discuss causality, there is also the issue of reverse causality which many studies do not reference; it could be possible that employee performance causes a change in employee wellbeing. This may be possible and would provide very interesting findings, the possibility of this is barely researched or discussed within the literature relative to other aspects of employee wellbeing.

TUC (2013) summarise the complexity of the relationship by stating that there are two sides to every coin and that even though there are 27 million days lost a year to ill health, being out of work can also lead to numerous health conditions and adverse behaviours such as lung and heart disease, mental disorders, alcoholism and suicide. Interesting findings have been found within those studies that have looked at reverse causality as Van de Voorde et al. (2012) found evidence for a reverse causal order as performance influenced HRM measures which then influenced employee wellbeing a year later.

While this result and the idea of reverse causality is interesting more research on the presence of causality itself is needed. Theoretical discussions are important and they have a critical role in any research process, but a theory needs to be tested and supported by empirical evidence. So far the literature, for understandable reasons, is limited to a small and rare discussion about how causality is difficult to test and that there could be reverse causality. These ideas need to be tested and one of the largest reasons why this testing has not occurred is likely due to the methodologies undertaken by most studies.

The methodological limitation that is likely to be responsible for there being very little empirical testing of causality is the use of single cross section data. When studies have conducted empirical tests in the research cited throughout this literature review they have almost exclusively used single cross section analyses. To be able to discuss causality, change over time needs to be measured which means the methodology that is chosen needs to be of a longitudinal design. This is supported within the literature by White et al. (2003) and Godard (2004) who both acknowledge that single respondent data is a serious limitation of the literature, with White et al. (2003) also stating that changes can occur over time.

The work by Van de Voorde (2012) explicitly states it took one year for wellbeing to be affected by changes in the HRM measures. Whether or not this length of time is appropriate will ultimately depend on the type of organisation that is being analysed as it is reasonable to expect that changes in policies in larger organisations will take a longer time to trickle down throughout the organisation and to be felt by employees enough to make a quantifiable difference to their wellbeing.

While there is evidence, albeit limited, to support the idea that moving beyond single cross section analyses will enable a study to identify the presence of causality, even when studies do this they sometimes do not discuss causality. For example, Angle and Perry (1981) conducted a longitudinal study but did not include any statistical tests or a significant discussion about causality.

It is accepted that causality is difficult to identify and impossible to prove, but the literature could move beyond a discussion of a possible association as this approach is not capable of identifying any causality between employee wellbeing and employee performance. The methodologies used need to move beyond single respondent data and move towards studies that incorporate both quantitative and qualitative studies in order to identify change and reasons for change over time with regards to how employees feel, what they experience, why they feel the way they do and why they make the choices they make. Only then will it be possible to provide some indication of the direction of causality and the extent to which it has an effect.

It is not just the methodological approaches that are limited, the demographics of a sample can also play a key role in determining what wellbeing concepts are analysed and what results are obtained. This issue is present within the literature in multiple forms with the country of study being one form. Most studies are based in the USA, which means that most studies are based on American workplaces, American employees and America's culture and society.

As such there is a noticeable gap in studies that are based within the UK, although some do exist (Whitefield, 2002; White et al., 2003; Lawton, 1998; Kinman and Jones, 2008; Penna 2007; Macleod and Clarke, 2011; Self et al., 2012; Randall et al., 2014; ONS, 2013; NHS, 2014; Diener and Seligman, 2004). While this is not an exhaustive list of all UK studies, when compared to the volume of studies based in the US this is a very small amount. This is magnified further when the focus is on empirical studies that analyse employee wellbeing and employee performance.

The reliance on American studies means the literature can suffer as the country specific differences outlined above could impact employee wellbeing due to differences in employee physical activity levels, access to healthy and non-healthy food, attitudes and perceptions of mental health, workplace flexibility rules and laws and smoking laws as well as employee rights. These will all affect employee wellbeing and performance and the findings of empirical studies cannot be assumed to be completely transferrable to the UK.

More studies should be conducted in the UK and based on UK workplaces and employees to ensure the differences outlined above are taken into account. This is supported by Boxall and Macky (2009) who state that most of the research focuses on the USA and when studies are conducted elsewhere socio-cultural variations have to be accounted for.

For example, Boselie et al. (2001) states that some policies are considered high performing in the US but elsewhere, outside of the US, they are legal requirements suggesting these policies will not have the same effect on employee wellbeing and performance in other countries. McDaid et al. (2008) suggests that much of the literature is based in the US because US employers bear the costs of their employees poor performance', despite this being the case for all organisations.

There are some studies that have been conducted outside of the US and the UK which reveal that different results could be obtained based on the location of the study (Boxall and Macky, 2009; Ryan et al., 2011; Farquharson, 2012; McDaid et al., 2008; Taris and Schreurs, 2009; Salahudin et al., 2012; Binoy, 2003; Pirzada et al., 2013; Canibano, 2013; Bauer, 2004). Specifically, cultural differences have been observed by Ryan et al. (2011) who state that focusing on the fast food industry in Malaysia is a limitation of the study due to the Islamic nature of the Malaysian culture even though other studies, such as Binoy (2003), show no relationship between religion and productivity.

While these findings outline differences on an international scale, they also outline that the culture of a country can affect the results obtained and the specific issues that could be faced.

The above discussion is a critical one that outlines that while it is not possible to prove causality due to numerous assumptions and limitations of a quantitative approach, it is important that future studies acknowledge and explore the causality of the employee wellbeing and employee performance relationship. Specifically, future studies should undertake a longitudinal study that combines quantitative and qualitative data to test for causality and ensure that changes over time can be evaluated effectively, including deep discussion surrounding the reasons behind these changes.

2.4.1.1 How Can Causality be measured?

There are a variety of statistical methods and techniques researchers can employ that aim to measure causality. With regards to the employee wellbeing and performance literature, there are some techniques that would appear to be more suitable to help identify the extent to which causality is present and the direction it can take.

Propensity score matching is a technique that is discussed in length throughout the econometric literature as an effective way to measure causality (National Academies of Sciences, Engineering, and Medicine, 2016; Reiter, 2000; Stuart, 2010). The technique relies upon observational data and, as stated by National Academies of Sciences, Engineering, and Medicine, (2016), the technique forms groups from respondents who are similar into those that received a given treatment and those that didn't based on observed factors. This is done so that only receiving the treatment is the difference between the two groups of matched participants. The propensity score is the sum of these factors and acts as the probability of receiving a treatment (National Academies of Sciences, Engineering, and Medicine, 2016). Propensity score matching could be a very effective way to isolate the effect of a health intervention, such as the Charter, amongst a sample.

However, the success of this technique not only relies upon the initial design of a study but also on many strong assumptions, namely that it is possible to generate a sample large enough to be able to identify two separate samples from within it with enough statistical power to perform a thorough econometric analysis, where the only difference between the groups was receiving the health intervention.

Also, National Academies of Sciences, Engineering, and Medicine (2016) states this method assumes there are no unmeasured confounding factors. However for a study to properly implement this technique in a way that minimised the extent to which this assumption is violated a wealth of information would be needed on each respondent, which is unlikely to be possible for a large sample.

In the absence of being able to match participants, a common methodology is to utilise a form of structural equation modelling (Stuart, 2010; Heckman, 2008; Maxwell and Mittapalli, 2012; Wood et al., 2011). Hox and Bechger (1999) outlined that structural equation modelling combines factor analysis with regression or path analysis. The technique is mostly of interest to theoretical concepts and presents the relationship between the factors observed and the dependent variable as a path analysis. Maxwell and Mittapalli (2012) put it simply by explaining that the technique seeks to find causal relationships via the correlations between variables. Chapter 3, highlights that factor analysis and regression analysis are the two main statistical techniques to be used within this study, suggesting that to some extent structural equation modelling has been utilised.

While this is true to some extent, as noted by Hox and Bechger (1999), structural equation modelling includes latent and observed variables. Within the approach detailed in Chapter 3, it is clear that no latent variables have been implemented. This is because, from a

practical perspective, it would not be possible to capture meaningful latent data when using a health intervention that has not been implemented before by participants, or has only been partially implemented. Appendix A shows that respondents were asked if they were aware of any workplace-wellbeing initiatives organised by their organisation and to what extent did this affect them whilst at work in an attempt to obtain latent data regarding the workplace health initiatives.

However, upon review of the study materials it became clear that this data does not accurately act as a latent proxy for previous workplace health initiatives as the measure relies heavily on the respondents recall and does not capture information about what the policies were, when they were implemented or how they were implemented. All of this data would be required to build an accurate measure of the workplace health initiatives prior to the study period.

This is also why another common methodology within the literature used to estimate causality has not been utilised within this study; lagged models (Allison et al., 2017; Allison, 2009; Leszczensky and Wolbring, 2019). These approaches include lagged variables for both X and Y at two different time points (Allison et al., 2017). In the context of this study this would mean there would be a lagged variable for the factors associated with the Charter. While the relevancy of this technique is recognised as a way to measure causality in some economic contexts, for example they could be used to see if education affects GDP or vice versa, the technique is unlikely to be feasible when evaluating a new or recent health intervention. This is because previous data from an earlier time period would be needed, and it would likely need to be the same data which could create extra assumptions that could affect the modelling process.

Instrumental variables is another statistical approach that could be used to estimate causality (National Academies of Sciences, Engineering, and Medicine, 2016; Wood et al., 2011; Becker, 2016; Stuart, 2010; Arellano and Bond, 1991). This technique relies upon the identification of a factor that is related to the treatment being studied but does not affect the outcome measure directly (Wood et al., 2011). This approach would allow for the estimation of a causal effect through a specific treatment (Becker, 2016).

While this technique is the most feasible of those discussed, as stated within the literature concerning instrumental variables identifying a suitable instrument can be difficult (Becker, 2016; Wood et al., 2011; National Academies of Sciences, Engineering, and Medicine, 2016). Moreover, within the employee wellbeing-performance relationship it is unlikely that there will be an instrument for every factor of wellbeing that is able to meet

these criteria. For example, it is unlikely to find an instrument that is associated to a person's mental health but has no effect on the extent to which they exhibit presenteeism.

Additionally, as Becker (2016) states, the instrument is only relevant for those that are affected by it and so the results are not indicative of what would be experienced by the whole population. This would reduce the external validity of any study seeking to evaluate causality between employee wellbeing and performance. Furthermore, any instrumental variable that fits this criteria would have the underlying assumption that X affects Y, which does not allow for reverse causality and that is still yet to be proven or disproven for the employee wellbeing-performance relationship.

The above discussion outlines four theoretically strong and valid statistical techniques to measure causality. However, these techniques rely on relatively unrealistic assumptions and criteria, which when applied to the employee wellbeing and performance relationship make the techniques very difficult to implement. This is likely to be why causality has not been examined in depth within the literature presented in this literature review and why, despite the design chosen, this study was also not able to sufficiently measure the causal relationship present.

As stated above, the literature has mostly utilised a single cross section research design. However, when discussing how can causality be measured it is important to acknowledge that many of the most important tenants of causality estimation rely on the research design chosen.

When discussing how research design can be utilised to estimate causality, few approaches are discussed more often as randomised control trials (RCTs), or randomised experiments. As stated by National Academies of Sciences, Engineering, and Medicine (2016), RCTs randomly select participants to be in a treatment or a control group, which will cause the unobserved confounders to be balanced between the groups as the sample size increases. Other authors recognise the usefulness of this approach by outlining that the randomisation within these trials, or experiments, mean the treatment effect should be the only difference between the two groups (Warner, 2018).

While this approach is acknowledged to be a useful way to estimate causality, they are not very feasible or appropriate outside of a strictly scientific experiment. For example, National Academies of Sciences, Engineering, and Medicine (2016) notes that these studies often have strict entry criteria. This means the study, by design, is already making assumptions about its potential population and is already limiting the external validity of the study. When considering most economic policies and interventions it is not possible to gate-

keep who has access to said policy, and so a randomised experiment conducted in such a way would not yield meaningful results.

Within the context of a health and wellbeing policy intervention, like the Charter, it would not be possible to conduct such an experiment. The design of the Charter would not allow for respondents to be randomly selected into treatment groups as they randomly select to participate with the Charter. Also, to ensure this methodology is carried out effectively any study would need to ensure that respondents are homogenous (National Academies of Sciences, Engineering, and Medicine, 2016) which would be almost impossible within this context given the amount of variables that would need to be considered and matched for each individual.

RCTs may be considered the gold standard for estimating causality according to Leszczensky and Wolbring (2019), but for economic interventions that rely on observational data, the use of control groups could be considered RCTs equivalent. Heckman (2008), outlines the econometric approach to measuring causality which uses counterfactuals to compare outcomes between two groups of respondents that are the same as one another, except for whether or not they received/experienced the treatment, to evaluate causality; this approach is supported throughout the literature, although it is not always labelled as such (Stuart, 2010; Weitzen et al., 2004; National Academies of Sciences, Engineering, and Medicine, 2016; Rosenbaum, 1987; Stuart and Rubin, 2008).

While this approach would enable causality to be evaluated, much like RCTs, this approach is not a practically feasible research design. For example, Heckman (2008) notes that within this approach the respondents need to be the same and for the only difference to be whether or not the respondent received the treatment.

From a practical perspective, this research design is extremely difficult to implement within a primary research study that is assessing a policy intervention. This approach not only requires respondents be nearly identical to one another, but it does not account for many real-world situational concerns when collecting organisational data. The most obvious limitation to this approach in this context occurs if the person left their employer as they would then have to be removed from the study; as would the person they were matched with as their control.

The limitations of this approach are numerous but the importance and potential for it are known, as this was the intended approach for this study. As shown in chapter 3, section 3.10.3 data had been collected on a control organisation as the intention was to form a control group of organisations. A clear limitation would be that organisations could be matched but

individuals could not, but even if organisations are matched the approach would have allowed a stronger suggestion towards causality and could have been a foundation for future research to build upon. However, as discussed in chapter 6, the methodology is very resource intensive and could not be implemented. This is likely to be a significant reason why the studies discussed above have focused on single cross section designs and have not been able to evaluate causality.

That being said, and as discussed previously, longitudinal designs would allow for an evaluation of causality. As has been stated previously, the main benefit to utilising a longitudinal design is that it allows for participants to be researched over time which allows for changes over time to be identified (Rahmadi et al., 2017; Wunsch et al., 2010). Additionally, Rahmadi et al. (2017) note that longitudinal designs require fewer participants than cross sectional research designs to generate the same statistical power.

While the usefulness of a longitudinal design has been noted throughout the literature as the most effective way to establish causality in non-experimental designs, this approach has similar limitations as the econometric approach. The clearest of which is the need to survey the same respondents over time. Panel data may be seen as crucial to establishing causality but it is very difficult to gain panel data for a health intervention policy as people do not always remain with their employers and, similarly, organisations do not always participate with a health intervention such as the Charter.

This means that gaining panel data on Charter employees relies on the individual not leaving their employer over the study period but also that the organisations remain active participants with the Charter. These are issues that are out of the researchers control in most studies that follow a similar design set out in chapter 3.

Wunsch et al. (2010) also outlines a number of issues relating to the longitudinal design approach, including the high costs involved with undertaking such an approach, the high levels of selection bias that affect many studies utilising this approach (see Chapter3, section 3.10.2 for a full explanation of how selection bias could have occurred within this study at an organisation and individual level) and that a longitudinal design needs to take into account all possible causes for the outcome that could occur over the study period. These issues affect the feasibility of such an approach and showcase why so many studies favour a cross section design.

Warner (2018) states that cross section research designs have the weakest ability to evaluate causality. Section 2.2.1 of this literature review has discussed the limitations of a single cross section approach in detail, but it is important to acknowledge the strengths of this

approach. Crucially, a single cross section analysis does still generate important and meaningful outcomes that are important when discussing causality.

As outlined by Warner (2018), cross-sectional designs are the first step in making a causal inference as they identify potential associations within a relationship while also controlling for various control variables concerning alternate hypothesis; due to this, this approach can be very important to testing a causal hypothesis. Wunsch et al. (2010) outlines that not only is cross-sectional research much simpler and more cost effective to undertake, they also have less sample bias as anonymity is easier to ensure, and they are more likely to capture the extreme ends of a data set, for example heavy smokers, as the study is a short one off survey.

While the causality estimating power is severely limited, cross sectional research should not be dismissed. Cross sectional research is an important step towards testing a causal hypothesis and the reasons outlined by Wunsch et al. (2010) are likely to be why this design is so prevalent within the employee wellbeing-performance literature. Moreover, it could be argued the literature is not developed enough to tackle the issue of causality yet as this research base is relatively new and growing.

Cross sectional research has a very important part to play in building the literature towards this objective as this form of research is needed to satisfy the three preconditions for causality set out by Warner (2018). Here it is stated the variables included within a causal analysis must be associated, the independent variables precede the dependent variable in a temporal order and that all alternative hypothesis have been previously dismissed.

Currently, the literature is still developing the first of these preconditions. As outlined in Chapter 4, section 4.1 this study has utilised a repeated cross sectional design by capturing data on the same organisations over time but not the same individuals. According to the UK Data Service (2015), this is an approach that allows for a discussion of changes over time, but as panel data is not included the approach does not discuss individual changes over time, only at the aggregate level.

Many of the challenges with estimating causality, and the limitations of specific approaches, have been discussed throughout. However, two significant limitations are the forced observation of participants in one outcome group and the nature of the causal relationship itself.

Regarding the former of these, this mainly concerns counterfactuals as the literature outlines that, when using observational data, due to respondents being placed into a treated or untreated group it is not possible to observe respondents in both outcomes at the same time

(Heckman, 2008; Reiter, 2000). This effects a causal inference made as individual treatment effects are not able to be formed (Heckman, 2008). Heckman (2008) also, notes that when the data is gained through the choices of respondents then selection bias will be present in any causal model. The example provided by Heckman, of a parent and a child, may not be relevant to this study but section 3.10.2 in Chapter 3 recognises that selection bias is likely to be present within this study and discusses it in detail at both the organisation and employee level.

The latter of the two limitations stated, references the literatures acknowledgement that the causal relationship may not be simple and direct so a causal inference of X equalling Y may be misplaced. Warner (2018) outlines that the observed causal relationship may have occurred through another variables effect on Y or that X can only affect Y under certain circumstances.

While it is probable that this would form the basis of an assumption within the study, this challenge is especially important when trying to estimate the causal relationship between employee wellbeing and performance. As has been stated throughout, causality within this relationship could be of a reversed nature and it is very likely that some element of the observed results are due to mediating and moderating effects, to some extent. As these factors are so difficult to account for within a quantitative study given the finite amount of data that can be gained on such a broad and detailed subject matter, identifying a causal relationship for wellbeing and performance is extremely difficult.

Expanding upon this idea, the nature of the subject matter itself could be viewed as a limitation to identifying the causal relationship between wellbeing and performance. Wellbeing has been shown throughout this literature to be a nebulous, personal and complex subject that will mean something different from person to person. When the question is asked; what is wellbeing? The answer will be a combination of many aspects of a person's personality and being, for example how they feel regarding a certain topic, change, environment or a style of leadership.

Aspects of wellbeing like this, ones that are emotions and perceptions, are very difficult to quantify and it becomes almost impossible to account for every factor associated to an individual's wellbeing, which would allow for a causal relationship to be clear and straight forward. This reason, along with those challenges and nuances outlined above and throughout the literature review show why there exists no study that seeks to identify and/or definitively evaluate causality between employee wellbeing and performance. This is despite

the required techniques and approaches being available that theoretically should facilitate such an evaluation.

2.4.2 Sectors

Sample demographics can also have an effect due to the types of sectors, industries and organisation size that are analysed. The literature is based mainly on studies that focus on a specific industry, sector or organisation size (Absar et al., 2010; Bloom et al., 2006; Krauter et al., 2013; Gardener et al., 2004; Datta et al., 2003; Kehoe and Wright, 2010; Levy et al., 2012; Weisberh and Sagie, 1999; Park, 2002; What Works, 2015; NICE, 2012; Devasheesh et al., 2013; Chi et al., 2013; Whitfield, 2000; Angle and Perry, 1981; Chen, 2011; RobertsonCooper, 2015) with only a small number of studies including respondents from a variety of sectors or industries (Saks and Rotman, 2006; Wood and de Menezes, 2011; Delaney and Huselid, 1996; Konrad and Mangel, 2000; Goetzel et al., 2002; Goetzel et al., 2001; Koch and McGrath, 1996).

While this is not an exhaustive list of all studies that have been analysed, the brief overview provided here does show how skewed the literature is to focusing on one specific sector or industry. The context of these sectors and industries will have a critical role in determining the type of results that are obtained. This is supported by the findings of Young and Bhaumik (2011) who found that access to health services were biased on large organisations in the public sector. This shows that the external validity of studies that focus on specific industries and sectors is affected, and the sectors and industries are normally very specific.

This is especially true given that most studies are based in the manufacturing or the health and education sectors. These sectors can have very specific cultures, processes and tasks, and their results could not be credibly applied to organisations in a variety of different industries, such as the hospitality industry, the armed forces and the pub and bar industry.

These will all have different cultures implying that wellbeing variables that are highly relevant to manufacturing organisations may not be suitable to other industries. This reliance on a specific sector or industry means the current literature is lacking a wide variety of knowledge of how wellbeing and performance interact in a wide variety of contexts.

Similar limitations exist around the sizes of the organisations analysed as most of the studies referenced above are based on large organisations (Bloom et al., 2006; Hafner et al., 2015; Huselid, 1997; Kang et al., 2012; Taris and Schreurs, 2009; Datta et al., 2003;

Devasheesh et al., 2013; What Works, 2015; Park, 2002; Kehoe and Wright, 2010; Canibano, 2013; Kinman and Jones, 2008) and only Salahudin et al. (2012) and Black (2008) focused on SMEs or a variety of organisation sizes. Moreover, transparency is an issue within the literature with many studies not providing enough information about their sample or methodology.

The omission of smaller sized organisations questions the external validity of the literature as smaller organisations face different issues than larger organisations. This is partly due to the differences in resources across organisations, but SMEs also differ with regards to what their employees need and want. Some wellbeing concepts analysed in studies based on large organisations may not be suitable or relevant for smaller organisations.

This all emphasises the need to move away from the sample demographic information that appears to dominate the literature, and research should attempt to focus on countries outside of the US and be based on a variety of sectors, industries and organisation sizes if the literature is to be tested for its external validity, practicality and relevance.

2.4.3 The Role of Management

The focus on certain organisation sizes and industries could be a reason why the role of effective management has been largely omitted from empirical studies. Nevertheless, the roles that managers and management have in determining performance has been highlighted extensively throughout theoretical discussion (Caverley et al., 2007; Bierla et al., 2011; Ramsey, 2006; Cooper and Dewe, 2008; Unum, 2015; NICE, 2015; Joarder and Sharif, 2011; Brough and Frame, 2004; Houkes et al., 2003).

The role of effective management has most notably been outlined within the Bath Performance Model where it can be seen that front line managers are one of the core focal points of the model (Purcell, 2004). The model highlights how front line management can affect performance via organisational commitment and discretionary behaviour.

Purcell (2004) uses a case study of four supermarkets and found those stores who had low scores for satisfaction, job influence and discretion had low scores for performance measures, and vice versa. Numerous studies now support Purcell's findings that effective management is associated with improved employee wellbeing and performance (Gorman, 2006; Lockwood, 2007; Robinson et al., 2004; Towers Perrin, 2003; Park, 2002; Tschopp et al., 2013; Alfes et al., 2012; Binoy, 2003; Black, 2008; NICE, 2015; RobertsonCooper, 2015; White et al., 2003; Van de Voorde et al., 2012). Specifically, the role managers have in

improving performance via wellbeing appears to be focused on three key areas: engagement, communication and manager training and policies.

Engagement and communication have been found to be key areas in which line managers can improve employee wellbeing and performance. Gorman (2006) states that greater recognition and involvement will improve employee engagement; effective communication can facilitate this but this needs to be frequent and interactive. This is supported by Lockwood (2007) who states improved engagement is the result of clear, consistent and honest communication. This pathway could also facilitate a feeling of being valued and belonging, and the importance of the communication-engagement link is supported by RobertsonCooper (2015) and Robinson et al. (2004).

Unum (2014) highlights the importance of management training by stating that in order to ensure that an organisation is considered a caring company they must ensure there is a range of line management training available and that managers are trained to notice the signs of stress and know how to deal with this. Various authors support the view that management training is needed to ensure that front line managers can help employees and their wellbeing (RobertsonCooper, 2015; NICE, 2015; NICE, 2012b; Kinnie et al., 2011; Unum, 2015).

Numerous studies have discussed the use of corporate policies with the general consensus being that if an organisation wishes to improve employee performance and wellbeing then they must ensure that wellbeing policies are clear and factored into all corporate policies, as well as the corporate culture (NICE, 2015; NICE, 2012b; Godard, 2004; Robinson et al., 2004; Pirzada, 2013; Purcell, 2004). In order to achieve this, many studies discuss the importance of senior management being on board as they will be asking line managers to implement policies (Unum, 2014; NICE, 2015; Goetzel et al., 2002; Macleod and Clarke, 2011; Towers Perrin, 2003; Bajorek et al., 2014).

While these findings do highlight the importance of effective management regarding employee wellbeing and the main areas in which the literature believes this can be achieved there are some limitations with this approach. As stated previously, Fleetwood (2006) outlines that not all policies explicitly benefit the employee as expected. Practical implementations of theoretical ideas needs to be undertaken with caution as there could be adverse consequences, although it should be noted that Fleetwood's (2006) discussion is not based on an empirical model and is purely theoretical.

Furthermore, while there appears to be a general consensus on the theoretical role of managers, Sainsbury Centre for Mental Health (2007) and SAMH (2006) indicate that there is a real world disconnect as both studies highlight how a large majority of employers

understate the prevalence of poor wellbeing. SAMH (2006) found that 30% of employers thought less than 1 in 20 employees would suffer from poor wellbeing and that 40% viewed employees with a condition as a risk.

Sainsbury Centre for Mental Health (2007) expands upon this by finding that 50% stated their workforce would not suffer from a health problem. Furthermore, Sainsbury Centre for Mental Health (2007) found that 40% of employers would not employ someone with a mental health issue and only one third of employees would outline their mental health experiences on a job application form.

While these findings do show that tackling stigma and discrimination is an important step in improving employee wellbeing and performance, the results ultimately highlight that there is a large gap between the opinions and behaviours of managers and the theoretical suggestions to improving wellbeing, suggesting that a large majority of employers are not using the theory to inform their opinions and subsequent organisational culture. Despite these limitations, arguably the greatest limitation of the literature is that while these studies do outline the importance of effective management they do so almost always qualitatively.

Although qualitative results provide the literature with useful and interesting findings, an empirical study is the only way to statistically test if the theories and links discussed above exist. As has been discussed throughout this review, quantitative measures do have many limitations in terms of their scope, biases introduced and sampling. However, a gap exists due to the lack of empirical studies that examine the role of managers, and therefore if the role of managers is to be expanded upon further then the logical progression is to empirically explore the relationship between management, employee wellbeing and employee performance.

This could be explored by using health interventions as case studies show that implementing a health intervention can improve absenteeism, presenteeism and employee turnover rates and overall net financial gains (McDaid et al., 2008; SAMH, 2006; Unum, 2015; Bajorek et al., 2014; Goetzel et al., 2002; Berry, 2010; Kinnie et al., 2011). Often case studies show that health interventions can lower the risk of mental and physical health conditions and improve the employee's social wellbeing (Centres for Disease Control and Prevention, 2013).

While these are all positive findings, the literature does highlight that the participation rate from employees tends to be quite low. Young and Bhaumik (2011) found that only 15% of employees who had access to stress management services participated in them, whereas the American Psychological Association (2011) found that 25% of employees participate in health and wellness programs. These results highlight that while health interventions are

beneficial to the organisation and employees, organisations implementing a health intervention should try to ensure that employees participate with it, because only then will the full effects be felt by the organisation and employee.

The low participation rates could be due to various factors as this could reflect the policies not being appropriate or relevant to most employees as well as reflecting employees' not wishing to highlight any potential health and wellbeing issues. While these could be reflected in the low participation rates knowledge of why employees decide not to participate with a health and wellness program cannot be known without qualitative data.

2.5 POSSIBLE REASONS WHY THESE ISSUES ARE PRESENT

This section explores the possible reasons why the confounding issues discussed above are present within the literature. The product life cycle outlines the lifespan of a good or service and states that over time once a product enters the marketplace demand rises in terms of sales, then peaks and then plateaus before entering a decline. The length of the cycle and the volatility of the cycle varies from product to product but this is a cycle that all products will follow except for those that are considered to be essential to human survival, like water, or addictive products, like smoking.

Services also follow this cycle and health interventions could also follow the same cycle. As outlined by Levitt (1965), the product life cycle follows four stages which are: Development (first bringing the product to market before there is demand for it generating low sales), Growth (demand increases and the size of the market expands), Maturity (demand levels off) and Decline (the product begins to lose its appeal and sales start to decline).

The concept of the product life cycle has yet to be applied to the HRM and wellbeing literature despite it being possible that health interventions could follow the same stages. Development brings the health intervention to employees and incurs some research and development costs. At this stage the participation rate is low as organisations try to publicise the new intervention and try to fix any implementation issues.

Growth occurs for a health intervention when employees begin to interact more with it. If the intervention is relevant and suitable then it is likely to be complimented by higher engagement with the intervention over time and, theoretically, improved performance and cost savings. These savings can be re-invested into the intervention to improve its effectiveness and scope.

At the maturity stage the main challenge an organisation would face would be to maintain employees' interest and engagement with the intervention. This would eventually lead to the decline stage as there is only a finite amount of policies an organisation can introduce before they run out of the resources needed to maintain its effectiveness. The latter of which could begin to decline over time regardless of resource constraints.

This could be due to employees becoming so used to undertaking their new behaviours that they become "the norm" so the impact on their perceptions of their own wellbeing from a walking meeting, counselling or being able to work from home begins to taper off and employees no longer feel these policies are altering their state of wellbeing. Despite still benefiting from the new normalised behaviour, it could be that employees are not recognising the change, and hence the change would not show when conducting empirical studies.

The theoretical proposal within this study is that health interventions do follow the product life cycle and that this plays a key role in determining the observed relationship between employee wellbeing and employee performance.

The effect of the product life cycle could be felt due to the time of data collection relative to the health intervention stage in the life cycle. For example, if data are collected when the health intervention is in the growth stage then it is likely that results will be very positive and show that employees are more physically active, less stressed, more engaged and more satisfied which results in improved performance.

However, if the same data were collected on the same health intervention when the health intervention is in the decline stage then the results could show that employees are either indifferent to the health intervention or that they are not less stressed, not satisfied, not engaged and are showing signs of adverse performance.

This means that depending on when the data was collected the same health intervention in the same organisation could show a positive, negative or no association. If health interventions experience this life cycle then this could be a major reason why the current literature is inconsistent and contradictory. Research is required to prove that this effect exists.

There are multiple ways in which the same wellbeing concepts and performance variables are defined and measured. This is likely to be due to employee wellbeing being a personal and individual concept, so that one person's idea of wellbeing or what it means to be healthy is not necessarily going to be the same as another's idea. Matthews (2014) defines

wellbeing as the sense of control, purpose and a feeling that their job is worthwhile and Grant et al. (2007) defines it as the overall quality of the employee experience.

A more complex definition is provided by NICE (2009) which defines wellbeing as a dynamic state where the individual can develop, work productively and creatively, have strong and positive relationships and contribute to their community. NICE (2009) supports the two previous definitions by recognising that its measure includes when a sense of purpose has been achieved.

Whilst these definitions are a brief insight into how varied wellbeing definitions can be they also outline a significant limitation within the literature as these wellbeing definitions are likely to lead to different measurement tools. Although studies can all be thought of as analysing the relationship between employee wellbeing and performance, they all measure a concept slightly different to one another. It could be argued that studies with different definitions and subsequent measures of wellbeing may not be directly comparable and it is this comparison that could be causing inconsistencies within the literature.

The results found in the literature may appear to be inconsistent because the measures of wellbeing are slightly different. This perspective is supported by Boxall and Macky (2009) who acknowledge that managerial practices are often subject to a confusing array of definitions resulting in disagreements regarding their effects on performance. The way in which a study defines wellbeing could also affect the interpretation of the results. If wellbeing is defined by an experience or a sense of purpose then this could lead to a different interpretation of the results than if wellbeing was defined as focusing on employee health.

This variation in broad concepts extends to employee performance and Koopmans et al. (2011) state that different approaches exist within different disciplines. Employee performance is either defined as a productivity or an efficiency ratio (Huselid et al., 1997; Konrad and Mangel, 2000; Perry-Smith and Blum, 2000; Mclughlin and Sydney, 1990; Datta et al., 2003, Binoy, 2003; Spring, 2011; OECD, 2011; Freeman, 2008) or as an employee behaviour outcome measure such as absenteeism, presenteeism and employee turnover (Koopmanschap et al., 2005; McDaid et al., 2008; Burton et al., 2004, Allen, 2008; Escorpizo, 2008; Oyeranti, 1991; Young and Bhaumik, 2011; Mitchell and Bates, 2011; Harter et al., 2002; Farquharson, 2012; Chen, 2011; Centres for Disease Control and Prevention, 2013; Beaton, 2009).

While it is accepted that performance is a difficult concept to define and measure, these results show that the way employee performance is determined has a direct link to how the term is measured.

This difference is not just observed based on whether a study views performance as a ratio or as employee behaviour, it is also observed within measures of absenteeism and presenteeism. For example, Mitchell and Bates (2011) measured absenteeism by asking employees how many days off they had in the previous year whereas Farquharson (2012) used data from the HR department for the previous 12 months.

Although these measures of absenteeism are very similar they are not measuring the same thing and a number of biases are likely to be introduced through a self-reported measure. At the broad conceptual level and at the specific measurement level, it could be argued that comparing the results of studies that define and measure employee performance differently may not be suitable.

Many aspects of employee wellbeing are often narrowly conceptualised. Employee wellbeing is a term that is often narrowly conceptualised as there is great variation in what is deemed to constitute employee wellbeing. The variety is highlighted when the number of concepts analysed to reflect wellbeing can range from between 4 and 19 concepts (Whitfield, 2002; White et al., 2003; Delaney and Huselid, 1996; Konrad and Mangel, 2000; Perry-Smith and Blum, 2000; Datta et al., 2003; Goetzel et al., 2002; Absar et al., 2010).

Studies that narrowly conceptualise employee wellbeing may also only capture part of the concept. For example, Absar et al. (2010) conceptualise employee wellbeing by focusing on recruitment and selection, training and development, performance appraisal and compensation. By doing so the study is not analysing the effect of many other important wellbeing concepts, such as job satisfaction, engagement, flexibility, role of management and physical activity among others.

Given the extent of the current literature that has found these to be important wellbeing concepts, if a study omits almost all of these concepts then it could be argued that employee wellbeing is not being fully measured. A consequence of this type of narrow conceptualisation is that the results gained are likely to be different to those generated by other employee wellbeing studies.

Some studies take a very narrow approach and while they include a large number of variables they are mainly focused on one specific concept of employee wellbeing. For example, White et al. (2003) included appraisal systems, group working, specified working times, flexible hour's system and personal discretion over starting times. While their measure captures a wide range of concepts it could be argued that they do not reflect all dimensions of wellbeing, Huselid (1995) had 18 variables that focused on a variety of aspects of employee

wellbeing which were so diverse that the data set was also used by Guthrie (2001) and Data et al. (2003) for their conceptualisations of a broad HRM intervention.

Employee health is often characterised by focusing on depression, stress and anxiety. This is despite the findings outlined above showing the importance and the effect of other common health issues such as insomnia, schizophrenia, PTSD and various physical health conditions. While depression, anxiety and stress are generally considered to be what constitutes employee health, there are some studies that broaden the scope of employee health.

For example, Mitchell and Bates (2011) and Goetzel (2004) broadened their conceptualisations of mental health to include at least 10 different health conditions. Even though the two studies did not focus on the same conditions, the results showed that depression and mental illness were less costly than arthritis, hypertension, cancer and bronchitis. Although these studies should not be compared with those that narrowly define employee health, they do show that depression, anxiety and stress are not always the most costly health conditions.

An extension of how the current literature defines, measures and conceptualises broad wellbeing and performance measures is whether or not the concept is a short or long term measure. This is an issue within the current literature that has rarely been acknowledged but it is important. For example, Young and Bhaumik (2011) found that employees who had long term conditions tended to take more days off work, 3.4 days compared to 1.6 days for those with short term conditions. This finding shows the way employee health is considered can affect the results, and absenteeism is the main performance measure that is likely to show different results if the measure is a short or long term measure.

Most measures have a 12 month recall period but this ignores the short term absenteeism that people undertake. This is the most common form of absenteeism that organisations will experience, such as the common cold, yet this is an under-researched approach to evaluating wellbeing and absenteeism. While some measures of absenteeism do use smaller recall periods and focus on short term absenteeism, all studies that use absenteeism as a performance measure label both approaches as measurements of absenteeism, and this could be inappropriate.

A gap exists within the literature as there is no study that evaluates short and long term absenteeism together from a broad and varied population. An exploration of this difference could improve the current literature as the relationship between employee wellbeing and performance is likely to be understood in more depth while explaining why there is conflicting and inconsistent results within the literature.

This section has proposed many possible reasons why the current issues within the literature could be present. The possibility that these issues could be a natural occurrence and could be due to the product life cycle suggests that if health interventions do follow a life cycle then the time at which the study is conducted could significantly impact the results gained. While this is an interesting theory, analysing this is beyond the scope of this study and so further research into the timing of these studies is required.

The limitations could also be present due to the variety of definitions and measures being used within the literature for key concepts, such as employee wellbeing and performance. The review has shown that within the literature there are multiple approaches to measuring these concepts which are likely to be due to the definition that is formulated and used with various studies using productivity based measures (Huselid et al., 1997; Konrad and Mangel, 2000; Perry-Smith and Blum, 2000; Mclughlin and Sydney, 1990) or employee outcome based measures (Koopmanschap et al., 2005; McDaid et al., 2008; Burton et al., 2004, Allan, 2008; Escorpizo, 2008; Oyeranti, 1991).

These differences have outlined the need within the literature to have standardised metrics for measurement as well as a standard definitions for these outcomes. Without them organisational context has too large of an influence for studies to be able to accurately state they are all measuring the same concept, meaning comparison across studies should be undertaken with caution.

The scope of the studies also hinders the literature as some studies take a very narrow approach to how employee wellbeing is conceptualised. This can be observed in the types of wellbeing concepts that are frequently analysed with many broad empirical studies omitting behavioural concepts in favour of more traditional concepts such as job satisfaction, engagement and flexibility.

Moreover, this lack of scope is observed in what type of employee performance is analysed as most studies do not distinguish between long and short run employee performance. This creates a significant gap within the literature, especially for absenteeism focused studies, as most absenteeism that is experienced by organisations is not long term.

The literature could be vastly improved upon if these possible reasons for the existing limitations are addressed as this could improve the depth of knowledge available, the consistency of that knowledge as well as the quality and external validity related ofthe knowledge. This would mean the literature is more useful to future researchers and to practitioners who rely on this literature to justify the implementation, or the continued use, of a health and wellbeing strategy.

2.6 CONCLUSION

This literature review highlighted many limitations that currently exist in the employee and performance literature, namely that the literature provides results that are inconsistent and contradictory. There are many studies that have found a positive association between employee wellbeing and employee performance (Datta et al., 2003, Boxall and Macky, 2009; Vandenberg et al., 1999; Mackie et al., 2001; Macky and Boxall, 2008) but also many studies that have found a negative or no association (Bloom et al., 2006; Neumark, 2001; Guest et al., 2003; Wright et al., 2005; Godard, 2004). It is not possible to state with a high degree of certainty what the expected relationship between employee wellbeing and performance should be.

This creates considerable problems for researchers and practitioners; for researchers the inconsistency of the results mean it is not possible to use the current literature as a solid foundation for future research. For practitioners the inconsistent results mean that it is difficult to make a policy decision with confidence about the outcome. The literature review has shown that there are likely to be many causes of the inconsistent results and these will affect every organisation or government attempting to implement wellbeing policy changes.

The effects of having a literature based on inconsistent results not only shows that further research is needed but also that further research is needed to highlight the potential causes of these inconsistencies and attempt to control for them. While this is likely to produce more results that conflict with the literature in the short term, these results should be viewed more as a bridge between the types of methodologies being implemented.

Another important issue within the literature is the lack of an empirical analysis of causality. Some studies use a methodology that enables them to indicate to some degree the direction and the strength of causality present but a possible improvement to this is to conduct future studies using a longitudinal design and a control group.

While it is accepted that there is no methodology that could prove the existence of causality, a longitudinal approach could build upon the literature significantly as it would enable an analysis of the changes in the wellbeing-performance relationship over time while also analysing the effects of not having the policy implementation in place. This would provide an indication to the effect of the policy with more validity than is currently observed within the literature.

However, for this type of analysis to be properly applied within this literature there are many methodological, statistical and practical issues that would need to be resolved. This

is likely to be why single cross section analyses are used as often as they are, especially considering these studies do provide valuable and important results.

The current literature is also limited on a global scale as it is dominated mainly by studies based in the USA that often focus on a specific industry or sector. This does not account for cultural differences or legal differences and it is likely to affect the types of wellbeing concepts that are analysed as some concepts may be seen as important, whereas in a different country they may be seen as standard aspects of the workplace.

This US dominance means that the external validity of the current literature is reduced as the findings of most studies cannot be applied with any degree of certainty to other countries. Therefore, practitioners from other countries are basing their decisions on a different culture, different legal frameworks, different workplace norms and different attitudes to employee health.

Despite some studies being based in the UK (Whitefield, 2002; White et al., 2003; Lawton, 1998; Kinman and Jones, 2008; Penna 2007; Macleod and Clarke, 2011) there is a growing need for UK based studies to ensure that future policy decisions by organisations and local and national governments are based on studies that do account for the UK's specific approaches and attitudes to employee wellbeing and employee performance.

The literature review also showed that many important wellbeing concepts are often overlooked by empirical studies. These overlooked variables tend to be behavioural variables that examine how employees behave when they are outside of work and can include concepts such as healthy eating, physical activity, alcohol misuse and tobacco use. These are often omitted despite multiple studies showing that they are the leading causes of many mental and physical conditions which are associated with a decline in employee performance (Hafner et al., 2015; NICE, 2008; NICE, 2012; Black, 2008; NHS, 2014; CDC, 2013; Baicker et al., 2010).

The roles these variables have in employee wellbeing are not acknowledged by the literature and so these variables are often studied in isolation from more traditional wellbeing concepts, e.g. job satisfaction. The literature only assesses employee wellbeing from the perspective of the workplace and does not fully analyse the relationship between employee wellbeing and performance, and hence the literature could be improved greatly if behavioural factors were included as this would allow for a more complete analysis of employee wellbeing as well as an analysis of the true effect of these variables on employee wellbeing.

As with behavioural and some mental health concepts, the role of effective management is also overlooked by empirical based studies. It may be overlooked within

empirical studies because the role of effective management has been discussed at length by qualitative studies, namely those that focus on theoretical exploration and discussion (Purcell, 2004; Gorman, 2006; Lockwood, 2007; Robinson et al., 2004; Towers Perrin, 2003; Park, 2002).

Within these studies the role of effective management is at the centre of the relationship between employee wellbeing and employee performance. The core features discussed within the literature regarding the role of effective management are improved line manager training, improved communication between management levels as well as employees and a change in organisational culture and policies.

Despite these findings within qualitative studies, which are supported by studies based on interviews by Baker-McClearn et al. (2010), the role of effective management is yet to be properly analysed within a broad wellbeing and performance empirical study. This is likely to be due to the concept of management being difficult to quantify and model. It is likely that most health interventions have been designed by management and will have to be implemented by managers. This could be the pathway that enables more robust analysis that explores and tests the theoretical discussions within qualitative studies.

The literature review also outlined there are many possible reasons why the issues stated above are present within the current literature with the most explorative reason being that health interventions and wellbeing policies may follow a product life cycle. The suggestion is that once a wellbeing policy is implemented by an organisation the effect of the intervention will rise before reaching its peak, engagement levels will plateau before beginning to decline.

This could occur with a health and wellbeing intervention as the policies could be assimilated into the organisational culture and day to day routine until they become normalised. If this were to occur then the returns on the intervention could begin to diminish over time for employees and organisations.

While this does propose that health interventions could have a finite but unknown lifespan, it ultimately suggests that the timing of data collection could cause the inconsistencies observed within the literature, suggesting that the results and the relationship are not necessarily wrong.

Differences in definition and measurement are likely to be two of the most important reasons to explain why the results found within the literature are varied and in conflict, yet this reasoning is often not acknowledged by empirical studies. The variation in measurement and definition of variables also leads to two other possible reasons for the contrasting results,

as it leads to the narrow conceptualising of some wellbeing concepts and the omission of short and long term effects. This has been observed most clearly for employee health which is often only conceptualised as depression, anxiety, stress and musculoskeletal conditions but other important and common health issues are overlooked within the literature.

Like the variation in definition and measurement of employee wellbeing variables, there are also variation in the definition and measurement of employee performance. This is most notable for presenteeism where the definition can vary but in essence presenteeism is conceptualised by attending work when ill or when the employee is not fit to do so (Demerouti et al., 2009; Cooper and Dewe, 2008; Biron et al., 2006; Holt and Powell, 2015; Garrow,2016).

If presenteeism were to be reconceptualised to focus on employee behaviour while at work then this could not only provide more accurate and detailed results but could also allow for more qualitative approaches to be used in conjunction with quantitative methods. Improved understanding of presenteeism could greatly enhance the existing knowledge surrounding the relationship between employee wellbeing and performance.

In a similar line of analysis the current literature rarely differentiates between the short and long term. This is very surprising given the long term nature of employee wellbeing with regards to how long a workplace health intervention can take to have an effect, how long the effects can be felt for and considering how long the recall periods can be for some performance outcome measures.

This variation seems to affect absenteeism the most as within the literature measures of absenteeism tend to have a 12 month recall period but with often no differentiation between the types of absence that have happened (Farquharson, 2012; Angle and Perry, 1981; Schaufeli et al., 2009; Braun et al., 2014). Most absences taken are likely to be relatively short, only lasting for 2-3 days and are due to things such as the common cold or caring responsibilities. By having a 12 month recall period that does not differentiate between these types of absences and those that could be significantly longer, such as being unable to work due to depression, then the data is likely to be inaccurate

There is a scarcity of empirical studies that examine whether there is a difference between how employee wellbeing affects short and long term employee performance. Exploring this relationship would greatly enhance the literature on the relationship between employee wellbeing and performance and allow policymakers to make more informed decisions.

Overall, it can be said that the employee wellbeing-performance literature is at a stage where it needs to move beyond theoretical discussion to testing theories while attempting to control for the limitations that are currently undermining the empirical analyses.

CHAPTER 3: METHODS

3.1 INTRODUCTION

When conducting a study that analyses the relationship between employee wellbeing and employee performance there are many questions that must be answered prior to any data collection or analysis, such questions that need to be answered are: Will the sample only focus on large organisations? Will the sample include all employees or only a targeted sample of all employees? What sampling method will be used to encourage participation? Are there any biases with the chosen sampling method? What potential methods are there for data collection and what approach is deemed most suitable? How will performance be measured? What statistical techniques will be used to analyse the data once it has been collected?

All of these questions are based on the current literature, as many studies focus on larger organisations from specific industries targeting specific types of employees. Furthermore, the current literature has shown there are a variety of different approaches to defining and measuring performance, suggesting that there are also a variety of different methods available to collect this data.

Some of these approaches may not be suitable for every study and so deciding upon how the data will be collected is vitally important as the approach could affect the data obtained. Additionally, due to the various definitions and approaches used there are multiple ways in which the data can be analysed in order to answer the broad questions posed by this study.

This chapter has been separated into two parts, a discussion regarding the methods employed and a discussion regarding the research design and approach utilised. The aim of this discussion is to present the approach to the research from a holistic perspective and to provide a broad overview of the chosen research approach and why this approach has been chosen. This section will also outline the methodological approach taken by this study and the statistical techniques and performance measures that have been used.

The second section of this chapter aims to discuss the research approach in more detail when discussing the specific aspects of the research design, how the process came to be and why these decisions were made. This section will focus on the survey instrument, the pilot process, the recruitment of organisations and employees, how data was collected and maintained and the sample procedure, including the potential for selection bias, followed by a description of the final sample.

3.2 METHODOLOGICAL APPROACH

This discussion is a brief overview of more detailed discussions that can be found within the research design sub-chapter within this chapter. The overview presented here focuses on four key areas where studies within the literature can diverge and take different approaches. These includes the industry and/or sector of focus, the data collection methods, the conceptualisation of wellbeing and the definition and measurement of employee performance.

3.2.1 The Chosen Approach – A Holistic Perspective

The unique structure of the Charter and the organisations that decide to participate with the Charter were the main considerations when deigning the research approach for this study. Evaluating the Charter was the original aim of this study and using the Charter as the foundation provided an opportunity to build one of the most unique samples to date within the literature.

Moreover, the Charter also allowed the study to construct a data set that takes into account almost every dimension of employee wellbeing relevant to the modern workplace. Bristol City Council were also consulted on the research approach to be taken prior to any organisation being contacted about the study and any data being collected.

Regarding the focus of the sample, the decision was made to not focus on any specific industry and/or sector and to not omit organisations based on their size. This was due to the need of this study to reflect the organisation level characteristics of the Charter and the City of Bristol within the sample. The decision was made to not place any restrictions on the organisations eligible to participate.

This affected many aspects of the research design including how data was to be collected, when data could be collected, how terms were defined and measured,the structure of the questionnaires regarding the use of Likert scales and the specific nature of the scales when used. This decision, and subsequent considerations, was made to ensure that no organisation could be omitted from potentially participating due to the specific way the survey or the research approach was designed.

The aim of this decision was to consider the potential constraints faced by organisations to generate a sample that was as diverse as the sample of organisations participating within the Charter.

The data collection approach followed two key stages; recruiting participants and collecting data. Organisations were contacted regarding their potential participation in the study via an initial email that outlined the study and their involvement and presentations at

Charter specific events. Following the initial contact with organisations, meetings were held with those organisations to discuss the study in more detail. This approach was used as it allowed for quick access to all Charter organisations, meaning they could all be informed about the study in quick succession. Where organisations did not reply to the initial email follow up emails were sent by the Council which did yield more responses. The meetings were used to discuss the study in more detail and provide the organisation with an opportunity to ask any questions they had about the study and the proposed approach. Organisations were also reassured that they could withdraw from the study at any stage.

When collecting the data, the approach used focused on collecting data from managers and employees using two original questionnaires across two data collection periods. This approach was used to try to capture any potential differences between the employees' and managers' experience of the workplace and to evaluate any changes over time.

The main rationale behind the two data collection period approach was to try to evaluate the extent to which organisations benefited from participating with the Charter over time. In order to facilitate such a discussion, it was outlined to organisations prior to data collection that it is crucial that the same employees participate in both data collection periods.

The conceptualisation of wellbeing within this study was guided by the Charter due to the need to represent the Charter within the study and because the Charter includes many aspects of wellbeing that were often omitted by previous studies. However, the decision was made not to focus on just the eight standards of the Charter but to build upon them to include more traditional aspects of employee wellbeing. This decision was made to ensure the study is not limited by the issues of having a narrow conceptualisation of wellbeing that were outlined in Chapter 2 and to ensure the effectiveness of the Charter was fully evaluated.

Moreover, it is important to conduct this evaluation in a context in which wellbeing is considered in a broad and inclusive perspective as this allows for a more realistic evaluation of the Charter. These decisions regarding the conceptualisation of wellbeing provide this study with many ways to contribute to the existing literature and help improve the knowledge and understanding of this relationship, upon which policy decisions are often based.

Further details about the measurement and evaluation methodologies of employee performance can be found in section 3.3.1, but from a holistic perspective the decision was made to measure employee performance as presenteeism, absenteeism and employee turnover. Performance was measured using these three measures as these are three outcomes

of low wellbeing that are direct reflections of an individual's performance, or ability to perform their job, and are often used to show the cost of low wellbeing to the macroeconomy.

Moreover, these are performance outcomes that are faced by all organisations, meaning they are not bound to one sector and/or industry or by organisation size. These are performance measures that can be considered important to every organisation and as such these can be applied to any sample of organisations.

This reason is also the motivation for separating absenteeism by short and long term absenteeism, as well as the lack of in-depth evaluation within the literature that fully explores the nuance of this relationship. Section 3.3.1 outlines the specific statistical techniques used to perform this evaluation, such as factor analysis, ordered probit, logits and negative binomials, and why these statistical techniques were chosen.

3.3 Employee Performance Measures and Statistical Techniques

This study used three performance measures: absenteeism, presenteeism and employee turnover.

Absenteeism: Absenteeism is said to represent the number of days lost over a given period of time. Generally this is measured over one year and is often collected by asking people how many absences they have had over a specific time period. The rationale for this measure is the same for presenteeism and labour turnover, namely that it is cited within the literature and is often used as a performance measure for employee wellbeing enhancing studies (Shi et al., 2013; Farquharson et al., 2012; Braun et al., 2014; Schaufeli et al., 2009).

It should be noted that some studies do not state how they measured absenteeism, suggesting that transparency is an issue within the literature (Mcdaid et al., 2015; Bajorek et al., 2014; ERS, 2016; Lerner and Henke 2008). This outcome variable, as well as presenteeism and employee turnover, can be applied to any sector, industry and organisation.

Absenteeism in this study has been separated into short term and long term absenteeism to assess if employee wellbeing affects have long or short term impacts. Short term absenteeism will be captured via a question within the employee questionnaire asking respondents to state the number of days they have been absent due to ill health in the previous three months. Long term absenteeism will be captured by asking employees if they have had a notable absence in the previous 12 months and, if yes, employees were then asked to state

how many days they were absent. A notable absence is defined within this study as an absence that required self-certification or a fitness to work note.

It should be noted there is potential for the two forms of absenteeism to overlap with one another, meaning respondents could consider absences in the three month short term period in the 12 month long term period too. This would mean the same period of absence is recorded twice within the data. However, the definition used in this study for long term absenteeism should ensure that respondents are able to separate between the two forms of absenteeism and record any short absences that did not require self-certification as short term absenteeism and not long term absenteeism. This differentiation was made clear to the respondents in the questionnaire, as can be seen in Appendix A.

Presenteeism: presenteeism is often defined and measured within the literature as a measure of productivity loss, or loss of working time over a given period of time due to ill health. There is no consistent measurement for presenteeism, although some common traits are present. All measures ask respondents to state if they attended work when ill with some going further to ask how they felt being ill affected their ability to work (Demerouti et al., 2009; Biron et al., 2009; Shi et al., 2013; Arnold, 2015; Gates et al., 2008; Callen et al., 2013; McGregor, 2016; Yang, 2016; Mitchell and Bates, 2011).

Presenteeism was captured within this study by building upon the measure used by Mitchell and Bates (2011) by asking "In the past 2 weeks, how much of the time did any health problem make it difficult for you to perform your normal job duties?" The possible responses were "none of the time, some of the time, half of the time, most of the time and all of the time". While this question does not give an exact figure for the amount of time lost, the options provided do enable a scale to be created that can be assessed over time.

The main limitation to this approach is not being able to express the precise productivity loss, however if the question asked for an exact figure then it is likely that respondents would not know this information and would provide inaccurate results.

Employee Turnover: This variable was intended to be captured via the data collection sheet, however as this was not possible a proxy question was used. Employees were asked "have you actively sought alternative employment in the previous 12 months?" This allows for change to be accurately measured based on the consensus that those organisations that see an increase in wellbeing should see a decline in employee's seeking alternative employment.

This is a similar method that has been used throughout the literature as turnover intentions are often used as a proxy for actual turnover data (Chen et al., 2011; Tschopp, C et al., 2013; Alfes et al., 2012; Chughtai and Zafar, 2006; Paile, 2011; Liou, 1998; Singh et al., 2014; Nivethitha and Kamalanabhan, 2014; Batt and Valcour, 2003; Cho and Lewis, 2011; Joarder, and Sharif, 2011; Baba et al.,1998), however this method goes beyond these approaches by focusing on an actual change in employee behaviour.

3.3.1 STATISTICAL TECHNIQUES

3.3.1.1 Factor Analysis

For a full overview of factor analysis including why and how this technique has been used in this study along with the factors that have been created, see Appendix D. Factor analysis is a form of data reduction and seeks to ascertain the underlying themes within a concept and use these themes to represent the original broad concept.

This technique can be used for broad and complex concepts and as such is a suitable technique for employee wellbeing. The main advantage to using this method is that it enables many employee wellbeing variables to be analysed effectively while retaining most of the original data.

3.3.1.2 Ordered Probit Regression

The ordered probit approach will be used to evaluate the relationship between employee wellbeing and presenteeism. Fox (2010) provides a detailed explanation of when and why a probit/logit regression is more suitable than a least squared approach. Fox (2010) outlines that if the outcome variable is qualitative then the responses can be thought of as 0 and 1. A least squares approach would not only allow for responses to be outside of this range but also requires that each response variable has the same weight. An ordered logit/probit does not assume this and does not allow for responses to go beyond 0 and 1.

Therefore an ordered probit regression is used instead of a least squared approach due to presenteeism being a dependent variable with a natural and categorical response ordering (Viola, 2012; Torres-Reyna, no date). A formal model for the ordered probit regression was detailed by Jackman (2000) and is presented below.

$$P[y_i = m] = \varphi(\mu_m - x_i\beta) - \varphi(\mu_{m-1} - x_i\beta),$$
$$= 1 - \varphi(\mu_{m-1} - x_i\beta)$$

Where m equals the possible thresholds Y can take, μ_{m-1} equals –infinity and μ_m equals +infinity and x equals the parameters. A log-likelihood function of this probability model is estimated to conduct the maximum likelihood estimation.

3.3.1.3 Logit Regression

This form of analysis follows the same principles as the ordered probit approach outlined previously, however the dependent variable does not have a natural ordering and is instead a binary variable. When the dependent variable takes this form the most common method is to use a logit regression (Chung-Ki, 2019). This method can be used to answer a range of questions, such as what is the probability a person attends college? The measures for short term absenteeism and employee turnover both have a binary outcome variable as short term absenteeism asks respondents "have you had any absences in the past three months?" and employee turnover asks respondents "have you actively sought alternative employment in the previous three months?"

Both measures have outcome possibilities of "yes or no", meaning they are the perfect structure to be used in a logit regression. A formal logit probability regression model is detailed by Chung-Ki (2019) and is presented below.

$$L = \prod_{Y_i=0} \Pr(Y_i > 0) \times \prod_{Y_i=1} \Pr(Y_i \leq 0)$$

$$= \prod_{Y_i=0} [1 - G(\beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i})] \times \prod_{Y_i=1} G(\beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i})$$

Where Pr(.) is the probability conditioned on the explanatory variables, which are denoted here as X, and G is the cumulative logistic distribution function.

3.3.1.4 Negative Binomial Regression

Long term absenteeism is modelled via a negative binomial regression which is used when the dependent variable is a count of the number of times it has occurred (UCLA, no date; NCSS, no date; Ford, 2016). This form of regression is an expansion of the Poisson regression that assumes the variance and the mean are the same (UCLA, no date; NCSS, no date; Ford, 2016). Negative binomials do not assume this equality, meaning this form of analysis allows for more realistic variation between the counts of the dependent variable.

It should be noted that NCSS (no date) do state that different authors generate different formal regression models for this model, suggesting that there is no consistent formal regression model for a negative binomial. However, Lawless (1987) and NCSS (no

date) both reference the same formal probability function for a negative binomial model for an observation i, which is outlined below.

$$\Pr(Y = y_i|u_i, a) = (1+x)^n = \frac{\Gamma(y_i + a^{-1})}{\Gamma(a^{-1})\Gamma(y_i+1)}\left(\frac{1}{1+a\mu_i}\right)^{a^{-1}}\left(\frac{a\mu_i}{1+a\mu_i}\right)^{y_i}$$

Where Pr is the probability, x is the explanatory variable, μ is the mean incidence rate of y, Γ represents gamma and a equals $\frac{1}{v}$ where v is a scale parameter.

3.4 RESEARCH DESIGN

3.4.1 Developing the Survey Instruments

The designing of the survey instruments followed a multistage process that involved the University and Bristol City Council. The starting point for designing the surveys was to further understand the Charter and use this as the foundation of the questionnaires. The Charter was used as the foundation of the questionnaires to ensure that the Charter was represented within the sample and the study could achieve its initial objective of evaluating the extent to which the Charter had an effect on employee wellbeing and performance.

Throughout this initial process the current literature surrounding the employee wellbeing and employee performance relationship was being reviewed in detail to be used to help build the questionnaires. The literature was used to do this in a number of ways, but from a broad perspective the rationale for this was to ensure the study built upon existing studies. This also provided the study with a strong theoretical foundation by utilising instruments/statements and perspectives that have been created, tested and implemented throughout the literature.

When focusing on the role of the literature specifically, the literature was used to build upon the standards of the Charter. The literature was used to add more depth to what was included in the Charter for each standard being represented in the questionnaire, enabling the standard to still be evaluated but it would be evaluated as a more complete concept. This step was taken to ensure that the standards were being represented fully and the study could add more to the existing literature.

For some standards of the Charter, such as the behavioural factors, just representing them adequately built upon the literature due to the narrow conceptualisation in previous studies. However, it was seen as important to try to conceptualise these terms in more depth than the Charter provided to contribute as much as possible to the existing literature.

The literature was also used as a means to identify gaps within the literature that the questionnaire could be designed towards resolving. This served as the main rationale for having two questionnaires, that targeted both the employees and the managers, as a review of the literature identified the lack of an empirical evaluation or discussion regarding a possible difference between their working experiences as a significant gap within the current knowledge. The specific design of the questionnaires and the rationale for having two has been discussed in more detailed below in section 3.4.2.

The literature was also used to help identify additional wellbeing concepts that could and/or should be included within the questionnaire, in addition to the standards of the Charter, and to guide the focus of the statements and questions asked regarding these concepts.

This was done by focusing on what aspects of wellbeing were being focused on by studies and what was being asked to respondents as well as focusing on what studies were not evaluating and asking respondents. For example, when discussing metal health it is rare that a study asks if employees feel comfortable discussing mental health issues with management rather than just focusing on if the conversations take place.

This approach was utilised to make the questionnaire the most complete measure of employee wellbeing possible. The rationale for this was to reduce omitted variable bias but also to study the effect of the Charter within a context of wellbeing that was as complete as possible. Furthermore, like the previous use of the literature, this approach identified where the study could contribute to the literature and ensure that the study added as much value as possible to the literature.

Besides using the literature, a key stage of the survey designing process was to work with Bristol City Council. The main reason for working with the Council at this stage was to clarify how the Charter was being represented within the questionnaires, what aspects of wellbeing were being evaluated and to confirm that the Charter was suitably represented within the instruments. However, the Council also provided insight on many practical aspects of the questionnaires, such as the structure and content.

The Council had knowledge about what was relevant to organisations involved with the Charter from a real world perspective, aspects of wellbeing that could be missed in the literature, e.g. employee engagement with standards. Overall, the collaboration with the Council ensured the Charter wasn't just adequately represented, but was correctly represented via the questions and statements used and that they were happy with how the Charter and wellbeing was being captured in the questionnaires.

The Council's involvement was an organic result of our positive working relationship, the reason why their advice was heeded is because they knew the Charter organisations better than the research team and they had experience of implementing multiple surveys internally, or to partner organisations. The intention was to blend the academic knowledge and rigour gained from working within a university environment with the practical and real world knowledge and application of the council, specifically those with an extensive background in public health.

The final stage of the survey design process was to conduct pilot surveys. This is discussed in more detail below in section 3.5, but overall the purpose of the pilots was to identify how the surveys performed and tested in the real world. The focus was to identify areas of the questionnaire that were faulty and/or could be improved to improve the data gained but also the user experience of the survey. The pilots were an important stage of the questionnaire development and generated useful feedback that changed the overall flow and structure of the questionnaires as well as the questions being asked to respondents.

3.4.2 QUESTIONNAIRE DESIGN

The questionnaire process was separated into two: a manager's questionnaire and an employee questionnaire. While structurally they appear to be very similar, the aims are very different. The aim of the employee questionnaire was to capture how employees feel and engage with aspects of wellbeing as well as their behaviour. The manager questionnaire seeks to assess the manager's perceptions of the eight components of the Charter as well as a selection of additional variables. The main aim for this questionnaire was to examine the presence of the variables, the extent of the manager's and employee's engagements as well as how important these measures were to the organisation in achieving its overall objectives and evaluating the measures performance.

There are a variety of reasons for having two questionnaires, the main reason being that some elements of the Charter are not suitable for employees to comment on. Employees are likely to know about the policies that are of relevance and of interest to them, and hence employees are in a good place to provide an assessment of how these policies are experienced.

Managers are better suited to answer questions with regards to policy creation and policy performance. Employees can be asked about how much they use the services and/or policy, how they experience them and if they know if they are present but an employee will not be able to answer whether or not the policy is useful to the organisation obtaining their

overall objectives. This discussion is another important aspect of wellbeing and performance that is missing from the existing literature and without having two questionnaires it is not possible to enable the discussion.

Another reason is the potential for there to be an element of discourse between managers and employees regarding the same topics. It is expected that this will be the case for a number of wellbeing concepts but especially for those that discuss the influence of the organisation. This method makes it possible to discover that there could be some facets of wellbeing where the manager believes the performance is very good but the employees believe the opposite. Such information would reveal whether there is a difference in what managers think is happening and what employee's experience. A study that can generate this kind of information is missing from the existing literature.

3.4.2.1 Employee Questionnaire

The employee questionnaire has many aims which are centred towards employee's behaviours, interactions and emotions regarding their workplace and various wellbeing concepts. It covers all eight components of the charter which are; healthy eating, physical activity, leadership, tobacco use cessation, alcohol and substance misuse, health and safety, mental health and attendance management. The main reason for their inclusion is to conduct an analysis of the Charter, but the inclusion of behavioural factors (such as physical activity) seeks to address one of the main limitations within the existing literature.

The questionnaire also looks at physical health, job satisfaction, flexibility, engagement, commitment to employer, return to work, training and development, stress management, workplace performance issues, brief employment details and biographical details. Intertwined within these are various other issues that have been seen from the literature to be relevant to both HRM and wellbeing such as employee voice, autonomy, employee involvement in decisions, organisational citizenship behaviour, pay, appraisals and the creation of policies and procedures. The variables included should produce one of the most rounded and complete assessments of how HR interventions impact wellbeing and how a change in this subsequently impacts employee performance when compared to the existing literature.

The questionnaire uses a combination of both questions and statements. Statements have been used where possible as they are likely to be more efficient at recording large amounts of data. This has the main benefit of decreasing the time it would take to complete

the questionnaire which was a key concern received in the feedback during the piloting process.

This will not only have the effect of increasing the response rate but it should minimise the drop-out rate as well. Most of the statements within the questionnaire use a 5 point Likert scale from strongly agree to strongly disagree with the additional option of Does Not Apply. Having a 5 point scale allows for a median to be captured with relative ease, although this median value is assumed to mean indifference as the value is Neither Agree nor Disagree.

Questions have been used where it was unable to obtain the information through a statement. Some questions use a different scale but where possible the 5 point scale approach was maintained for consistency, and some questions are also left open-ended. These questions allow the respondent to explain their answer in as much depth as possible and it provides the potential for data to be captured that would have been missed if a statement or closed question were to be used.

These questions could generate information about how much of a presence workplace wellbeing policies had prior to the introduction of the Workplace Wellbeing Charter, and it could be possible to understand better if the changes found across the data collection periods are due to a combination of the Charter and previous policies. Please see appendix A and B for the employee and manager's questionnaire, respectively.

3.4.2.2 Managers Questionnaire

The manager's questionnaire was focused towards capturing the presence of policies, how managers engage with them, how managers believe employees engage with them and how managers see these policies in terms of contributing towards the attainment of organisational objectives. It covers the eight components of the Charter but they are represented here using different statements and questions for the reasons highlighted previously. The manager's questionnaire also covers training and development and return to work.

The reason for the manager's questionnaire focusing on fewer variables than the employee questionnaire is twofold. Firstly the lengths of both questionnaires were of primary concern and as such, while having both questionnaires is key to the analysis, a concern was that organisations would decline to participate if too much was asked of them. Also, there are questions that are better suited to employees rather than managers. For example, discussing

the employee's ability to work from home and how often they do this is better suited to an employee rather than a manager.

Secondly managers could have more responsibilities than their employees which means that they have to prioritise how they use their time. For this reason less was asked of the manager in order to ensure that managers were able to complete the questionnaire and to not perceive it as an unnecessary burden. It is accepted that asking managers about more aspects of wellbeing would generate more useful results that are key to assessing wellbeing.

However, to do so in enough depth would have doubled the questionnaire size and realistically this questionnaire would likely have been ignored. The issue of missing out on this data is recognised, accepted and understood but the need to obtain useful data from time conscious managers outweighs the need to ask questions about every facet of wellbeing. The elements of wellbeing that have been focused on in this questionnaire should provide a well-rounded view of wellbeing for the managers while still assessing the Charter in a satisfactory manner.

3.5 PILOT

The aim of the pilots was to identify issues that respondents could face when completing the survey and to make any adjustments. Those piloted were asked to complete the questionnaires outside of their work time but to imagine that they had been asked to complete them for real.

The respondents were asked to complete the survey away from anyone else to replicate the feeling of completing this in an office environment. This is important because real respondents could be completing this survey at their workstation independently and would not be communicating with others.

Pilot respondents were asked to complete the survey in one attempt in order to ascertain a time frame for completion and to write down any problems they faced. During the first pilot period any problems that were encountered were discussed with the pilot respondent once the questionnaire was completed in order to gain further clarification.

There were two pilot periods and the sample of those taking part in round one was small with only ten respondents: 1 worked within retail, 1 was an assistant manager in retail and works part-time, 1 worked in a PR company, 4 were professors, 1 was a member of Bristol city Council, 1 was a vice chairman for a large multinational organisation and 1 was an assistant managing director at an industrial dry cleaning service. Of these, 4 ranged between

the ages of 20-23, 9 were in full time employment and 1 had a recognised mental health condition.

The most important changes made as a result of the first pilot period were: the reordering of sections to improve the flow of the survey, the removal of duplicated questions, improved the clarity of the questions asked and the reduction in the completion time of the respondents.

A second round of pilots were conducted using much shorter and updated versions of both questionnaires. The second round had eight respondents all with a variety of jobs and qualification levels. The sample included; a university manager, a policy officer, an economic development officer and an organisational development manager.

The rest of this chapter provides more feedback from the pilots. It has been split into four main categories for both questionnaires (Questions, Format, Length and Terminology and Incentives) to highlight that similar issues were raised in both questionnaires and over time these issues were improved and resolved.

Questions

Areas of concern focused on how understandable the questions were and the order of the questions to ensure a natural flow and progression. Certain questions needed to be reordered to improve the flow of the questionnaires and to "warm up" the respondents for the later, more sensitive questions on issues relating to mental health and wellbeing. This reordering could have helped increase and maintain the completion rates of the questionnaires.

The idea of "warming up" the respondents improved the questionnaires in a more important way than simply moving questions; it created a mind-set that improved the balance between the academic perspective and the practical perspective. One of the difficulties with conducting this study is the balance that has to be achieved between what research process and questions should be used from a theoretical perspective and what is actually possible from a practical perspective.

The need to improve the wording of the questions was also raised. The main issue was not that the respondent could not understand the question but more that the respondent might have to take an extra couple of seconds to work out what the question was asking. The questionnaire should be easy for the respondent to complete and whilst some thinking will be required, areas of potential confusion needed to be avoided.

We did not want the respondent to over analyse issues which could lead to false data being received and a greater amount of time spent on completing the questionnaire, as this could increase the dropout rate and increase bias in the results.

Some questions were reworded to ensure they were understandable, clear and that the data was accurate whilst ensuring that the sample was large. The process to ensure this, was to first identify the purpose of every question and/or statement and to omit those that had no extra contribution. This same process was used to resolve the issue where questions could elicit a yes answer automatically.

Another common issue raised was question duplication. This issue was raised in two forms: one being that the exact same question was asked twice and one being that a question was asked twice in slightly different ways. This occurred due to the question being relevant for more than one variable within the survey. For example, the statement "I believe my level of pay is fair" could apply to a variety of variables such as job satisfaction, engagement, commitment to employer and wellbeing. All duplicated questions were removed.

The argument could be made that the decision of where a statement is most useful is subjective and may depend on the researcher's opinion. However, where statements are placed is influenced by existing studies and theories, and not just the researcher's opinion. For example, Hafner et al. (2015) asks questions about diet and exercise before asking questions about the employee's mental health.

It was recommended that questions asking how often policies are used should be replaced with questions asking how satisfactorily policies are working. This would generate more meaningful data as in some cases the organisation has a legal obligation to have a policy in place. In this case, knowing that an organisation has a policy does not offer much useful data but it does fit with Charter requirements.

Gaining data on how this policy works and/or is created provides useful data as it could show that policies with low employee representation in policy development have a negative impact on wellbeing and productivity, or that there is no effect at all. This suggestion has been acknowledged with managers now being asked both questions in most cases as they both offer important data where it is not a legal requirement to have a policy in place

The second pilot period revealed the questions were seen to be easy to answer, understandable and covered all the necessary topics. Only one respondent felt the questions were misleading which led this person to question the research aims of the study. This is likely to be indicative of how questionnaires are received once launched as it is reasonable to expect some people to have some issues with questions given the sensitive nature of the subject matter.

The focus had been on improving how understandable the questions were, reducing any feelings of being judged and improving the clarity of what is asked. Some questions were

reworded and some questions were changed to statements, which should have improved the usability for the audience. For that reason it is pleasing that there was only one person of the eight respondents who thought the questions were an issue.

Format

Format could refer to a number of different aspects of a questionnaire but in these pilots this refers to the layout and structure of the questions. The point was raised that for some questions, mainly those that had a list of options, the options available were limited so that people could not accurately answer the questions. The need for a "Does not Apply" column was suggested due to this confusion and subsequent debate that it caused, it was felt that the inclusion of a sixth category for "Does Not Apply" would improve the accuracy of the results obtained.

This is because not all organisations who are engaged with the Charter will be working towards accreditation on the same categories. This means that if the "Does Not Apply" option had not been there respondents would have been forced to provide an answer to a question and/or statement that does not apply or they would select the "Neither Agree nor Disagree" option which would provide false data.

In the second pilot period format can be split into two general areas: the format of the questionnaires and the format used to collect the data[3]. The format of the questionnaires received generally mixed reviews, with some stating the format of the answers do not correspond to the questions asked or that the order of the questions being asked seems slightly off. This latter point mainly centred on the structure of having the healthy eating questions first, as it was felt the questionnaires should have the organisational questions first and then they should progress into the more personal questions.

Whilst this is a valid point, the structure of these questionnaires follows the structure of Bristol City Councils own wellbeing surveys in an effort to "warm up" the respondent by asking questions about their lifestyle first that propose no challenge before asking about their workplace and mental and physical health.

[3] Regarding the second classification of format, feedback was mainly on the software being used with one respondent suggesting Google forms and others assuming that drop down boxes would be used for yes/no questions. Qualtrics is the software that has been used from the start as the software is more than capable of providing the tools needed to carry out this study. Whilst drop down boxes are an option, they offer essentially the same purpose as the check boxes being used so these were not changed.

The question order also led one respondent to feel that the questionnaire was judgemental and was irritating, as well as having no structure. The two former feelings originated from the view that the researcher would be forming an opinion of the respondent based on their responses to behavioural questions. In order to minimise the risk of this happening questions about how much managers smoke, how much alcohol they consume and other similar questions have been removed from the questionnaire.

In addition to this, a general issue for most regarding the format of the questionnaires was the separation of different sections with suggestions being made to underline headings and sub-headings in order to make the respondent more aware when a section comes to an end. Whole section headings such as "Lifestyle Questions" are now in a larger font and are underlined. Sub-headings such as "Healthy Eating", have a larger font than the normal text. Despite this feedback, some respondents were fine with the structure and did not have any issues regarding the order of the questions.

Length

This refers to the length of the questionnaire and focuses on issues that are increased the amount of time spent completing the questionnaire. Minimising the time taken to complete the questionnaire needed to be a priority when constructing the questionnaire because the more time an employee spends on this questionnaire then the more time they are not working.

This means that, in the view of the participating organisation, this study could be seen as a burden on their resources, meaning compliance in the second round of data collection may be reduced. A long questionnaire also has the issue of respondent fatigue, which could lead to incomplete results, higher drop-out rates and increased bias in the findings.

The questionnaire length proved to be the most common and most important issue raised, with the issue being that the questionnaire was too long. Those taking part were taking roughly 25 minutes to complete the questionnaire. Discussions with one respondent established that on average 15 minutes should be spent on any questionnaire, anything longer than this and not only is it harder to encourage people to participate in the study but it increases the risks of the questionnaire being rushed in the final stages or not completed.

The main issue with this questionnaire is that the subject matter being analysed is very broad and complex with the variables being interdependent. This means that to effectively measure some variables a lot of information is required on just one variable. This becomes a major issue when structuring a questionnaire as the researcher has to try and resolve multiple problems. The main problem was that there were thirteen broad variables and eighteen

different, specific variables included in the data collection process. There exists trade-off between trying to cover all of the topics and having enough completed questionnaires to accurately model these variables.

A more aggressive approach was adopted with certain questions being removed, such as: how supportive is the communications policy in supporting you to meet organisational objectives, how many days do you consume alcohol and has your employment negatively or positively contributed to your health. Whole sections, such as commitment and organisational citizenship behaviour, were removed entirely and where possible embedded into other variables, such as engagement. A consequence is that there will be variables that will be left out of the final analysis that other authors may see as important in determining both wellbeing and productivity.

Within the second round of pilots, like the first, the length of the questionnaires and the time taken to complete was the main issue that was consistently discussed by all respondents. The overall view was that the questionnaires were still too long with some respondents stating they would have given up halfway through or after Q12 with two out of the eight people stating that they became bored.

The completion times, when stated, ranged between 15 and 40 minutes; however, unlike the first round of pilots some of the respondents acknowledged that whilst the questionnaires are long, this may be a necessity given the subject matter and that they are relatively quick to complete due to the design.

The issue was raised that the aims of the study should be made clearer in the Introduction to the questionnaire. This was needed because when piloted the introduction only provided a small piece of information about why they were being asked to complete the questionnaire. The suggestion was that more information is needed; however this is not a main concern as all organisations would have had a briefing prior to agreeing to participate.

Nevertheless, the introductory text was changed to describe the aims of the study, to highlight confidentiality and anonymity, to discuss who is conducting the study, to explain what respondents should do if they do not want to answer a question for any reason and how long they should expect the questionnaire to take.

Terminology and Incentives

There was concern that the questionnaire would appear to be better suited towards larger organisations and that people in smaller organisations will not answer the questions[4]. This was a concern as most of the organisations who are engaged with the charter are SMEs, as are the majority of organisations in Bristol, meaning that if the questionnaires did not apply to SMEs then the data would not effectively evaluate the charter.

Whilst this concern is acknowledged, there are a number of reasons why only minimal action was taken. It was not possible to create two separate questionnaires suitable for both large and small organisations given the time frame of the study and the language used was not overly academic so there should be no issues with understanding what is being asked. Also, the Charter itself appears to cater more towards larger organisations, and if a statement or question does not apply to an organisation due to their size then the respondent had the option to select either "Does Not Apply" or "Don't Know".

In the second pilot period there was concern about terminology and that it tended to move between "organisation" and "company", which confused respondents. In response to this, the language was standardised throughout with "organisation" being used to refer to the organisation and "my manager" referring to the respondents line manager.

The terminology used regarding health conditions was discussed and were advised that people may not feel that what they have is a condition in the typical sense. This could impact the data as people may not feel that chronic stress is a mental health condition so when asked if they have a condition they may select "no" whereas others may argue that the answer should be "yes". As a result, the term condition was reworded to "health issue" to ensure that the data that was collected was as accurate as possible.

Regarding the use of incentives many of the respondents made suggestions about what can be offered in order to increase the response rate with the following being suggested: offer prizes, offer a basket of fruit and vegetables, send reminders to participants and establish champions within organisations to push the questionnaires and participation. Due to funding and time concerns, none of these suggestions were possible and therefore none of these were implemented.

[4] The way in which the questionnaires would be distributed and collected was discussed and it was decided the best option would be to have a mix of both online and paper copies. When paper copies are used the researcher would travel to the organisation, disseminate the questionnaires and then collect them to ensure confidentiality.

3.6 ETHICAL APPROVAL

3.6.1 The Rationales for Review and Approval

When conducting a primary research study that collects real world data on human participants, there are likely to be many ethical considerations that need to be thought of. This study is no different as there are many realised, and potential, ethical considerations given the subject matter and the research design that need to be evaluated prior to data collection.

Given this study seeks to evaluate, in-depth, a person's level of wellbeing there is an expectation that data which is considered sensitive and personal will be collected. Examples of this data range beyond collecting data on a respondents mental health and also consider subject areas that have social stigma's attached to them, such as alcohol consumption and potential substance misuse.

When collecting this type of data it is important that any data instrument used is rigorously reviewed and evaluated. This ensures the questions designed to collect these forms of data do not allow for the potential to be identified and/or harmed in any way through their participation in this study.

When discussing mental health in particular, it is important to note this is a subject matter that could be considered highly sensitive and uniquely identifiable. This is because there still exists a stigma surrounding mental health conditions, people who have mental health conditions and the possible changes in behaviour or consequences that could result from having a mental health condition. Moreover, having a mental, or physical, health condition can make the respondent immediately identifiable to their employers, colleagues and business partners with whom they have a working relationship, as well as friends and family.

In a large, national scale study the risk of this could be managed and minimised but when it is considered this study is based in a specific City and focuses on a small sub-set of organisations that participate in a specific health intervention, the likelihood of a respondent being identified due a specific health condition becomes greater.

This has tried to be mitigated through design choices with regards to what types of questions have been asked and how these have been designed with the consideration for how these questions could be combined to identify a person. As the research design and instruments to be used were the main method of reducing the possibility of this, ethical approval with respect to the data collection instruments and methods is a necessity to ensure the potential for identification and harm has been minimised or eliminated.

The study also seeks to collect data on respondent's opinions and attitudes towards their employers as well as their behaviours at work and their working relationships. When collecting and using data of this nature it is important to consider the way this data is managed, processed and presented has the potentially to harm the respondent. This potential harm ranges from affecting personal and working relationships with colleagues to possibly the respondent having their employment terminated.

While the latter of these is likely to be considered by many to be an extreme case, as there is some potential for this to happen, any data collection instrument and methodology needs ethical approval.

In particular, the methodology utilised in this study could be a concern with respect to this as there is potential for managers to know who they have sent the linking emails to. However, as this is an unknown aspect of the data collection process and an assumption, it must be assumed that the linking emails have been distributed as agreed. This method must still require ethical approval to ensure that the method being utilised does maintain anonymity for any and all respondents.

When the three considerations outlined above are combined together, or considered by themselves, it is clear that the potential to have respondents who are considered to be vulnerable is high. This is expected given the objective of the study is to evaluate the Charter, an instrument that if properly implemented, should in theory have the greatest amount of benefits for vulnerable individuals. With this in mind, as has been the case for the above considerations, the design of the data collection instrument and data collection approach were the main tools used to protect vulnerable people, as well as how data will be managed and processed once collected.

Special consideration was given to design the data collection tools and approach in a way that did not put potentially vulnerable people at risk of being identified or harmed through their participation, but to also ensure they were not omitted from the study and had the same opportunity to participate as other potential respondents.

Despite the efforts made to ensure that specific data that could harm or identify vulnerable people was limited to the absolute minimum necessary, ethical review and approval is required to ensure that sufficient steps have been taken in the design of this study to protect those individuals who are considered to be vulnerable.

While this is not an exhaustive list of all of the possible ethical considerations that could be possible with such a study, those ethical considerations outlined and discussed above do clearly emphasise why it is important that this study is conducted in an ethically

robust manner. As such, it is clear that a thorough ethical review, evaluation and approval is required prior to any data collection being conducted. The feedback that was obtained when this study was put to review is outlined and discussed below, along with how this study deals with each subsequent consideration presented through the research governance and data management utilised in the study.

3.6.2 Feedback and Response

As outlined above ethical approval was requested from the university's ethics committee, but as both questionnaires were submitted for approval to this committee, the ethical approval process also served as an extra pilot. This is because, if there were any obvious or glaring issues with the questionnaires, then given the sensitive nature of the study these would have been highlighted in the feedback and resolved to enable progression onto the data collection stage.

The feedback was from two anonymous reviewers who work within the university and are experienced researchers themselves. No feedback was received that directly addressed the questionnaires. Whilst this meant from an ethical perspective that the questionnaires were approved, it did not mean that the questionnaires had no issues, as had been identified in the pilot section above.

The issues raised within the ethical review concerned the potential for causality to be inferred, reputational risk and data confidentiality (see Appendix E for a copy of the ethical approval letter). The main concern with respect to causality, was the results would imply a causal link between employee wellbeing and employee performance. It was clarified that is not what the results could, did or were able to show because there are many determinants that impact an organisation's productivity.

The researcher is in agreement with the reviewer who noted that to attribute changes in productivity to individuals' behaviours and environment would be considered an ambitious conclusion to reach based on the methodology utilised in this study. Furthermore, as has been outlined throughout this study, the type of data utilised within this study would not allow for causality to be implied and as such, great care has been taken within the results to not suggest that causality is being discussed or is being presented.

There was also the concern of reputational risk if the results were to assert that UWE research proves X. This links with the previous concern with regards to causality and making assertions that are unfounded, ultimately this is an acknowledged suggestion for how to

present findings as well as how to view the nature of the data gained. The response to this concern outlined that there is no way a qualitative or quantitative study could ***prove*** causality with absolute certainty. The results could generate information consistent with the Charter having an effect, whether that be positive or negative, as well as showing no effect, but that is all the results are capable of implying.

Bristol City Council were aware that all these findings are possible and when presenting the results, at no time would the university be named directly in such a way to possibly place the university's, faculty's, department's or professors' reputation's at risk. Great care has been taken to ensure that this has been upheld with how the results have been presented and discussed, especially where phrases such as "over time" have been used. The use of this phrase, when used, has been qualified and justified within the relevant literature.

The final concern was the maintenance of the data's confidentiality given that there is a lot of data being collected that could tie respondents to their answers which, as outlined above, could compromise the "future employment and career ambitions of those individuals" (UWE, 2014). In response to this point it was stated and clarified that only the researcher, would be able to make the association between the respondents and the responses.

Furthermore, it was stated in response that the data will be anonymised enough so that these confidentiality processes will be maintained over time. It was also made clear within the ethics review and when discussing participation with organisations that all data will be held confidentially and will go through a process of anonymisation. This issue, and the subsequent response, raised through the ethical review validates the various needs that were outlined above with respect to why an effective ethical review process was required for this study.

Most ethical considerations outlined within the rationale for the review and from the review itself have been managed and minimised by design. Consideration was made when designing the questionnaire to limit identifying questions where possible and omit certain questions, including asking if the respondent has moved to the UK for work purposes and how long they have been living here.

Once data was collected it was important to ensure the data was managed in such a way that anonymity and confidentiality could be ensured. Firstly, direct identifiers were removed, such as the employees email address which was gathered for matching purposes, and stored separately with an index number being used within an encrypted file.

With respect to data storage and management, all data will be held in password protected files on university servers in a drive to which the researcher is the only person with

user access. The data will be stored and analysed by the researcher from a restricted access room, using their office computer which is not a shared machine. Only the researcher will know the passwords to these files and the computer on which the data is stored, meaning the raw data can only be accessed by the researcher. Although the results will be discussed in detail with the supervisory team.

An important aspect of data management is the way data has been structured and presented, as it is possible to identify people due to the type of data captured and methods of reporting the data. The reporting of variables and associated statistics that could identify people will be omitted by design as, where possible, exact data for potentially identifying variables are not being captured. For example, certain identifiable data such as a high figure for a person's age (89+) and specific health conditions could all identify a respondent, but these are not captured in a format that would allow for identification.

The specific length of absences has been captured and this could directly identify an individual, but the purpose of the data is to create a dependent variable for evaluation, not to be reported exactly. For this data, only relevant data has been reported and this has been reported as a range, as can be seen in chapter 4, meaning no individual who has had a long term absence can be identified by the length of the absence.

Also, when data is discussed descriptively it is discussed as a population, not at an organisation or an individual level. This should ensure that respondents are not identified through the activities, behaviours and cultures that are specific to their organisations.

To further ensure the confidentiality and anonymity of the data, statistical disclosure control (SDC) will be applied to outputs from this data following the best-practice standard (Brandt et al., 2010). As noted by Brandt et al. (2010) there are two best practice methods; the principal based model and the rule based model. The former of these allows the researcher to be flexible in their use of the outputs, i.e. they can use the data to its fullest extent. However, for this approach to be maximised the researcher is required to undertake a significant amount of training (Brandt et al., 2010), which would not be possible given the time sensitive nature of this study.

Therefore, this study adopted the rule based model to statistical disclosure control, which outlines simple rules for researchers to follow when generating their outputs (Brandt et al., 2010). The researcher will receive training in output SDC and outputs will have a final check by a supervisor, who drafted the UK and international standards, to ensure that the proper steps have been taken to ensure that the outputs are safe to be released.

Similarly, participating organisations have been made aware that tailored analyses of their responses will only be possible where the population and sample is large enough to support it and will not hinder the anonymity and confidentiality of the respondents.

Upon completion of the data entry paper data collections will be shredded and fully disposed of as soon as the information is transcribed. The data will be electronically shredded after use, although a copy will be stored in a secure area of the UWE data repository for validations purposes only, in line with UWE policies. The full ethical approval letter received from the University can be seen in appendix E.

3.7 Access and Recruitment of Participants

The aim of this section is to discuss the approach used to encourage organisations to participate in the study. This discussion focuses on why the methods used were undertaken along with the potential benefits and limitations of each approach. The specific methods used were an information sheet, presentations and face-to-face meetings. Following this discussion, section 3.8details the process of deciding what type of organisation was going to be included in the study and section 3.10.1, details what broad sampling method will be used when recruiting individual participants.

The information sheet was the first step in recruiting organisations and was designed to introduce potential participating organisations to the study. The information sheet provided the organisation with a brief overview of the aim of the study and outlined what their participation would entail, what the free health check would provide in return for their participation.

The information sheet was sent to the organisations who had signed up to the Charter through Bristol City Council. This is because the Council has access to all of the organisations involved, the most up to date contact information and already have a rapport with the organisations. It was hoped this approach would enhance the likelihood that the organisations would participate and respond quicker, which is very important given the time sensitive nature of this study.

More detail was provided to organisations at an event celebrating participating Charter organisations in which a presentation was given about this study. The presentation was short but it provided the attending organisations with a succinct overview of the study's aims, the health check on offer, what their participation meant and how they could benefit. This presentation was also a quick and useful way to advertise the study to a range of

potential organisations who may not have seen the information sheet. This presentation also gave the organisations an opportunity to ask specific questions about the study.

In this instance it can be said that the Council acted as a gatekeeper to participating organisations, as it was through the Councils direct contact with organisations and celebration events that opportunities were granted that enabled access to organisations that participated within the Charter.

The final step in recruiting organisations was to hold a meeting with each organisation who were interested in participating with the study. The purpose of these meetings was to discuss the study in more depth and detail what their participation would entail, why there are two questionnaires, the purpose of the company data sheet, data collection methods, data collection time periods, data protection and security, the health check, the feedback they would receive and also to answer any questions the organisation may have had. These meetings were conducted mainly so that every organisation who participated knew as much information as possible about the study before agreeing to participate in the study.

No organisation participated without participating in a meeting and in some cases a second meeting was required so that another manager could be given a full briefing about the study. The meetings were also an opportunity to discuss any adjustments that were needed to the questionnaires and the proposed data collection method. These meetings were fundamental to ensuring that expectations were properly managed and participation is maximised.

Similar to the role of the Council above, the participating organisations act as gatekeepers to the employees as it was only with the organisations permission and agreement to the design methodology that the questionnaires were distributed. Specifically, the contact from each organisation is the main gatekeeper as this person is whom is responsible for disseminating the questionnaires to the employees based on the agreed methodology.

While these approaches worked well to ensure that a large and diverse sample was generated there are limitations to this sampling method, specifically the presentations only benefited those in attendance and the length of time involved with undertaking this approach. The presentations main limitation is that they have the potential to create selection bias in a number of different ways as they only benefit those in attendance. The presentations only benefited those who already completed a recognisable amount of work on the Charter. This affects the sample and data will be skewed towards those already engaged; therefore, it is unlikely that a true baseline will be able to be established.

The second limitation focuses on the time taken to conduct this approach and this is vitally important as this study is time sensitive due to the Workplace Wellbeing Charter already being in place prior to the study. The longer it takes for the data to be collected then the less of a true baseline would be found. This in turn means that it is harder to identify the effect of the Charter as other factors may determine the results.

The time taken to implement this sampling method was increased through two sources: the time taken to arrange the meetings and the time taken to confirm participation. The former was an issue as in some cases it could take up to 6 weeks to have a meeting to discuss the study in depth. Waiting for confirmation of participation was not an issue in most cases as most organisations decided at the end of the meeting whether or not they wanted to participate. There were only a few occasions where a second meeting with more of the organisation's management was required or where the manager in the meeting asked to confirm with their manager. All of this meant that it could take months longer than expected to begin the data collection process, which affects the data received and the validity of the results.

3.8 Choosing What Size of Organisation to Include

The literature review, Chapter 2, highlighted that some of the samples used to conduct an analysis on the relationship between employee wellbeing and employee performance are based on large organisations from specific industries. As such, the aim of this section is to discuss the reasons for and against using these particular samples.

3.8.1 Large Organisations Only

It could be easier to collect larger volumes of data across large organisations. This could be due to there being more employees or because it could be easier to use the managers to endorse the questionnaire to encourage participation. This could result in a higher response rate when compared to an unknown researcher asking employees to participate in a study via a cold email. A larger organisation is also more likely to have a HR department, meaning that formal and accurate data is likely to be kept on key outcome variables such as absenteeism and employee turnover.

Smaller organisations, especially micro organisations, may be less likely to keep this type of data meaning participation in a study like this could require more effort from the manager. Large organisations are also likely to be easier to find online, with the potential for information that has failed to be provided by an organisation possibly being found online.

Therefore, targeting larger organisations could lead to a greater sample size even when a request is made to sample only a small number of employees within the organisations. For example, assume company A has 5000 employees and company B has 1000. If participants are asked to ask 5% of their workforce to participate within the study then Company A would generate 250 respondents and company B would generate 50.

In order for company B to generate the same absolute number of respondents as company A the within sample size would need to be 25%. Hence, it could be easier to encourage large organisations to participate in a survey.

Those companies signed up to the Bristol Charter that are either accredited or are in the process of being accredited are from a variety of industries. The majority of these organisations are large and medium sized organisations. By targeting larger organisations, a larger sample size for analysis is likely and therefore more information could be sourced about how these practices and policies affect different industries. This is tentatively supported by the literature that has shown a difference between sectors exists (Konrad and Mangel, 2000; Penna, 2007; McDaid et al., 2008; Robertson Cooper, 2015).

Larger organisations are also likely to have a clearly defined hierarchical structure. The pilot process revealed potential issues concerning who is the manager. In particular the issue was whether a manager meant a team leader or a department head (or equivalent). In smaller organisations, the roles of these two positions are often combined, which could make identification difficult.

Despite these benefits to focusing the sample on large organisations there are some limitations with this approach. Larger organisations may have already completed a staff survey so they have less incentive to participate with this study. The staff survey could have been created for the organisation's needs, meaning their survey is likely to be bespoke to their needs and therefore more beneficial than a general wellbeing survey that applies to a variety of concepts.

An incentive of a free health and wellbeing evaluation may not be relevant if the company has already conducted a staff survey and have already obtained an indication of their employees' health and wellbeing. This means that encouraging participation may be more difficult if the focus is only on large organisations.

Arguably the greatest limitation to this approach is that focusing only on large organisations would not accurately represent the Bristol economy. The external validity of the study would be dramatically reduced if the sample, and the results of the study, did not represent the Bristol economy. The Bristol economy is characterised by a variety of features

with the most important being that most organisations within Bristol are classified as SMEs. According to 2015 data from NOMIS there were 16,635 enterprises and 20,615 local units in Bristol of which only 70 were large enterprises and 120 were large local units (0.4% and 0.6%). The data also shows that there were 16,565 micro to medium enterprises and 20,495 micro to medium local units making up 99.6% and 99.4% of Bristol's economy.

Although there are a variety of benefits for targeting larger organisations the limitations far exceeds the benefits and so this becomes a critical point to consider when deciding what sample strategy to undertake. Moreover, one of the limitations of both the HRM and the wellbeing literatures is that most studies tend to focus either on one sector or one size of company, usually large ones.

If the Charter has more appeal to smaller and medium sized organisations then these organisations must be included in any study that seeks to analyse how effective the Charter has been. Moreover SME's may be more willing to participate due to the opportunity of having a free health and wellbeing evaluation, especially if an in-house health evaluation is not possible. This incentive could help ensure a large and varied sample that represents the Charter and the Bristol economy.

Surveying organisations of varying sizes and in different sectors would be highly unusual in this literature and could generate a dataset that is much larger than what is typically seen within both the HRM and wellbeing literatures. This should give the study's results greater external reliability than existing studies.

One of the recommendations from Hesketh and Fleetwood (2006) was the need for a general theory on HRM policies. According to Hawking (2011) a general theory is when models replicate what people see in reality. In order for a general theory to be created, the results would need to be based on all company sizes. Although a model will never fully replicate reality, structuring the sample and model to include all variables could provide insights into the relationships between employee wellbeing and performance.

An approach including organisations of all sizes has its limitations. Smaller organisations may not keep a formal account of the data required. This may only be an issue for the outcome data in the models developed below that focus on employee turnover. If this issue were to arise then it could result in the organisation not responding to this question, the organisation dropping out of the study, a biased sample or adding time to the duration of this study.

Some of the statements and questions may not be relevant to small or a medium sized organisations. This could be the case when smaller organisations are unable to implement all

elements of the Charter or other issues relating to wellbeing policies. Nevertheless, it is possible that organisations regardless of size find it difficult to implement the charters wellbeing policies. This has attempted to be remedied by including a "Does Not Apply" category on almost all of the questions to enable companies to state if that element of the charter or variable is not relevant to them.

3.8.2 All Employees versus a Targeted Sample

Following the decision to include organisations of all sizes across all sectors, another area of concern when designing the study was whether or not to include all employees or have a targeted sample. The aim of this section is to discuss the advantages and disadvantages and to justify the chosen approach.

Including all employees in the sample would provide a comprehensive measure of an organisation's wellbeing. This would ensure that a large sample is generated that reliably represents the sample of the Charter. Including all employees' within an organisation could improve the external validity of the results and provide an accurate representation of the current workforce within Bristol.

Including all employees could also mean the results of the study are not biased by those who were chosen to not be included. For example, if a targeted approach is taken that excludes highly productive or very ill employees then the results may overstate wellbeing and understate productivity.

Some limitations do exist with the approach of including all employees from all organisations. Sample fatigue could be an issue as a targeted sample would have already obtained agreement to participate in both data collection periods.

The response rate could be improved by briefing employees prior to data collection and providing each employee with information on what the study is about, what the aims of the study are, what they are being asked to do and why it is important that they fully participate. If all employees are included then a briefing could be difficult to do in a large organisation and in enough depth as the chosen method of doing this would be an information sheet. Employees may not have the opportunity to ask further questions or gain a greater insight into what is being asked of them. This could result in lower response rates and lower completion rates due to the personal and sensitive questions which may be unexpected to the respondent.

A targeted approach may generate a larger sample because it may be less likely that respondents will drop out of the study between time periods especially if employees are

briefed on the aim of the study and agreeing to participate in the study. The samples may stay the same in both time periods if there is a high level of agreement to participate in the study hereby making any differences in the results between data periods not due to differences in the sample.

This approach could encourage participation from organisations because they would know that they will not be losing time from every employee that they employ while still generating a strong enough sample to provide a good representation of their organisation. Adopting this approach could encourage more organisations to be a part of this study as their employee participation rate would be lower.

This approach has the least potential limitations, however an obvious limitation is that the data obtained from the respondents will not be representative of the entire workforce within organisations and sectors. It would then not be possible to apply the findings of the study to people outside of the study and to the general population. However, the extent to which this approach represents the workforce and limits the applicability of the findings depends on the size of the sample. If the sample is large enough then it may be still be possible to credibly say that this provides an accurate enough representation of the workforce.

In addition to this it is most likely that it will be the manager of the organisation or the manager of the HR department that will be selecting the employees for the sample. This is a limitation because it opens the study up to many unforeseen biases as it is possible that the views and opinions one person has of another will influence their decision to include them in the study. It is entirely plausible that the person will select respondents who they know to be happy, engaged and productive in order to overstate the data obtained.

Despite the benefits of using a targeted approach, the approach to be used here will be to include all employees. This will ensure that all employees have a fair and equal chance of participating in the study. This approach should ensure the results have stronger external validity and could provide an insight into the relationships between employee wellbeing and performance for specific industries and sectors.

3.9 Data Administration and Collection Methods

3.9.1 Data Administration

Section 4.2 provides an in-depth overview of how the data were managed and maintained prior to the econometric analysis taking place. This section provides a brief overview of this discussion. The data was maintained in a variety of ways with the overall objective of ensuring the data remained anonymous and confidential while also being appropriate to be

used for a statistical analysis. With regards to maintaining the confidentiality and anonymity of the data, the first step was to maintain respondent confidentiality and anonymity when designing the questionnaires as potential identifiers were removed from the survey.

While it is acknowledged that beyond the matching question used no single question could be used to identify an individual, it was acknowledged that potential combinations of questions could identify respondents through a process of elimination. For that reason certain questions were removed from the surveys such as questions regarding the respondent's nationality, specific questions regarding caring responsibilities and specific answers regarding contractual status.

Furthermore, the questionnaires to be used in this study were generated using external survey software which was password protected. This ensured the data could not be accessed by anyone from within the University, the Council or from participating organisations. The only person who knew how to access this data was the researcher. Once, all data has been collected the data were exported into a password protected document that was maintained on a secure server at the University and each respondent will be given an index number.

Once again, only the lead researcher had access to this file. The supervisory team on this project, the Council and the participating organisations did not have access to this file and at no stage in this study did any person besides the main researcher see the raw data. The data was analysed from a restricted access room and once used all data, in paper and electronic format, will be shredded. Although a copy will be stored in a secure area of the UWE data repository for validations purposes only, in line with UWE policies.

3.9.2 Data Collection Methods

Research surrounding health and wellbeing uses questionnaires extensively as a measure of data collection (Robertson Cooper, 2015; Farquharson et al., 2012; Paile, 2011; Johnston et al., 1990). Questionnaires can reach a large number of respondents, they are easy to administer, the data is collected in an order ready for analysis, they do not require much effort from the participant, they are inexpensive to conduct and they can capture data on many topics important for analysis.

The main benefits of using a questionnaire surround the logistics of data collection. Questionnaires can be emailed or posted to a large number of respondents with relative ease. For example, sending questionnaires via the participating organisation is as easy as sending one email to all employees. Questionnaires can be a quick and easy process by the respondent, although this is dependent on the format and structure of the questionnaire. A

questionnaire can allow a researcher to analyse more concepts of a wider, complex construct due to the often tick box nature of the questions asked. This provides the researcher with summary details on many topics and can reduce the chances of omitted variable bias within the results.

While questionnaires can gain data on many complex topics they also lack the ability to provide depth on the topic as they cannot ask open, in-depth "why?" questions. A questionnaire can introduce many forms of bias as the data received could be biased in a number of ways, such as respondents answering in the way they think the researcher desires, answering in a pattern and social desirability bias. All of these forms of biases are possible in almost all methods of data collection.

However, in a questionnaire there is limited scope for control beyond reverse scoring as it is not possible to ask further questions or to observe the respondent while at work. A respondent may also not understand the question being asked, which leaves the respondent with limited options available.

A possible solution to this limitation is to accompany the questionnaire with a covering letter which is a technique that has been used in the existing literature (Igbaria and baroudi 1992; Johnston et al., 1990; Chughtai and Zafar 2006) to ensure that individual respondents are informed about the study prior to completing the questionnaire. Johnston et al. (1990) used the organisation to disseminate the questionnaire and any non-responders were sent an additional questionnaire that outlined the importance of their participation. These two methods should encourage participation by informing respondents of the aim of the questionnaire and why their participation is important.

A slightly different approach to using questionnaires is to use phone surveys. This is an approach that has been used only twice within the 25 studies featured in the literature review. Bloom et al. (2006) and Nicholson et al. (2006) both used a phone survey with Nicholson et al. (2006) using a third party organisation to contact managers and conduct the survey. The third party organisation could ensure a higher response rate by explaining to the respondent they are an independent third party organisation. This should reassure the respondent their answers will be held anonymously and confidentially which could reduce many biases in the data.

From this small sample of studies it can be seen that most studies used only secondary sources (Whitfield, 2002; White et al., 2003; Hafner et al., 2015; Huselid and Becker, 1995; Cassar, 2010). Like other data collection methods using secondary sources improves the logistics of collecting the data as secondary data tends to be easier to access,

inexpensive or free to access and quick to use. This means the researchers can gain key and crucial data for their analysis in a matter of hours or days whereas primary source methods, such as interviews and questionnaires, could take months to obtain relevant data.

Authors who used secondary data sources tended to pick data sources that have large samples. This could enhance the external validity of the study and remove biases that are found in datasets due to primary data collection methods, as there could be less selection bias, emotional bias, response bias and social desirability bias.

While these are clear advantages to secondary data, it should be noted that all studies are subject to these biases in some form. Using secondary sources means the study inherits the biases in the original dataset and collection method. The difference between the biases present in secondary sources and primary sources is that in secondary sources the researcher cannot control for it. The only way to tackle biases when using secondary data is to accept that it may be present and discuss this in the conclusion.

A researcher has less control over the data when using secondary sources. This is due to the researcher having no control over how the data is obtained, meaning the data may not be fit for purpose and is simply just the best substitute that could be found.

Rather than focusing on one approach to data collection, many studies within this area of research used a combined approach to data collection. Many authors combined primary and secondary data sources or they combined qualitative and quantitative methods to collect their data (Steadman and Taskila, 2015; Shreeve et al., 2015; Bajorek et al., 2014; Lawton, 1998; Krauter and Ferreira de Sousa, 2013; Angle and Perry, 1981).

Combining data collection methods is an approach that has been used for decades and is largely due to the many advantages a study can gain from it, namely that a secondary method can be used to support and validate the findings found via the main approach. For example, Steadman and Taskila (2015) used interviews as well as a literature review. This approach could ensure the content of the interviews is based on the relevant literature and could engage the respondent with appropriate topics, this could then generate useful data and results.

The approach of combining methods means it is possible to obtain information on a wide number of relevant topics but also have the opportunity to obtain the depth that is required. This approach was used by Angle and Perry (1981) when managers were given surveys and interviews whereas employees were surveyed. This approach could create a rounded and more complete perspective as gaps in the data from the questionnaires are filled. Additionally it may be possible to offset biases sourced from one approach by combining the

method with another. For example, an interview could offset some of the sources of selection bias found in questionnaires and a questionnaire could offset reporter bias found in interviews.

While this approach has many notable benefits it also could be time intensive. This is a concern as any result presented from a model is automatically out dated as the data is only representative of the data collection period. If a survey is collected and then an interview takes place, this adds time to when the data can be published and increases the likelihood that the original set of data has less relevance.

3.9.3 Methods Discussed Prior to the Data Collection Periods

Prior to collecting data only one main alternative method was discussed that had not been seen in the literature. This method considered collecting the data via researchers setting up computers in a room and have respondents come in and complete the questionnaires in person. This is a much more rigorous method of making sure the data is collected and could ensure a high response rate. As this study is being marketed as a free company health check this method would make conducting business specific analysis much easier as respondents can be matched with relative ease[5].

While this method does have limited benefits it could potentially bias the results as respondents may feel under pressure to not answer some of the questions honestly whilst in the vicinity of their colleagues. Also this is likely to be regarded as an unusual approach to collecting survey data by most and when combined with a feeling of being uncomfortable, selection bias could be more of an issue with this approach.

Also, this study does require a high volume of data to be collected and most of this data could be considered to be highly sensitive and personal. Therefore it is unlikely that respondents will discuss these topics honestly and openly if they feel their colleagues can see them. As a result of all of these concerns this particular type of data collection method was quickly deemed to be unsuitable for this study.

3.9.4 Chosen Data Collection Method

The data were collected using two questionnaires. The primary method of data collection provided a link to the questionnaire electronically that respondents can access at their convenience, whether that be at work or at home. There are a number of strengths to this method, namely that this is a relatively flexible way of collecting data and increases the chances of honest responses as the questionnaire can be completed in private.

[5] A company specific analysis would not reduce the anonymity of the respondents.

By highlighting that this a University of the West of England, Bristol study and independent from the employee's organisation on the information sheet and emails, it should be clear to the respondents that this data would not be collected in conjunction with their employer. This should reassure them that all data would be kept confidential and anonymous.

A reserve method for gathering data was to issue the questionnaires in paper format and have respondents complete them at their desks throughout the course of a day. This method has two main strengths: it is more efficient to complete for the respondent and it bypasses certain software limitations. The former is based on the fact that a paper copy has no risk of internet issues and if the respondent has a headache or eye strains then using the paper format makes the questionnaire easier to complete.

While the chosen electronic method does have many benefits, the main limitation of using paper copies is that the data set has to be input manually by the researcher and this could take a long time. This would mean time is taken away from completing the final analysis. A final method is to have a blend of both approaches, where respondents are given the option to complete the questionnaire using a paper or an electronic format. This should ensure a strong response rate and reduce the burden placed on the employer as both methods can be completed at the respondent's convenience.

3.10 SAMPLING PROCEDURE

3.10.1 Sampling Method

As discussed in section 3.8.2, the decision was taken to have a targeted approach for the organisations, by focusing on Charter organisations, but with a random sampling method for employees, by not targeting a defined sample within the organisation. This was the first stage of the sampling method used in this study.

The specific approach that was used after organisations had been recruited was to have the links to the surveys disseminated via emails from managers at the organisation to their employees. These emails included a link to both surveys that would take the respondents to the surveys in one click. Prior to the data being collected it was agreed with the organisation that the emails containing the links to the surveys would be sent to all employees in a mass email. When agreeing this the date and time allowed for data collection was also agreed with the individual organisation.

Employees were ultimately allowed to self-select into the study, which does have the potential to generate self-section bias which is discussed in more depth below in section 3.10.2. Where the response rate appeared to be low, follow up emails were sent to the

organisations requesting the links be re-sent to their staff to encourage participation, which did result in an increase in the number of surveys completed.

This sampling method was chosen as this was deemed the best way to reach all of the potential employees at the participating organisations while also providing the best chance of the highest response rate possible. The latter point, was evident when trying to recruit organisations to participate in the study as organisations were less responsive when contacted by an external researcher whom they have never met when compared with being contacted by the Council, whom they have a prior existing working relationship.

The experience of this process was applied to the sampling method, as it was decided that employees would be more willing to engage with a questionnaire if it was being sent to them by a person they knew rather than someone they had never met, meaning it is easier to disregard the email containing the information about the study.

The use of emails as a means of disseminating the surveys to the respondents was a key aspect of the sampling method. The emails not only potentially provide access to all of the employees employed at the participating organisations but they are also a quick, simple and cost effective way of disseminating the surveys while also asking little of the participating organisations. The use of emails and the agreed method of disseminating them to staff also ensured the individual respondent would remain anonymous from their employer. Throughout the sampling process the individuals anonymity, and the importance of maintaining this, was emphasised throughout to the organisation and to the individual respondents.

That being said, it is acknowledged that there is potential for this to have been affected by this sampling method, mainly through the use of the manager as a means of disseminating the surveys. It is acknowledged that by using the manager as the final step to get the surveys to the employees the confidentiality and anonymity of the respondent could be debated. It is also acknowledged that this could potentially create debate as to the random nature of the sample generated.

However, this concern regarding the anonymity of the sample is unknown and theoretically, if the organisation issued the link via an email as agreed, the respondent anonymity and confidentiality has been maintained. This is because it would not be possible for anyone to know who responded to the email as the link included takes the respondent to an external survey site, which the organisations could not access. Because of this it would be impossible for the organisation to access the raw data meaning they cannot know which employees participated and they could not know how each individual has responded.

3.10.2 Selection Bias

One issue that has been quite apparent when undertaking the process of generating the sample is that the final sample could largely be determined by selection bias. This is mainly due to those organisations who have more of an interest in their employee's health and wellbeing being more likely to want to participate. However, in the context of this study, selection bias occurs at a number of points in time with the potential for selection bias varying at each opportunity. The potential pathway for selection bias here can be explained via the following diagram:

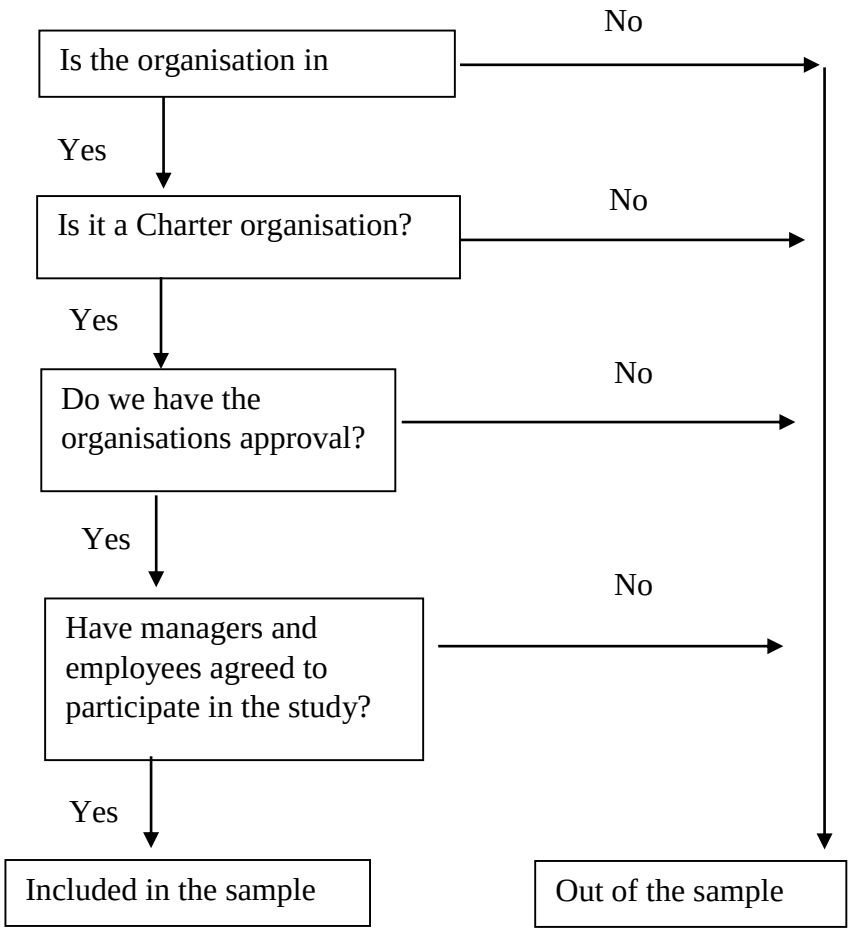

Figure 1: Potential Areas of Selection Bias

At the beginning all organisations are available to be included in the sample but not all organisations will form the final sample. There are four search criterions for inclusion in this study as shown in figure 1.

The selection of these organisations has been biased on their interest in organisational health and wellbeing, and this also removes the possibility of including those organisations who are interested in the Charter but have not yet signed up to it. Selection bias may have also occurred based on the extent to which the organisation has actively been involved in improving employee health and wellbeing.

The final stage focuses on the managers and employees decision to participate in the study once they have received secure email links to the surveys. While the possible causes for selection bias are fully detailed in the following section, at this stage the main sources of selection bias arise from the questionnaires design and the individual's interest.

Organisational factors could also cause selection bias at this level, as employee workload and time available to spend on the questionnaire will differ between participating organisations.

3.10.2.1 Factors Determining Selection Bias

The above section discussed how selection bias may occur during the research process and what the impact of this may be. This section will discuss the main factors that determine selection bias at an organisation and employee level.

3.10.2.2 Organisation Level Factors

As highlighted, the organisations taking part in this research are those organisations that have signed up to the Workplace Wellbeing Charter in the City of Bristol. Selection bias occurs as the organisations included in the sample will only be organisations that have an interest in workplace health and wellbeing. It will be hard to identify the effect of the Charter because we do not have non-chartered organisations to act as a control.

By focusing on organisations in the Charter, who are likely to already have a strong interest in employee wellbeing, it is likely that they already have employee wellbeing policies in place. This may cause selection bias on two levels: the organisation and the employee opts out. The organisation could opt out as these policies may have been in place for a long period of time and so the effect of these is already known.

Employees could opt out of the study due to existing policies being present as it is quite possible they are already surveyed about their wellbeing and performance and do not wish to repeat this process. A staff survey is likely to have been used already as it is a useful evaluation tool allowing the organisation to assess whether or not the benefit of wellbeing policies outweigh the cost of implementing and maintaining them.

Asking for sensitive information in the questionnaires could create selection bias, and this may include questions asked to the organisations in the company data sheet. The company data sheet asks organisations seven questions to enable the calculation of three performance measures. Most of these questions are financial questions and so an organisation may not wish to disclose this and may see this as a barrier to their participation.

Moreover, this data could be hard for an organisation to obtain or there could be restrictions on making this data available to a third party. This could be especially relevant for organisations in the public sector where information such as turnover and costs are regarded as highly sensitive.

3.10.2.3 Employee Level Factors

It is likely the sample will consist of employees who have a keen interest in their own personal health and wellbeing rather than those employees who do not. This has two main effects: there may be less scope for change between data collection periods and the effect of the Charter may be more difficult to identify. High scores obtained from respondents in both periods would create an impression that the Charter has not had much of an impact on employees' wellbeing. It would be harder to identify the impact of the Charter if the employee naturally behaves in a healthy way, and hence any positive score received cannot be assumed to be due to the charter rather than their general interest in their own wellbeing.

The topic of wellbeing naturally encompasses sensitive topics, such as mental health, and are likely to be topics that the respondent rarely discusses and perhaps even less likely to state in a questionnaire. In the context of this study, selection bias could be caused as some respondents may complete most of the questionnaire and when they are asked sensitive questions they may opt out and ask for their questionnaire to be withdrawn. Moreover an individual could opt out of the questionnaire much earlier as the issue regarding the sensitivity of the questions does not start and end with mental health.

Questions asking the respondent to state their eating habits and the amount of physical exercise they do are asked at the very start of the questionnaire and for some people these will be sensitive topics of discussion. The same applies for smoking and alcohol consumption where one pilot respondent said that being asked how much they smoked made them feel that they were being judged.

All of these areas of wellbeing could lead to selection bias as people decide not to complete or start the questionnaire. Therefore, the sample may not include those people who would benefit the most from policies aimed at reducing behaviours associated with lower levels of wellbeing. It is also likely that social desirability bias would be an issue, as well as missing data rather than selection bias.

Selection bias can also be driven by time and seasonality. The concept of time here also refers to the time available to the employee to be able to sit down and complete the questionnaire. Even though the questionnaire has been designed to be completed in approximately 15 minutes, it is still possible that some people may take longer than this. This could create a feeling that they do not have the time to complete the questionnaire and so they decide to opt out.

While the data collection method does have the benefit that it can be completed outside of work hours, realistically it is assumed that most employees are unlikely to complete the questionnaire in their spare time.

The topic of seasonality works in conjunction with time as at certain times of the year some organisations may see an increase in demand leading to increased hours and workload. Seasonality can also apply to leisure pursuits as people tend to take holidays during the months of July and August, meaning if the questionnaire were sent out during these months then there would be less respondents available to participate.

Workload and family responsibilities work in tandem with time and seasonality to create the possibility for selection bias. In particular it may be the employee's current workload that restricts the time they have to participate in the study. This selection bias also impacts the data and results, as this could mean the sample omits employees who feel overworked, underpaid, burnt out, exhausted and stressed amongst many other feelings that would negatively impact many areas of their wellbeing. This could mean the data is positively skewed towards those who have a lighter workload and lead to results that suggest the Charter has a small effect.

Selection bias could occur when the respondents reflect upon the first data collection period and decide not to participate in the second data collection period. This could be due to many reasons but the result of this selection bias is that the comparison between the data collection periods is based on individuals with different interest, goals and values.

Omitting long term absentees may cause selection bias as the study may only include those people who were at work during the collection period. This creates selection bias as the data may capture people with minor illnesses, such as a cold, but it is unlikely to capture those who are off work due to severe ill health. The latter group of employees would be the group who theoretically should benefit the most from the charter being introduced and as such, omitting them from the evaluation could weaken the findings.

3.10.2.4 Can Selection Bias be controlled?

Selection bias is a topic that is not often discussed in detail in the literature despite its prevalence and importance to health and wellbeing studies. This may be because authors can only hope to encourage participation of an organisation and its employees and that selection bias is likely to be unavoidable at an organisation level as organisations will only self-select to participate in studies that are of interest to them. Furthermore, at the employee level, the only tools available to control for selection bias are incentive schemes as employees could

self-select into studies they do not have an interest in if they were to be compensated for their time.

In an effort to try to reduce the possibility of selection bias it was made clear to organisations, and to participants via the introduction paragraph in the surveys, that the data would be anonymous, that the university was independent of their employer and that their data would be confidential. This was also explained to the organisation along with how the data would be stored and that the data would not include any personal and organisational identifiers.

These measures were taken to help respondents feel more comfortable talking about sensitive issues and to reassure them, and the organisation, that the data would be properly maintained and protected. The outcome of these measures could be improved participation at an organisation and an employee level.

3.10.3 FINAL SAMPLE

The original final sample consisted of seven organisations, six of which are involved in the Workplace Wellbeing Charter and one which is outside of the Charter. The organisation from outside of the charter was removed from the sample. This was because the organisation was intended to be a control organisation but in the absence of a full control group it was better to remove this organisation from the sample and focus on just Charter organisations.

This gives an organisational response rate of 17.14% for those organisations involved with the Charter. The six organisations included in this final sample are a mix of public (2), private (3) and tertiary sector (1) organisations. All organisations are from different industries and the range of organisation size is from 6 employees to 8,000 employees. The total amount of employees across all six organisations is 11,446.

Table 3.1 provides a breakdown of the sample and the response rate in each organisation based on identifiable respondents, following this is a breakdown of the sample in each data collection period as well as the overall sample[6].

[6] The sample is dominated by one large organisation.

Table 3. 1: The Final Sample Breakdown for Each Organisation based on Identifiable Respondents

Organisation	**Sector**	**Size**	**Response Rate***	
			First Period	Second Period
A	Third	6 (Micro)	6 (100%)	6 (100%)
B	Public	100 (Medium)	33(33%)	22(22%)
C	Public	8000 (Large)	154(1.93%)	103(1.29%)
D	Private	3000 (Large)	22(0.73%)	0
E	Private	100 (Medium)	18(18%)	8(8%)
F	Private	240 (Medium)	29(12.1%)	29(12.1%)
Total		**11446**	**262 (2.89%)**	**168 (1.47%)**

*Response Rates Calculated based on identifiable respondents

Table 3.1 highlights that for those organisations included in the sample, small to medium sized organisations tended to have a higher response rate than larger organisations, with no data being collected from one large organisation in the second data collection period.

From a potential 11,446 respondents, in total the first data collection period had 372 responses, giving a response rate of 3.25%, of which 327 were employees and 45 were managers. Both questionnaires had a drop-out rate of 22%. In the second data collection period, there were 241 responses, giving a response rate of 2.11%: of which 215 responses were employees and 26 were managers.

The size of the final sample suggests that the pilot studies, the data collection methods, the questionnaires and the sampling methods worked to generate a large and diverse sample. Nevertheless, the sample size was probably reduced by seasonality as data were collected close to the summer and winter holiday periods.

3.11 CONCLUSION

The choice was made to include organisations of all sizes in order to ensure the sample adequately reflected the breakdown of the Charter as well as the Bristol economy. The importance of ensuring the sample has the potential to accurately represent the Charter is shown when it is considered that 68.8% of the organisations participating in the Charter are classed as SME's. A targeted sample of employees would not be suitable for organisations that are considered to be micro or small organisations.

The sampling method outlines the techniques used to encourage organisations to participate in the study. Three main approaches were used: an information sheet, presentations and face to face meetings. These three approaches provided all organisations engaging with the charter with opportunities to receive information about the study and have the opportunity to ask questions about the study. These approaches ensured that organisations received as much information as possible and could make informed decisions regarding participation. It ensured that organisations could be briefed about the ways in which the study overcomes the resource limitations and how it is suitable for all organisations regardless of sector, industry and size.

While these are benefits to this approach, this approach does have biases, namely selection bias. Selection bias is arguably the greatest bias that this study will face as it can be encountered at every stage and is applicable to both employees and organisations.

The final sample does represent the Workplace Wellbeing Charter as all sizes of organisations from a variety of industries and all sectors are represented. The response rates by organisations was much higher than the response rate observed by employees but despite this the final samples in both data collection periods are sufficient. The final sample was generated without the use of a participation incentive, suggesting that future expansion of this methodological approach could be improved if employees were incentivised more to participate.

The chosen data collection method was to conduct employee and manager questionnaires across two data collection periods, and these were provided to organisations electronically via online survey software and also in paper format if required. Both questionnaires covered all eight standards of the Charter with the employee questionnaire including other wellbeing concepts such as flexibility, engagement, job satisfaction, and pay, commitment to employer and performance appraisal. Links to the questionnaires were provided to managers who then sent these to all of their employees.

While it is acknowledged throughout that different data collection methods have been used within the current literature and there are multiple ways in which this data could be collected, this method was deemed to be the most suitable and beneficial method for this study. This method ensured that employees and managers had flexibility regarding how they participated in the study in both the format chosen as well as the time and place of data collection.

Although it is not possible to conduct a causal analysis due to the lack of control organisations, this method does allow for a longitudinal design that analyses employee

wellbeing and the role of managers while also providing an indication of the changes that occurred over time.

The pilot process allowed for the questionnaires to be tested and this highlighted many problems that needed to be resolved. The most common problem identified was the length of the questionnaire, which was resolved using statements where possible enabling as much data to be collected as possible.

As more pilot studies were conducted the number of reported issues reduced and the positive perception of the questionnaires improved. One respondent from a University stated that “All in all I think that this is a very well thought out, well-crafted piece of work and the author should be congratulated for that”. This was not the sentiment shared by all respondents which is indicative of how this study could have been received but this does show how positive the data collection tools were received.

CHAPTER 4: DESCRIPTIVE STATISTICS

4.1 INTRODUCTION

Descriptive statistics are used within the literature as the main method of analysis, and are able to provide an insight into the potential relationships that exist between employee performance and wellbeing concepts. While it is accepted that focusing on descriptive data limits the analysis it may still produce interesting findings.

As stated in Chapter 3, the methodology for this study utilised a repeated cross sectional approach. This is when individual level data is collected on respondents at different points in time, where the samples are not the same (UK Data Service, 2015; Salkind, 2010). Common examples of these type of analyses are labour surveys, retail trade surveys, political opinion polls and general household surveys (UK Data Service, 2015). T

These differ to longitudinal designs in some ways, however the main difference is that a repeated cross sectional approach does not capture data on the same individuals in each data collection period. A longitudinal design captures panel data and has the ability to evaluate the potential for causality whereas repeated cross sectional data does not have this ability. Repeated cross sectional analyses do still allow for a discussion of changes over time, but this is at the population or group level, not at the individual level (UK Data Service, 2015; Lavrakas, 2008; Yee and Niemeier, 1996; Lebo and Weber, 2015).

Within this chapter, and this descriptive analyses, that is what is being referred to when the phrase "change over time" has been stated. At no stage is this analysis attempting to imply causality, or that for individual A their behaviour has changed by X amount. For this study, the individual level samples are not the same but the organisation level samples do remain constant. This means, by using a repeated cross sectional analysis, it is possible to discuss changes over time in the circumstances and environment within these organisations. As noted by the UK Data Service (2015), repeated cross sectional analyses allow for a comparison in the behaviour or circumstances of different groups if representative samples are present in consecutive data collection periods.

Also UK Data Service (2015) notes that when making an inference based on repeated cross sectional analysis it is important to ensure that the data has been made as comparable as possible to eliminate the possibility of changes over time being due to methodological differences. As outlined throughout Chapter 3, the same data was collected in both data collection periods and the same methodology has been used. This consistency regarding the

data collection approach ensures the possibility of methodological differences causing differences within the observed data over time has been minimised.

Although it is accepted that the observed differences could be due to the different individual level respondents that have participated in the sample, having different samples does not mean it is not possible to make non-causal descriptions of the changes in the circumstances within the organisations over time.

This chapter provides a broad overview of the descriptive statistics and the associations between employee performance and wellbeing while also outlining interesting trends that augment the existing literature. The results identifies that over time employees feel less supported and valued by their employers despite their managers exhibiting behaviour that theoretically should lead to improved wellbeing and performance.

This chapter also reveals a clear difference in how managers and employees perceive the performance of the organisation and management. This was found for almost all wellbeing concepts, suggesting that the inconsistent findings in the literature review could be due to the level of seniority of the employee who participates in any given study. The seniority of the employee, based on the descriptive statistics observed in this chapter, is likely to affect how positively or negatively the employee responds to questions asked as well as what observations are missing.

The remainder of this chapter describes how data was managed prior to performing any analysis, explores these themes in detail and provides a brief overview of the demographic information of the samples in both data collection periods and justifies the use of factor analysis and an original modelling approach. The results found in the second data collection period are shown in brackets after the first data collection period's results to provide clear and concise comparisons between the two data collection periods.

4.2 DATA MANAGEMENT PRIOR TO MODELLING

The data went through various stages of management for it to be ready to be used for the proposed econometric analysis in Chapter 3. Once collected, in line with the approved ethical procedure, the data were exported on to the university's server and all files were encrypted. All files were stored on a password protected computer in a locked room that had controlled access. Following the storage of the data, the data were anonymised as the respondents email addresses were removed from the data set and each respondent was given an identification number.

These steps were followed to ensure that access to the data was limited to the only intended person discussed with the participating organisations and that no respondent could be directly identified from the data set.

As per chapter 3, section 3.10.3 respondents from the single control organisation were removed from the data set to ensure the results obtained would not be skewed by a non-charter organisation. This allows for a more accurate reflection of the Charter with results that are more indicative of the extent to which participating in a health intervention can affect an organisation.

Before that data were used for any analysis, the next step was to try to solve the potential problems of having large amounts of missing data. This was a key focus, because as outlined by White (2015) missing data not only reduces the statistical power of a model to adequately predict the effect of a specific variable on Y but it also reduces how representative the data is with regards to the variable(s) concerned.

This study attempted two methods to solve for missing data; regression and mean imputation. The former of these is a method that can be computed through SPSS software via the "missing value analysis" command and uses regression analysis to estimate what the missing value would be, the latter method replaces the missing values with the mean value (White, 2015).

While, the potential issues regarding missing data are known and could be present given the sensitive nature of the data collected, this study decided to leave the data set with the missing values as collected[7]. This decision was made because both of the techniques stated above input data, which means the data is not the true and honest data. The data set would be less representative of the sample and of the respondent's true experience if the researcher input a value for the respondent.

For example, if the estimated value or the mean value is a four, this would mean the researcher is inputting into the data that the respondent agreed with a given statement, given the Likert scales used. This could potentially bias the data more than the missing data as, in this example, the data would become positively skewed.

Following this, dummy variables were created for the biographical and employment data gained. Data collected regarding gender, age, ethnicity, whether the respondent considered themselves to be disabled, if they had caring responsibilities, their working hours,

[7] If missing data is removed by SPSS and/or STATA when performing a specific statistical analysis the true base will be reported and the number of responses removed will be stated in a footnote.

their employment contract classification, tenure and if they received performance related pay were all turned into dummy variables to be used within the analysis.

The final stage of the data management process prior to conducting the econometric analysis was to resolve the issue regarding the number of variables that had been generated. As can be seen below in Tables 4.18 and 4.19, in section 4.18, the employee questionnaires generated 111 separate variables in both data collection periods. These variables needed to be reduced as a regression analysis that includes over 90 variables is not feasible.

It is important to note that at this stage it was clear within the employee and manager data sets that utilising both data sets in the advanced econometric analysis would not be possible due to the lack of matched data, therefore the high variable count was only a concern for the employee questionnaire data.

The first methods utilised were to use the mean and the modes of each wellbeing concept instead. This would have reduced the number of potential variables to a more manageable amount but, as with the concerns expressed regarding missing data, these methods lacked the power to adequately represent the concepts and were poor representatives of the data gained.

Following these approaches, it was decided to utilise factor analysis. This is discussed in more depth below in section 4.18, but as discussed in chapter 3 factor analysis is a methodology that identifies an underlying trend within the data set (Cornish, 2007). This results in a reduction in the number of variables that can be used while maximising the amount of the variance explained within each factor identified.

The factors generated from this methodology are to be utilised within the advanced econometrics models in Chapter 5, the main focus of this chapter is to provide an overview of the themes and trends that exist within the data. Tables 4.1 and 4.2 outline the wellbeing concepts analysed for the employee and manager questionnaires, along with how these variables were defined.

Table 4. 1 An explanation of how wellbeing concepts have been defined for the employee questionnaires

Employee Wellbeing Concept	**Definition**
Healthy Eating	The extent to which employees eat healthy foods and the extent to which their organisation facilitates this behaviour.
Physical Activity	Employee activity levels and the extent to which their organisation facilitates this behaviour.
Tobacco Cessation	The amount of cigarettes smoked by the employee and the extent to which their organisation seeks to reduce this behaviour.
Alcohol and Substance Misuse	The amount of alcohol consumed by employees and the extent to which their organisation seeks to reduce this behaviour.
Leadership	The extent to which employees feel they are well managed and communicated with regarding their workplace and performance.
Flexibility	The ability of the employee to manage their own workload and their work-life balance.
Training and Development	The extent to which employees are provided with training and development opportunities and how these are funded.
Attendance Management	The extent to which employees are absent and how their absences and return to work are managed by the organisation.
Health and Safety	The extent to which employees have had health and safety training and are aware of health and safety principles.
Job Satisfaction	How satisfied and happy employees are with their current role and employer.
Engagement	How engaged are employees at work and how do they exhibit this behaviour.
Commitment to Employer	The extent to which employees wish to stay or leave their current employers.
Health and Wellbeing	The extent to which employees are mentally, physically, emotionally and socially healthy.
Employment Details	Assessed certain characteristics of the employee's employment such as tenure, working hours, contract type and performance related pay.
Biographical Details	Assessed certain personal characteristics such as gender, age, presence of a disability and having caring responsibilities.

Table 4. 2: An explanation of how wellbeing concepts have been defined within the manager's questionnaire

Manager Wellbeing Concept	Definition
Healthy Eating	What policies and/or behaviours are in place and/or exhibited by the organisation and management to help facilitate employees to eat healthier.
Physical Activity	What policies and/or behaviours are in place and/or exhibited by the organisation and management to help facilitate employees to be physically active.
Tobacco Cessation	What policies and/or behaviours are in place and/or exhibited by the organisation and management to help facilitate employees to reduce their levels of smoking.
Alcohol and Substance Misuse	What policies and/or behaviours are in place and/or exhibited by the organisation and management to help facilitate employees to reduce the level of alcohol that is consumed.
Leadership	What behaviours are in place to effectively manage employees, specifically focusing on the amount of, and type of, communication that takes place with employees'.
Training and Development	The level of training for managers to have difficult conversations surrounding employee health and wellbeing.
Attendance Management	What policies and/or behaviours are present and/or exhibited by the organisation and management to manage employee absences and facilitate a return to work.
Health and Safety	The policies and practices that focus on supporting and updating the organisations health and safety practices.
Performance Management	The policies and practices aimed at managing and improving employee performance levels.
Health and Wellbeing	The policies and/or behaviours are present and/or exhibited by the organisation and management to maintain and improve the health and wellbeing of employees.
Employment Details	Awareness of previous workplace wellbeing initiatives and their effect on the organisation.

4.2.1 Final Sample

Chapter 3, section 3.10.3, outlines the final sample for the first and data collection periods were 372[8] and 241[9], with response rates of 3.25% and 2.11%, respectively. Within this

[8] This is a total figure for the first data collection period. The split, as stated in section 3.10.3, is 327 responses from employees and 45 from managers.

[9] This is a total figure for the second data collection period. The split, as stated in section 3.10.3, is 215 responses from employees and 26 from managers.

discussion in Chapter 3, it is also outlined that a control organisation was identified and data was collected from this organisation. As stated in section 3.10.3, the intended methodology was to have a control group where these organisations were matched with those participating in the Charter and this study. Unfortunately, due to resource limitations, it was not possible to create an entire control group but data was collected for one control organisation.

As has been discussed above, prior to the data analysis, this organisation was removed from the data set as the inclusion of this would enable the results to better reflect the role of the Charter. This is particularly important when discussing the policy implications of the results in Chapter 6, although this could potentially reduce the external validity of the results.

The organisation only represented 3.4% and 6.8% of the sample in the first and second data collection periods, respectively. The removal of this organisation from the data set was unlikely to have had a significant effect on the results produced, whether they be descriptive or more advanced econometric results.

With this organisation removed, Table 4.3 outlines the final sample based on the potential responses available from those participating organisations and the final sample gained along with the response rate.

Table 4. 3: Final response rate for both data collection periods, with the number of manager and employee responses combined

	First Data Collection Period	**Second Data Collection Period**
Potential Sample	11,446	11,446
Final Sample	372[10]	241
Response rate	**3.25%**	**2.11%**

4.3 DEMOGRAPHIC INFORMATION

Within the employee data, 4.9% (6.5%) of the sample worked between 0 and 20 hours per week, 12.2% (14%) worked between 21 and 30 hours per week, 46.8% (50.2%) worked between 31 and 40 hours per week and 11.6% (8.8%) worked more than 40 hours per week. 5.8% (3.3%) of the sample have been with their employer for less than one year, 12.5% (12.6%) of the sample have been with their employer for between one and three years , 4% (7%) of the sample have been with their employer for between 3 and 5 years and 53.8% (55.3%) of the sample have been with their employer for more than 5 years.

[10] See footnotes 8 and 9 above.

50.8% (54.4%) of the sample work full time, 16.8% (20%) work part time, 5.5% (1.9%) have a fixed contract, 1.5% have temporary contracts and 1.5% (0.9%) described their contractual status as other. 64.5% (65.1%) of the sample do not receive performance related pay with 9.5% (14.4%) stating they do receive performance related pay.

8.3% (11.6%) of the sample were under 30 years of age, 17.1% (16.3%) were aged between 30 and 39 years of age, 20.8% (24.2%) were aged between 40 and 49 years of age, 21.7% (21.9%) between 50 and 59 years of age and 7.3% (5.6%) were older than 60 years of age. 52.6% (52.1%) of the sample were female and 22.9% (26.5%) were male in the employee questionnaire. 24.5% (21.4%) did not state their gender.

65.1% (70.2%) of the employee questionnaire were white, 1.8% (2.3%) stated they were of multiple ethnic groups, 1.5% (0.9%) were Asian or Asian British, 1.8% (3.7%) were Black/African/Caribbean/Black British and 1.5% (0.9%) classified their ethnicity as other. 60.6% (62.3%) of the sample did not have a disability, 12.8% (16.7%) did and 26.6% (20.9%) did not answer the question.

48.3% (45.6%) of the sample did not have any caring responsibilities and 35.2% (33.5%) were aware of workplace wellbeing initiatives organised by their employer. The results for the manager's data is far greater with 65.7% (76%) being aware of workplace initiatives.

Prior to any analysis being conducted it is important to highlight that there is a significant difference in the number of managers included in the first and second data collection period analyses. Therefore, the results and interpretations of the results should be taken with a degree of caution.

4.4 HEALTHY EATING

Table 4.4 shows the descriptive statistics for the healthy eating concept based on the employee level data. The table shows the mean responses for all healthy eating statements and questions within the first data collection period, along with the standard deviation and the minimum and maximum. The minimum and maximum for categorical variables will be the range of the category, which in most cases will be 0 to 6. Similar tables have been produced for all employee and manager concepts in both data collection periods and these have been outlined in appendix F.

Table 4. 4: Healthy eating descriptive statistics in the first data collection period, based on employee responses.

	N	Minimum	Maximum	Mean	Std. deviation
There Are Vending Machines	327	0	4	1.51	0.850
Vending Machines Have Healthy Alternatives	327	0	4	2.63	1.490
On site Cafe or Restaurant	327	0	4	1.51	0.933
Cafes or Restaurants Have Healthy Options	327	0	4	2.33	1.613
Organisation Supports Healthy Diet	327	0	6	2.58	1.580
Provided Information On Healthy Eating	327	0	6	2.68	1.609
Offered Programme To Improve Diet	327	0	6	2.09	1.873
Consume Fruit and Veg	327	0	5	3.17	1.526
I Have Takeaway Regularly	327	0	4	1.50	0.949

When evaluating the data regarding healthy eating in both samples outlined in appendix F, 53.5% (67.4%) of the sample stated there were no vending machines providing food and drink in their workplace and 22.3% (14.4%) of the sample stated they knew their vending machines did not provide healthy alternatives. However, 43.7% (59.1%) did not know if their vending machines contained healthy alternatives. Vending machines appear to be the main source of food provided by the organisations given how few cafés and restaurants there are within the organisations included in the sample, as 49.2% (42.8%) stated there is not a café or restaurant.

For those few employees that do have access to a café or restaurant within their organisation, 4.6% (43.7%) do not know if healthy alternatives are available. 28.7% (33%) of the sample stated healthy alternatives are available which implies that a relatively high percentage of the sample are provided with healthy alternatives by their organisation.

20.2% (28.8%) of the sample agreed that their employer supports a healthy diet and 29.7% (27.4%) agreed that they are provided with information on healthy eating by their employer, although 22% (20%) also disagreed. 60.8% (66.5%) of the sample either strongly disagreed or disagreed that a tailored programme to improve their diet was available.

In terms of general employee behaviour 54.5% (58.1%) of the sample consumes five portions of fruit and vegetables often or all of the time and 72.4% (79%) of the sample never or rarely have a takeaway 2-3 times per week. Figures 2 and 3 show the changes over time regarding the consumption of fruit and vegetables across both data collection periods.

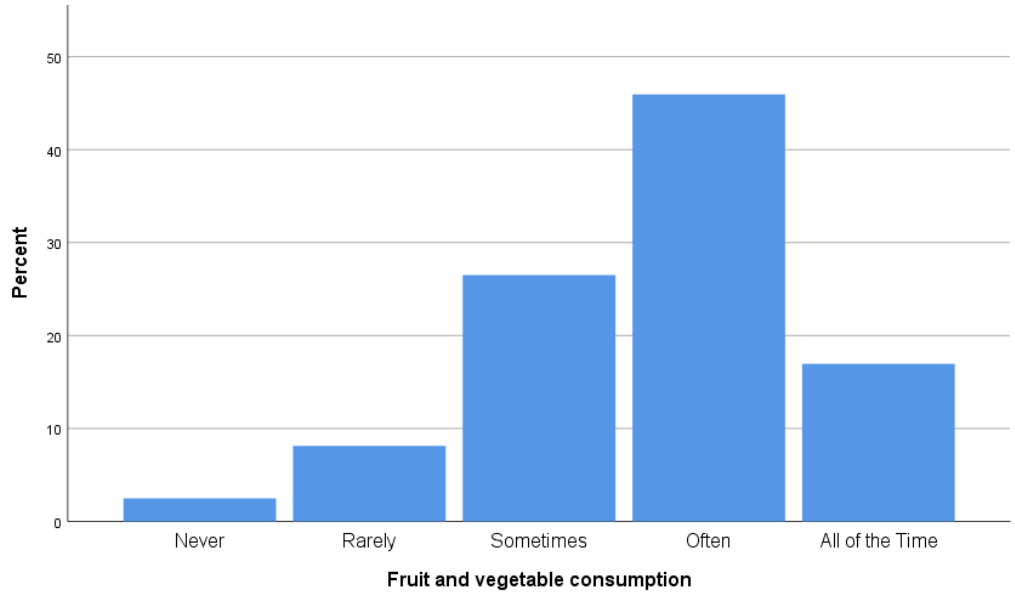

Figure 2. Consumption of five portions of fruit and vegetables per week, in the first data collection period.

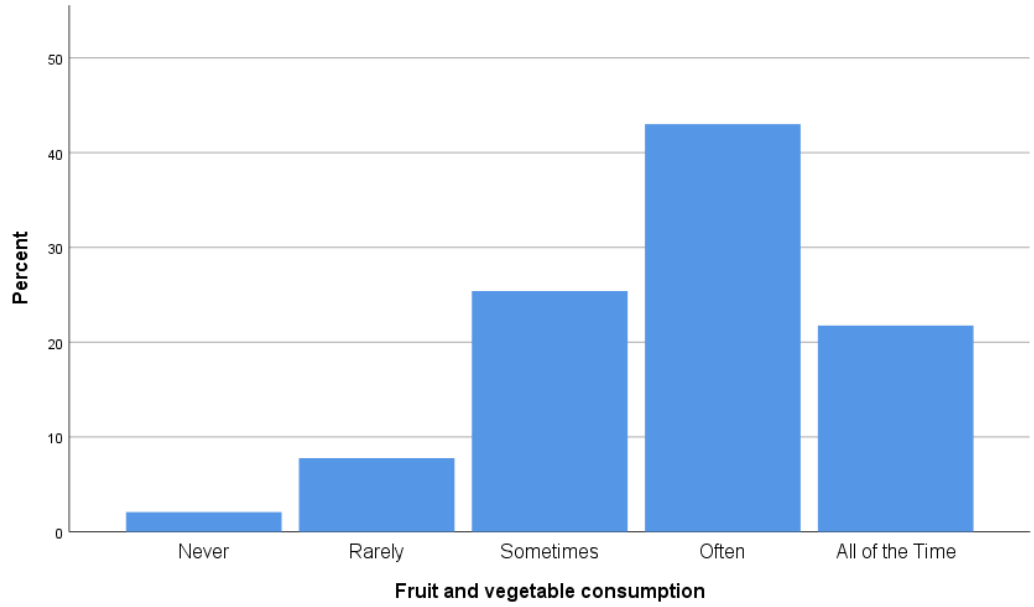

Figure 3. Consumption of five portions of fruit and vegetables per week, in the second data collection period.

While the results suggest a general negative trend, the results imply that organisations have made an effort to increase the presence of healthy food within their organisations. The perception of organisation support has improved over time and appears to be associated with the change in employees' general behaviour, suggesting that over time employees are eating healthier in and out of the workplace. The extent to which perceived improved organisation

support has contributed to this is debateable, however it is clear from the employee's perspective that their employers are actively doing more to enable them to eat healthier.

Managers Questionnaire

89.3% (64%) of this sample stated their organisation did not have a healthy eating plan with 64.1% (19.2%) of managers strongly disagreeing or disagreeing that healthy eating information was provided to all employees. 38.5% (23.1% disagree) strongly disagree or disagreed that the organisation promotes healthy eating and only 25.6% (65.4%) strongly agreeing or agreeing. In addition, 51.2% (26.9%) of managers strongly disagreed or disagreed that healthy eating choices were promoted by the organisation through an internal pricing strategy.

48.7% (53.8%) of managers strongly agreed or agreed that eating facilities are situated away from work areas and 46.2% (61.6%) strongly agreed or agreed they encourage employees to use these areas. 51.3% (30.8% disagreed) of managers strongly disagreed or disagreed that employees are consulted on healthy eating interventions compared to 7.7% (23.1%) that agreed. 57.9% (28%) of managers strongly disagreed or disagreed that there are planned events to show the importance of healthy eating.

While managers perceived their behaviour regarding the provision of information more positively than the employee's experience, these results mainly show large positive changes over time. This supports the suggestion that over time employees feel more supported and are eating healthier due to the changes made by their employers and that managers do have a key role in the general health of their employees.

However, as healthy eating is widely overlooked within the literature there are no studies that link the influence managers can have on employee's healthy eating. These descriptive statistics suggest that there is an association and that more research is needed to fully explore the extent to which managers and organisations can support healthy eating.

4.5 Physical Activity

45.6% (43.7%) of surveyed employees strongly agreed or agreed they were provided with information on the benefits of physical activity and 22.3% (21.9%) strongly disagreed or disagreed. There is a perception of more organisational support to be physically active than to have a healthier diet as 32.5% (31.2%) strongly agreed or agreed that their employer supports them to be physically active, with 29.1% (32.6%) strongly disagreeing or disagreeing.

This result is likely to be explained by greater information provision and by the promotion of interventions such as active travel where 55.3% (54.4%) of the sample strongly agreed or agreed that they are encouraged to undertake this. 39.1% (40.4%) of the sample strongly disagreed or disagreed that there are sports clubs or teams that they can join.

In terms of employee behaviour 48.3% (46%) state that they exercise regularly, often or all of the time whereas 20.5% (26%) of employees state that they never or rarely exercise. 72.2% (74.5%) of employees never or rarely take part in sports teams outside of work. Table 4.5 outlines the extent to which feeling supported to be physically active is associated with how often employees exercise.

Table 4. 5: Relationship between physical activity support and regular exercise

	Exercise Regularly	Organisation Supports Physical Activity
Exercise Regularly	1	0.483**
Organisation Supports Physical Activity	0.483**	1

*p<0.10 N = 327
**p<0.05
***p<0.01

The results show that improved organisational support for physical activity does have a statistically significant correlation with employees exercising more regularly. While this could be affected by other factors, such as the employee's own desire for exercise, the results presented here suggest that organisational support can play a role in increasing employee's level of physical activity.

This shows the importance of organisation support on employee behaviour and organisations could realise some of the benefits of physical activity (such as potentially lower absenteeism) if they provide more support for their employees' physical activities.

Over time these results represent a large negative change and could be due to the increased perception that their employers do not support physical activity and that certain activities are not encouraged as much as before. This could explain why more employees are participating in sport that is unrelated to their employer.

The results suggest that organisations need to do more to ensure that their employees are physically active in ways that go beyond active travel. While there is a debate regarding how much responsibility an employer has to improve and influence their employees' lifestyles, ensuring their employees are physically active would be in any organisation's

interest given the many studies that highlighted in chapter 2 the benefits of increased physical activity in reducing absenteeism and improving employee health.

Managers Questionnaire

76.3% (61.5%) of managers stated there is not a physical activity plan in place, 34.2% (68%) of managers strongly agreed or agreed that information on the benefits to physical activity is provided to employees while 34.2% (20%) strongly disagreeing or disagreeing.

With respect to taking breaks, it was found that 57.9% (64%) of managers strongly agreed or agreed that staff are encouraged to take the minimum number of breaks and 34.2% (28%) strongly disagreed or disagreed that staff take regular breaks that exceed the minimum amount, only 10.5% (32%) strongly agreed or agreed. Interestingly, 52.6% (36%) of managers neither disagree nor agree which may not be a sign of indifference and instead could show that managers do not know, or realise, that certain activities take place as regularly as they do, such as smoking breaks.

47.4% (62.5%) of managers strongly agreed or agreed that they promote physical activities within the local area or those led by the organisation whereas 34.2% (16.7%) strongly disagreed or disagreed. Interestingly, when managers were asked about encouraging physically active ways of travelling to work only 47.3% (36%) strongly agreed or agreed while 23.7% (24%) strongly disagreeing or disagreeing and 26.3% (40%) doing neither.

The results show that a difference between managers' and employees' perspective exist as managers were more positive about information provision than employees but were more negative than employees about the promotion of active travel to work. These findings show a widening gap over time between managers' and employees' perspectives which could be due to employees being provided with information at one time point but not regularly, such as when active travel is promoted.

Lower levels of physical activity is associated directly to poorer employee performance and indirectly through numerous health factors that all directly link to poor employee performance. Therefore, this disconnect between employees' and managers' perceptions could offset the benefits of employees eating healthier.

4.6 Tobacco Use Cessation

75.8% (77.7%) of the sample do not smoke. An analysis of the amount of cigarettes smoked by those that do smoke was not possible as 90.2% (89.3%) of the sample did not answer the question, meaning the percentages available could be misleading. Of those that do smoke,

67.3% (68.8%) do not use an e-cigarette and only 1.8% (4.2%) said they do, suggesting that when people did smoke they tended to smoke tobacco.

With regards to the awareness of a smoke free policy, 60.8% (69.3%) of the sample strongly agreed or agreed that they were aware of a policy. 64.8% (61.8%) strongly agreed or agreed that they are aware of tobacco control laws. 43.4% (48.6%) stated the ability of the organisation to help support them quitting did not apply to them. For those that it did apply to, 17.1% (11.1%) strongly agreed or agreed and only 8% (8.8%) strongly disagreed or disagreed.

"No smoking" signs are clearly situated in most workplaces as 41% (38.6%) of the sample strongly agreed or agreed and 15.6% (15.4%) strongly disagreed or disagreed. As it has already been established, smoking does not appear to be an issue within the sample, which means the finding that 16.5% (17.2%) strongly disagreed or disagreed that they smoke to reduce workplace stress is even more positive.

Manager questionnaire

84.3% (100%) of the sample stated that staff are aware of a smoke free policy. In addition, 23.7% (38.5%) agreed that there is a procedure for employees to report breaches of the smoke free policy. 44.7% (95.5%) of managers said that e-cigarettes do come under the smoke free policy but 52.6% (30.7%) of managers strongly disagreed or disagreed they encourage staff to use e-cigarettes instead of tobacco, only 10.5% (19.2%) agreed.

With regards to organisational support to help employees quit smoking, 44.7% (6.7%) of managers said they did not know if the organisation provides stop smoking services with 26.3% (66.7%) and 28.9% (26.7%) saying yes and no respectively. 13.5% (19.2%) strongly agreed or agreed that staff would be allowed time off to attend these services with 27% (15.4% disagreed) strongly disagreeing or disagreeing.

Furthermore, 52.6% (19.2%) of the sample strongly disagreed or disagreed that information on the long term effects of smoking is provided to employees compared to 15.8% (50%) that agreed. 34.2% (42.3%) of managers strongly agreed or agreed they were able to provide extra support to help employees quit smoking but 36.8% (30.7%) strongly disagreed or disagreed.

The managers' results with respect to the visibility of "no smoking signs" are in line with the employees, as 42.3% (73.1%) strongly agreed or agreed and 26.4% (19.2%) strongly disagreed or disagreed. This finding is even more surprising when it is considered that 68.5%

(80.8%) of managers strongly agreed or agreed that employees are made aware of areas where they can smoke.

The agreement between managers and managers shows that any alignment or disagreement between the two levels are not due to questionnaire design and is a genuine difference. Figures 4 and 5 highlight the differences observed over time regarding the behaviour of managers within the sample with respect to tobacco cessation activities.

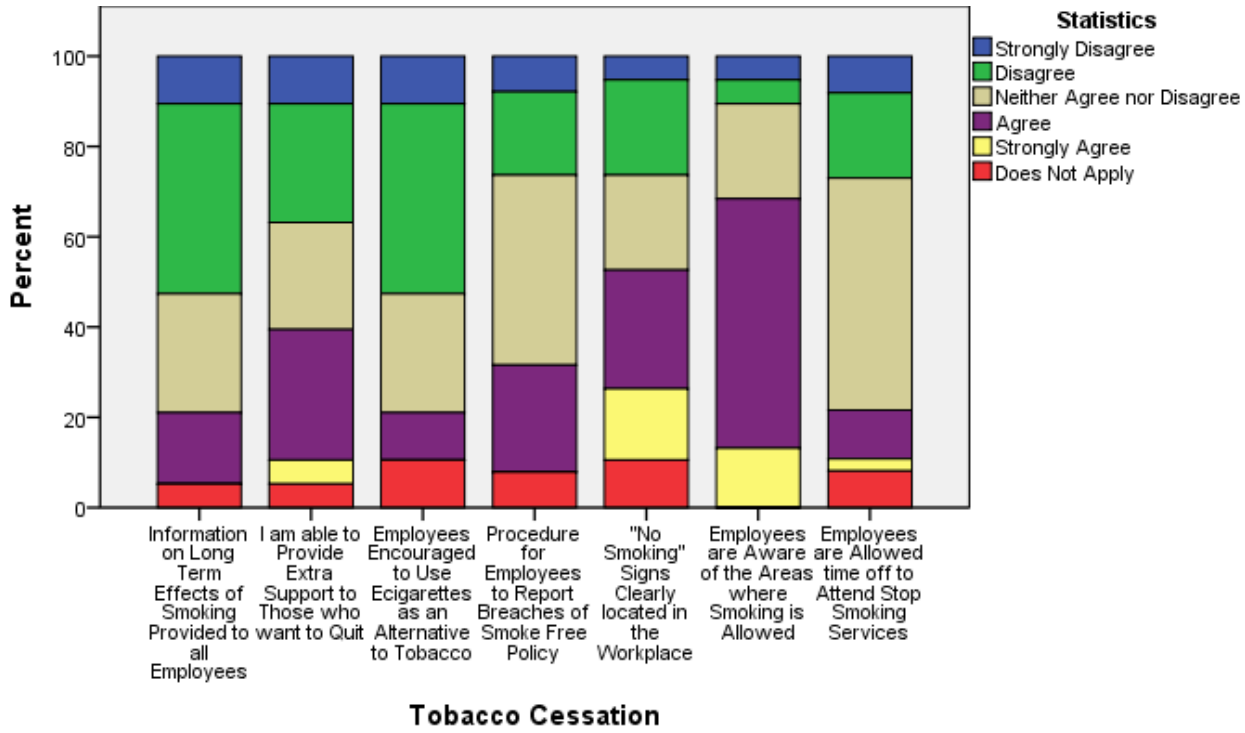

Figure 4. Managers' behaviour regarding tobacco cessation activities, in the first data collection period.

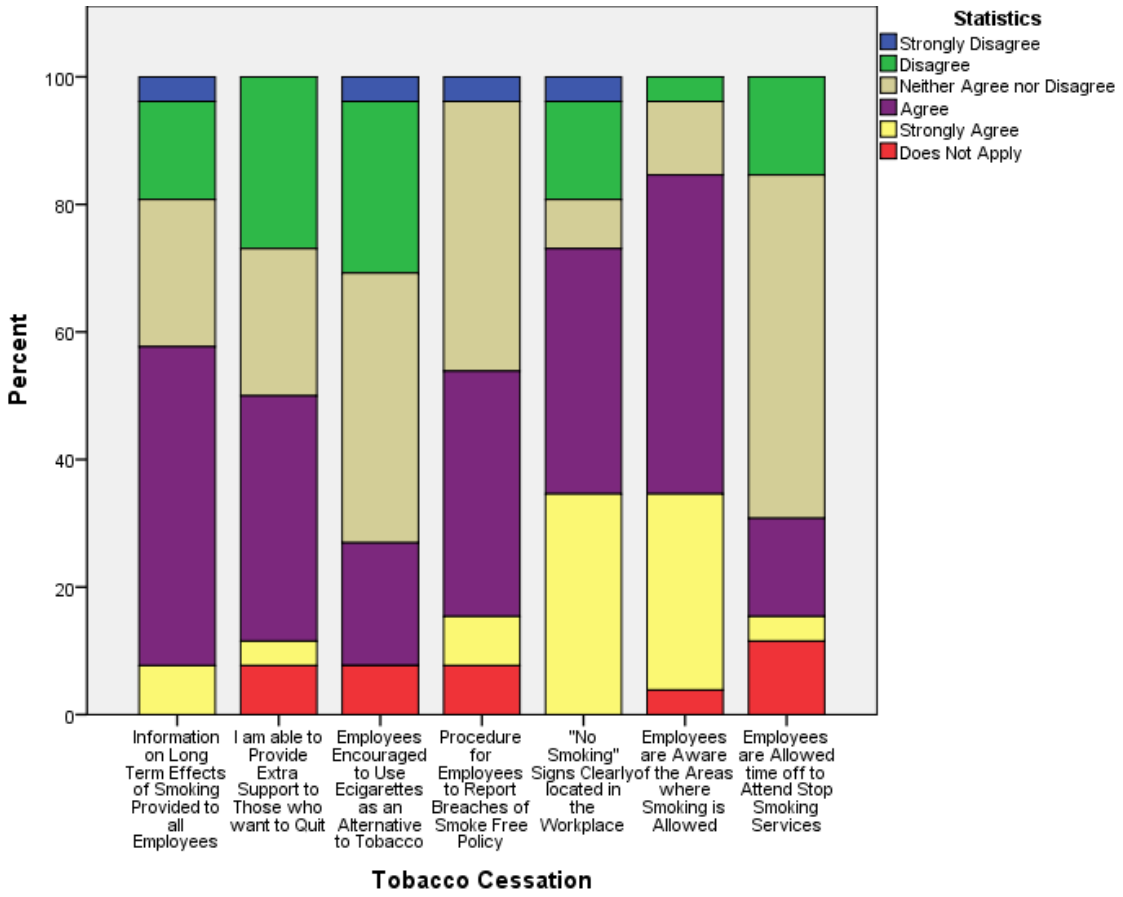

Figure 5. Managers' behaviour regarding tobacco cessation activities, in the second data collection period.

Over time a significant difference has emerged between what managers believe they do and what employees' experience. For example, the difference between employee awareness of a smoke free policy in the second data collection period from the perspective of both levels is approximately 30%. Furthermore, the results from the managers' questionnaire do not support the negative changes observed in the employee results; suggesting that with regards to tobacco use cessation, a large gap in communication has occurred.

These results are in line with what has been observed for physical activity and suggest that while on paper the organisation may be implementing the right policies in practice there appears to be a lack of communication and input from employees. These trends could be occurring due to resource constraints and discussions about these health topics may not be taking place on a consistent basis. This would be in line with the literature as the widespread omission of these behavioural factors suggest that they are of low priority.

4.7 Alcohol and Substance Misuse

71.4% (75.8%) of the sample consumed alcohol with 34.3% (36.7%) consuming between 0-3 units per week, 21.4% (23.7%) consuming 4-9 units, 5.8% (8.8%) consuming 10-15 units and 3.7% (1.9%) consuming more than 16 units of alcohol per week. It should be noted that 14.7% (11.2%) of the sample declined to state whether or not they consume alcohol and 34.3% (28.8%) did not state how much alcohol they consume in a typical week.

The results show that across the sample, alcohol misuse does not appear to be a concern and this reduced over time. Reinforcing the latter point is the two findings that 47.1% (51.7%) strongly disagreed or disagreed that they consume more than is recommended and that 49.3% (56.7%) strongly disagreed or disagreed that they consume alcohol to reduce workplace stress. Additionally, 58.1% (61.8%) of the sample strongly disagreed or disagreed that they use other substances to reduce work related stress with 11.3% (12.6%) strongly agreeing or agreeing that they did.

18.9% (22.4%) of the sample strongly agreed or agreed they have been provided with information on the impact of alcohol misuse whereas 38.8% (36.3%) strongly disagreed or disagreed. 16.2% (17.2%) of the sample strongly disagreed or disagreed their organisations would support them if they had an alcohol related misuse issue whereas 29.4% (33.5%) strongly agreed or agreed.

60.3% (60.4%) of the sample strongly disagree or disagree they have had alcohol awareness training. Awareness of alcohol guidelines at organisational functions had positive results as 36.6% (45.2%) of the sample strongly agreed or agreed they were made aware of these, however, 27.9% (23.7%) strongly disagreed or disagreed that they have been made aware.

These results show positive changes over time as the consumption and intensity of alcohol consumption had reduced. Furthermore, employees felt more supported to reduce alcohol consumption by their organisation, which could be due to the improved information provision and alcohol awareness training.

Managers Questionnaire

51.4% (92.3%) of managers stated that there was an alcohol misuse policy in place and 48.6% (7.7%) stated that there was no policy in place. With regards to these policies 27.8% (5.9%) of managers stated that they were developed with employees but 72.2% (82.4) stated they did not know. The manager results are in line with the employee results with respect to

the provision of information on the effects of alcohol misuse, as 45.9% (16% disagreed) strongly disagreed or disagreed and only 13.5% (56%) strongly agreed or agreed.

In addition, 77.8% (88.5%) of managers strongly agreed or agreed they are aware of the link between mental health and alcohol misuse. 56.7% (69.2%) of managers strongly agreed or agreed they would be willing to provide external help if required. Whether or not these statements are associated with the stigma associated with alcohol misuse is outlined in tables 4.6 and 4.7.

Table 4. 6: Relationship between reducing stigma and offering external support to employees

	Support Those who need external help	Reducing stigma a part of culture
Support Those who need external help	1	0.498**
Reducing stigma a part of culture	0.498**	1

*p<0.10 N = 36
**p<0.05
***p<0.01

Table 4. 7: Relationship between reducing stigma and awareness of link between alcohol misuse and mental health

	Reducing stigma a part of culture	Aware of link between alcohol misuse and mental health
Reducing stigma a part of culture	1	-0.049
Aware of link between alcohol misuse and mental health	0.008	1

*p<0.10 N = 36
**p<0.05
***p<0.01

While the results show no statistically significant correlation between managers believing that reducing stigma is important and manager's awareness of the link between alcohol misuse and mental health. The results suggest that there is some correlation between managers believing that reducing stigma is important and their willingness to support employees who require external help, suggesting that offering external help could be dependent on the manager's personal belief and the organisations culture.

The result could also suggest that providing extra support could have a role in reducing the stigma associated with mental health and improving the organisations culture.

This could be associated to improved employee performance through reduced absenteeism and employee turnover as employees feel better supported by their organisation.

Additionally, 94.6% (88.4%) strongly agreed or agreed that they are aware why some employees may not want to come forward despite only 16.2% (26.9%) of managers agreeing that noticing the signs of misuse was important to their training.

Overall the results show positive changes over time which could be due to organisations becoming more involved with tackling alcohol misuse. The results show employees and managers experiences to be in alignment as well as showing that employee behaviour has improved over time. While this is a positive outcome it is interesting to note there is even more alignment between managers and employees with regards to alcohol misuse and healthy eating than physical activity and tobacco cessation despite the former two aspects of wellbeing being much less of a focus in the literature. However, it is unclear whether these changes over time have been led by organisations or if they reflect societal change.

As has been shown throughout this thesis, there is literature available that discusses the associations of low physical activity and high tobacco use on wellbeing and performance yet these are the two aspects of employee behaviour that have the least support from organisations. Moreover, the close alignment for employee and manager alcohol misuse perspectives supports the Charters statement for healthy eating and suggests that managers do have significant influence on employee behaviour. This suggests that if managers can be more aligned with employees regarding their physical activity and tobacco cessation then organisations could see improvements in employee performance via absenteeism and presenteeism.

4.8 LEADERSHIP

Employee Questionnaire

30.6% (41.4%) of the sample strongly agreed or agreed they are aware of a communications policy but 28.1% (24.6%) strongly disagreed or disagreed. The latter could be due to a communications policy not being in place as 34.3% of managers stated that no policy was currently in place, however further in-depth research would be required to identify this link (65.7% stated a policy is in place in time two).

Expanding upon employees being informed by managers, 44.1% (44.2%) of employees strongly agreed or agreed that they had been informed about a complaints

management procedure while 35.2% (36.2%) of employees strongly disagreed or disagreed that they are consulted by managers on any organisational change.

39.4% (43.2%) strongly agreed or agreed they are recognised for high standards of work. 53.5% (48.8%) of the sample strongly agreed or agreed that they have the opportunity to go on training courses and 56.2% (58.2%) strongly agreed or agreed that they are able to suggest ideas. 47.7% (53%) strongly agreed or agreed that they have regular performance reviews but the sample was divided with regards to how beneficial performance reviews are with 29.4% (32.1%) strongly disagreeing or disagreeing and 30.9% (30.7%) strongly agreeing or agreeing that they find them beneficial.

Despite a large percentage of employees feeling that performance reviews are not beneficial, 47.1% (55.3%) of employees strongly agreed or agreed that they know how their performance contributes to goals of the organisation.

The results show almost consistent negative change over time with employees feeling less valued, less able to have a voice within the organisation and given less direction with respect to how their performance aligns with the organisation's objectives. These findings correspond with the findings observed previously for physical activity and tobacco cessation as it is clear that a gap between the two levels is present, which will likely affect other aspects of employee wellbeing.

Managers Questionnaire

65.7% (80%) of managers stated that a formal communications policy is in place. 81.1% (88.5%) of managers stated they discuss health and wellbeing issues with their employees, while 18.9% (11.5%) said they did not. According to the managers, 67.9% (54.5%) stated they sometimes discuss health and wellbeing issues with employees, implying that issues are raised a moderate amount of the time and that health and wellbeing issues do not seem to be a problem.

Table 4.8 shows associations between discussions with employees and managers knowledge and awareness of the link between alcohol misuse and mental health.

Table 4. 8: Wellbeing issues discussed and awareness of the link between alcohol misuse and mental health

	Wellbeing issues are discussed with employees	Aware of link between alcohol misuse and mental health
Wellbeing issues are discussed with employees	1	0.230
Aware of link between alcohol misuse and mental health	0.230	1

*p<0.10 N = 36
**p<0.05
***p<0.01

The results show there is no correlation between managers discussing wellbeing issues with employees and being aware of the link between alcohol misuse and mental health. This suggests that if managers are to become more aware of the link between alcohol misuse and mental health formal training may be required as discussing wellbeing issues with employees will not always result in managers becoming more informed about specific issues.

89.2% (96%) of managers strongly agreed or agreed they informed and supported employees through periods of organisational change. Furthermore, 91.7% (100%) of managers strongly agreed or agreed they make decisions with employee input. 91.7% (96%) of managers strongly agreed or agreed that employees are made aware of the importance of raising concerns. In addition, 94.4% (92%) of managers strongly agreed or agreed they are aware of the issues that affect their employees' health and wellbeing. Table 4.9 shows whether or not this awareness is associated with the extent to which health and wellbeing issues are discussed with employees.

Table 4. 9: Relationship between the rate of wellbeing discussions and awareness of issues that impact employee health

	Frequency of wellbeing discussions	Awareness of issues impacting employee health
Frequency of wellbeing discussions	1	0.289
Awareness of issues impacting employee health	0.289	1

*p<0.10 N = 28
**p<0.05
***p<0.01

The results show that no significant correlation exists between how often wellbeing issues are discussed with employees and managers awareness of the issues impacting employee's health. Tables 4.8 and 4.9 likely reflect the discourse between the managers and employees perception of organisational support as well as the discourse regarding the level of communication between the two groups. Based on the themes that have emerged within this chapter it could be suggested that organisations are not utilising the potential to gain a better understanding with their employees, as a gap between the two perspectives appears to be present.

There seems to be positive changes over time regarding the level of communication taking place between managers and employees with regards to health and wellbeing, but elsewhere it could be suggested that communication between managers and employees has deteriorated over time.

Managers' views of their own performance are much more positive than employees' views of managers' performance, and employees appear to have felt undervalued and highlighted a lack of voice. Both of these results appear to have been deteriorating over time and given these trends are observed in other aspects of employee wellbeing the results suggest that employee wellbeing could also deteriorate, which could lead to increased absenteeism and employee turnover.

While the gap between managers and employees perceptions is known, there is yet to be a study to show this in any detail or to discuss the potential outcomes of this gap. It is clear that more research is needed that analyses the presence of the gap along with its causes and the extent to which it spills over into other aspects of employee wellbeing. This reinforces the need to have more studies that focus on the role of managers that include employee level data and combine qualitative and quantitative approaches.

4.9 FLEXIBILITY

Employee influence is an aspect of wellbeing that appears to be an issue for most wellbeing concepts, however, 59.2% (58.1%) of the sample strongly agreed or agreed they have choice over their working hours and 29.9% (35.8%) strongly agreed or agreed they have influence on the amount of work that they do. 57.8% (60%) strongly agreed or agreed that they are able to balance work and home life commitments.

While this finding is likely to be explained by the findings that 60% (59.5%) strongly agreed or agreed they can work flexibly depending on their needs and that 30.6% (34.9%) strongly agreed or agreed they are able to fulfil their caring responsibilities, this could be

associated with other aspects of employee wellbeing, including job satisfaction. Table 4.10 shows the relationship between employee satisfaction with their work and their ability to balance their work and home life.

Table 4. 10: Satisfaction with work and work-home life balance

	Work-Life Balance	Satisfied With Work
Work-Life Balance	1	0.636**
Satisfied With Work	0.636**	1

*p<0.10 N = 327
**p<0.05
***p<0.01

The results show that there is a statistically significant correlation between employees who are satisfied at work and employees feeling that they are able to balance their work and home life. This suggests that offering employees the opportunity to balance their home and work life improves employees' satisfaction at work, which could result in improved employee performance. This supports the suggestion that the declining levels of job satisfaction over time could be due, in part, to the reduction in flexibility.

These results suggest that organisations are not focusing on the needs of their employees and that bespoke policies that are suited to the context of their workplace are not in affect. This could be why the perception of flexibility has declined over time leading to a reduction in employee job satisfaction.

When assessing where employees can work 40% (44.2%) strongly agreed or agreed that they can work at home, whereas 43.5% (49.8%) strongly disagreed or disagreed that they often work at home.

The results show that over time employees do not have the same flexibility they once had at work and this has impacts on their ability to manage their lives outside of the workplace, resulting in a lower work-life balance. However, the results do show that flexibility means more than just being able work from home as most employees do not take advantage of this when it is available. Therefore, other aspects of flexibility such as the ability to work flexibly depending on their needs and having choice over the number of hours worked appear to have more of an effect on employees feeling of a work-life balance and overall sense of flexibility.

4.10 TRAINING AND DEVELOPMENT

With regards to the development and progression opportunities available to employees 34.2% (42.3%) of the sample strongly disagreed or disagreed that they had opportunities to progress. The negative opinion from this statement likely explains why 30.9% (39.1%) strongly disagreed or disagreed that they have the opportunity to develop their career, while 35.2% (30.7%) strongly agreed or agreed.

Assessing organisational support, it was found that 42.5% (38.6%) strongly agreed or agreed they are supported to do their job effectively, however 24.8% (28.4%) strongly disagreed or disagreed. Given the changes in perceived organisation support over time that have been observed in this chapter, it is worth noting that the change observed here does affect other aspects of employee wellbeing. Table 4.11 shows how the perception of being supported to do their job effectively affects employees' satisfaction with their work.

Table 4. 11: Relationship between perceived support to do their job and employee satisfaction with work

	Supported to do job effectively	Satisfied With Work
Supported to do job effectively	1	0.682**
Satisfied With Work	0.682**	1

*p<0.10 N = 327
**p<0.05
***p<0.01

The results show there is a correlation between supporting employees to do their job effectively and employee satisfaction with their work. Much like the results observed for physical activity, this suggests that the perception of greater organisational support enhances employees' attitudes and behaviours. Moreover, the results suggest that organisations could have a more satisfied workforce and benefit from such outcomes as lower absenteeism and employee turnover through improvements in the training offered to employees.

Beyond doing their job, employees need support to deal with the pressures that work can bring and 31.2% (38.2%) strongly disagreed or disagreed that they receive training in how to deal with these pressures. 37.3% (39.5%) strongly agreed or agreed their training is of high quality compared to 17.8% (20%) that strongly disagreed or disagreed.

Expanding upon the training that is given to staff, 28.4% stated their training was for the organisation, 13.8% stated that their training was for the industry that they work in, 52.3% stated that the purpose of their training was for their role within the organisation and

2.4% stated that their training was for another purpose[11]. In addition to this, 73.2% (80.5%) of employees do not pay for their training and 21.4% did not answer the question.

The results show consistent negative changes over time as employees appear to have felt they had less opportunities to progress and develop as well as feeling less supported from their employers. This is in line with previous results and suggests that perceived lower organisational support from employees does have an impact on employee wellbeing and their behaviour.

However, chapter 5 does provide some debate regarding the effect of perceived poor training and development as a one unit improvement in training and development was found to be associated to a greater probability of all outcome measures occurring. This result further reinforces the need for more research that evaluates this relationship with sufficient breadth and depth.

Manager's Questionnaire

According to the manager's data, 47.2% (76%) of managers have had training in how to have difficult conversations whereas 52.8% (24%) have not had any training of this nature. In addition, 75% (52%) of managers have not had training to identify health and wellbeing issues. Table 4.12 shows the relationship between those managers who have had this training and if they discuss employee's health and wellbeing.

Table 4. 12: relationship between being trained to have difficult conversations and the discussion of wellbeing issues with employees

	Trained to have difficult conversations	Wellbeing issues discussed with employees
Trained to have difficult conversations	1	0.184
Wellbeing issues discussed with employees	0.184	1

*p<0.10 N = 37
**p<0.05
***p<0.01

[11] In the second data collection period 52.1% of the sample did not state what the purpose of their training was for and so the small percentages that were found are misleading and do not adequately reflect the sample.

There is no correlation between those managers that are trained to have difficult conversations with employees and how often wellbeing issues are discussed with employees. This could show that training managers to have difficult discussions may not result in more discussions with employees taking place. However, it should be noted that this result could also be due to employees not feeling comfortable having these discussions with their managers. This would fit the trend established within this chapter as over time employees have felt less supported by their organisation and this could be driving this finding.

While the results reflect an improvement over time due to managers becoming better equipped to deal with health and wellbeing issues, they are unexpectedly low given the improvement found for managers within the leadership results. This suggests that many managers are having difficult conversations with employees despite them not being properly trained in how to do so. Improving the training of managers could result in better outcomes for employees when health and wellbeing issues are discussed, which could create a more open culture that benefits employees' wellbeing and the organisation through less absenteeism and turnover.

4.11 Absence Management

The number of absences was very low as 81.7% (77.2%) had not had any absences in the 3 months prior to the data collection and 10.7% (14.4%) had only 1 day absent in this time period. With regards to notable absences, 74.6% (51.6%) of the sample had not had a notable absence. Of those that did have an absence 5.7% (7.1%) had between 5 and 10 days absent. In the second data collection period, there were 11 recorded absences that were greater than 15 days long, a range has not been presented as the maximum length of absence could potentially identify the participant.

In the first and second data collection period a minimum of 74% and 68% of the sample, respectively, did not answer the questions relating to their perceptions of absence management whilst off sick, in line with the low level of absenteeism observed. Therefore the percentages stated below for these questions are for the remaining 26% and 32% in the first and second data collection period, respectively.

For those who were absent, 14% (13.5%) strongly agreed or agreed that their manager had kept regular contact with them while they were off sick, 17.4% (18.2%) of employees strongly agreed or agreed that their manager was supportive when they were off sick and 19.3% (21.3%) strongly agreed or agreed they were supportive when they returned.

14.7% (18.2%) strongly disagreed or disagreed their absence had negatively affected their career with only 3.9% (4.2%) strongly agreeing or agreeing that it had. This finding is likely to be explained by the findings that 15% (18.2%) strongly agreed or agreed they were supported in their return to work and that 10.1% (11.6%) strongly agreed or agreed that any adjustments required to their work were made clear to them. This result probably influenced the finding that 11.6% (14.9%) stated they did not feel under pressure to return to work.

However, 6.7% (5.1%) stated they did feel under pressure and 5.2% (7.9%) strongly disagreed or disagreed that adjustments were made clear to them. With regards to the perception that the organisation is concerned about their wellbeing, 9.5% (12.6%) of employees strongly agreed or agreed, and 6.4% (11.2%) strongly disagreed or disagreed with this statement.

60% (68.4%)) of the sample strong agreed or agreed they are aware of an attendance management policy and 67.9% (72.1%) strongly agreed or agreed they are aware of formal return procedures follow a period of notable absenteeism. 9.2% (25.1%) of the sample strongly disagreed or disagreed their organisation actively raises awareness of long term conditions, but 29.9% (31.2%) strongly agreed or agreed. 44.9% (51.6%) strongly agreed or agreed they would be supported through a long term issue. The changes over time with respect to return to work procedures and long term health issues can be reflected in Figures 6 and 7.

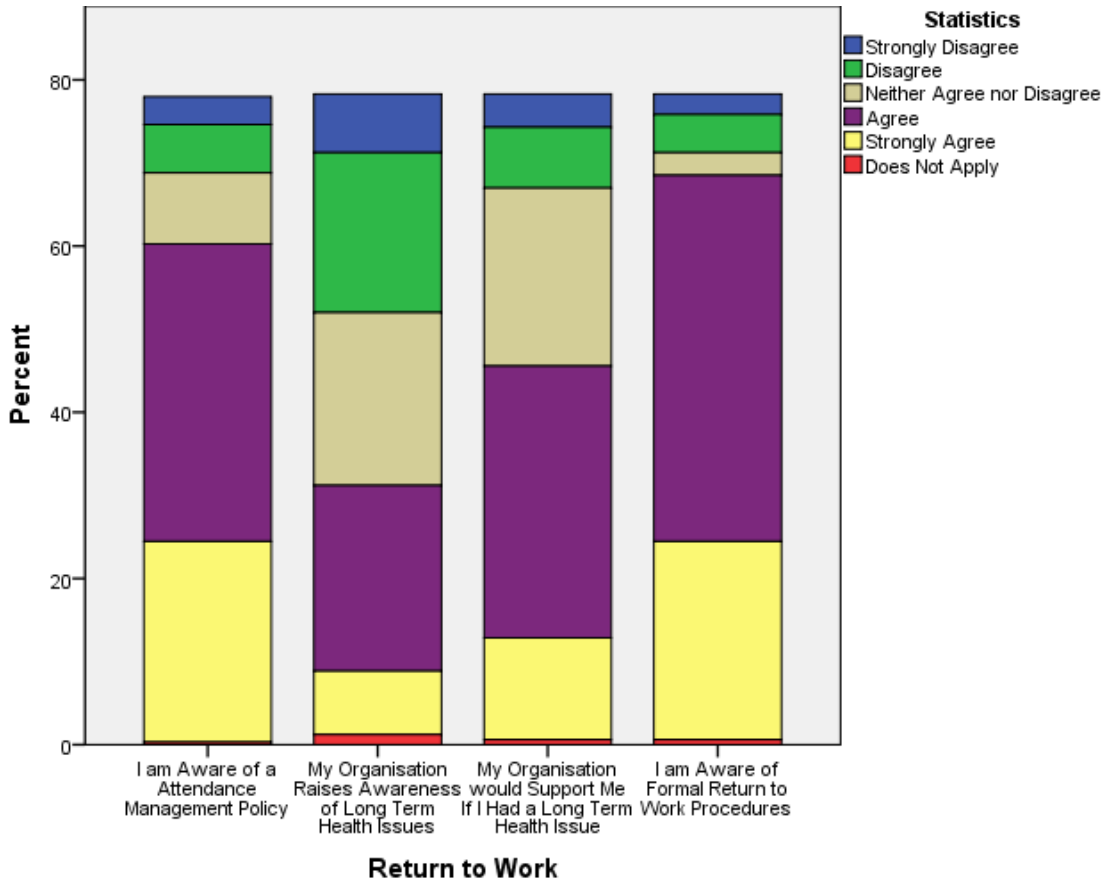

Figure 6. Employee perception and awareness of return to work procedures and long term health issues, in the first data collection period.

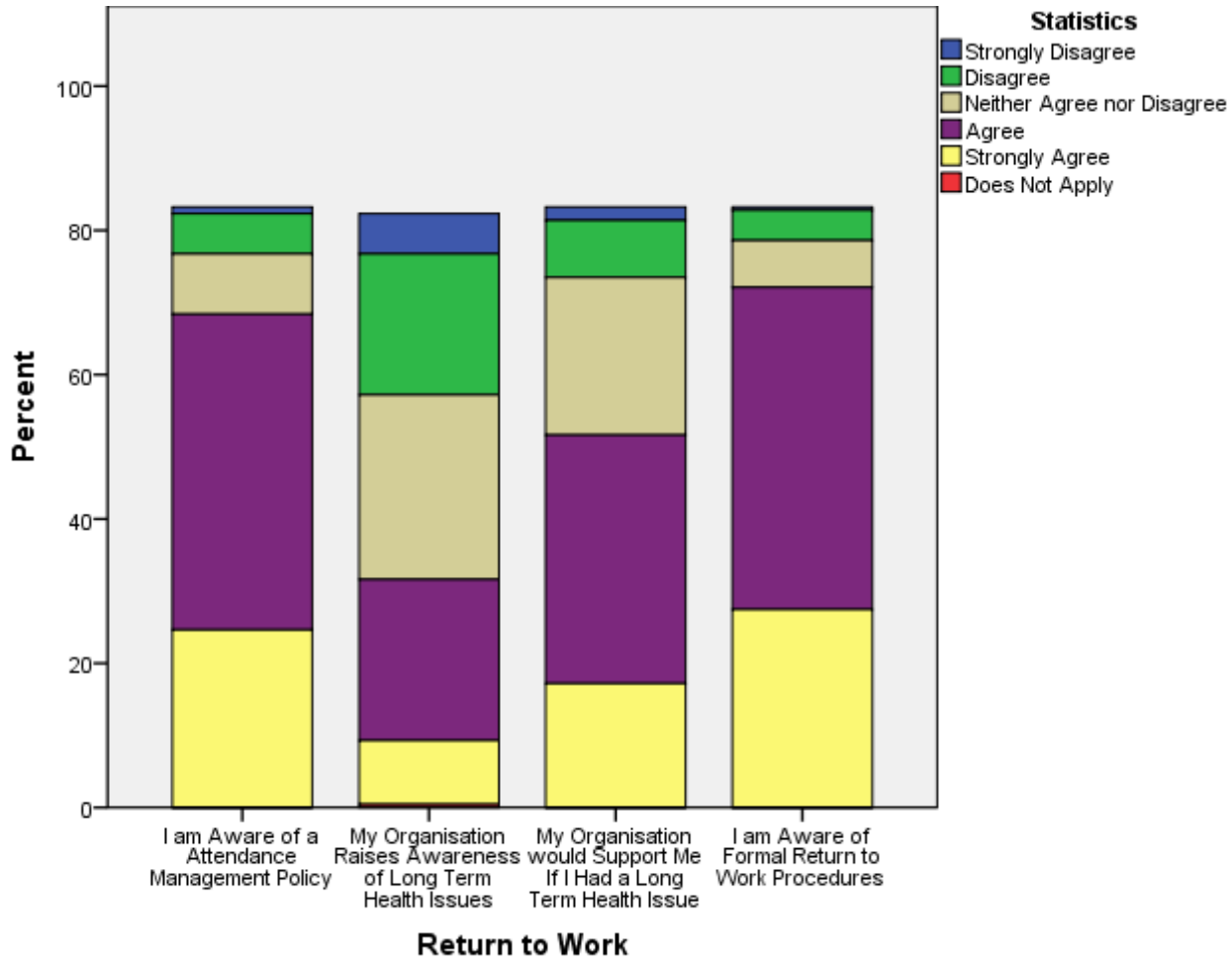

Figure 7. Employee perception and awareness of return to work procedures and long term health issues, in the second data collection period.

Manager's questionnaire

80% (100%) of managers stated that there is a formal attendance management policy with 15.2% stating that there is not. 74.3% (76%) of managers strongly agreed or agreed they are encouraged to maintain contact with absent employees. 82.9% (96%) of managers strongly agreed or agreed that causes of absences are collected and monitored and 82.8% (92%) strongly agreed or agreed that there are formal measures in place should trends in absences appear.

Expanding upon this, 77.8% (87.5%) of managers strongly agreed or agreed that appropriate support is discussed and provided following a statement of fitness to work. Furthermore, 58.4% (66.7%) of managers stated they do not feel under pressure to pressure employees to return to work and 66.7% (83.3%) of managers strongly agreed or agreed that

return to work policies support recovery whereas 38.9% (50%) strongly agreed or agreed they support a return to work.

The results show that short term absences decreased while long term absenteeism increased. The latter finding is unexpected given the positive improvements over time regarding how managers manage absences. However, as these questions are asking managers to assess their own management skills the same biases that were present for leadership are likely to present here too. Furthermore, the results may be driven by the employees' perception of support from their organisation.

The results showed that over time fewer employees felt they would be supported through a long term issue despite employees stating they were made more aware of long term issues by their employers over time. Raising awareness by organisations seems to have had no effect on employee behaviour or belief in their employers, which is likely to result in employees being less willing to take a leave of absence when they need one.

This could be why the observed trend is present and this could explain why when short term absences do occur more absences are for longer than one day. While this is speculation, the results do emphasise the importance of combining qualitative and quantitative approaches to fully explore these possible trends as this finding could reinforce the importance of organisational support for employees' wellbeing and their performance.

4.12 Health and Safety

Health and safety training appears to have been undertaken by 50.8% (52.1%) of the sample. 60.6% (69.8%) strongly agreed or agreed they have been made aware of emergency meeting points. Signs warning of hazards appear to be displayed throughout the employee's workplace, as 55.4% (61.8%) strongly agreed or agreed that these signs are present within their workplace.

61.1% (64.7%) of the sample strongly agreed or agreed they are comfortable raising any health and safety concerns that they may have with their managers. 52.9% (57.7%) of the sample strongly agreed or agreed that there are designated health and safety officers in the workplace. Despite the presence of health and safety officers, 36.9% (33.1%) of the sample strongly disagreed or disagreed that they are consulted on any new health and safety policy.

These results suggests that over time organisations are making positive steps to improve their health and safety levels while trying to integrate employee representation more than they did previously. Employees do appear to be slightly less comfortable with raising

concerns they have but the difference is very small when compared to the improvements that have been made.

Managers Questionnaire

With regards to the provision of information about the risks that employees face, 85.3% (96%) of managers strongly agreed or agreed that employees are provided with information about the risks they face. 77.2% (100%) of managers strongly agreed or agreed that new hazards are identified and implemented into existing health and safety policies. 82.9% (96%) of managers strongly agree or agree that employees have had health and safety training.

It does appear that managers have had less health and safety training than employees as 60% stated they have had training and 40% stated they had not (100% stated they have had training in the second data collection period). 78.3% (92%) of managers strongly agreed or agreed that health and safety issues can be raised via a formal policy. 68.6% (84%) of managers stated that health and safety meetings take place and 11.4% (8%) stated they do not. Expanding upon this, it was found that 54.3% (76%) of managers stated that health and safety meetings are recorded and that 8.6% (4%) stated they are not with 34.3% (20%) stating that they did not know if meetings were recorded.

While the results do show positive changes over time, from the managers perspective there is a difference with what employees experience as fewer employees stated they have had health and safety training. Furthermore, employees are less comfortable raising any health and safety concerns despite there being more health and safety officers. Most employees would be given health and safety training once, typically on their first day, so the reduction over time is not unexpected.

However, employees feeling less comfortable to discuss health and safety issues may be a result of previous findings as a consistent theme throughout is the lack of communication between employees and managers over time, as well as the worsening perception of organisation support.

4.13 JOB SATISFACTION

When asked if they were satisfied with their work, 54.4% (58.6%) of employees strongly agreed or agreed and 16.5% (13.5%) strongly disagreed or disagreed. 46.2% (50.7%) strongly agreed or agreed they are proud to work for their employer and 49.9% (52.1%) get a feeling of accomplishment by doing their role. Both of these findings are important determinants towards the finding that 53.5% (54%) strongly agreed or agreed that they enjoy their job.

54.7% (57.7%) strongly agreed or agreed their role is meaningful. 33.7% (43.8%) strongly agreed or agreed they worry about their job security.

Further negative findings were found concerning pay as 27.8% (30.3%) strongly agreed or agreed their pay reflected their level of contribution compared to 33% (35.9%) that strongly disagreed or disagreed. 31.5% (34.5%) strongly disagreed or disagreed their pay is fair compared to 28.7% (31.5%) that strongly agreed or agreed.

The difference between experiences being present within the data receives further support as managers' responses were much more positive with 45.8% strongly agreeing or agreeing their pay reflects their levels of contribution compared to 34.3% of managers that strongly disagreed or disagreed.

Overall the results show that employees have become less satisfied with their work over time despite a slightly more balanced perspective about their pay. This reduction over time could be linked to other important wellbeing concepts as flexibility has reduced over time, training opportunities and progression opportunities have reduced over time, long term absenteeism has increased and the differences between employees perception of what is being experienced and the manager's perception of what is being experienced has grown. Tables 4.13 and 4.14 show the relationship between the two former potential causes.

Table 4. 13: Relationship between job enjoyment and flexible working

	Enjoy Job	Work Flexibly
Enjoy Job	1	0.608**
Work Flexibly	0.608**	1

*p<0.10 N = 327
**p<0.05
***p<0.01

Table 4. 14: Relationship between job enjoyment and opportunities to progress

	Enjoy Job	Opportunity to Progress
Enjoy Job	1	0.675**
Opportunity to Progress	0.675**	1

*p<0.10 N = 327
**p<0.05
***p<0.01

The results show a statistically significant correlation between those employees who enjoy their jobs and those employees who stated they are able to work flexibly depending on their needs. This supports the findings discussed above as there is a positive correlation between flexibility and how much employees enjoy their job. It suggests that by providing more

flexibility in the workplace organisations could have a happier and more engaged workforce, which could be causing the reduction in job enjoyment felt by employees over time.

This is reflected in table 4.14 which shows a statistically significant correlation between those employees who enjoy their job and those who believe they have the opportunity to progress their career. These results support the suggestion that job satisfaction may have reduced over time due to the reduction in flexibility and progression opportunities as these two factors have been shown to affect the level of job enjoyment experienced. The results for job satisfaction highlight the potential outcomes that deterioration in these aspects of employee wellbeing can create. Chapter 5 shows the importance of this as job satisfaction is associated to lower general absenteeism, suggesting that organisations could experience higher levels of general absenteeism if job satisfaction continues the downward trend observed across these data collection periods.

4.14 Engagement and Organisational Citizenship Behaviour (OCB)

With regards to how employees think and feel about their employer, it was found that 34.2% (41.4%) strongly agreed or agreed that they speak highly of their employer and 51.2% (52.1%) strongly agreed or agreed they are happy for their friends or family to use their employers goods or services. 31.8% (31.7%) strongly disagreed or disagreed their organisation inspires the best in them. In contrast, 35% (39.1%) strongly agreed or agreed that there is a strong sense of belonging to the organisation.

An immediate method to assess if the positive levels of engagement have resulted in higher performance is to assess the organisational citizenship behaviour (OCB) exhibited by the workforce. 75.4% (78.2%) strongly agreed or agreed they help others when they can and 37% (40.5%) strongly agreed or agreed they volunteer to undertake tasks that go outside the requirements of their job. In addition, 54.8% (60%) strongly agreed or agreed they go beyond what is required of them. However, 37.6% (36.7%) strongly agreed or agreed that they have to go beyond what is required of them in order to progress compared to 15.9% (14.9%) who strongly disagreed or disagreed.

While the final finding shows positive changes, all of the results highlight a negative change over time with regards to the levels of OCB being exhibited by employees. The results are not unexpected given the negative changes that were seen in both employee engagement levels and job satisfaction over time. Once again these findings may be driven by a deterioration in employer perception from employees. However, as with previous aspects of

wellbeing, while the results outline the need for future studies to combine qualitative and quantitative methods the role of managers can only be speculated upon.

4.15 Commitment to Employer

The thought of leaving their current role appears to be a thought that a high percentage of the sample has often as 36.7% (37.3%) of the sample strongly agreed or agreed with this statement when asked with 23.8% (28.8%) strongly disagreeing or disagreeing. 42.5% (46.4%) strongly agreed or agreed that they do not wish to leave their employer. This was not the case for all employees as 18% (15.7%) strongly agreed or agreed that they see themselves with a different employer within 12 months and 18.7% (12.9%) strongly disagreed or disagreed they did not wish to leave their employers.

50.8% (52.6%) stated they had not sought alternative employment in the previous 12 months. 37% (36.7%) strongly disagreed or disagreed that they received suitable non-financial rewards compared to 20.2% (19.5%) that strongly agreed or agreed. These results are presented in figures 8 and 9 to show the commitment to employer within the sample for both data collection periods.

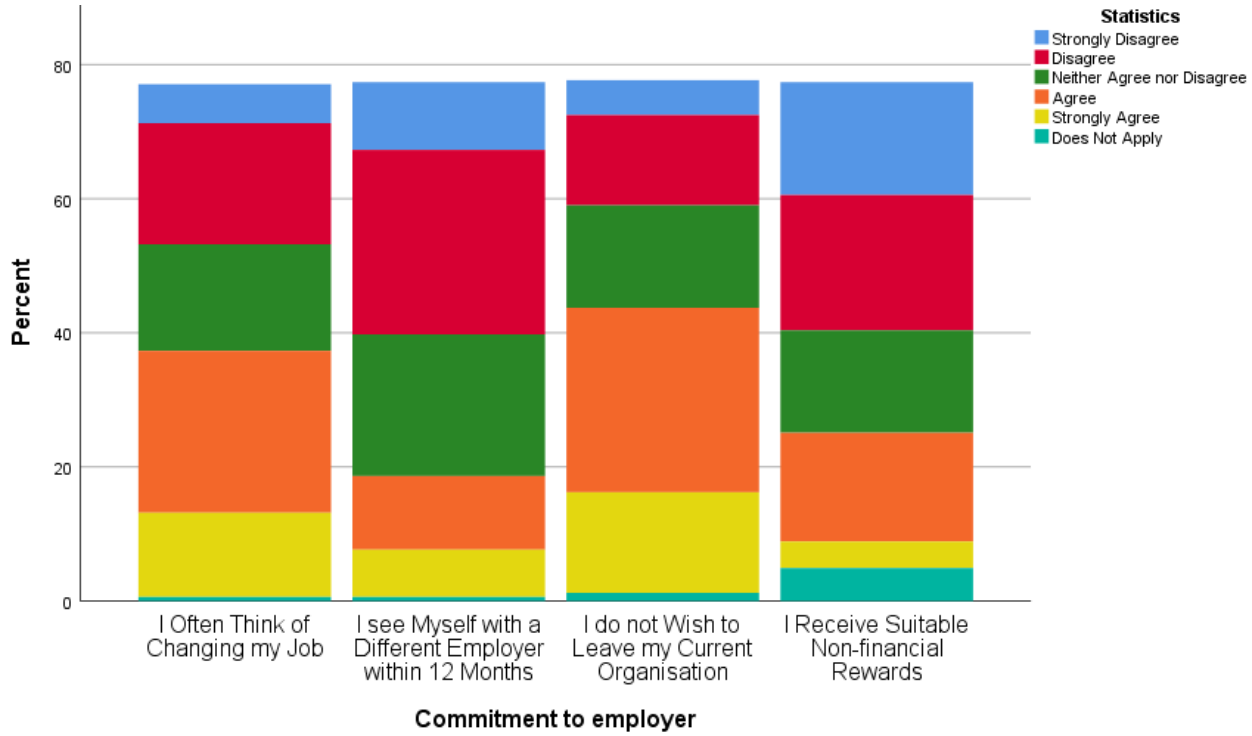

Figure 8. Commitment to employer in the first data collection period.

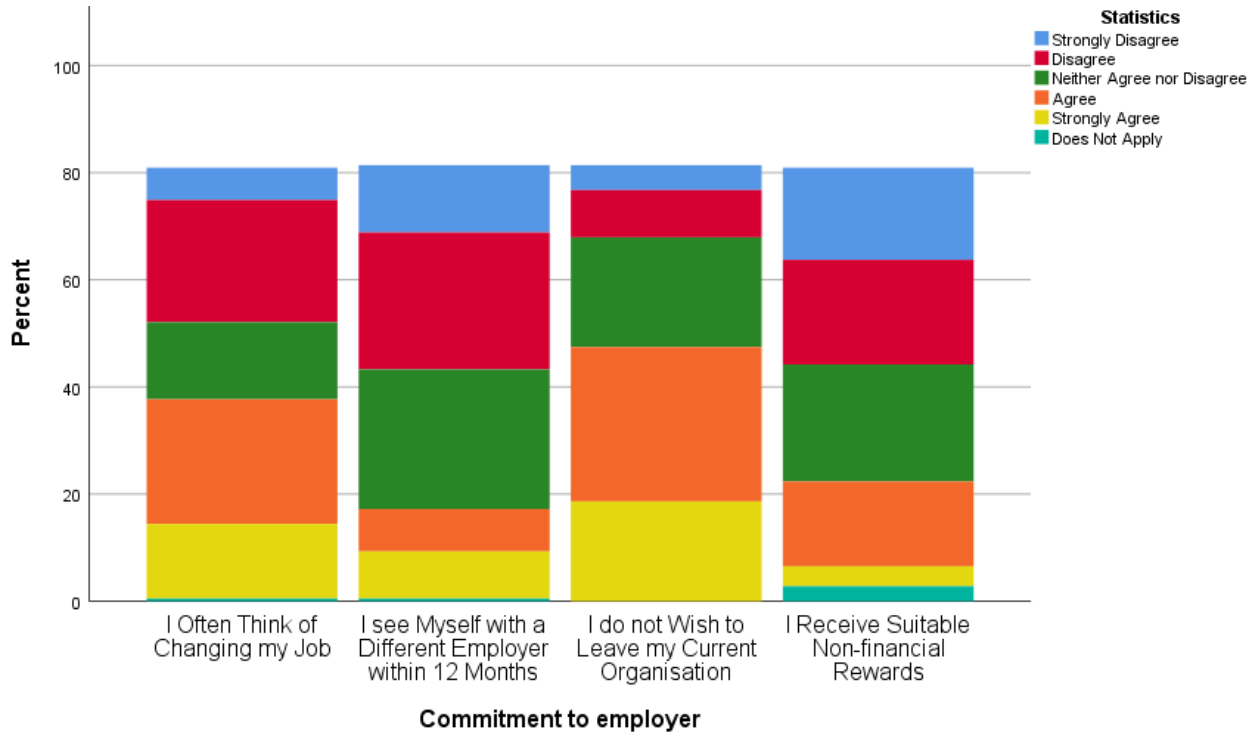

Figure 9. Commitment to employer in the second data collection period.

While the results show a mix of positive and negative changes over time, crucially they show that even though a large percentage of the sample see themselves leaving their current employer, this does not correlate with employees often thinking of leaving their employer. This suggests that the relationship between turnover intentions and turnover behaviour requires further research and an aspect of that research should be the focus on actionable turnover intentions.

Chapter 5, section 5.4.2 shows there is a correlation between those employees who think of leaving their organisation and those that actively seek alternative employment. This suggests that future research can better represent and estimate the probability of employee turnover occurring by focusing on employee turnover behaviour rather than just employee turnover intentions.

While more research would be needed to solidify this approach, this study has shown there to be a relationship between this new approach and turnover intentions and Chapter 5 shows that this does serve as a satisfactory measure for employee turnover.

4.16 Mental Health and Wellbeing

40.7% (38.7%) strongly agreed or agreed they have been provided with information regarding mental health concerns with 20.8% (20.4%) strongly disagreeing or disagreeing.

Going beyond the provision of information, 57.1% (40.4%) strongly disagreed or disagreed that they are surveyed about their mental health. In contrast, 48.6% (54%) strongly agreed or agreed they would be supported by their organisation if they had a mental health issue.

42.1% (44.2%) strongly agreed or agreed they would feel comfortable discussing a mental health issue with their employer, while 23.8% (26%) strongly disagreed or disagreed. 53.5% (54.9%) strongly agreed or agreed that they believe that their manager would be willing to discuss any mental health issues that they may have. 56.2% (54.8%) strongly agreed or agreed that they would be comfortable discussing a physical health issue.

In an attempt to further explore the role perceived organisation support has on employee behaviour and wellbeing, table 4.15 shows the relationship between employees perceived organisation support for a mental health issue and how comfortable they believe their manager would be in discussing a mental health issue. Tables 4.16 and 4.17 shows the relationship between employees perceived organisation support for a mental health issue and their comfortableness discussing a mental and physical health issue with their manager.

Table 4. 15: Relationship between perceived organisation support and perceived willingness of managers to discuss mental health issues

	Organisation support a mental health issue	Manager willingness to discuss a mental health issue
Organisation support a mental health issue	1	0.836**
Manager willingness to discuss a mental health issue	0.836**	1

*p<0.10 N = 327
**p<0.05
***p<0.01

Table 4. 16: Perceived organisation support and employee comfortableness to discuss mental health issue

	Organisation support a mental health issue	Comfortable discussing a mental health issue
Organisation support a mental health issue	1	0.828**
Comfortable discussing a mental health issue	0.828**	1

*p<0.10 N = 327
**p<0.05
***p<0.01

Table 4. 17: Perceived organisation support for mental health issue and comfortableness discussing physical health issue

	Organisation support a mental health issue	Comfortable discussing a physical health issue
Organisation support a mental health issue	1	0.821**
Comfortable discussing a physical health issue	0.821**	1

*p<0.10 N = 327
**p<0.05
***p<0.01

The results show a strong positive statistically significant correlation between employees who felt that they would be supported by their organisation if they had a mental health issue and the perception that their managers would be more comfortable discussing a mental issue. Once again this suggests that improved perceived organisational support could affect employee behaviour as this could result in reduced presenteeism as well as employees taking fewer, or shorter, absences than they would have if they did not feel comfortable discussing their concerns with their managers.

Improving perceived organisation support for a mental health issue is also strongly correlated to employees being more comfortable discussing their mental and physical health. This suggests that improving organisational support for mental health does also affect the perception of support for physical health issues but is also associated to changes in employee behaviour. These changes in behaviour could result in less absenteeism, less intense absenteeism if absenteeism occurs, and greater satisfaction with their workplace resulting in the positive associations outlined above.

Given the perception of a lack of organisational support on a variety of wellbeing factors observed in this chapter, these results underscore how important it is that organisations do attempt to eliminate any gap between managers and employees. This perception has been shown to affect employee behaviour negatively and it could be associated with higher employee turnover and could be why employees are taking longer absences when they are absent.

With regards to employee awareness 60.3% (62.9%) strongly agreed or agreed they are aware of a bullying and harassment policy. 37.6% (40.9%) strongly agreed or agreed they were aware of their legal entitlements regarding working conditions with 23.6% (20.5%) strongly disagreeing or disagreeing. 36.1% (35.8%) strongly disagreed or disagreed they can have mental health awareness training. 61.5% (62.4%) strongly disagreed or disagreed that

they are involved in the development of any mental health policy with only 4.3% (3.3%) strongly agreeing or agreeing that they were involved.

The above statements and questions can all impact a person's health and wellbeing so the following information assesses what that impact may be. 26% (33%) have either a mental or a physical health issue that impacts them doing their job on a daily basis with 15.9% (18.1%) having both. Nevertheless, 46.2% (70.2%) stated that in the past two weeks no health issue had impaired their ability to do their normal job duties.

The results for the employee questionnaire show the health and wellbeing of the sample has generally improved over time and any health issue faced is not serious. While the results also highlight that employee representation has improved over time, they also show that the perceived levels of organisation support and the comfortability employees have with discussing issues has declined.

The latter finding is unexpected given the change observed in managers' perceptions of how often they discuss health and wellbeing issues, suggesting that there is a difference between the two parties' experiences. This echoes the findings of previous aspects of employee wellbeing and further outlines that there is a clear difference between employee level experiences and management level experiences.

Manager's questionnaire

41.2% (16.7%) of managers stated that there was no mental health policy in place whereas 58.8% (83.3%) of managers stated that a policy was in place. With regards to those who do have policies in place, 61.9% (55%) of managers stated they were developed with employee representation and only 4.8% (5%) stated that they were not. 40% (87.5%) of managers strongly agreed or agreed that reducing stigma is a part of the organisational culture. 60% (76%) strongly agreed or agreed that information about mental health issues is provided, while 22.9% of managers disagreed. 68.5% (80%) strongly agreed or agreed they encourage employees to discuss any mental health issues that they may have with them.

85.7% (88%) of managers strongly agreed or agreed they would be comfortable discussing a mental health issue. 91.4% (96%) strongly agreed or agreed they would be comfortable discussing a physical health issue. 37.1% (52%) of managers stated that mental health awareness training was available but 48.6% (36%) of managers did not know if this is available to employees, suggesting that many employees may have access to this training but do not know that they do.

With reference to what is available to employees, 54.3% (56%) of managers stated that a stress prevention system is in place with 28.6% (28%) stating that there is not. 57.1% (58.3%) of managers' state that they do encourage employees to use the stress prevention system. This is in line with expectations as 68.5% (80%) of managers stated they see mental health and wellbeing as an important determinant of performance.

45.7% (76%) of managers strongly agreed or agreed they notify employees about health and wellbeing initiatives. With regards to surveys assessing employees' health and wellbeing, 45.5% (58.3%) of managers stated that they take place and 54.5% (41.7%) stated that they do not. 58.8% of managers stated that they do not know if action plans are drawn up as a result of health and wellbeing surveys (none stated that they did not know in the second period, but 87.5% stated that actions plans are drawn up as a result). Also, 65.7% (78%) of managers strongly agreed or agreed their employees are aware of their legal entitlements with regards to their working conditions.

Overall the results for mental health and wellbeing suggest that while the organisations have made substantial improvements in policies and recognition over time with improving employee mental health and wellbeing, these changes are not being recognised or experienced by the employee.

Changes made by the organisations, such as improved surveying, a more open culture for discussions, improved stress prevention systems and an improved active role regarding employee mental health and wellbeing, should lead to improvements for the employees over time. Instead, the results for the employees highlighted that they feel less supported and less comfortable engaging with the organisation regarding their mental health and wellbeing.

The importance of these results are explored further in chapter 5 as improved organisation support for mental health and wellbeing is associated with presenteeism, absenteeism and employee turnover. Moreover, these findings are in line with the consistent theme that over time employees feel less supported by their organisation and that there is less of an open culture regarding their health and wellbeing which negatively impacts their wellbeing.

4.17 Performance Management – Manager's Questionnaire

The regularity of performance reviews expressed within the employee results was reflected in the manager data as 80% (88%) strongly agreed or agreed that they conduct regular performance reviews. There is not a desire to conduct more performance reviews by most

managers as 42.8% (40% disagree) strongly disagreed or disagreed this was needed, with 31.4% (24%) agreeing that they would like to conduct more.

Performance reviews do appear to be useful for managers, as 65.7% (80%) strongly agreed or agreed they are used in decision making. 80% (88%) of managers strongly agreed or agreed the organisation is committed to improving employees work life balance. The perception of pay does not appear to be in line with employee perceptions as 45.8% (46%) strongly agreed or agreed their pay reflects their level of contribution and 34.3% (32%) strongly disagreed or disagreed.

The results suggest that employee performance management has improved over time, however, some results are not in-line with the employee results. For example, employees' perceptions of their own work-life balance reduced over time but the manager's believe that they are almost 90% committed to improving this. This is despite the extent to which employees are able to work flexibly declining over the data collection periods.

This once again suggests that there is a clear difference between what employees experience and what managers think their employees experience, and it is this gap that is likely to be driving the trends and themes observed throughout this chapter.

This chapter has shown that there is an intricate and complex relationship between an employee, their manager and their organisation, and without having qualitative data available a quantitative study is hindered in its ability to analyse why trends have occurred and the extent to which these trends impact employees' wellbeing and subsequent performance.

It is clear from the results observed in this chapter that this is a path that must be changed in future research if researchers and practitioners are going to have a better understanding of the relationships between employee wellbeing and performance and how they are both influenced by organisations.

4.18 Factor Analysis

Cornish (2007) states that factor analysis is a methodology that seeks to reduce a data set into a smaller set of data based on underlying latent variables, which means factor analysis is an ideal methodology to use within this study.

This study includes many concepts that are very complex and are potentially related; factor analysis is used here to reduce the data in order to enable a simpler and more complete analysis. Data were collected via questionnaires on thirteen broad wellbeing variables that impact productivity.

Due to the complex nature of each variable, multiple questions and statements needed to be asked in order to effectively capture the concept. For example, sickness absence and returning to work included three questions and eleven different statements, all of which assess a different feature of absence management.

Therefore, to analyse the effect of absence management full with employee performance would require 14 separate variables. Factor analysis is used here to reduce this to a fewer number of variables. For example, in the case of absence management, only two factors are established.

An overall account of the number of potential variables that could be generated for each wellbeing concept can be seen in tables 4.18 and 4.19. This data shows that for both data collection periods prior to factor analysis there were 111 variables (with all questions and statements combined together), highlighting the need to reduce the number of variables prior to the econometric analysis. Tables 4.18 and 4.19 also show that after factor analysis had been conducted the number of variables reduced to 20 and 21 in the first and second data collection period, respectively.

This shows that factor analysis achieved its aim and successfully reduced the number of variables. Moreover, as shown in Appendix D, the factors created also captured a significant amount of the variation within the original data, meaning the identified factors do adequately reflect the original data set and would be suitable for use in an econometric analysis.

Table 4. 18: The results of the factor analysis for the data collection period, as shown by comparing the number of original variables with the number of factors

Wellbeing Concept	**Number of Original Variables**	**Number of Factors**
Healthy Eating	9	2
Physical Activity	6	1
Leadership	9	1
Flexibility	7	1
Training and Development	7	2
Absence Management	14	2
Health and Safety	6	1
Job Satisfaction	8	1
Engagement	8	1
Commitment to Employer	6	2
Mental Health and Wellbeing	14	2
Tobacco Use Cessation	8	2
Alcohol and Substance Use	9	2
Total	**111**	**20**

Table 4. 19: The results of the factor analysis for the second collection period, as shown by comparing the number of original variables with the number of factors

Wellbeing Concept	**Number of Original Variables**	**Number of Factors**
Healthy Eating	9	2
Physical Activity	6	1
Leadership	9	1
Flexibility	7	1
Training and Development	7	2
Absence Management	14	2
Health and Safety	6	1
Job Satisfaction	8	1
Engagement	8	1
Commitment to Employer	6	2
Mental Health and Wellbeing	14	2
Tobacco Use Cessation	8	2
Alcohol and Substance Use	9	3
Total	**111**	**21**

It is important to note that these factors are part of an original research design and will be used within an original econometric approach. The approach utilised within this analysis differs from previous econometric analyses in a number of ways, which have been outlined throughout Chapter 3 and are discussed in more detail in Chapter 6.

The rationale for conducting an original modelling approach, in the first instance, was clear; this is the first quantitative analysis of the Workplace Wellbeing Charter. This means there is no previous study to base the econometric approach on as a foundation and so a new approach had to be generated as a matter of necessity.

Additionally, as a result of the literature review a number of confounding issues became clear which could potentially be resolved or improved upon through an original econometric analysis. This study sought to build upon these by moving away from the use of single cross section analyses and attempting to evaluate the probability and odds of absenteeism, presenteeism and employee turnover occurring through the use of econometric methods that are often not utilised within the literature.

While, panel data would allow for a stronger discussion of these, a repeated cross section analysis enables a stronger discussion than a single cross section analysis. Also, the statistical techniques employed within the approach allow for a more focused discussion and interpretation of the wellbeing and performance relationship.

4.19 CONCLUSION

The descriptive results presented in this chapter highlight positive and negative changes that have occurred across both data collection periods for both managers and employees. The results showed that general employee health and wellbeing has improved over time along with some employee performance measures. These positive changes were mainly observed regarding the extent to which employees had a mental or physical health issue and the amount of alcohol they consumed.

These changes may be due to the positive changes in organisational and managerial behaviour which could be why short term absenteeism and desire to change employer declined. Furthermore, the results showed there was some improvement in the perceived levels of organisation support from employees. This was only observed for the healthy eating and alcohol misuse standards, suggesting these became a more important focal point for the organisations over time.

In contrast, the results showed there was a decline in the perceived levels of organisation support from the employee perspective for other wellbeing concepts. This was observed in the results for physical activity, flexibility and mental health and wellbeing, suggesting that where positive changes have been made by the organisation they have not been recognised or felt by the employee.

This lack of perceived organisational support could be driving many of the negative feelings that were consistently expressed from the employees over the data collection periods. The results showed that employees felt less valued, less satisfied, less engaged, less able to balance their work and home life, showed fewer signs of positive OCB and were less comfortable raising issues with their organisation about their mental and physical health as well as their workplace health and safety. These results highlight the disconnect that exists between employees' and managers' perception of how the employees' experience the workplace and how they feel about their current employers.

While these results are negative, given that employees' reported almost no presence of any severe health issue the results do call into question the relationships these variables have with employee health.

Numerous studies have linked aspects such as job satisfaction and engagement to poor mental and physical health, yet these results descriptively imply this is not present, suggesting the theoretical link is not as strong as the literature depicts; perhaps analysis of

this relationship should be on minor health issues rather than severe health issues. The results showed there is a clear difference between how managers perceive their performance, how employees perceive their organisation and how they experience the workplace. This result was evident in almost every aspect of wellbeing included in this analysis and shows there is a clear communication gap between employees and employers.

Furthermore, the difference between the two groups outlines the roles that managers have to play as many areas where employees feel unsupported by their organisation could be driving of the negative changes observed.

CHAPTER 5: RESULTS

5.1 INTRODUCTION

Employee performance within this study constitutes presenteeism, absenteeism and employee turnover. All three outcome variables are under-researched measures within empirical studies analysing the effect of employee wellbeing and employee performance. In particular, presenteeism and absenteeism are complex terms that have a high level of nuance that is rarely acknowledged within the literature.

For example, the definition of presenteeism has various levels of nuance regarding why the employee is not fully present and the magnitude of this reasons; however, studies that do outline a definition define it as productivity loss due to attending work when ill or disabled relative to productivity when well (Demerouti et al., 2009; Cooper and Dewe, 2008; Biron et al., 2006; Holt and Powell, 2015; Garrow, 2016).

Absenteeism and employee turnover have similar issues within the literature with a variety of definitions and measures being used which generates substantial debate regarding the relationship between employee wellbeing and these measures. All of the outcome measures have complexities within the literature that affects the way the terms are measured, modelled and the extent to which they affect performance.

Due to these complexities the current literature presents many confounding issues with regards to the extent to which employee wellbeing affects organisations and the wider economy, as well as the extent to which wellbeing affects performance.

The aim of this chapter is to reconsider these complexities and contribute to the existing knowledge base by reassessing the association between wellbeing and performance using original data across two data collection periods. The importance of expanding upon the current literature is clear across all outcome measures as 22.3% of employees experience a mental health issue at some time in their lives and, on average, employees attend work 51.5% of the time when ill (Cooper and Dewe, 2008; Biron et al., 2006).

Moreover, when focusing on just the cost of absenteeism to the wider economy, the literature has stated this can range from £6.5 billion to £22 billion per year (NICE, 2012; NICE, 2008; NHS, 2014) and McDaid et al. (2008) states that 40% of English organisations have rising stress related absences.

Despite these statistics, these outcome measures are under-researched when evaluating wellbeing and performance, and the potential pool of studies is very small when compared to those studies that use productivity ratios and financial measures. For example, Brown et al.

(2011) highlight how under-researched presenteeism is when they conducted a review of twenty studies they found that only one used presenteeism as an outcome variable. Also, most studies that do discuss these outcome measures are qualitative studies (for example where presenteeism is concerned NICE, 2012; Garrow, 2016; Medibank, 2011; Baker-McClearn et al. 2010; Huver et al., 2012; Caverley et al., 2007; Bierla et al., 2011; Ramsey, 2006; Gilbreath and Karimi; 2012).

The literature reviews for each respective outcome measure highlights the lack of empirical studies that do examine wellbeing and these measures in a broad and detail manner. This justifies the need for more empirical research that uses these three outcome variables, especially when the above examples are considered along with the lack of literature that accounts for the short and long term perspectives of these outcomes. This further highlights the size of the gap present within the employee wellbeing and employee performance literature.

This chapter evaluates the impact of employee wellbeing on employee performance by offering solutions to various gaps within the literature of each outcome measure. For example, for presenteeism the cost of presenteeism is often overstated as it is combined with other labour costs and for absenteeism there exists little distinction between the short and long term perspectives.

All three outcome measures have literature bases that have common issues such as how empirical studies often overlook the role of effective management, there are contradicting results when evaluating traditional wellbeing concepts and how important aspects of wellbeing are often omitted from empirical evaluations. There is also a lack of time series analysis as most studies tend to be based on a single cross section of data, suggesting the literature bases lack a strong discussion of the impacts of employee wellbeing on performance over time.

The issue of important variables mainly concerns the omission of behavioural factors across all three performance measures, but for employee turnover the literature also tends to omit the impact of mental health which is considered an important factor within the literature for absenteeism and presenteeism. The omissions of these aspects of wellbeing across all performance measures is seemingly due to the role organisational context has in dictating what wellbeing factors will be analysed, which hinders the understanding gained from the literature.

This difference is an example of why the literature reviews have been conducted separately for each performance measure. The decision to do this is due to each measure

being fundamentally different to one another and having their own unique field of research with some differences in terms of the confounding issues and limitations present.
The remainder of this chapter follows the following structure for each performance measure: literature review, methods and results. This is then followed by a brief conclusion of these results before a detailed discussion in Chapter 6.

5.2 PRESENTEEISM

5.2.1 Literature Review

Presenteeism is often used as an outcome variable for studies based within the wellbeing enhancing performance literature. There are confounding issues within this literature that limit current findings and subsequent debate. Gaps within the literature need to be resolved in order to improve the debate surrounding presenteeism.

One such issue that exists is the inconsistency of the findings produced which is evident when analysing the costs of presenteeism. The costs of presenteeism are often reported with absenteeism and employee turnover and is called lost productivity, the costs of which have been outlined in Chapter 1, section 1.2. When focusing specifically on presenteeism the associated costs range between £19.9 and £130 billion per year[12] (Medibank, 2011; LevinEpstein, 2005). As lost productivity is different to just focusing on presenteeism the cost of presenteeism is being overstated when studies focus on lost productivity, suggesting that studies could be misguided to use these statistics as a justification for further study or for policy changes.

This variation in the methods used to report the costs of presenteeism highlight the inconsistencies within the literature and outline why these statistics are not consistent, or robust enough, to be used to adequately highlight the potential problem of presenteeism or lost productivity to the wider economy.

The effects of managers and management on presenteeism are often overlooked within empirical studies. Most studies that do examine the roles of managers tend to be qualitative. Those studies that have analysed the role of managers have found that they influence employees' performance as they are seen as role models (Huver et al., 2012; Caverley et al., 2007; Bierla et al., 2011; Ramsey, 2006).

While these results suggest that managers that have high presenteeism are likely to have employees with high presenteeism, various studies have shown that improving line

[12] Statistics changed From US Dollars and AU Dollars to British Pounds for comparison reasons. Exchange rates based on rates in May 2018.

manager training, specifically mental health awareness training, has a practical impact and is key to reducing presenteeism (Cooper and Dewe, 2008; Seymour et al., 2005; Rolfe et al., 2006).

Changing management policies has been found to reduce presenteeism, with important policies including alcohol misuse policies (Hafner et al., 2015), improvements in the environment and social support (Arnold, 2015) as well as making decisions with employee input and showing interest in employees ideas (Gilbreath and Karimi, 2012). In contrast, Baker-McClearn et al. (2010) found that absence management policies increased presenteeism due to extra stress and anxiety.

While many management policies reduce presenteeism as intended not all policies will have the intended effect. More care has to be taken when implementing these policies and the literature should reflect this dynamic. Although a positive effect appears to be present more research is required to fully understand how managers and management affect presenteeism. This is especially important as the role managers have in affecting employee presenteeism has yet to be tested empirically within a wider wellbeing study. This chapter fills part of this gap within the literature.

The literature fails to include many behavioural determinants of presenteeism, such as healthy eating, physical activity, alcohol misuse and management and tobacco use and cessation, in to evaluations of the relationship between wellbeing and presenteeism. HERO (2013) strengthened the case for the inclusion of behavioural factors by identifying increased presenteeism risks for smokers, employees with an unhealthy diet and employees who did not exercise very much.

Specifically it was found that employees who had difficulty eating healthily at work and received less support to be physically active were 93% and 123% more likely to have higher levels of presenteeism, respectively (HERO, 2013). While these results show that employee behaviour does have an impact on presenteeism, these are factors that are often overlooked in favour of more traditional wellbeing concepts, such as mental/physical health and engagement among others.

Furthermore, the existing literature rarely acknowledges that organisations are limited in how they can impact these concepts as these behavioural traits could have been shaped years prior to their current employment. There is a failure within the literature to acknowledge and discuss the addictive nature of these wellbeing aspects suggesting that the potential impacts of organisation policies could be limited.

While this could be why the literature omits behavioural variables, it should also be acknowledged that results have shown that organisations have an incentive to act on these behavioural factors as they do effect presenteeism. The literature needs to further explore the relationship behavioural variables have with presenteeism in order to guide policy decisions.

Arguably the greatest determinant of presenteeism are workplace factors. Multiple studies found that workload, work autonomy, tenure and work environment are associated with greater presenteeism (Arnold, 2015; Biron, 2006; Demerouti et al., 2009; Shi et al., 2013), as is workplace pressure, conflicting demands (Garrow, 2016; Aronsson and Gustafsson, 2005; European Foundation for the Improvement of Living and Working Conditions, 2013; Caverley et al., 2007) and poor relationships and flexibility (Holt and Powell, 2015).

While these results partially support Arnold (2015), they also show that the workplace is key to employee presenteeism. Effective employee management is important as almost all of these factors are due to how the work is performed and the workplace rather than the work itself. This suggests that practitioners could reduce presenteeism through improving employee flexibility and employee support.

However, due to the lack of empirical studies that use presenteeism as an outcome variable further research is required to explore how these factors affect presenteeism, especially when combined with widely omitted variables.

Personal health is a broad wellbeing concept that has been associated with presenteeism in multiple studies, specifically studies that have found that emotional exhaustion and stress increase presenteeism (Demerouti et al., 2009; McGregor, 2016; Yang, 2006) and that reducing behaviours that risk good physical health can reduce presenteeism (Shi et al., 2006).

In contrast, Callen et al. (2013) found that only stress was associated with higher presenteeism. Unlike many other aspects of health and wellbeing as Callen et al. (2013) found that blood pressure, cholesterol, blood glucose, weight, exercise, and diet were not significantly associated with presenteeism.

While these results do suggest that worsening personal health is associated with greater presenteeism, the results highlight that some inconsistency is present in the literature suggesting that more research is needed. While stress is analysed within some studies, other health factors analysed here are often omitted from empirical studies.

This supports the discussion in chapter 2 where it was stated that the literature tends to conceptualise physical and mental health by focusing on musculoskeletal conditions, depression, stress and anxiety. These results show that what constitutes personal health in

empirical analyses of presenteeism needs to be broadened as there exists a substantial debate regarding how these lesser analysed conditions impact presenteeism.

Personal characteristics have been found to effect the levels of presenteeism exhibited by employees. Gender was found to impact presenteeism as it was found that being female increased presenteeism (Arnold, 2015; Callen et al., 2013; Yang, 2006), as was being a parent (Arnold, 2015) while not being white was found to reduce presenteeism (Callen et al., 2013).

While these findings highlight there are various factors out of the organisation's control that can affect presenteeism, it should be noted that the literature does not often reflect this and instead tends to omit most personal characteristics. These results show that an employee's demographic information does have an impact on presenteeism, suggesting that the knowledge gained from the literature and future policy decisions could be improved by extending the scope of what characteristics are analysed. For example, having a disability is rarely analysed, either quantitatively or qualitatively, despite mental and physical health being the cornerstone of most wellbeing definitions and measurements.

However, it is not known why these results have been found or if these characteristics are indirectly related to presenteeism as a cause of adverse behaviour, such as discrimination or as a consequence of societal issues. More research is needed and existing results should be interpreted with great care and caution as they could point to a deeper, unobserved relationship.

Overall, while the debates presented are a cause for further research it should be noted that these results tend to be based on single cross section studies. This underscores the issue of not being able to identify causality and only being able to discuss associations at one specific point in time. More studies need to be conducted over two or more time periods in order to fully analyse the relationships between wellbeing and presenteeism.

This will mean studies can reflect the dynamic nature of employee wellbeing while also enabling a discussion about how these concepts may change over time. This could have significant effects on the results gained and future policy decisions as it will allow for a discussion about which policies produce the most beneficial and long term effect on presenteeism.

Summary of the Gaps

This brief literature review highlights a number of gaps that exist within the literature. These gaps have formed the foundation for the main research question that this chapter seeks to answer in order to progress the literature regarding the relationship between employee

wellbeing and presenteeism. The sub-research question outlined in Chapter 1 of this thesis is discussed in-depth in Chapter 6.

Research Question 1: Is there a relationship between employee wellbeing and presenteeism and, if so, to what extent to employee wellbeing factors affect presenteeism?
Based on the literature review the general consensus is that employee wellbeing does have an impact on presenteeism. However, it is unclear from the literature what aspects of employee wellbeing have an impact on presenteeism and to what extent this impact exists.

5.2.2 Methods

This section outlines the measure for presenteeism and the method of analysis. Fox (2010) provides a detailed explanation of when and why a probit/logit regression is more suitable than a least squared approach. Fox outlines that if the outcome variable is qualitative then the responses can be thought of as 0 and 1. A least squares approach would not only allow for responses to be outside of this range but also requires that each response variable has the same weight.

An ordered logit/probit does not assume this and does not allow for responses to go beyond 0 and 1. Therefore an ordered probit regression is used instead of a least squared approach due to presenteeism being a dependent variable with a natural and categorical response ordering (Viola, 2012; Torres-Reyna, no date).

The dependent variable to be used in this chapter asked respondents "In the past 2 weeks, how much of the time did any health problem make it difficult for you to perform your normal job duties?" Respondents chose from a list of possible answers including none of the time, some of the time, half of the time, most of the time and all of the time. There is a natural order to the responses and the scope of this measure is broader than most measures as the focus is on the extent to which having a health problem impacts the employee's ability to perform their job.

This measure does differ from most measures outlined in the literature review that take a more specific approach as it does not provide a list of health conditions, such as those presented by Mitchell (2011). This could be seen as a positive general approach given there are more potential health problems than can be listed and may avoid false results associated with correlated health problems. Health conditions such as insomnia, PTSD, schizophrenia

and anorexia are under researched within most wellbeing studies and it is likely that these will be omitted from a list of specific conditions.

The measure used in this study takes an all-encompassing approach, and while this does mean that it is not possible to evaluate the impact of specific conditions, explore which conditions are most prevalent and how these have changed over time, this measure does not omit any health conditions from the answers.

A similar measure has been used by Mitchell (2011) who measures presenteeism via the question: "In the past 2 weeks how much of the time did your health problems make it difficult to do the following…" respondents were then presented with a list of options. Mitchell (2011) states that this measure has strong validity and reliability and has been praised by a 2014 review as it allows for both general and specific health concerns to be discussed.

The measure for presenteeism within this study has been shown to be in line with other measures of presenteeism. The measure is similar to some approaches used in that it has the same recall period and it focuses on the extent to which a health condition impacts employee's productivity (Mitchell, 2011). It is an improvement on those measures that focus solely on attending work when ill (Demerouti et al., 2009; Cooper and Dewe, 2008; Biron et al., 2006). The measure allows for general and specific conditions to be included but more importantly this measure will not omit certain health conditions by providing a restrictive list of health conditions.

The formal model to be used within this chapter for presenteeism can be seen below, which adapts the formal model outlined in Chapter 3, section 3.4.1.1. The following equation concerns only healthy eating as an example of the formal equation to be applied to all wellbeing concepts included in the analysis.

$$P[Pr_i = m] = 1 - \varphi(\mu_{m-1} - HE_i\beta)$$

Where Pr_i equals presenteeism, i is the individual, m equals the possible thresholds Pr_i can take, μ_{m-1} equals –infinity and μ_m equals +infinity and HE equals the parameter for healthy eating. Healthy eating will be represented by the factors identified from the factor analysis and outlined below, as will all wellbeing concepts included in this study. All included variables are expected to have a negative effect on presenteeism, which would generate an overall positive finding.

5.2.3 Results

This section presents the results of the econometric models and discusses findings. Specifically this section seeks to present, discuss and evaluate the impact different econometric methods can have on the results. It evaluates if employee wellbeing has an effect on presenteeism and if so, what wellbeing factors are found to have an important impact.

5.2.3.1 Factor Analysis

Cornish (2007) states that factor analysis seeks to reduce the data into a smaller subset of underlying latent variables. This is supported by Rahn (no date) who states that multiple observed variables should have a correlation to an unobserved latent variable, which leads to similar patterns of responses within the dataset. The necessity for a linear relationship is supported by numerous authors (Tryfos, 2001; UCLA, no date; Garret-Mayer, 2006) as this means that a smaller number of latent variables can be used to represent a larger dataset and still generate similar results.

This study includes many concepts that are very complex and are potentially related; factor analysis is used here to reduce the data in order to enable a simpler and more complete analysis. Data were collected via questionnaires on thirteen broad wellbeing variables that impact productivity. Due to the complex nature of each variable, multiple questions and statements needed to be asked in order to effectively capture the concept. Therefore factor analysis is used here to reduce this to a fewer number of variables. For example, in the case of absence management, only two factors are established as stated in chapter 4, section 4.18.

In order to conduct the factor analysis the correlation matrix was preferred over the covariance matrix which is in line with Garret-Mayer (2006). Tryfos (2001) highlights that the most common method of factor analysis is the principal component method which seeks to find the total communality that is as close as possible to the total amount of variation found in the observed variables. Cornish (2007) also highlights that the principal component method can be used to calculate the factor loadings, as does Field (2005) who also acknowledges that this method is not strictly factor analysis but it often yields similar results.

Due to this technique being so widely used and that this technique will not produce dissimilar results, principal component analysis is the technique that has been used here. Tryfos (2001) states that varimax is the most commonly used rotation method and so that is being used within this analysis too. A full explanation and breakdown of the factor analysis can be seen in Appendix D.

The number of potential variables is found by combining all statements and questions asked within both questionnaires for each concept. Tables 5.1 and 5.2 show the number of factors that have been identified for each concept for each data collection period. It can be seen that the factor analysis for both data collection periods were successful in reducing the data.

This process had the same benefit across both data collection periods, with the second period only having one extra factor for alcohol and substance misuse. A potential concern with this process is that while the data have been reduced and is more manageable, the quality of the data available could have suffered. However, this does not appear to have happened as all broad concepts in both questionnaires capture a large percentage of the variation that was originally observed.

Table 5. 1: General Results from the Factor Analysis in the First Data Collection Period

Wellbeing Concept	**Number of Original Variables**	**Number of Factors**
Healthy Eating	9	2
Physical Activity	6	1
Leadership	9	1
Flexibility	7	1
Training and Development	7	2
Absence Management	14	2
Health and Safety	6	1
Job Satisfaction	8	1
Engagement	8	1
Commitment to Employer	6	2
Mental Health and Wellbeing	14	2
Tobacco Use Cessation	8	2
Alcohol and Substance Use	9	2
Total	**111**	**20**

Table 5. 2: General Results from Factor Analysis for the Second Data Collection Period

Wellbeing Concept	**Number of Original Variables**	**Number of Factors**
Healthy Eating	9	2
Physical Activity	6	1
Leadership	9	1
Flexibility	7	1
Training and Development	7	2
Absence Management	14	2
Health and Safety	6	1
Job Satisfaction	8	1
Engagement	8	1
Commitment to Employer	6	2
Mental Health and Wellbeing	14	2
Tobacco Use Cessation	8	2
Alcohol and Substance Use	9	3
Total	**111**	**21**

An illustrative example of the factor analysis results for the healthy eating concept are presented in tables 5.3 and 5.4, which show that two factors have been created from the initial 9 statements that account for 75.48% and 73.59% of the variance in both time periods respectively. The determinants are 0.013 and 0.018 which means there are no strong computational problems as this is greater than the 0.0001 critical value outlined by Field (2005). The KMO statistics are 0.763 and 0.0735 which is a good score and indicates that factor analysis is appropriate.

The factors identified can be titled OrgOptionsHE which represents the opportunities that are provided to the employees by their employer to improve their diet, and OrgSupportHE which represents the support that employees receive from their employers to help improve their diets. The statements asking employees how often they consume fruit and vegetables and takeaways were omitted from the analysis for both time periods due to low communalities.

Table 5. 3 Factor Analysis Statistics in both Time Periods for Healthy Eating

First Data Collection Period				**Second Data Collection Period**			
Determinant	0.013			0.018			
KMO Statistic	0.763			0.735			
			Eigenvalue				
Component	Total	% of Variance	Cumulative %	Component	Total	% of variance	Cumulative %
1	4.039	57.71	57.71	1	3.74	53.39	53.39
2	1.240	17.72	75.48	2	1.41	20.21	73.59

Table 5. 4: Factor Analysis Components in both Time Periods for Healthy Eating

First Data Period	Component		Second Data Period	Component	
	1	2		1	2
ThereAreVendingMachines	0.738		VendingMachinesAtWork	0.751	
VendingMachinesHaveHealthyOptions	0.826		VendingMachinesHaveHealthyOptions	0.826	
OnsiteCafeorRestaurant	0.899		OnsiteCafeRestaurant	0.851	
CafesorRestaurHealthyOptions	0.932		CafeRestaurHealthyOptions	0.9	
OrganSupportsHealthyDiet		0.885	OrgSuppHealthyDiet		0.885
ProvidedInfoOnHealthyEating		0.869	InfoProvidedHealthyEating		0.851
OfferedProgrammeToImproveDiet		0.847	TailoredProgImproveDiet		0.879

5.2.3.2 First Collection Period

In model 1, all of the variables from the factor analysis were initially included and then statistically insignificant factors were removed to move to a more parsimonious model in model 2. During the process of removal, attention was given to how the overall model performed and whether there was evidence of omitted variable bias.

Model 1 in table 5.5 shows that when all variables are included there are many wellbeing factors that are statistically significant: PhysicalActivity, TrainingAndDevelopment, HowMuchPayForTraining, OrgSupportAM, Engagement, IntentToStayCE, IntentToLeaveCE and OrgSupportMHWB. Model 1 also shows that some important wellbeing factors are statistically insignificant.

When included to the modelgender was insignificant and caused OrgSupportMHWB and PhysicalActivity to become insignificant. Gender was removed, as was ethnicity ethnicity which was also insignificant and caused PhysicalActivity to become insignificant so ethnicity will also not be included in the final model. Age was also insignificant and caused OrgSupportMHWB, Engagement and PhysicalActivity to be insignificant.

Disability and Caring Responsibilities were then added where the latter was insignificant and having a disability was significant. The following variables became insignificant: PhysicalActivity, Engagement, IntentToStayCE, IntentToLeaveCE and

OrgSupportMHWB. CaringResponsibilities will therefore not be included in the final model. Hours worked and tenure were both insignificant.

From this process it can be said that the model is not sensitive to the inclusion/exclusion of many wellbeing factors that are thought to be important despite the high levels of multicollinearity that exists between the factors. This process led to model 2. Model 2 was statistically significant at all levels (0.000) and had a Pseudo R-Square of 0.334 meaning that 33.4% of the variation of presenteeism is explained by the model.

Table 5. 5: Presenteeism Starting and Final Model for the First Data Collection Period

	Model One Estimate	Model Two Estimate	Marginal Effect
OrgOptionsHE	0.105 (0.095)		
OrgSupportHE	-0.030 (0.112)		
PhysicalActivity	-0.303 (0.132)**	-0.173 (0.102)*	0.040 (0.024)*
TobaccoCessation	0.028 (0.112)		
AmountSmoked	-0.084 (0.067)		
OrgSupportALC	0.137 (0.067)		
UnitsConsumed	0.011 (0.075)		
Leadership	-0.161 (0.236)		
Flexibility	-0.023 (0.170)		
TrainingAndDevelopment	-0.453 (0.205)**	-0.353 (0.153)**	0.082 (0.036)**
HowMuchPayForTraining	0.133 (0.065)**	0.164 (0.062)**	-0.038 (0.016)**
OrgSupportAM	0.208 (0.069)**	0.164 (0.066)**	-0.038 (0.016)**
AwarenessAM	0.181 (0.189)		
HealthAndSafety	0.053 (0.192)		
JobSatisfaction	-0.286 (0.198)		
Engagement	0.699 (0.225)**	0.680 (0.163)***	-0.158 (0.043)***
IntentToStayCE	0.295 (0.159)*		
IntentToLeaveCE	0.521 (0.097)***	0.522 (0.088)***	-0.121 (0.003)***
OrgSupportMHWB	0.653 (0.183)***	0.737 (0.157)***	-0.171 (0.040)***
EngagementOppMHWB	0.122 (0.115)		
Disability Present		0.616 (0.197)**	-0.001 (0.030)***

*p<0.10, -2 Log Likelihood =578.483. Pseudo R-squared =0.334. LR chi2(8) =289.6(0.000). Number of Obvs = 327
**p<0.05
***p<0.01 (Standard Error)

5.2.3.3 Second Data Collection Period

The same modelling process was followed for the second data collection period with the same aims and motivations. Multicollinearity was once again present within this data set to a similar extent as the first data collection period. Once more the starting model shows that with all factors included in the model many important wellbeing factors are statistically

significant, such as AmountSmoked, Leadership, Flexibility, JobSatisfaction, Engagement, IntentToStayCE, IntentToLeaveCE and OrgSupportMHWB. The same process was used to remove factors from the model, focusing on those that were statistically insignificant. Similar issues in the first data collection period led to the conclusion that gender should be excluded and disability and ethnicity included.

Despite the insignificance levels the impact of removing OrgSupportAM and PhysicalActivity caused omitted variable bias issues for the model and so these variables were left in. As a result, it can be said that the model was as robust as the model in the first data collection period and multicollinearity did not strongly impact the results. However, this model was slightly sensitive to some of the control variables but not enough to cause any concern given that one of the removed factors was originally insignificant.

This led to model 2 being the preferred and final model for the second data collection period as shown in table 5.6. Similar to the first data collection period, both models were significant at all levels (0.000). Model two had a Pseudo R-Square of 0.218 meaning that 21.8% of the variation of presenteeism is explained by the model.

Model 2 is not sensitive to the inclusion/exclusion of variables despite the multicollinearity between the factors. While this model is more sensitive than the first data collection period this is likely to be due to differences between the two samples.

Table 5. 6: Presenteeism Starting and Final Model for the Second Data Collection Period

	Model One Estimate	Model Two Estimate	Marginal Effect
OnSiteOptionsHE	0.121 (0.106)		
OrgSupportHE	-0.126 (0.136)		
PhysicalActivity	-0.182 (0.155)	-0.154(0.128)	0.017(0.015)
TobaccoCessation	-0.032 (0.117)		
AmountSmoked	0.141 (0.084)*		
OrgSupportALC	0.218 (0.146)		
UseOfAlcAndSubstances	-0.112 (0.099)		
AlcoholConsumption	0.037 (0.085)		
Leadership	-0.724 (0.241)**	-0.530(0.219)**	0.058(0.029)**
Flexibility	0.488 (0.188)**	0.355(0.193)*	-0.039(0.024)
TrainingAndDevelopment	0.065 (0.201)		
PercentTrainingPaid	-0.046 (0.085)		
OrgSupportAM	0.159 (0.090)*		
AwarenessAM	0.033 (0.223)		
HealthAndSafety	0.036 (0.236)		
JobSatisfaction	-0.684 (0.264)**	-0.531(0.260)**	0.058(0.033)*
Engagement	0.535 (0.284)*	0.593(0.289)**	-0.065(0.038)*
IntentToStayCE	0.723 (0.211)***	0.686(0.206)***	-0.075(0.032)**
IntentToLeaveCE	0.590 (0.122)***	0.656(0.111)***	-0.071(0.025)**
OrgSupportMHWB	0.705 (0.237)**	0.535(0.222)**	-0.058(0.028)**
EngagemenOppMHWB	-0.168 (0.148)		
Disability Present		1.211(0.223)***	-0.075(0.028)**
Ethnicity (Other Ethnic Group)		2.120(0.843)**	-0.056(0.023)**

*p<0.10, -2 Log Likelihood = 355.228.Pseudo R-squared=0.218.LR chi2(10)= 218.112(0.000), Number of Obvs = 215
**p<0.05
***p<0.01
(Standard Error)

Model 2 in tables 5.5 and 5.6 are the final model estimations for the first and second data collection period. The slight increase in the R-squared for the second period could be due to sample differences but it is more likely to be due to model 2 in the second data collection period including more employee wellbeing concepts that are important to this relationship.

Furthermore, it should be noted that the change in the coefficients observed for the marginal effects is due to the means of the variables being the opposite of the coefficients as the marginal effects are calculated at the mean of the variables. A full model summary can be seen in Appendix G.

Tables 5.5 and 5.6 show that some variables had an association with presenteeism in both time periods. For those variables, it was found that the probability of presenteeism

occurring is greater for a one unit improvement in employee physical activity by 4% and 1.7% in the first and second data collection period respectively. Although physical activity became statistically insignificant in the second data collection period, removing it from the estimation caused other variables to be insignificant. This suggests some correlation exists between the variables and it is better for the overall model to have the factor included in the final estimation.

Improved employee engagement, the intention to leave their current employer and improved organisation support for mental health are associated with a lower probability of presenteeism by 15.8%, 12.1%, 17.1% and 6.5%, 7.1% and 5.8% across the data collection periods, respectively. When compared with not having a disability, being disabled is associated with a lower probability of presenteeism by 0.1% and 7.5% in the first and second data collection period, respectively.

For the results that correspond to the first data collection period, an improvement in training and development and an extra percentage point increase in the amount of training paid for by employees is associated with a greater probability of presenteeism by 8.2% and a probability of less presenteeism by 3.8%, respectively. Additionally, improved organisation support for absence management is associated with the lower presenteeism by 3.8%.

In the second data collection period, improved leadership and improved job satisfaction are both associated with a greater probability of presenteeism occurring by 5.8%. In the same data collection period, improved flexibility and a greater intention to stay with the current employer are both associated with a lower probability of presenteeism by 3.9% and 7.5%, respectively. Moreover, the results show that those respondents who classify their ethnicity as being other ethnic groups to those listed in this study experienced a 5.6% lower probability of presenteeism than respondents who classified their ethnicity as “White”.

Across the data collection periods it can be seen that four broad factors remained significant (Mental health and wellbeing, Engagement, Intention to leave the current employer and being disabled) whereas Physical Activity became statistically insignificant in the second data collection period.

The main area of change across time periods was found in the sizes of the coefficients as these tended to be smaller in the second data collection period. The reasons for this change are unknown and for those factors that were common to both data collection periods the coefficients reduced in the second data collection period. However, these factors were still associated with a lower probability of presenteeism.

Considering the Charter factors included in the final models, the results suggest that improved organisational support for mental health and wellbeing has the most consistent effect over the data collection periods. This implies that over the study period the Charter can be associated with improved presenteeism but the results for physical activity and leadership suggest more qualitative research is needed to fully evaluate the relationship between the Charter and presenteeism.

5.3 ABSENTEEISM

5.3.1 Literature Review

Absenteeism is a common outcome variable for wellbeing enhancing empirical studies. Given the similarities between absenteeism and presenteeism, it is not surprising that the literature has similar confounding issues that limit the debate. Although there are analyses surrounding the connections between employee mental health and absenteeism, similar analyses are rare in the employee turnover literature.

Employee mental health has been found to be one of the largest factors affecting absenteeism, and sickness absence due to stress, anxiety and depression (Public Health England, 2013; Unum 2014). McDaid et al. (2008) support this as they found that 40% of English organisations have rising stress related absences. Similar figures were found by Unum (2015) who found that 42% of businesses recorded an increase in stress related absenteeism. In a later study, McDaid et al. (2015) found a trend of increasing absenteeism due to mental health was overtaking musculoskeletal problems as the leading cause of absence.

These finding show that mental health has been an important factor that is contributing to the increasing levels of absenteeism and this upward trend is likely to continue. An improvement in the mental health of the workforce could substantially reduce the level of absenteeism faced by some organisations. Some studies show the impact of mental health conditions on absenteeism is high. Lerner and Henke (2008) found that those employees who had depression were 1.5 times more likely to be absent and CDC (2013) found that depression accounted for 4.8 days of absence in a three month period.

While these results underscore the extent to which mental health can affect absenteeism, the results in the above studies define mental health by stress, anxiety and depression. These may be the most common mental health conditions but common conditions such as insomnia and PTSD will affect absenteeism too but are typically omitted from studies analysing absenteeism. This could be a serious omission as the documented number of PTSD instances are increasing.

Current measures of mental health could be improved and broadened to incorporate these mental health conditions as existing findings could understate the true effect of mental health on absenteeism. This effect on absenteeism is likely to be much greater, which further emphasises the need for organisations to help improve their employees' mental health.

In addition to mental health, workplace factors are one of the greatest determinants of absenteeism. The existing literature shows that job satisfaction is an important determinant of

absenteeism, such as Diener and Seligman (2004) who found that employees with higher job satisfaction also had lower absenteeism. In particular, it is job insecurity that has been found by multiple studies to affect absenteeism, with higher job insecurity leading to higher absenteeism (Bajorek et al., 2014; Garrow, 2016; Sparks et al., 2001; Chartered Association of Business Schools, no date).

However, while Garrow (2016) found that job insecurity was associated with absenteeism, it was also found that this association recovered in line with the economic cycle. The result showed that absences dropped to a record low during the economic crisis and normalised afterwards, suggesting that absenteeism could be cyclical. This is supported by Baker-McClearn (2010), who found that in pressurised environments there is less absenteeism, and Garrow (2016), who found that organisations experience pressures that have been shaped and influenced by the economy.

This is important as it highlights there are factors that are beyond the control of individual organisations that can determine absenteeism. However, while these results do suggest that absenteeism could be cyclical and sensitive to the current macroeconomic conditions, it is difficult to associate the drop in absenteeism to job insecurity as many other factors could also be responsible for the observed decline. For example, the number of children an employee has and their financial security could both contribute to this decline.

The literature shows the use of health and wellbeing programmes have had an effect in reducing absenteeism (Bajorek et al., 2014; NICE, 2012; CIPD, 2007). For example, CIPD (2007) used Prudential as a case study and found the use of a health programme reduced short-term absenteeism by 11%.

Inconsistencies exist between absenteeism and specific workplace factors. For example, Spector (1986) found that higher work autonomy is associated with absenteeism, yet other studies have found the opposite (e.g. Goodman et al., 1988). While this underscores the presence of conflicting results within the current literature, it also reinforces the need for further study regarding the impacts of workplace factors on absenteeism.

In contrast, one aspect of the literature with generally consistent results is the effect of working hours on absenteeism. Numerous studies have found that the use of flexible working practices is associated with lower absenteeism (Christensen and Staines, 1990; Pierce and Nestrom, 1983; Lewis et al., 1996; Hammond and Holton, 1991; New Ways to Work, 1993; Young-Blood and Chambers-Cook, 1984). Similarly, the Chartered Association of Business Schools (no date) found that working longer hours increased absenteeism by increasing stress.

It is not just the amount of hours worked that impact on wellbeing and absenteeism but also having autonomy over how these hours are worked. This is supported by Farquharson et al. (2012) who found that work-family conflict was a significant predictor of sickness absence.

While these results do indicate that flexible working hours and the amount of hours worked affect absenteeism, the results lack specific details which means that it is not possible to discuss which particular dimension(s) of flexible working practices affect absenteeism and whether one dimension is more important than another. For example, does flexible working in these instances mean working from home or having flexible working hours and do these affect absenteeism equally?

The role of managers and management is a factor determining both presenteeism and absenteeism that is often ignored in empirical studies. The role of managers is highlighted by Unum (2015), who found a communications chasm between employees and employers leads to lower staff satisfaction causing an increase in sickness absence. Specifically, Unum (2015) found this occurred if organisational benefits and entitlements were not fully communicated to employees.

NICE (2015) supports this by stating that employers should ensure line managers receive training in a number of leadership areas including changes in legal obligations and official advice to employers, communication skills and how to manage sickness absence. These results highlight that effective communication between management and employees can help reduce absenteeism, suggesting that organisations could reduce absenteeism by altering or installing management training or adjusting management structures to encourage better communication with employees.

The issue of effective leadership and communication is expanded upon by Baker-McClearn et al. (2010) who found that managers felt under pressure from senior managers to manage sickness absences effectively and reduce unofficial absences. This emphasises the need to train line managers more to manage sickness absences as it is likely that an organisation would see increased absenteeism from their employees (line managers and employees) who feel under significant pressure.

In contrast, Bockerman et al. (2011) found that high involvement management, including autonomous teamwork and information sharing, is associated with having greater short term absenteeism. This highlights that increasing the amount of communication with employees does not necessarily guarantee lower absenteeism, that the method of information

delivery is important, and that employee absenteeism is sensitive to how communication is made and not simply how much communication is made.

While these results provide an interesting insight into how managers and management can affect employee absenteeism, it should be noted that this is an area of research that is very limited. Therefore, it is difficult to make any assertions about the extent to which managers and management affects absenteeism with any certainty outlining the need for empirical studies to include the role of managers and management in any future broad wellbeing-absenteeism analysis.

The current literature on absenteeism overlooks certain behavioural factors despite some literature finding evidence implying these factors should be included in wellbeing studies. One such factor is physical activity which is widely cited as a key determinant of reducing absenteeism (NICE, 2012; ERS, 2016; Brown et al., 2011). Physical activity programs have been found to reduce absenteeism by 20% and employees who are more physically active take 27% fewer days sick (NICE, 2012; ERS, 2016). Physical activity also has indirect associations with reduced absenteeism as physical activity has been found to reduce some of the most important mental and physical conditions associated with higher sickness absence (NICE, 2008; CDC, 2013).

In contrast, Shi et al. (2013) found that physical health was not a significant predictor of absenteeism. This result underscores another inconsistency found throughout the literature although this result was found when physical activity was not studied in isolation. Nevertheless, this result does indicate the effects of physical activity on absenteeism could be overstated by not including it in broader empirical wellbeing studies and that the effects of physical activity on absenteeism need to be studied in more depth.

Physical activity should be included in studies of absenteeism that include traditional wellbeing factors in order to establish how physical activity interacts with absenteeism when other important wellbeing factors are considered contemporaneously.

Healthy eating is also often overlooked in the literature. This is despite better nutrition being found to have similar benefits on absenteeism as physical activity in that it lowers the risk of many conditions that cause absenteeism (CDC, 2013). The importance of more research into the effects of an improved diet is outlined by NHS (2014) who found that despite being able to reduce absenteeism by a third, 75% of trusts do not offer healthy food to night shift employees. These results highlight that an improvement in diets has the potential to reduce absenteeism.

Healthy eating is often not analysed in large empirical studies to the same extent as physical activity or other wellbeing factors. The potential benefit of both proper nutrition and increased physical activity is shown by Unum (2014) who outlines that changes in government advice about diet and activity could lead to reduced stress levels, which is a leading cause of absenteeism. This outlines the need for more research into the effects of better nutrition but especially if physical activity is being analysed contemporaneously. Therefore, further research into the effects of improved nutrition on absenteeism is needed.

Tobacco cessation is a behavioural factor that is also often overlooked in studies of absenteeism too, despite there being a few studies that outline the influence tobacco use can have on absenteeism. It has been found that those who smoke take more days off work than those who do not, and thus tobacco cessation contributed to reducing absenteeism (CDC, 2013; NICE, 2012; NICE, 2007). It has been noted that tobacco use is a recognised cause of a number of health conditions that also cause absenteeism and that reducing tobacco use could help reduce these and hence indirectly reduce absenteeism (NICE, 2012; CDC, 2013).

This highlights the need to include the effects of tobacco cessation in broader wellbeing studies. Reinforcing this perspective, Sparks et al. (2001), Conrad (1988), Daley and Parfitt (1996) and Neck and Cooper (2000) all found that health-promotion schemes have led to reduced absenteeism through improved diets, increased exercise, smoking cessation and stress reduction techniques.

In contrast to these findings, Hafner et al. (2015) found there was no direct association between work impairment and smoking. This result outlines another ongoing inconsistency within the literature. Consistent with Shi et al.'s (2013) results, Hafner et al.'s (2015) results outline the limitations of studying these factors in isolation without including other wellbeing factors. This reinforces the need to include these factors in broader empirical based wellbeing studies.

A limitation of all of these results is they do not take into account the duration of absenteeism. None of the literature within this review have analysed the impacts of absenteeism on both short and long term absenteeism and compared the results, suggesting that another significant gap within the literature has not been addressed. Although Bockerman et al. (2011) state that their analysis was separated by short and long term absenteeism their analysis focused on high-involvement practices and not employee wellbeing in a broad conceptualised view.

Additionally, no results are presented for long term absenteeism which emphasises the need for further research that distinguishes between short and long term absenteeism when

analysing its relationship with employee wellbeing. Moreover, the current debate does not suggest whether policies and behaviours aimed at improving employee wellbeing and reducing absenteeism have a long or short term effect, and so organisations and practitioners using the literature to shape their policies may be using policies and measures that are misguided.

It is important that this gap within the literature is addressed as some long term absences can last for more than the typical 12 month recall periods used for some absenteeism measures.

Summary of the Gaps

This brief literature review highlights a number of gaps that exist within the literature. These gaps have formed the foundation for the main research question that this chapter seeks to answer in order to progress the literature on the connection between employee wellbeing and absenteeism. The sub-research question outlined in Chapter 1 of this thesis is discussed in-depth in Chapter 6.

Research Question 1: Is there a relationship between employee wellbeing and absenteeism and, if so, to what extent to employee wellbeing factors affect absenteeism?
Based on the literature review the general consensus is that employee wellbeing does have an impact on absenteeism. However, it is unclear from the literature what aspects of employee wellbeing have an impact on absenteeism and to what extent this impact exists.

5.3.2 Methods

This section focuses on the measures of short and long term absenteeism as well as the statistical techniques used in econometric models. Short term absenteeism was measured via the question: "Have you had any absences in the past three months?" This was then converted into a dummy variable where 1 equals yes and 0 equals no. Long term absenteeism was measured via the question "Have you had any noticeable absences in the previous 12 months? If so, how many days absent?" This measure differs from the short term absenteeism measure principally by having a recall period that is longer and by asking for the number of days absent.

A limitation of this approach would be the possibility of inaccurate data being given due to the long recall period. However, this measure is based on absences that require self-

certification, meaning it is unlikely that the employee would forget having to provide evidence of any absence in the previous 12 months.

While these measures are similar to others within the literature that investigate absenteeism, it is more typical to only have long term or 12 month recall periods (see for example Farquharson, 2012; Angle and Perry, 1981; Schaufeli et al., 2009; Braun et al., 2014). Many studies that discuss the relationship between employee wellbeing and absenteeism do not state how absenteeism has been measured (see for example Sparks et al., 2001; Bockerman et al., 2011; Lerner and Henke, 2008; Garrow, 2016; ERS, 2016; Bajorek et al., 2014) and although the reason for this omission of detail is unclear, it does mean that direct comparison between this and previous studies could be problematic.

Separating absenteeism into two measures that use different recall periods has some advantages over those measures used in the current literature that use either a 12 month or an unspecified duration. The main advantage of having both measures is the ability to contrast possible associations by enabling more possible causes of absenteeism to be captured, meaning a range of causes, such as the common cold to cancer and other serious mental and physical health issues, can all be evaluated.

The use of two measures means that both types of absences are likely to be accounted for more accurately than a single 12 month recall period as the respondent could forget about a one day absence if they had been absent for a long period of time. These measures also allow for other causes of short absences (such as poor work-life balance) to be taken into account. There are causes of absenteeism that are often omitted from broad empirical studies due to the recall periods used which are typically 12 months. The two measures enable an analysis of whether or not wellbeing factors have different relationships with short and long term absenteeism.

Each form of absenteeism will be modelled using a different statistical technique. Short term absenteeism is modelled using a logit regression. This form of analysis follows the same principles as the ordered probit approach outlined in section 5.2.2, however as the dependent variable for short term absenteeism does not have a natural ordering the decision was made to not use an ordered probit and instead use the more common method of a logit.

Long term absenteeism is modelled via a negative binomial regression which is used when the dependent variable is a count of the number of times the event being evaluated has occurred (UCLA, no date; NCSS, no date; Ford, 2016). This form of regression is an expansion of the Poisson regression that assumes the variance and the mean are the same (UCLA, no date; NCSS, no date; Ford, 2016). Negative binomials do not assume this equality

and so this form of analysis allows for more realistic variation between the counts of the dependent variable.

The formal model to be used within this chapter for short term absenteeism can be seen below, which adapts the formal model outlined in Chapter 3, section 3.4.1.2. The following equation concerns only healthy eating and physical activity as examples, the full equation would be substantially extended to include all wellbeing concepts included.

$$A = \prod_{A_i=0} Pr(A_i > 0) \times \prod_{A_i=1} Pr(A_i \leq 0)$$

$$= \prod_{A_i=0} [1 - G(\beta_1 + \beta_2 HE_{2i} + \beta_3 PA_{3i})] \times \prod_{A_i=1} G(\beta_1 + \beta_2 HE_{2i} + \beta_3 PA_{3i})$$

Where A is absenteeism, i is the individual, HE is healthy eating, PA is physical activity, Pr is the probability conditioned on the explanatory variables, which are shown by HE and PA for healthy eating and physical activity, respectively, and where G is the cumulative logistic distribution function.

HE and PA will be represented by the factors identified from the factor analysis, as will all variables included in this study. This also applies to those variables included in the estimation for long term absenteeism below. There is a negative expected association for the factors included in the study with both short and long term absenteeism.

The formal model to be used for long term absenteeism can be seen below, which adapts the formal model outlined in Chapter 3, section 3.4.1.3. The following equation concerns only healthy eating as an examples of the equation line applied to all wellbeing concepts included.

$$\Pr(LA = LA_i | u_i, a) = (1 + HE)^n = \frac{\Gamma(LA_i + a^{-1})}{\Gamma(a^{-1})\Gamma(LA_i + 1)} \left(\frac{1}{1 + a\mu_i}\right)^{a^{-1}} \left(\frac{a\mu_i}{1 + a\mu_i}\right)^{LA_i}$$

Where Pr is the probability, LA is long term absenteeism, μ is the mean incidence rate of y, Γ represents gamma and α equals $\frac{1}{v}$, where v is a scale parameter and HE is healthy eating.

5.3.3 Results

5.3.3.1 Short Term Absenteeism

Tables 5.7 and 5.8 present the results found for short term absenteeism across both data collection periods. The same factor analysis process used to generate the final models for presenteeism will be employed here too. The models include the same factors identified as a result of the factor analysis. This is followed by a discussion of the results including an evaluation of the overall model for both data collection periods.

Table 5. 7: Short Term Absenteeism for the First Data Collection Period

	Coefficient	Exp(B)
OrgSupportALC	0.499 (0.267)*	1.647
UnitsConsumed	0.359 (0.169)**	1.432
Leadership	-1.180 (0.553)**	0.307
TrainingAndDevelopment	0.452 (0.473)	1.572
HealthAndSafety	1.033 (0.444)**	2.808
JobSatisfaction	-0.609 (0.372)	0.544
IntentToLeaveCE	1.141 (0.233)***	3.129
EngagementOppMHWB	-0.315 (0.267)	0.729
Age (50-59)	-0.884 (0.429)**	0.413
Tenure (< 3 years)	1.407 (0.659)**	4.084
Tenure (< 5 years)	1.090 (0.558)**	2.974
Constant	-2.763 (0.482)***	0.063

*p<0.10, -2 Log Likelihood=231.373, Pseudo R-squared = 0.258, LR chi2 = 80.35(0.000), Number of Obvs = 327
**p<0.05
***p<0.01
(Standard Error)

Table 5. 8: Short Term Absenteeism for the Second Data Collection Period

	Coefficient	Exp(B)
OnSiteOptionsHE	0.559 (0.219)**	1.750
TobaccoCessation	-0.479 (0.249)*	0.619
AbsenceManagement	0.446 (0.172)**	1.563
Engagement	-0.893 (0.468)*	0.409
OrgSupportMHWB	0.940 (0.454)**	2.559
HoursWorked (21-30)	1.639 (0.775)**	5.151
HoursWorked (31-40)	1.566 (0.694)**	4.786
HoursWorked (40+)	1.543 (0.891)*	4.676
Constant	-2.602 (0.589)***	0.074

*p<0.10, -2 Log Likelihood=201.312, Pseudo R-squared = 0.128. LR chi2 = 29.484(0.000), Number of Obvs = 215.
**p<0.05
***p<0.01
(Standard Error)

The final models in both data collection periods were statistically significant at all levels (0.000). The first data collection period had an R-squared of 0.258 meaning that 25.8% of the variation of short term absenteeism is explained by the model. This reduced in the second data collection period to an R-squared of 0.128, meaning 12.8% of the variation is explained by the model, and is likely to be due to the second data collection period having almost half as many explanatory variables than the first data collection period included in the final model.

Table 5.7 shows that in the first data collection period a one unit improvement in organisational support for alcohol misuse and in the units of alcohol consumed in a week is associated with greater odds of short term absenteeism occurring by 64.7% and 43.2%. Similarly, improved training and development was associated with 57.2% greater odds of short term absenteeism occurring. Larger associations were found for improved health and safety and greater intention to leave the organisation as the odds of short term absenteeism occurring were greater by a multiple of over 2.8 and 3.1, respectively.

However, one unit increases in improved leadership, job satisfaction and opportunities to engage in mental health and wellbeing policies are associated to fewer odds of short term absenteeism occurring by 69.3%, 45.6% and 27.1%, respectively. The latter finding here, along with the result for training and development, were statistically insignificant but their removal caused changes amongst the other variables within the model.

Being aged between 50 and 59 years old is associated with lower odds of short term absenteeism occurring by 58.2% than being aged under 30 years old. The odds of short term

absenteeism occurring were greater for those who were employed with their current employer for less than 3 years and for less than 5 years by a multiple of 4 and 2.9, relative to those who were employed for less than one year.

In the second data collection period, table 5.8 shows that a one unit improvement in the healthy eating options provided on-site and absence management policies are associated to greater odds of short term absenteeism occurring by 75% and 56.3%, respectively. Similar unit increases in improving the organisational support for employee mental health and wellbeing are associated with greater odds of short term absenteeism occurring by a multiple of 2.5.

One unit increases in the improvement of tobacco cessation policies and employee engagement are associated with 38.1% and 59.1% lower odds that short term absenteeism occurs, respectively. When compared with working between 0 and 10 hours working between 21 and 30 hours, 31 and 40 hours and more than 40 hours a week are associated with greater odds of absenteeism occurring by a multiple of 5.1, 4.7 and 4.6, respectively.

5.3.3.2 Long Term Absenteeism

Tables 5.9 and 5.10 outline the results found for long term absenteeism across both data collection periods. This is followed by a discussion of the results including an evaluation of the model for both data collection periods.

Table 5. 9: Long Term Absenteeism for the First Data Collection Period, split by Gender

	Coefficient	IRR	Gender			
			Males	IRR	Females	IRR
TobaccoCessation	0.733(0.283)**	2.082(0.588)	1.338(1.032)	3.811(3.934)	0.583(0.359)	1.792(0.643)
OrgSupportAM	2.811(0.276)***	16.605(4.577)	3.195(0.821)***	24.4(20.035)	2.634(0.336)***	13.932(4.678)
IntentToLeaveCE	0.556(0.242)**	1.743(0.422)	-0.449(0.873)	0.638(0.557)	0.286(0.323)	1.331(0.426)
EngageOppMH	-0.542(0.274)**	0.582(0.159)	-2.352(0.905)**	0.095(0.086)	-0.784(0.336)**	0.457(0.154)
Gender	-0.871(0.498)*	0.419(0.209)				
OftenWorkAtHome	-0.230(0.112)**	0.794(0.089)	-0.165(0.148)	0.848(0.126)	-0.288(0.148)*	0.750(0.111)
Constant	-1.601(0.342)***	0.208(0.588)	-2.839(1.203)**	0.058(0.070)	-0.976(0.476)**	0.377(0.179)

*p<0.10, Log Likelihood = -287.865, LR chi2(6) = 179.19(0.000), Pseudo R-squared = 0.237. Number of Obvs = 327.
**p<0.05
***p<0.01
(Standard Error)

Table 5. 10: Long Term Absenteeism for the Second Data Collection Period

	Coefficient	IRR
OrgSupportHE	-0.916(0.474)**	0.400 (0.190)
AmountSmoked	-0.395 (0.259)	0.674 (0.174)
OrgSupportALC	0.809 (0.395)**	2.245 (0.886)
AbsenceManagement	3.074(0.368)***	21.618 (7.964)
JobSatisfaction	1.195(0.475)**	3.309 (1.569)
Engagement	-2.7(0.609)***	0.067 (0.041)
IntentToLeaveCE	0.614(0.264)**	1.848 (0.489)
Tenure (< 3 years)	1.691(1.080)	5.422 (5.854)
Tenure (< 5 years)	2.399(1.215)**	11.010 (13.379)
Tenure (5 years +)	1.794(1.018)*	6.015 (6.122)
Constant	-3.586 (0.916)***	0.028 (0.025)

*p<0.10, Log Likelihood = -232.104, LR Chi2(10) = 136.15(0.000), Pseudo R-squared = 0.227. Number of Obvs = 215
**p<0.05
***p<0.01
(Standard Error)

The final models were significant in the first and second data collection periods at all significance levels (0.000). The first data collection period had a pseudo R-Squared of 0.237 meaning 23.7% of the variation of long term absenteeism is explained by the model. In the second data collection period this reduced to 0.227 meaning 22.7% of the variation in long term absenteeism is explained by the model.

In the first data collection period, table 5.9 shows that a one unit improvement in tobacco cessation policies, organisational support for absence management and a greater intention to leave the organisation are associated with 0.733, 2.81 and 0.556 more notable days of long term absence, respectively. A 1% increase in the number of notable days absent for these factors is associated with 2.082, 16.605 and 1.743 unit increases, respectively.

Similar one unit increases in opportunities for employees to engage in mental health and wellbeing policies and working from home are associated with 0.542 and 0.23 fewer notable days of long term absence. To achieve 1% decreases in the number of notable days absent, unit improvements of 0.582 and 0.794 are required, respectively. Males were associated with 0.871 fewer notable days absent than females.

In the second data collection period, as shown in table 5.10, a one unit improvement in organisational support for healthy eating, employee engagement levels and every extra cigarette smoked are associated with 0.916, 2.7 and 0.395 fewer notable days of long term absence, respectively. A 1% decrease in the number of notable days absent is associated with

0.4, 0.067 and 0.674 unit increases in these factors, respectively. However, the result for every extra cigarette smoked is statistically insignificant at all levels.

Comparable one unit increases for organisation support for alcohol misuse, improvement in absence management policies, job satisfaction and greater intention to leave the organisation are associated with 0.809, 3.074, 1.195, and 0.614 more notable days of long term absence, respectively. A 1% increase in the number of notable days absent is achieved by 2.245, 21.618, 3.309 and 1.848 unit improvements, respectively, in those factors.

When compared with being with your employer for less than one year, being with your employer for less than 5 years and more than 5 years is associated with 2.399 and 1.794 more notable days absent. Being with your employer for less than three years was statistically insignificant but the removal of this category caused the category result for less than 5 years to also become statistically insignificant.

Across the data collection periods, tables 5.9 and 5.10 show that only the intention to leave the organisation was consistently statistically significant when evaluating short and long term absenteeism. As no other factor was common in both data collection periods it is not possible to evaluate the impact of employee wellbeing on short and long term absenteeism over time with clear certainty. These results highlight the complex nature of employee wellbeing and reinforce that organisational context is critically important when evaluating what factors of wellbeing affect short and long term absenteeism.

5.4 EMPLOYEE TURNOVER

5.4.1 Literature Review

Employee turnover is an outcome variable that is often discussed alongside presenteeism and absenteeism. However, unlike absenteeism and presenteeism, employee turnover is a performance variable that is rarely used as an outcome variable in empirical based studies focusing on wellbeing. Studies that do use employee turnover as an outcome variable often omit key factors relating to employee wellbeing.

Omitting employee turnover from the literature is important limitation because if these wellbeing variables are associated with greater employee turnover then organisations are likely to be interested in how to mitigate this given the high financial and productivity costs of recruiting and training the leaving employee's replacement. This is a significant gap in the literature as current quantitative based studies are not fully analysing employee wellbeing and employee turnover, which means the usefulness of the literature to organisations and government at all levels is not being maximised.

One factor that is omitted from analyses of employee turnover is mental health. Sections 5.2.1 and 5.3.1 highlight the critical role that mental health has been found to have in determining absenteeism and presenteeism. Despite this, findings showing the effect of mental health on employee turnover are based on non-empirical studies that limit their discussion to descriptive results.

Within these results the focus is on the roles of depression and stress on employee turnover with multiple studies stating that depression and stress are associated with higher employee turnover (Baba et al., 1998; Goetzel et al., 2002; NICE, 2009; Ryan, 2011; Paile, 2011). The extent to which depression and stress are associated with employee turnover is outlined as it was found that mental health is associated with between 5 and19% of employee turnover (ERS, 2016; Lerner and Henke, 2008; Sainsbury Centre for Mental Health, 2007).

While these results do provide useful and interesting information about the association between mental health and employee turnover, there are some notable limitations. Many of these are results not taken from empirical studies so it is currently unknown how mental health interacts with employee turnover when included with models that also include behavioural and workplace factors.

It is notable that the literature is limited to the discussion of depression and stress while omitting many other workplace mental health conditions that could influence an employee's decision to leave their current workplace. This narrow view of mental health and the wide scope of the extent to which there is an association highlights the need for empirical

studies to include mental health when focusing on employee wellbeing and employee turnover.

Many behavioural factors are omitted from empirical employee turnover studies. While these factors are typically omitted from empirical studies that investigate absenteeism and presenteeism issues, there are studies that focus on these factors in isolation and provide an insight into their effectiveness, albeit using descriptive or case study data.

Those studies that have analysed the effect of behavioural factors on employee turnover found that physical activity was associated with lower turnover and could reduce employee turnover by 10% (ERS, 2016; Healthy Working Lives, no date). Furthermore, two studies found that poor employee health and wellbeing are associated with higher employee turnover (Robert Walters, 2006; PriceWaterhouseCoopers, no date).

While these studies provide insight into the association between behavioural factors and employee turnover, a range of issues still exist that are not clarified in the literature. For example, PWC (no date) uses very broad and vague terms meaning that it is not possible to know which aspects of wellbeing are associated with higher levels of employee turnover, and much of the work on behavioural factors is limited to examining the impacts of physical activity. There is almost no information about how alcohol misuse, tobacco use and healthy eating are associated with employee turnover despite sections 5.2.1 and 5.3.1 outlining the links these factors have with health conditions.

Most of the studies and results cited above are based on qualitative case studies. These studies do provide important information but if these are the main sources of information available then it is not possible to determine if changes are correlated across the sample with changes in physical activity or other workplace factors. A quantitative approach that includes these factors with other wellbeing factors could help show the extent to which physical activity interacts with employee turnover.

Overall the widespread omission of mental health and behavioural factors in studies about employee turnover highlights that more research is needed to understand these relationships. Most studies appear to focus on a particular industry or sector rather than a sample that includes a variety of organisations, and the organisational context may play a key role in the selection of wellbeing aspects for examination. This is likely to be a reason why so many employee turnover based studies omit key aspects of employee wellbeing.

Unlike mental health and behavioural factors, workplace factors are the main component of empirical studies using employee turnover as an outcome measure. As with absenteeism and presenteeism, these factors are generally considered to be HRM practices

and are often analysed and discussed as their own concepts. There are studies that have analysed HR practices with employee turnover and have found those organisations that use HR practices experience lower levels of employee turnover (Alfes et al., 2012; Balaji and Balachandran, 2012; Nivethitha and Kamalanabhan, 2014).

While these results do create a general understanding of an association between HRM practices and employee turnover, the results and discussions remain vague. The results do not discuss what practices in particular are associated with lower turnover and the lack of clarity hinders the understanding and the knowledge gained. This limits the discussion to showingthat an association is present and does not facilitate a discussion of what is associated with employee turnover and to what extent the association is present.

Practitioners and researchers cannot gain meaningful and useful information about the magnitude of the effects that could directly affect future research and future policy discussions. This vagueness underscores that more clarity is needed when discussing the results of empirical studies and that each concept should be discussed as its own concept and not under a broad term encompassing many concepts.

Job satisfaction is often found to be a key factor determining employee turnover. Multiple studies have found higher levels of job satisfaction to be associated with lower levels of employee turnover (Diener and Seligman, 2004; Paile, 2011; Chen et al., 2011; Liou, 1998; Joarder and Sharif, 2011). The extent to which greater job satisfaction can reduce employee turnover is outlined by NICE (2012) where it was found that an increase in job satisfaction can reduce turnover by 10-25%. Haddon (2011) partially supports this by finding that 53.8% of employees leaving their organisation do so due to higher job insecurity.

While these results show that job satisfaction is a key factor in determining employee turnover, the wide range of percentages found for the size of the effect underscore that more research is needed to fully understand to what extent it is a major factor.

In contrast to these findings, Shaw et al. (1998) found that job stability, a key feature of job satisfaction, has no effect on employee turnover. This result highlights that while the above literature is mostly in agreement with how job satisfaction affects employee turnover there is inconsistency within the literature, suggesting that more research is needed to explore how and to what extent job satisfaction is associated with employee turnover.

The literature also outlines that employee commitment is strongly associated with employee turnover. The literature reveals that greater employee commitment to an organisation is mostly associated with lower employee turnover (Chugtai and Zafar, 2006; Johnston et al., 1990; Boxall and Macky, 2009; Bartol, 1979).

However, while the literature does appear to be in agreement that commitment is associated with employee turnover, the literature surrounding this has limitations. The vagueness outlined previously concerning the use of HRM practices is also present here, as some studies (for example Angle and Perry, 1981) state that an association may exist but the direction of the association is unclear. This limits the knowledge that can be gained and limits the overall discussion to an association.

The literature surrounding commitment and employee turnover also suffers from the same inconsistencies found for absenteeism and presenteeism with, for example, Ayre et al. (1991) finding that turnover was unrelated to professional commitment. This result shows that there is no general consensus within the literature and that more research is needed to understand how employee commitment is related to employee turnover.

Unlike job satisfaction and employee commitment, there are some workplace factors that appear to be more important determinants of employee turnover than they are for presenteeism or absenteeism. One such factor is employee compensation with multiple studies showing that salary and compensation packages are associated with lower employee turnover (Yang et al., 2012; Bonn and Forbringer, 1992; Bloome et al., 2010; Chan and Kuok, 2011; Shaw et al., 1998; Batt and Valcour, 2003; Liou, 1998; Joarder and Sharif, 2011).

While these results show a general consensus has been established that salary is associated with lower turnover, the literature does not explicitly clarify this statement. For example, within those studies referenced here, there is no study that outlines whether the term salary refers to higher levels of pay or higher levels of employee satisfaction with their salary. These are two very different aspects of the term salary that could generate multiple different policy recommendations, meaning organisations using these findings could be misguided in their policy decision making. Greater clarity is needed within the literature when discussing the effects of salary and compensation on employee turnover.

As with salary and compensation, training and development are workplace factors that appear to be more significant for determining employee turnover than absenteeism and presenteeism. Some studies have found the training of the workforce was associated with lower employee turnover (Getz, 1994; Bagri et al., 2010) whereas other studies have shown that it is the opportunity for career development that is associated with lower turnover (Batt and Valcour, 2003; Hemdi and Nasurdin, 2006). When considered together these findings show that the training and development of the workforce is associated with lower employee turnover. However, the literature does show that there is a difference between the two as

three studies (Hemdi and Nasurdin, 2006; Shaw et al., 1998; McFadden and Demetriou; 1993) all found that training and development had no effect on employee turnover.

While these results highlight inconsistent findings within the literature, they also outline that it may be the provision of development opportunities that is relevant and not the training the staff receive per se. The literature surrounding training and development also supports the issue of vague descriptions of findings with Yang et al. (2012) stating that training and development determined turnover without any further explanation.

A discussion of how and to what extent training and development determines employee turnover is not possible due to the limited information available. Both of these issues are consistent throughout the employee turnover literature and outline that more and clearer research is needed with regards to how training and development are associated with employee turnover.

Organisational context appears to be determining which factors of wellbeing are analysed in empirical studies that use employee turnover as an outcome measure, with many wellbeing factors being analysed in very little depth. For example, Pirzada et al. (2013) found that loyalty, absenteeism and unfair treatment were associated with lower employee turnover and Batt and Valcour (2003) found that flexibility was associated with lower employee turnover. While these studies provide important results, an in-depth review of the literature does not reveal many studies that support their findings, which motivates the need for more research.

A similar issue has been found for engagement as only two studies have studied it in-depth. Pangallo and Donaldson-Feilder (no date) found that disengaged employees are more likely to leave the organisation and MacLeod and Clarke (2009) outline that engaged organisations can reduce turnover by 87%. While these studies do support one another and show that engagement is associated with lower employee turnover and the extent to which it can reduce turnover, more research is needed to solidify the associations that have been found.

A broad aspect of the workplace that does not suffer from this criticism as much is the issue of work control and workload, with multiple studies showing that working with greater control over their work and their workload is associated with lower employee turnover (Yang et al., 2012; Hom and Kinicki, 2001; HSE, 2007; MacFadden and Demetriou, 1993).

Although these results outline that there is an important association between work autonomy, workload and employee turnover, the literature has the same concerns as those with pay in that the term is too broad. For example, the literature does not state if it is

employee satisfaction with their workload or a decreasing workload that drives the results. The literature does not state if it is more or less control over their work that drives employee turnover. These are all areas of the concept that need to be discussed in more depth if a better understanding of how these factors affect employee turnover is to be known.

As was the case for presenteeism and absenteeism, the role of managers and management is under-researched with respect to the effect they have on employee turnover. However, the role of the manager features more in empirical studies that use employee turnover as an outcome variable. In particular, these studies show that it is higher levels of supervisory support felt by employees that are associated with lower levels of employee turnover (Joarder and Sharif, 2011; Brough and Frame, 2004; Houkes et al., 2003; Rhoades and Eisenberger, 2002; Batt and Valcour, 2003).

Lerner and Henke (2008) show the extent to which supervisory support affects employee turnover as they found that employees with depression who received support had higher employment rates (72%) when compared to those who did not (53%). Harter et al. (2002) also conducted empirical research into the role of managers and employee turnover and found that greater recognition, encouraging development and listening to employee opinions were all associated with lower employee turnover.

While these results provide more of an insight into how the role of managers is associated with employee turnover from an empirical perspective than was observed for absenteeism and presenteeism, the literature is still limited in scope. More empirical research is required as the role of managers goes beyond supporting employees and there are other factors of leadership that could interact with employee turnover.

Summary of the Gaps

This brief literature review highlights a number of gaps that exist within the literature. These gaps have formed the foundation for the main research question that this chapter seeks to answer in order to progress the literature on the connection between employee wellbeing and employee turnover. The sub-research question outlined in Chapter 1 of this thesis is discussed in-depth in Chapter 6.

Research Question 1: Is there a relationship between employee wellbeing and employee turnover and, if so, to what extent to employee wellbeing factors affect employee turnover?

Based on the literature review the general consensus is that employee wellbeing does have an impact on employee turnover. However, it is unclear from the literature what aspects of employee wellbeing have an impact on employee turnover and to what extent this impact exists.

5.4.2 Methods

This section discusses the measure used to represent employee turnover and the statistical processes that have been undertaken. Employee turnover was measured by asking respondents if they have actively sought alternative employment in the previous 12 months. While this measure does not use formal turnover data, only Shaw et al. (1998) included in the above literature review used formal turnover data as a measure for employee turnover. Therefore, the use of a self-reported measure to measure employee turnover is supported by numerous studies that have used turnover intention as a measure for employee turnover (see for instance, Chen et al., 2011; Tschopp et al., 2013; Guthrie, 2001; Alfes et al., 2012; Liou, 1998; Singh et al., 2014; Batt and Valcour, 2003; Cho and Lewis, 2011; Joarder and Sharif, 2011; Hemdi and Nasurdin, 2006; Baba et al., 1998).

The use of turnover intentions as a measure for employee turnover is explicitly supported by Cho and Lewis (2011) who found that predicted probabilities of leaving your employer and planning to leave your employer are strongly correlated, indicating that studying turnover intention should provide insights into actual turnover. This is supported by Liou (1998) who found turnover intentions to be significantly linked to turnover behaviour.

A cross-tabulation showing whether the intention to leave and stay with the organisation resulted in the employee actively seeking alternative employment was conducted to further justify the use of this outcome measure while exploring the relationships present. The results are presented in tables 5.11 and 5.12 below.

Table 5. 11: Cross-tabulation for intention to leave and actively seeking alternative employment

		Actively Sought Alternative Employment	
		Yes	No
I Often Think of Changing Job	Strongly Disagree	0	**20**
	Disagree	4	**60**
	Neither Agree nor Disagree	9	44
	Agree	**42**	38
	Strongly Agree	**31**	10
	Does Not Apply	1	1

Table 5. 12: Cross-tabulation for intention to stay and actively seeking alternative employment

		Actively Sought Alternative Employment	
		Yes	No
I Do Not Wish to Leave My Current Employer	Strongly Disagree	12	5
	Disagree	24	22
	Neither Agree nor Disagree	16	36
	Agree	23	**69**
	Strongly Agree	11	**40**
	Does Not Apply	1	3

Table 5.11 shows there is a relationship between turnover intentions and turnover behaviour as those employees who do actively seek alternative behaviour show they have a strong intention to leave the organisation. Conversely the results also show that those employees who do not actively seek alternative employment tend to have no intention to leave their current employer, although some employees who do intend to leave do not seek alternative employment.

Table 5.12 supports these results by showing that most employees who do not seek alternative employment do not wish to leave their current employer, although no trend emerged from those employees who did actively seek alternative employment.

While these results do support the use of asking employees if they have actively sought alternative employment as an outcome measure for employee turnover, the results also suggest that further research into the relationship between turnover intentions and actual turnover behaviour is required as some employees think of leaving their employer but this does not relate to a change in behaviour.

The measure outlined above to be used in this study is an approach that is in between collecting actual turnover data and asking if the employee intends to leave the organisation. Focusing on whether or not the employee has actively sought alternative employment is not asking about actual turnover data but it goes beyond asking if an employee intends to leave their employer by asking if this intention has resulted in a change in their behaviour. If the respondent replies with yes, this suggests they are more likely to leave the organisation as they are doing more than just thinking about leaving their employer. This approach should be a more accurate representation of an employee's turnover intention and should be a good proxy for turnover data.

While this approach may go beyond typical measures of employee turnover intentions the measure still suffers from similar drawbacks, as it is a self-reported measure and is subject to a number of biases that can affect an employee's response, such as their mood or

their perception of recent events at the organisation (for example, a restructure). However, these types of biases are more of a concern for measures that just ask about an employee's intention to leave. The measure outlined above should mean if an employee is not happy and is thinking about leaving, but has not actively began this process, then the answer should remain unchanged.

In the absence of formal turnover data and given the structure of the dependent variable the method of analysis to be used is a logit regression. The formal model to be used within this chapter for employee turnover can be seen below, which adapts the formal model outlined in Chapter 3, section 3.4.1.2. The following equation concerns only healthy eating and physical activity as examples, the full equation would be substantially extended to include all wellbeing concepts included

$$ET = \prod_{ET_i=0} Pr(ET_i > 0) \times \prod_{ET_i=1} Pr(ET_i \leq 0)$$

$$= \prod_{ET_i=0} [1 - G(\beta_1 + \beta_2 HE_{2i} + \beta_3 PA_{3i})] \times \prod_{ET_i=1} G(\beta_1 + \beta_2 HE_{2i} + \beta_3 PA_{3i})$$

Where ET is absenteeism, i is the individual, HE is healthy eating, PA is physical activity, Pr is the probability conditioned on the explanatory variables, which are shown by HE and PA for healthy eating and physical activity, respectively, and where G is the cumulative logistic distribution function. HE and PA will be represented by the factors outlined previously in the factor analysis, as will all variables included in this study, and are expected to have a negative effect on employee turnover, meaning the variable is associated to lower odds of employee turnover.

5.4.3 Results

The same process used for presenteeism and absenteeism to generate the final models has been replicated in this section and the final models use the same factors as absenteeism and presenteeism. The outcomes of these process can be seen in tables 5.13 and 5.14. As stated, the dependent variable asks respondents if they have actively sought alternative employment in the previous 12 months, it could be possible to generate results that better show the relationship between employee wellbeing and actual employee turnover by using data that focuses on employee behaviour rather than employee desire.

While a difference between actively seeking alternative employment and turnover intentions is acknowledged, it is important that employees desire to stay with and leave their current employer be included in the analysis. This is because these two factors of wellbeing should be the greatest determinants of an employee's decision to begin to actively seek alternative employment. To not include these variables would likely introduce a significant amount of bias into the models via omitted variables bias.

Table 5. 13: Employee Turnover Results for the First Data Collection Period

	Estimate	Exp(B)
TobaccoCessation	-0.418 (0.286)	0.658
OrgSupportAlcohol	0.575 (0.334)*	1.778
TrainingAndDevelopment	0.964 (0.434)**	2.623
IntentToStay	-3.693 (0.550)***	0.025
IntentToLeave	1.444 (0.374)***	4.236
Age (40-49)	-1.138 (0.505)**	0.320
Age (50-59)	-1.731 (0.530)***	0.177
Age (60+)	-1.865 (0.945)**	0.155
Ethnicity (Mixed/Multiple Ethnic Groups)	2.429 (1.348)*	11.350
Ethnicity (Asian/Asian British)	2.344 (1.306)*	10.420
Constant	0.085 (0.428)	1.089

*p<0.10, -2 Log Likelihood = 166.522. Pseudo R-squared = 0.489. LR chi2(10)= 159.125(0.000). Number of Obvs = 253[13]
**p<0.05
***p<0.01
(Standard Error)

[13] 74 responses were removed as respondents did not answer this question.

Table 5. 14: Employee Turnover Results for the Second Data Collection Period

	Estimate	Exp(B)
AmountSmoked	1.012 (0.262)***	2.751
JobSatisfaction	-1.585 (0.581)**	0.205
OrgSupportMHWB	2.651 (0.706)***	14.166
Leadership	-2.671 (0.664)***	0.069
HealthAndSafety	-1.895 (0.616)**	0.150
Age (30-39)	-1.796 (0.834)**	0.166
Age (40-49)	-1.855 (0.717)**	0.156
Age (50-59)	-1.761 (0.728)**	0.172
Age (60+)	-2.411 (1.061)**	0.090
Constant	1.601 (0.633)**	4.958

*p<0.10, -2 Log Likelihood = 126.786. LR chi2(9) = 92.262. Pseudo R-squared = 0.421. Number of Obvs = 171[14].
**p<0.05
***p<0.01
(Standard Error)

The final models in both data collection periods were statistically significant at all levels (0.000). In the first data collection period the final model had a Pseudo R-squared of 0.489 meaning that 48.9% of the variation of employee turnover is explained by the model. This R-squared reduced slightly in the second data collection period which had a Pseudo R-squared of 0.421 meaning that 42.1% of the variation of employee turnover is explained by the model. This reduction over time could be due to the strength in effecting employee turnover of the intention to stay and intention to leave variables that are included in the first data collection period and not in the second data collection period.

Table 5.13 shows that in the first data collection period a one unit increase in experiencing many factors of wellbeing is associated with greater odds that employee turnover is likely to occur. The results show that a one unit improvement in organisation support for alcohol misuse is associated with greater odds of employee turnover occurring by 77.8%.

Likewise, the odds of employee turnover occurring is greater by a multiple of 2.6 and 4.2 for a one unit improvement training and development and one unit increases in the desire from employees to leave their current employer. The odds of employee turnover occurring for those respondents who classified their ethnicity as mixed/multiple ethnic groups and

[14] 44 responses were removed from the analysis as they did not answer the question.

Asian/Asian British were greater than those who classified themselves as white by a multiple of 11.3 and 10.4.

The results also show that some factors of wellbeing are associated with lower odds of employee turnover occurring. One unit improvements in tobacco cessation policies and greater employee desire to stay with their current employer are associated with 34.2% and 97.5% lower odds of likelihood. However, tobacco cessation policies was found to be statistically insignificant. The factor was maintained for the same reasons as previous statistically insignificant findings as the removal suggests and underlying relationship with other variables exists.

Being aged between 40-49, 50-59 and over 60 years of age is associated with lower odds of employee turnover when compared to being aged under 30 by 68%, 82.3% and 84.5%, respectively. This shows that as employees get older the odds of them leaving is lower.

Table 5.14 shows that in the second data collection period the odds of employee turnover occurring are greater by a multiple of 14.2 and 2.7 for a one unit improvement in organisational support for mental health and wellbeing and a one unit increase in the amount of cigarettes smoked. Contrastingly, improved job satisfaction was associated with 79.5% lower odds of employee turnover occurring, as was improved leadership and health and safety which were associated, respectively, with 31% and 85% lower odds of employee turnover occurring.

Being aged between 39-39, 40-49, 50-59 and over 60 years of age is associated with lower odds of employee turnover when compared to being aged under 30 by 83.4%, 84.4%, 82.8% and 91%, respectively.

Over both data collection periods the results outlined in tables 5.13 and 5.14 show the effect of the employee's age on the odds of employee turnover occurring remained consistent over both data collection periods. The effect of the employee's age became larger across the data collection periods, but due to the lack of consistent Charter factors a discussion about the effect of the Charter over time is not possible with respect to employee turnover.

5.5 Conclusion

The results presented within this chapter clearly show that there is a relationship between employee wellbeing and employee performance, however when answering research question 1 it is clear that many caveats to this finding exist. The extent to which employee wellbeing

affects employee performance is ultimately dependent on the outcome measure being evaluated.

From a broad perspective the results clearly show a relationship is present as only awareness of absence management policies had no association with any employee performance measure, but the specific factors that have an important association with employee performance vary greatly between outcome measures.

Moreover, the results show that numerous inconsistencies are present as many wellbeing factors were identified to affect employee performance in the opposite way to what would be expected. For example, increasing the amount of cigarettes smoked is associated with lower odds of absenteeism and improved job satisfaction is associated to a greater probability of presenteeism.

While these types of results are unexpected, only training and development showed a consistently unexpected finding within all outcome variables and this was not consistent across both data collection periods. These findings suggest that more empirical studies are needed to further understand how employee wellbeing and employee performance interact and what the expected relationships between specific factors and employee performance should be.

The results outline that some effects were found to be consistent over both data collection periods for all broad outcome measures. Short term absenteeism is the only specific outcome measure that did not have consistent results across data collection periods. Although the estimations are not based on panel data, by using repeated cross sectional data the results do suggest that some aspects of employee wellbeing as well as personal characteristics do have long term effects on employee performance.

However, the results also show that when focusing on specific outcome measures most results are not consistent across both data collection periods and for each specific outcome it is usually just the one result that holds over data collection periods. This means that more research is needed within a longitudinal design framework to better understand the long term effect employee wellbeing has on employee performance.

With regards to the sub question posed within this study in Chapter 1, the results show that all standards of the Charter do have a broad effect on employee performance. Specifically, the results show that the effect of the Charter varies based on the outcome measure that is being evaluated. This suggests that for organisations participating within the Charter they can all benefit from their participation but the extent to which they benefit will depend upon the performance outcome they seek to target.

This reinforces the need for further empirical research into the effectiveness of health interventions such as the Charter. The results suggests that the Bristol Workplace Wellbeing Charter has the greatest impact on employee turnover and therefore will benefit organisations whose main strategic objective is to reduce employee turnover. Chapter 6 discusses these findings and the policy implications of these findings in more detail while also discussing the limitations of the study, the recommendations for future research and the potential contributions to the literature generated by this study.

CHAPTER 6: DISCUSSION

6.1 INTRODUCTION

The previous chapter indicates that there appears to be a statistically significant correlation between some of our measures of employee wellbeing and employee productivity.

This chapter seeks to expand upon these results and comprehensively discuss what these results show and also what these results mean for the current literature, participating organisations and policymakers. This discussion is divided into two broad discussions; one focusing on what the results show and mean in relation to the current literature and another section that focuses on the potential policy recommendations for organisations and policy makers based on these results.

The discussion found that across all three performance measures there were core themes that emerged from the results, such as the potential for omitted variable bias and the importance of including behavioural factors. There were also similar policy recommendations, such as the recommendation to restructure the Charter.

This chapter also seeks to discuss the potential limitations of this study and the recommendations for future research. The aim of this section is to use the limitations and challenges discovered over the course of this study as a foundation to potentially improve future studies. There is also a discussion about the many contributions to knowledge from this study, with the most important being that a relationship between employee wellbeing and performance does exist but it is a complex and, at times, contradictory relationship.

To be in line with Chapter 5, and for the same reasons stated in that chapter, this chapter separates the first two areas of discussion by the performance measures. The remainder of this chapter takes the following structure: results discussion, policy recommendations, limitations of the study and future research, contribution to knowledge and a conclusion.

6.2 PRESENTEEISM

6.2.1 Discussion

Numerous findings can be drawn from the results above, including the finding that the existing literature suffers from omitted variable bias, and specifically to the exclusion of some behavioural, personal and workplace factors. The results show that high levels of physical activity are associated with a higher probability of presenteeism, suggesting that

greater physical activity may not be an effective way of reducing presenteeism. The results show that having a disability is associated with a lower probability of presenteeism occurring over time, suggesting that adequate workplace adjustments are present while also emphasising the need to ensure that a disability does not hinder an employee's ability to do their job effectively.

When focusing on the size of the effect, this result had a similar association with lowering presenteeism as the respondent's ethnicity. This showed that employees who classified their ethnicity as not being White, Mixed or multiple ethnic groups, Asian/Asian British or Black/African/Caribbean/Black British had a lower probability of presenteeism than employees who were White. The latter finding is supported by Callen et al. (2013) who found that employees who are not white had lower levels of presenteeism.

While the findings for physical activity are not tentatively supported within the literature, as Shi et al. (2013) and HERO (2013) found that greater physical activity is associated with less presenteeism; this suggests the way these factors of wellbeing are evaluated should be considered in more detail. The results for physical activity do go against theoretical expectations, however the effects of these behavioural variables on presenteeism tend to be researched in relative isolation.

The literature is not exploring important relationships holistically and the knowledge gained from the literature, and policies that are based on this, is limited. These results suggest that the literature needs to broaden the scope of employee wellbeing to include important behavioural concepts as well as broaden the control variables analysed to include variables that affect employees' daily lives that go beyond age, gender and tenure.

Employees' intentions to leave or stay with their current employer is often omitted from presenteeism studies, and the results suggest that this could cause omitted variable bias. The results show that a greater intention to leave the current employer is associated with a lower probability of presenteeism in both data collection periods. In contrast to logical expectations, a greater desire to stay with their employer is also associated with a lower probability of presenteeism, suggesting that improving employee's commitment to their employers affects more than just an organisation's level of employee turnover.

While the former result is unexpected and cannot be explained in this study, it outlines that further research combining qualitative and quantitative approaches is needed to understand the complexities of this relationship and why these results occur. Moreover, the results suggest that turnover intentions do not just affect employee turnover and should be included in future presenteeism studies, as the desire to stay with their current employer does

have some spillover into the employee's daily performance. This is the first study to empirically show this finding which suggests that further research is needed to understand how turnover intentions effect other measures of employee performance.

The results show that organisational support is associated with lower levels of presenteeism. This result was found for attendance management, in the first data collection period, and mental health and wellbeing in both data collection periods. This supports some of the results observed in chapter 4 and highlights that improved organisational support does effect employee performance, supporting various studies within the literature (Cooper and Dewe, 2008; Seymour et al., 2005; Rolfe et al., 2006; Arnold, 2015). The results presented here contrast with Baker-McClearn et al. (2010) while also suggesting that it is the type of support that is offered and whether or not this is in line with employees' needs that matters.

The role that effective management has on presenteeism was shown directly and indirectly in the results as improved leadership had one of the greatest probabilities in the second data collection period of greater presenteeism, contrasting with most of the literature (Gilbreath and Karimi, 2012; Cooper and Dewe, 2008; Seymour et al., 2005; Rolfe et al., 2006). Indirectly, the results showed that training and development is associated with a greater probability of presenteeism, but this reduces if the employee pays for it.

However, improvements in flexibility are associated with a lower probability of presenteeism, tentatively contrasting with Holt and Powell (2015). The factor that had the greatest probability of greater presenteeism was improved job satisfaction. The results are not in line with logical expectations and highlight the need for qualitative research.

Overall, the results regarding the role of effective management go against theoretical expectations and outline the need for more quantitative research that analyses the role of effective management. Despite this, the results do outline a clear difference between the role of effective management and the role of perceived organisational support as the former association suggests that the type of leadership and training is what matters rather than managers being present and supporting employees when required.

However, these results did not occur in both data collection periods implying that while effective leadership and the many facets of leadership do have an effect on presenteeism, whether or not this is persistent and effective requires further research.

The results show that in both data collection periods greater engagement is associated with a lower probability of presenteeism occurring, suggesting that not all facets of leadership are associated with negative outcomes. While this supports the results of McGregor (2016),

the results presented here for leadership suggest more research is required to identify the association between leadership and the effects of leadership with presenteeism.

6.2.2 Policy Implications

The results show that many wellbeing factors do not have any impact on presenteeism. Those wellbeing factors that were deemed to not have any impact in either time periods were health and safety, alcohol and substance misuse, tobacco use cessation and healthy eating. While these results support the current literature that does omit these variable from wellbeing-presenteeism studies, they are Chartered variables and hence half of the Charter may have had no effect on presenteeism.

This calls into question the effectiveness of health interventions like the Charter and outlines that not all aspects of a health intervention will result in a universal positive effect on all aspects of employee performance.

These results suggest the Charter should include different standards that have been identified to effect presenteeism, specifically engagement. The results show that engagement is a key factor in determining presenteeism consistently in both data collection periods and has been shown to have a greater effect than half of the Charter's standards in reducing presenteeism. While engagement could replace one of the above standards that had no effect on presenteeism, ultimately this is dependent on the aims of the Charter.

If the Charter is focused on reducing presenteeism then this suggestion is appropriate, however if a more general approach is taken then no suggestion can be made about replacing standards until all three outcome measures have been considered. Furthermore, these results do highlight the need for health interventions to have a specific outcome in mind when designing the intervention and that not all wellbeing concepts will necessarily effect employee performance in the desired way.

Flexibility could also replace some of the Charter's standards, but further study is needed as flexibility only had an effect on presenteeism in one of the data collection time periods.

Other factors of employee wellbeing had unexpected associations with presenteeism. This was most evident for physical activity and training and development, as these should reduce the probability of presenteeism but the results show the opposite. While this outlines that wellbeing factors are dynamic and likely to vary from person to person, the results also reemphasise that employee wellbeing policies will not have a universally positive effect on presenteeism.

This trend highlights the need for more empirical research into the relationship between employee wellbeing and presenteeism that follows a longitudinal design in order to improve the knowledge base used to form policy decisions. This could result in policy decisions that take into the account the nuance and dynamic nature of employee wellbeing while also understanding that it is not enough to just implement a policy and assume it will positively affect presenteeism.

Furthermore, in support of this notion almost all of the control variables did not affect presenteeism. These were mainly personal characteristics such as gender and age, and these, are factors that have been found to play a role between employees' and their performance from a general perspective. The only personal characteristic that did impact presenteeism in both data collection periods was whether or not the employee considered themselves to be disabled. While this did not follow logical expectations and was associated with a lower probability of presenteeism occurring, an important relationship between being disabled and the levels of presenteeism shown is still present.

Despite this, having a disability is a control variable that is widely overlooked in the literature meaning the literature needs to expand the scope of what personal characteristics are used as control variables. The use of qualitative data could be used to explain why this result has occurred and how organisations assist those who are disabled within the workplace.

Future research, and health interventions, could be improved by integrating this into broad, empirical wellbeing studies to investigate the extent to which being disabled impacts presenteeism and if this differs by the type of disability. As being disabled had a greater and more consistent influence than some workplace wellbeing factors, the results suggest that this is an area of research that should be investigated further.

Some of the results found within the second data collection period were also found within the first data collection period. These results show that some wellbeing factors have a lasting and meaningful impact on presenteeism, suggesting that organisations could see practical changes in presenteeism if they invest in these aspects of wellbeing. Moreover, the results show that the size of the effect reduced in magnitude over time, suggesting the variables have less influence in lowering the probability of presenteeism occurring across the data collection periods.

Importantly, this change was observed for an improvement in perceived organisational support for mental health and wellbeing, which is a Chartered variable and had the greatest effect in lowering the probability of presenteeism. This suggests that participating

organisations could benefit from less presenteeism due to their ongoing participation in the Charter.

6.3 ABSENTEEISM

6.3.1 Discussion

The results show the literature based on the relationship between wellbeing and absenteeism could suffer from omitted variable bias. This could be due to numerous sources as many omitted variables were found to have an important association with absenteeism. The results show that physical activity had no association with absenteeism, which is in contrast with the results of various studies (NICE, 2012; ERS, 2016; Brown et al., 2011).

Although the results did support many studies that found that healthy eating, alcohol misuse and tobacco cessation have a significant association with absenteeism (NHS, 2014; CDC, 2013; NICE, 2012; Sparks et al., 2001; Neck and Cooper, 2000). However, the results are only supported in so far that a statistically significant relationship exists as only improved organisational support for healthy eating and increased tobacco cessation efforts were found to be associated with lower odds of absenteeism. Also, this finding was only relevant in one data collection period for one form of absenteeism meaning no consistent effect was identified.

Workplace factors such as health and safety and the employee's intention to leave their employer were significantly associated with general and long term absenteeism. The latter of these factors had the expected effect of being associated to greater odds of long term absenteeism occurring but improving health and safety, unexpectedly, is associated to greater odds of short term absenteeism occurring. This is in contrast to CDC (2013) who found that health and safety concerns are associated with high absenteeism costs.

Various personal characteristics that are often omitted from empirical studies were found to be associated with absenteeism, such as age, gender, the number of hours worked and tenure. However, tenure at more than one years of employment are associated to greater odds of general and long term absenteeism occurring. These results are not supported by Shi et al. (2013) who found that tenure was a predictor of absenteeism reduction. The number of hours worked was associated to greater odds of general absenteeism in the second data collection period. The lack of supporting literature for these findings outlines the need for the literature to broaden its scope of variables that are included within empirical analyses.

While these results do suggest that omitted variable bias may be present within the literature, they also show how the literature ignores the nuance of these relationships. For

example, improvements in tobacco cessation policies is often omitted from empirical studies yet it was found to be associated with greater odds of long term absenteeism after being associated with lower odds of general absenteeism.

This suggests that improving tobacco cessation policies has greater effects on absenteeism only in the short term, but due to the level of omission within the literature this finding lacks strong theoretical support. Moreover, these results suggest that more research is needed to fully explore the relationship between absenteeism and these commonly omitted variables.

Expanding upon the role of control variables, the results show there were important differences by gender. The results show that some factors had a different association with absenteeism for males than they did for females, including often working at home and having a greater intention to leave their current employer. The latter of these factors was the only factor that showed different effects by gender, i.e. greater intention to leave is associated with lower odds of absenteeism for males but greater odds for females, but the variable was statistically insignificant for both genders.

Interestingly, often working at home was only statistically significant for females, suggesting that organisations who employ more females than males could see a reduction in long term absenteeism by introducing working from home as a flexible working policy. This supports various studies within the literature that found that flexible working practices are associated to reductions in absenteeism (Pierce and Nestrom, 1983; Lewis, Watts and Camp, 1996; Hammond and Holton, 1991; New Ways to Work, 1993 and Young-Blood and Chambers-Cook, 1984).

Differences between genders were also found within factors that had an association with absenteeism for both genders. For example, the results show that improved organisational support for absence management and improvements in engagement opportunities for mental health and wellbeing policies affect both genders in the same direction but the effect is greater for males than for females.

While these results do support the broad findings CDC (2013) found that differences do exist by gender, and although some of these results were unexpected, for example improved organisation support for absence management being associated with greater odds of absenteeism for males, the difference observed between genders shows that future analyses should be separated by gender.

Gender has been shown to be a factor in determining what concepts of wellbeing affect long term absenteeism, and to what extent. Further research is needed to ascertain if the

inconsistent or unexpected results are being driven by gender. For example, often working from home was a factor for females but had no statistically important effect for males, suggesting that demographics may be driving this result.

The results show that improved organisation support is associated with greater odds of absenteeism. This result was found for multiple factors, including mental health and wellbeing, healthy eating, absence management and alcohol misuse, suggesting that the support offered to employees is not in line with what employee's need. These results support Baker-McClearn (2010) and Bockerman et al. (2011) who both found that increased levels of managerial involvement can lead to greater levels of absenteeism. Although, improved organisational support for healthy eating was associated to lower odds of long term absenteeism occurring.

These results highlight that it may be the type of support or the method of delivery that matters rather than the extent to which the support is available. This notion is further supported by the finding that improved absence management is associated with greater general and long term absenteeism.

Overall the results highlight the roles of managers and management do influence absenteeism, however without qualitative data it is not possible to determine what aspects of organisational support and absence management are causing the observed association. Although, while these results may initially appear alarming, it should be noted that the results show to generate a 1% increase in long term absenteeism a 21.6 unit improvement in absence management is required. This suggests the role of absence management in increasing long term absenteeism is small and in contrast the effect of employee engagement is over 20 times more effective at reducing long term absenteeism than absence management is at increasing long term absenteeism.

The results highlight that more empirical research is needed that explores the role effective management has on absenteeism. The results also emphasise in order to fully understand why these results have occurred, and to explore in more depth the complex relationship between management and absenteeism, future wellbeing empirical studies need to combine qualitative and quantitative methods when evaluating wellbeing and absenteeism.

Crucially, the results show that some wellbeing factors do have different associations with short and long term absenteeism. Similar to the differences observed between genders, the results show that some factors of wellbeing affect short term absenteeism but not long term absenteeism; those factors include the number of alcoholic units consumed, improved leadership, improved training and development, increased options for healthy eating on-site,

improved organisation support for mental health and wellbeing, the number of hours worked and age.

Similarly, many factors had an association with long term absenteeism but not short term absenteeism, including often working at home, improved organisation support for healthy eating and the number of cigarettes smoked by the employee.

Reinforcing the need to separate absenteeism into two parts is the finding that some factors were found to have an association with both forms of absenteeism but the associations found were different. The results showed that tobacco cessation and improved job satisfaction are associated with lower odds of short term absenteeism occurring but greater odds for long term absenteeism. These results suggest that improved job satisfaction and tobacco cessation should only be effective in the short term if the aim of the organisation is to reduce absenteeism levels.

These differences highlight that there is a clear difference between the effects of employee wellbeing on short and long term absenteeism, a difference that has yet to be acknowledged within the literature, especially in empirical studies. Bockerman et al. (2011) did perform an analysis concerning the effect of high involvement management on short and long term absenteeism but found no long term effects.

The result found within this study would not have been found had the definition and measurement of absenteeism been bound to a traditional 12 month or long term recall period. Further research into these differences could generate a wider debate within the literature that helps practitioners and researchers further understand the relationship between wellbeing and absenteeism. This could possibly explain why inconsistent results in the literature are commonly found within empirical studies.

6.3.2 Policy Recommendations

The results show that some wellbeing factors have no association with short or long term absenteeism. These factors were flexibility and physical activity, supporting empirical studies that omit these variables. This is especially important for physical activity as this finding goes against many studies that have found physical activity to have a strong association with lower absenteeism (NICE, 2012; ERS, 2016; Brown et al., 2011).

This result outlines that standards of the Charter affect wellbeing outcomes differently. Therefore, organisations participating in the Charter, or similar health interventions, should recognise that the use of one wellbeing factor will not necessarily result in favourable outcomes across multiple performance measures.

Expanding upon this, as was found for presenteeism, the results show that when associations were found some results go against theoretical expectations. This was consistent for both forms of absenteeism with the results showing that wellbeing factors such as improved organisational support for alcohol misuse and mental health and wellbeing were associated with greater odds of absenteeism occurring. This unexpected result was also found for improved job satisfaction and absence management, contrasting with (Diener and Seligman, 2004; Bajorek et al., 2014; Garrow, 2016; Sparks et al., 2001; Chartered Association of Business Schools, no date).

While these results suggest that organisations using policies based on these factors would need to act with caution, the results also highlight the need for future studies to combine qualitative and quantitative methods to be able to explore why these results have occurred. This exploration could benefit both organisations and policy makers as it could highlight if the determinants of these findings are due to specific organisation characteristics or to the way a policy has been structured or implemented.

The results show that the Charter could be restructured to include factors that have a high association with lowering the odds of absenteeism. In particular, the results partially support the suggestion made above that the Charter could include an engagement standard, as well as a commitment to employer standard. Both factors were shown in the results to have greater associations with absenteeism than most of the Chartered variables.

For example, engagement was associated with the second largest reduction in short term absenteeism and was found to have the lowest required unit changes to be associated with 1% less long term absenteeism. When combined with the results found in Chapter 5 for presenteeism, the results underline the suggestion that engagement could be a standard that is included within the Charter.

However, for both forms of absenteeism, the results for engagement only occur in the one data collection period suggesting that more research is needed on the association between engagement and absenteeism over the long term. Likewise, having a greater intention to leave the organisation is associated consistently to greater odds of both forms of absenteeism. Whether a new standard could be included for commitment to employer depends on the performance aim of the Charteras a similar result for absenteeism is found for employee turnover in the first data collection period but not presenteeism.

Building upon the notion of restructuring the Charter, the results suggest that the absence management standard, and future health interventions similar to the Charter, should differentiate between short and long term absenteeism. The results show there is a clear

difference between what wellbeing factors affect short and long term absenteeism, suggesting organisations participating in the Charter that seek to reduce absenteeism could be seeking to adjust the wrong wellbeing factors.

The Charter should reflect this distinction as a restructure of the Charter, along with clear definitions for short and long term absenteeism, could enable organisations to better manage the different forms of absenteeism they encounter. However, given the lack of empirical studies that evaluate wellbeing as a function of short and long term absenteeism, more research would be required before this restructuring is undertaken by local authorities and implemented into future health interventions.

6.4 EMPLOYEE TURNOVER

6.4.1 Discussion

The results presented in tables 5.13 and 5.14 show several contrasting findings. A common finding across all three employee performance outcome measures is that the results presented in the current literature could suffer from omitted variable bias. This is likely due to empirical studies focusing on the organisational context in which the sample is based and using this to determine what wellbeing variables are included in the analysis.

When this approach is not taken, omitted variable bias appears to be an issue as the results have shown that across both data collection periods some of the behavioural factors, only alcohol misuse policies and the amount of cigarettes smoked, have important effects on employee turnover. This also extends to other variables that are often omitted from such analyses, such as mental health. The results show that improved organisational support for mental health and wellbeing is associated with greater odds of employee turnover occurring.

While this specific result goes against what would be expected, the finding that there is an important effect on employee turnover for these omitted variables does not support the literature that widely omits these variables, for example Joarder and Sharif (2011). Moreover, this result is not too unexpected when the results observed in chapter 4 are considered.

Instead, these results supports the literature that has described an association between the above omitted variables and employee turnover (Baba et al., 1998; Goetzel et al., 2002; NICE, 2009; Ryan, 2011; Paile, 2011; ERS, 2016; Robert Walters, 2006; Sparks et al., 2001). If future studies were to include these variables in their analyses then substantially more information and knowledge may be gained about how employee wellbeing affects employee turnover. While the results do outline this limitation, they are not constant over both data collection periods as all of the results above only occur in one time period, suggesting that

more longitudinal research is required to assess how the effect of these variables change over time.

The concern of omitted variable bias extends to the control variables that are used as tables 5.13 and 5.14 show that age and the employee's ethnicity have important effects on employee turnover. The results show that these variables have strong effects on employee turnover; for example, age is the only variable to remain important in both data collection periods, suggesting that age has a consistent effect on employee turnover over time. The effect of age on employee turnover could be seen as a long term effect and the effect appears to strengthen over time.

Interestingly, the results showed in both data collection periods that age was associated with lower odds of employee turnover while being Asian/Asian British and being from multiple ethnic groups are associated to greater odds of employee turnover, when compared to employees who classified their ethnicity as white.

While these results highlight the current literature is not fully evaluating the connection between wellbeing and turnover, the results do show that much more can be learned by expanding the scope of the variables included. This is especially apparent when not focusing on the organisational context of the sample. Further research is needed to know the extent to which these control variables affect employee turnover, but organisations seeking to create wellbeing policies should consider the demography of their workforce as this could greatly affect who and to what extent people engage with the policies.

In contrast to what was found for absenteeism, the results presented in table 5.13 and 5.14 show there were no gender effects. The result highlights that different factors of wellbeing affect different aspects of employee performance. This is exemplified by the finding that the age of the employee is associated with lower odds of employee turnover occurring but had no effect on short and long term absenteeism.

While the result regarding age and employee turnover is in line with logical expectations, due to the lack of literature that considers the age of the employee when conducting an empirical evaluation of wellbeing and employee turnover it is not possible to state if this finding is in line with theoretical expectations with certainty. This reinforces the need for further research to better understand the relationship between control variables, such as age, and employee turnover.

Expanding upon the above discussion about omitted variable bias, the results show that behavioural factors have an important association with employee turnover. The results show that tobacco cessation policies and improved organisational support for alcohol misuse

were associated with lower and greater odds of employee turnover, respectively, with tobacco as a broad concept having an effect across both data collection periods. Across both data collection periods only age was a consistent variable that was not a behavioural factor, and there were no non-behavioural factors that had any consistent effect on employee turnover.

These results indirectly support the findings of those studies that discuss these omitted variables with regards to the health conditions that could force an employee to leave their employer, especially as smoking is the recognised cause of many conditions such as cancer, stroke and heart disease (Centers for disease control and prevention, 2013).

However, due to the lack of literature including these variables in empirical studies there does not exist a direct supportive finding of the results presented here. This suggests that the empirical based studies within the literature could be misguided in their approach of focusing solely on workplace factors that are relevant to a specific industry as more knowledge could be gained if the current literature were to expand the scope of variables.

This improvement in the knowledge available could benefit organisations as these behavioural factors have been shown in previous chapters to be determinants of health conditions that cause employees to leave the workforce. These health conditions are not bound to the industry the employee is employed in; they may affect any industry. For example, any employee who smokes can benefit from tobacco cessation policies regardless of the industry they work in and these results show that tobacco cessation is associated with lower odds of employee turnover occurring.

Including behavioural factors in future empirical studies could further explain the unexpected findings that have been found in tables 5.13 and 5.14 as well as exploring the extent to which these factors affect employee turnover when included in studies that also include workplace and personal health factors.

As was found for presenteeism and absenteeism, improved organisational support for some wellbeing factors has an association with employee turnover. However, the results do not support the findings found in various studies (e.g. Joarder and Sharif, 2011; Brough and Frame, 2004; Houkes et al., 2003; Rhoades and Eisenberger, 2002; Batt and Valcour, 2003; Lerner and Henke, 2008) that found the roles of the organisation and of the manager are key to employee turnover.

Improved organisational support for alcohol misuse and mental health and wellbeing are associated with greater odds of employee turnover, suggesting the support offered is not in line with the needs of the employee. However, the reason why these finding have occurred

is beyond the scope of this study and the extent to which the support on offer is a factor can only be fully explored through qualitative methods.

The results could mean the type of support being offered to employees is more important than the extent to which the support is provided, but overall the results across the performance measures show that wellbeing factors, specifically perceived organisation support, affect different performance measures differently. For example, improved organisational support for mental health and wellbeing was found to be associated with greater odds of absenteeism and employee turnover but also associated with a lower probability of presenteeism occurring.

While this suggests that the aim of participating organisations needs to be decided upon prior to their participation with the Charter, the results mainly suggest that organisations should not expect positive changes in every performance metric just because they are engaging in positive behaviour that has been outlined in the literature. This is a finding that has yet to be acknowledged within the literature despite being an important finding.

To the best of the author's knowledge this is the first study to empirically analyse workplace factors, behavioural factors, mental and physical health and various control variables together as a function of absenteeism, presenteeism and employee turnover. Furthermore, it is the first study to show empirically that wellbeing factors do affect these three performance measures differently.

This means that not only should organisations using the literature be cautious of the results presented in the literature, but future research should also acknowledge this difference and factor it into empirical analyses and discussions. By doing so, it may be possible for future studies to identify what wellbeing factors are most relevant to a particular performance measure and practitioners can adapt their strategies depending on their overall strategic objective.

6.4.2 Policy Recommendations

Some wellbeing factors have no effect on employee turnover, these include Charter and non-Charter variables such as physical activity, healthy eating, engagement, flexibility, absence management and some aspects of mental health and wellbeing. While these results are consistent with studies that have omitted these factors due to organisational context, the results re-emphasise that factors of wellbeing will affect different performance measures differently.

As these factors have been identified in previous chapters and studies as key wellbeing factors, these factors should be included in future studies. However, if organisations and their health interventions aim to reduce employee turnover then these factors should not be the main focus.

The initial results show that many wellbeing factors that did affect employee turnover had an unexpected association with the outcome measure. Many variables were found to be associated with greater odds of employee turnover when theoretically they should be associated with lower turnover, including improved organisation support for alcohol misuse and training and development in the first data collection period, and improved organisation support for mental health and wellbeing in the second data collection period.

In contrast to these results, some results did show the expected association with employee turnover as increasing the amount of cigarettes smoked is associated with greater odds of employee turnover. This could suggest that smoking is associated to more harmful health conditions that affect employee turnover but have not been overtly evaluated within this analysis.

Although smoking is highlighted by Centers for Disease Control and Prevention (2013) as a cause of various serious health conditions, the lack of supporting literature for this specific finding outlines the need to broaden the scope of wellbeing to include behavioural aspects such as smoking.

The results reflecting training and development is the opposite of what would be expected, which underscores that the relationship between employee wellbeing and employee turnover is complex and dynamic. However, a full explanation of these results are beyond the scope of this study. This emphasises the need for qualitative data to be used in conjunction with quantitative data as the findings could reflect specific aspects of the workplace that were not included in the questionnaire but could be identified through qualitative methods.

The results suggest the Charter could be restructured to increase its effectiveness with the results suggesting that job satisfaction could have its own standard. Job satisfaction had the second greatest association with lowering the odds of employee turnover occurring than all of the Chartered variables, except for improved leadership. The results imply that the Charter could be improved and that participating organisations may benefit more from a job satisfaction standard instead of the current standards that focus on the workplace.

In particular, across all three performance measures, health and safety and physical activity have been shown to have the least effect of all the Charter variables. This means if

the Charter were to be restructured then health and safety and/or physical activity could be replaced.

When evaluating all three performance measures the results show that the Charter has had an important impact on employee turnover. This can be seen in tables 5.13 and 5.14 which show that almost all of the final factors, excluding control variables, are Charter variables. The suitability of health interventions to outcome measures could be one of the reasons why the literature finds conflicting and inconsistent results. This is also a factor for future policy implementation that should be considered by policymakers.

The results across all three measures have shown that the relationship between employee wellbeing and employee performance is complex and not all wellbeing factors will affect each performance measure in the same way. Therefore, health interventions could be targeted at specific performance measures. Knowledge between health interventions like the Charter and employee performance can only be improved if health interventions are tested across multiple performance outcome measures. The results suggest that the Charter should be used by organisations whose primary strategic objective is to reduce employee turnover and revisions of the Charter could maximise this outcome.

6.5 Limitations of the Study and Future Research Recommendations

Most of the data collected for this thesis focuses upon the respondent's current and past mental, physical and emotional health. This type of information is regarded as very sensitive and people's different disclosure levels of such information could be a reason for missing data. While the sample statistics are strong for an employee wellbeing and performance study, the sensitive nature of the data could be skewing the results.

Future studies should not remove sensitive questions from their studies as the information generated from these are vital to any employee wellbeing study. The pilot process showed that the questionnaire should slowly proceed to asking progressively more sensitive questions about mental health, and this is the approach that should be taken in future studies. This approach allows respondents to become comfortable with the structure of the questions and with being asked about sensitive topics. An improvement here could solve the issues above by reducing the prospect of missing data and respondent drop off while encouraging honest answers.

The nature of the questions as well as the topic of employee wellbeing in general could create selection bias. Selection bias is the bias that has the most potential to affect the results generated, largely because it can be caused in many different ways on multiple

different levels. The main concern with this form of bias is that organisations and employees who have a low level of interest in employee wellbeing are likely to be excluded from the analysis. This means the results are likely to be positively skewed and the true effect of the Charter may not be observed in the results.

There is no practical solution to selection bias given the data collection method utilised so future research will need to focus on the data collection process as well as the design of the data collection instruments. Both will affect what type of organisations are interested in participating and if the questionnaires can be constructed in a way that is applicable to all organisations regardless of their size, industry or sector then this could encourage participation from organisations who may have felt they do not have the resources in place to participate in such a study. The data collection process could generate the same outcome if it does not require the use of many of the organisations resources, and a flexible approach is the best way to ensure this.

Other forms of bias are likely to be present, including social desirability bias and response bias. Social desirability bias could occur in a number of ways within this study and could mean the analysis will not be an accurate reflection of what is happening within the organisations or how it affects employees.

While there is potential for this to happen this form of bias does present a paradox; the information may be biased and may not be a true reflection of what is being analysed, however it is impossible to know what the true data should look like. We cannot be sure of the presence of these biases and so future research has to accept the potential for this bias. The same approach should be considered for response bias, as this form of bias has a very broad meaning and identifying the bias, its size, its effect and the form it takes within the study is problematic.

It is likely that most studies suffer from these biases without knowing that they do or by how much. The unknown nature of both of these biases is why future research must ensure that the questions or statements being asked are not leading and the respondent's anonymity and confidentiality is preserved.

If this study were to be repeated then the data collection methods and the design of the instruments would not be changed as these combined to generate a sample that had a variety of organisation sizes from a variety of sectors and industries. While smaller than some samples in the literature, this sample is one of the most diverse and the results can be generalised to almost any organisation engaging in an employee wellbeing enhancing strategy. This is largely due to the methods used to construct and collect the data as this

process did not omit any organisation from participating. The pilot process ensured that the questions were not leading and a variety of measures were taken to ensure the anonymity of the respondents.

Furthermore, if this study were to be repeated, the measure for employee turnover would not be changed given the absence of actual employee turnover data. Chapter 3 outlines that in the absence of this data the literature typically uses employee turnover intentions. Chapter 5 showed that employee turnover intentions are correlated to changes in employee behaviour as employees tend to seek alternative employment when they intend to leave.

This type of actionable intention to leave lies between turnover intentions and actual turnover data as the measure focuses on whether or not employees have actually acted upon their desire to leave their employers, with those who have being the more likely to actually leave. Chapter 5 showed this measure can be used as an effective proxy for employee turnover and can offer more insight into employee turnover than a simple OLS regression of turnover intentions.

Future research could benefit from using this measure for employee turnover intentions by being able to generate results that better replicate actual employee turnover while also improving the depth and relevancy of the findings available to practitioners.

However, one aspect that would be changed if this study were repeated would be to add another outcome measure, namely Gross Value Added. If this study is repeated then GVA would be included in the design but the approach would need to take into account that micro organisations often do not record every piece of information and that asking for three or four different pieces of data for one variable could discourage participation.

The literature highlighted there are many different ways to define the same aspect of employee wellbeing or the same performance outcome measure. This poses many problems because regardless of what definition is used it is likely that for some organisations and/or employees the definition of wellbeing or performance may not apply.

While the data for these measures can be objective the variable itself is still subjective to some degree due to the fact that one definition has been chosen over others. Future research needs to move towards a position where there is a definitive definition of employee wellbeing including clear definitions for the individual aspects of wellbeing.

These definitions need to be applicable for all organisations as this is the only conceivable way to eliminate the bias introduced by organisational context. This approach would lead to the much suggested standardised metrics for employee wellbeing and employee

performance which should help reduce the inconsistent results that are found within the literature.

Data limitations are also present as the nature of the project requires a lot of data to be collected. The project needed information on as many aspects of employee wellbeing as possible, but the questionnaire could only capture so much data before the respondents see the questionnaire as too long and either stop completing certain questions or dropping out altogether. There appears to be a trade-off between capturing as much data as possible and maximising responses.

The ideal questionnaire length remains unknown and could vary from one respondent to another and also from one topic to another. There is also a failure within the literature to acknowledge that this trade off exists and to explain the extent to which this can cause issues for research projects.

For this study it was decided that 20 minutes was too long to complete a questionnaire and that 15 minutes should be the maximum amount of time spent completing it. As a result of this restriction the questionnaire had to be reduced from its original size. While the data captured still covers many aspects of employee wellbeing and is more diverse than most other studies, detailed data is missing on a variety of key aspects of employee wellbeing. For example, data on performance appraisals and compensation are limited to one or two questions and are not based on enough detail to form strong factors.

Future research will face this problem, even if the approach is statement based like the approach used in this study. This implies there must be a prioritisation of data needs and valuable information.

Further research should ask questions about compensation, and questions on health and safety could be removed. This is due to most of the health and safety standard being based around legal compliance and employees having a natural tendency to forget or not adhere strictly to or even recognise health and safety protocols.

Employee wellbeing studies are based on subjective topics that are measured in subjective ways that focus on self-reported techniques. Although the main issues are due to the potential bias introduced, such as social desirability and response bias, there are other potential problems due to the use of subjective data, for instance the results could depend on the respondent's mood or feelings on that given day. This could cause the results obtained to not be the true values that the person would normally associate to the given topic.

For example, if arguments take place outside of the workplace before the data is collected then the respondent may answer the questions from a more negative viewpoint than

they normally would and this would show in the results. In contrast, if the respondent has recently received some good news then this could cause them to answer the questions in a more favourable way than they otherwise would and this could also skew the results.

While these are potential issues, ultimately their influence on this study are unknown. Future research cannot do much to stop this from happening and should instead accept the possibility of this occurring while assuming the data generated is truthful and does accurately represent respondents' general opinions.

Baseline data is needed to be collected prior to any intervention taking place. This is a potential problem for this study because due to the timing of when the study began, and how long the questionnaires took to be constructed, organisations had already began participating with the Charter and to different extents. As organisations had begun participating with the Charter prior to the study being conceived, a true difference-in-difference estimation was never possible.

Also, due to the time taken to construct the questionnaires the recruitment process for participating organisations was much shorter than expected meaning it was not possible to generate a control group. When these issues are combined, it becomes clear that caution is needed over the interpretation of these results and the ability to clearly identify the effect of the Charter and any changes over time.

In addition, the gap between the two data collection periods was not as large as intended due to the time taken to recruit organisations and to construct the questionnaires. The results do not necessarily show the true change that occurred due to the Charter over time as, for some organisations, the intervention may not have had enough time to take effect before the second period of data collection. The effect that the timing of the study can have was outlined in Chapter 5 as Garrow (2016) found that absenteeism relates to the economic cycle, suggesting that the results gained within a study are different based on when the study is conducted.

Future research would need to fully identify the intended relationship to be evaluated and the methodological requirements to conduct the evaluation. Future research should begin before the announcement of a Charter and this would ensure the data in the first data collection period was a true baseline for all organisations. Future studies should be conducted over a longer period of time. Three years is not enough time to generate two original questionnaires, recruit both Charter and control organisations, collect the data with at least a 12 month period between data collection points, and conduct a full econometric analysis with a comprehensive write up.

Moreover, in the future the literature needs to increase its use of qualitative methods to capture information that explains why the observed relationships exist. Specifically, there needs to be a movement towards combining qualitative and quantitative approaches. Quantitative approaches can be used to obtain surface level data which can then be used to direct a qualitative approach.

The literature has shown that the relationship between employee wellbeing and performance does not have a universal and conventional theoretical relationship. The evaluation of these results could have been greatly improved by being able to discuss why these had occurred. This discussion could have better informed practitioners about how employee wellbeing could affect their employees' performance.

Future research that focuses on the evaluation of a specific workplace health intervention needs to ensure that they isolate the effect of the health intervention. A control group may be the simplest way of achieving this, but without the isolation the extent to which the results are due to the health intervention can always be debated.

6.6 Contributions to Knowledge

While this study does have limitations and recommendations, this study also contributes to the current literature in a number of important ways. The main contribution made by this study is that the study shows there is a relationship between employee wellbeing and employee performance, but the results outline that this relationship is not straight forward and is not clear. The results challenge the notion that there exists a clear and linear relationship between employee wellbeing and employee performance.

The findings do this by showing how this relationship varies based on a number of different aspects of the relationship and that it is possible to have one aspect of wellbeing with a positive and negative relationship with employee performance. For example improved organisational support for mental health and wellbeing was found to lower the probability of presenteeism occurring but be associated with greater odds of employee turnover occurring. This shows that employee wellbeing is a dynamic and multi-dimensional construct that can generate results and relationships that compete with previous literature and policy intentions as well as our own logic.

While an empirical relationship across all three performance outcomes has been found, ultimately the results show that our understanding of the relationship between employee wellbeing and employee performance will always be limited if the integration in future research of qualitative and quantitative approaches to evaluating the relationship

remains scarce. This study clearly emphasises the need for this as many of the results are unexplainable without an in-depth qualitative study that analyses how employees think, feel and experience certain aspects of their workplace and wellbeing.

For example, improved organisational support for alcohol and misuse policies was associated with greater odds of short and long term absenteeism. When this combination is properly and fully implemented it could be possible to then begin to understand why certain findings and relationships, such as this example presented here, have been found and what they mean for future research. This will also affect future national and local public health policy.

As discussed in chapter 2 employee wellbeing tends to be narrowly conceptualised within the literature with most measures focusing on a specific subset of wellbeing factors. This study created and evaluated the most rounded measure of wellbeing included in a quantitative evaluation of the relationship between wellbeing and performance within the UK. The measure of employee wellbeing used within this study, as stated in chapter 3, captures all eight components of the Workplace Wellbeing Charter as well as many aspects of wellbeing that have been shown within the literature to be important to HRM practices and employee wellbeing.

Overall the measure of wellbeing captures seventeen different aspects of employee wellbeing including healthy eating, physical activity, leadership, tobacco use cessation, alcohol and substance misuse, health and safety, mental health, attendance management, physical health, job satisfaction, flexibility, engagement, commitment to employer, return to work, training and development, stress management and workplace performance issues. Within these areas lesser focus was given to other important aspects of employee wellbeing such as employee voice, autonomy, employee involvement in decisions, organisational citizenship behaviour, pay, appraisals and the creation of policies and procedures.

Beyond having one of the broadest conceptualisations of employee wellbeing to date, the research design also sought to collect data from managers at the organisations. The majority of the above areas of wellbeing were also captured when surveying managers, although the type of questions being asked differed to reflect the different aim of each questionnaire. This means this study, to the best of the authors knowledge, is the first study to collect data from employees and managers that encompasses this many different aspects of wellbeing while also capturing the different experiences and nuances that are present when considering the difference between employees and managers.

Expanding upon the conceptualisation of terms within the literature, studies that seek to model employee turnover when actual turnover data is missing tend to use employee turnover intentions. Measures of this vary but the general measurement is to ask the respondent whether or not they think of leaving their employer.

The measure for employee turnover used within this study asks if they have actively sought alternative employment. This goes beyond asking if respondents simply think of changing their employer and asks if this intention has resulted in an actual change in their behaviour. If a change occurs this would suggest that employee turnover is more likely to occur.

Chapter 5 outlines the previous measurements for employee turnover intentions as well as the measure used for actionable employee turnover and shows, via a cross tabulation, that there is a positive correlation between those who state they do often think of leaving their employer and those who actively seek alternative employment.

The results in chapter 5 also show this measure can be used for robust and in-depth advanced econometric analysis. The measure has produced findings with more detail that may havegreater effectiveness when making policy recommendations, when compared to traditional approaches of assessing whether or not the employee thinks of leaving their employer.

While more research using this measure is required, the proposal based on this study is this measure should become the standard metric for measuring employee turnover when employee turnover data is not available. The focus on changes in behaviour is likely to be a better representation and/or prediction of future employee turnover behaviour when compared with using turnover intentions.

As stated in chapter 2, there is a tendency within the literature to evaluate this relationship within the context of one specific sector or industry (Absar et al., 2010; Bloom et al., 2006; Krauter et al., 2013; Gardener et al., 2004; Datta et al., 2003; Kehoe and Wright, 2010; Levy et al., 2012; Weisberh and Sagie, 1999; Park, 2002; What Works, 2015; NICE, 2012; Devasheesh et al., 2013; Chi et al., 2013; Whitfield, 2000; Angle and Perry, 1981; Chen, 2011; RobertsonCooper, 2015; Gates et al., 2008; Baba et al., 1998; Demerouti et al., 2009; Naylor and Bell, 2010; Farquharson et al., 2012; Chugtai and Zafar, 2006; Rhoades and Eisenberger, 2002). This over reliance on a one sector or industry approach gives rise to the role of organisational context.

As discussed throughout this study, organisational context means that studies define and measure employee wellbeing and employee performance in a manner that is relevant to

the sector or industry that is being examined. This results in measures that use the same broad terms such as absenteeism, job satisfaction, mental health and presenteeism but have different measurements of these terms. This limits the external validity of these studies and results in findings that are mostly only applicable to the sector or industry that has been analysed.

This study has taken a different approach and sought to explore the relationship between employee wellbeing and employee performance without organisational context. This meant the sampling and research methodology was an inclusive and flexible approach. This resulted in the first sample based on a UK health intervention within the current empirical literature to include organisations from private, public and the tertiary sector from a variety of different industries that included SME's and large organisations, where the number of employees employed by the organisation varied from 6 to 8000 employees. This has resulted in results not being potentially biased due to the industry being examined and has generated findings that could be relevant to organisations in any sector, industry or of any size.

Regarding purely theoretical contributions to the literature, one potential contribution that has yet to be made is that health interventions could follow a product life cycle similar to almost all goods and services, and that this could explain the variation in the results found in previous studies[15].

The suggestion put forward within this study is that health interventions, such as the Charter, become assimilated into the organisational culture over time and become normalised. This results in findings that could show a positive, negative or no effect depending on what point in time the study has been conducted relative to the health interventions position on the product lifecycle timeline.

An econometric analysis could show this to be a determinant for the inconsistent results observed and discussed within the current literature, but this is beyond the scope of this study. However, the link between the product lifecycle theory and the relationship between employee wellbeing and performance has yet to be suggested as a possible determinant of the variation and contradictory nature of the results within the literature. The proposal made by this study could act as a foundation upon which future research could be conducted that could help change our understanding of the employee wellbeing and employee performance relationship.

[15] This assertion is to the best of the author's knowledge given an extensive review of the current literature examining the relationship between employee wellbeing and employee performance.

The role and importance of managers has been discussed extensively throughout the literature (Gorman, 2006; Lockwood, 2007; Robinson et al., 2004; Towers Perrin, 2003; Park, 2002; Tschopp et al., 2013; Alfes et al., 2012; Binoy, 2003; Black, 2008; NICE, 2015; RobertsonCooper, 2015; White et al., 2003; Van de Voorde et al., 2012) with various theoretical models placing the manager and effective management at the centre of the employee wellbeing-performance relationship, most notably within the Bath Performance Model (Purcell, 2004).

However, the current literature lacks an in-depth empirical analysis of the role of management within the employee wellbeing and performance relationship. As such, this is the first study to show in such detail in a quantitative study that the role of the manager is key and the results outline the nuance of this role in relation to employee performance.
The results showed this in two ways through the descriptive analysis and the advanced econometric evaluation. Chapter 4 empirically showed that there is a difference between the employee and manager experience at work. The results showed decreases within the data on various aspects of employee wellbeing across the two data collection periods such as perceptions of leadership, effective and ongoing communication and job satisfaction.

Whereas for managers, the results showed that data focusing on the same aspects of wellbeing tended to remain constant or increased. The differences between employee and managers were most noticeably clear when employees were discussing their experiences of their managers and leadership and when managers were discussing what behaviours they exhibit to effectively lead their employees.

Furthermore, Chapter 5 showed that the role of perceived organisational support was statistically important to all three measures of employee wellbeing. However, the effect of employee perceived organisation support was found to be different for each employee performance outcome measure depending on what aspect of employee wellbeing was considered. This is the first study to find such detailed and varied findings when evaluating the role of management within the employee wellbeing and employee performance relationship.

The behavioural aspects of wellbeing outlined within this study such as physical activity, healthy eating, tobacco use and alcohol consumption and misuse are beginning to feature more in recent broader empirical studies of the wellbeing-performance relationship. However no empirical study has measured these aspects of wellbeing in as much detail and depth as this study when including them in a broad conceptualisation of wellbeing.

Within the literature almost all measures of these terms focus on frequency of an event and will focus on how often the respondent participates in a certain type of behaviour. These factors are rarely measured but when they are physical activity is typically represented by how often the person is physically active or inactive (Hafner et al., 2015), tobacco use is typically represented by how many cigarettes a person smokes (Nice, 2012), alcohol consumption is normally used to represent alcohol consumption and misuse (Hafner et al., 2015) and nutrition is often represented by how often the respondent consumes food groups (Hafner et al., 2015).

While these measures are useful and do provide some interesting and much needed insight into the overall relationship between employee wellbeing and performance they are limited views of the concepts. This is because they do not focus on broader details surrounding these terms, such as what type of organisational support is present for positive behaviour to be encouraged? And, what are the reasons why this behaviour occurs?

The measures used within this study sought to build upon the frequency based approach of previous measures to try to capture these details and evaluate what effect these have on employee performance. This means this is also the first quantitative study to apply such a detailed evaluation and measurement of these behavioural aspects of wellbeing in an evaluation of the employee wellbeing and employee performance relationship.

Additionally, this is one of the first studies to show in such detail and depth that employee wellbeing has a different effect on short and long term employee performance, specifically absenteeism. This means the study evaluated the relationship between employee wellbeing on general (or short term) absenteeism, which is normally caused by colds or minor illnesses, and on long term absenteeism that includes longer periods of absences caused by more serious long term health issues.

The separation of absenteeism in this way found there was a difference between general and long term absenteeism. Chapter 5 showed that different factors of wellbeing were associated to short and long term absenteeism, and in some cases the results showed that the same factor of employee wellbeing had a different relationship with general and long term absenteeism.

As stated previously, Bockerman et al. (2011) did separate their analysis of absenteeism to include the short and long term perspectives but there is one important difference between their finding and the one presented here. The difference is that Bockerman et al. (2011) evaluated the relationship between high involvement management (HIM) and wellbeing, where absenteeism was considered a factor of the latter.

This meant their analysis is fundamentally different to the analysis conducted here as their analysis does not consider the effects of various wellbeing aspects on employee performance, where absenteeism is considered a factor, such as job satisfaction, engagement, physical activity, tobacco cessation and smoking, alcohol misuse and related policies, healthy eating, flexibility, broad measures of mental and physical health as well as the employees commitment to their employer.

Although it is acknowledged that Bockerman et al. (2011) did find an important finding in that there was no association between HIM and long term absenteeism, when the specific nature of the result presented within this study is considered with the fundamental differences between the two studies, the result presented here stands as its own original contribution to the literature.

This study is the first study to find that a broad measure of employee wellbeing is associated to both forms of absenteeism and that there are varying different associations when considering short and long term absenteeism as outcome measures.

While further research is required, this finding of such a dynamic being present concerning how absenteeism is measured suggests that moving forward all empirical studies that seek to use absenteeism as an outcome measure for employee performance should differentiate between short and long term absenteeism. Moreover, the findings also serve as a foundation for future research to explore whether or not the same dynamic is present when evaluating the relationship between employee wellbeing and short and long term employee turnover and presenteeism.

6.7 CONCLUSION

The discussion built upon the finding in chapter 4 that there does exist a relationship between employee wellbeing and employee performance by discussing in detail that, empirically, employee wellbeing has been found to affect presenteeism, absenteeism and employee turnover differently.

This shows that the relationship between employee wellbeing and performance is not straight forward which is exemplified in the finding that some wellbeing factors are only relevant to one or two performance measures and some factors have different affects when found to be associated to more than one measure of performance. For example, physical activity was found to only have an association with presenteeism and job satisfaction was found to have different affects for presenteeism and short term absenteeism than it did for

long term absenteeism and employee turnover. This variation is a theme throughout the results, even when discussing the same broad finding.

There are core theoretical findings that are expressed across all three performance measures. All three sets of results suggest that omitted variable bias could be present within the literature, that behavioural factors do have an impact on performance, that control variables/personal characteristics are important to a person's performance and that improved organisation support has an association with performance.

However, within these core discussions there exists substantial variation in the specific results based on the performance measure being evaluated. For example, improved organisational support when found to have an important association was associated positively to presenteeism but negatively to absenteeism and employee turnover.

The one area for discussion that differentiated the three performance measures was the role of gender as this was found to only be important for absenteeism, specifically long term absenteeism. When this finding is combined with the above discussion points and the finding that many wellbeing factors had the opposite effect on employee performance, it is clear from these results that further empirical research is needed.

In particular, further empirical research that is combined with qualitative data seeking to evaluate a broad measure of employee wellbeing and multiple forms of employee performance, that account for short and long term perspectives, is required to better understand the relationship between employee wellbeing and performance.

The core discussion within this chapter along with the specific results outlined in Chapter 4 allowed for a variety of policy recommendations for organisations participating in the Charter and for policy makers. That being said, the findings within this chapter outlined that many of the policy recommendations depend upon the rationale organisations have for participating with the Charter and on the aims of the Charter. This is shown by the variability of the findings across the performance measures within this chapter and Chapter 4.

Similar to the discussion of the results, there were core policy recommendations that were suggested across all performance measures. For example, based on the results it was found that for all performance measures some factors had no effect and others had unexpected interaction effects. This means that having a policy in place is not enough and future policies and/or interventions should account for the nuance of employee performance.

Likewise, for organisations they should not just assume that implementing a policy will have far reaching positive effects. Across all performance measures the use of qualitative data is suggested as a way to limit where this may occur. This would produce more rounded

results that will improve future policies decisions and intervention structures via improving the literature base.

Also, the results for all three performance measures led to the recommendation that the Charter be restructured. This was to include those factors of wellbeing that have been found to have a greater association with improving employee performance. For presenteeism and absenteeism, the recommendation was to include a standard for employee engagement whereas for employee turnover the suggestion was to have a standard for job satisfaction.

This is another example of how the aims of the Charter affects the implementation of these recommendations. If the Charter were to be restructured the results suggest that physical activity or health and safety could be replaced. Overall, the results showed that the Charter did have an effect on all performance measures showing that, to a certain degree, organisations can benefit from participating with the Charter.

This chapter also highlights a number of limitations that exist within the study and how these limitations can be used to inform future research. Some limitations were recognised within this chapter but led to no recommended changes for future research. These tend to focus on the sensitive nature of the questions asked, the presence of certain biases, the data collection methods and the use of self-reported data.

These limitations did not led to recommendations about how future research could improve upon this study because for the most of these concerns they are either an aspect of this area of research that has to be accepted to be present or are too unknown to be acted upon. For example, sensitive questions need to be asked to be able to collected data on mental health and this data can only be gained directly from the respondent. Similarly, it is unknown if self-reported data would, with 100% certainty, lead to potentially biased data and if a different sampling approach would lead to a larger sample with a similar composition.

Where recommendations for future research were made these mainly centred on the conceptualisation and measurement of wellbeing concepts. The conceptualisation of the term wellbeing itself should be addressed in future research as there is a need discover a standardised definition of what wellbeing means and what factors are considered essential aspects of employee wellbeing.

Furthermore, future research needs to diversify the scope of performance measurement to include different perspectives and actual behaviour. Actionable intention to leave has been shown to offer more insight than standard turnover intentions, as has the differentiation of short and long term absenteeism. Future research should consider

employing this differentiation when conducting evaluations where absenteeism and employee turnover are considered performance measures.

Beyond these recommendations, the most important is the need for future research to follow a longitudinal design and establish a clear baseline for the data over time. This means that the research process needs to start before any action has taken place and organisations who are being evaluated should be monitored and surveyed over a number of years. Qualitative methods should also be employed within future studies to help explain why any unexpected findings have occurred while also discussing the "why?" and "how?" aspects of an evaluation to compliment the "what?" aspects seen in an empirical analysis.

This chapter has outlined several potential contributions to knowledge made by this study, all of which are stated to the best of the author's knowledge. Arguably the most important contribution made by this study is the finding that there is a relationship between employee wellbeing and employee performance, and that this relationship is not straight forward and has a number of complex caveats attached to it.

Furthermore, this study found this result when using one of the broadest measures of employee wellbeing in a UK based quantitative evaluation of the employee wellbeing-performance relationship. This was also based on one of the most unique samples to be used in an evaluation involving multiple data collection periods, removing the potential influence of organisational context and providing results that have greater external validity.

Specifically, this study also created and evaluated a new measurement for employee turnover. This measurement goes beyond asking about turnover intentions and focus on whether or not these intentions have resulted in actual changes in employee behaviour. This measure could be used as a new alternative to measuring employee turnover when actual turnover data is unobtainable.

This study also makes a contribution to knowledge by providing the most thorough evaluation of the role of management on employee performance within an empirical evaluation. Most discussions about the role of managers regarding employee performance are theoretical discussions and if this is included in an empirical study, the factor is not included in as much detail as this study. The study shows that the role of effective management and leadership is a key predictor of employee performance but the extent to which it is effective depends on the performance measure being evaluated.

This level of depth regarding the role of effective management is not present within the current literature and could greatly enhance the way future policies and/or interventions are structured and implemented. As could the finding that employee wellbeing is associated

to short and long term absenteeism, but the relationship is different based on the outcome measure.

Additionally, this study also found that the same factor of wellbeing can have a different effect on short and long term absenteeism. As stated, while Bockerman et al. (2011) did find a difference between the two forms of absenteeism, their result is fundamentally different to the result presented here and given the specific nature of the result here, this finding stands alone as its own contribution to knowledge.

CHAPTER 7: CONCLUSION

7.1 INTRODUCTION

This study was borne out of Bristol City Council's desire to evaluate the effect of the Workplace Wellbeing Charter for participating organisations, with a view towards encourage new organisations to engage and participate with the Charter. The hope was that this study could help facilitate this, while also showing how beneficial engaging with employee health and wellbeing could be for organisations; improving the health and wellbeing of employees in the city and lower social costs.

This motivation is in line with the many studies and workplace interventions that have been known to go back as far as the 17th century and Ancient Greece. Today, there exists a number of workplace wellbeing Charters across the UK, with at least four in London alone. There are organisations that all have the same aims as those expressed by Bristol City Council as they are focused on employee wellbeing research and/or helping other organisations improve the health and wellbeing of their employees.

Despite this, from a dedicated research perspective the relationship between employee wellbeing and performance is complex and under-researched. This is changing due to employee wellbeing within the workplace becoming more of a focus for organisations as well as local and national governments. However, there are several issues that exist within this area of research that limit the discussion surrounding employee wellbeing and employee performance, namely what relationships exist and what direction these relationships take.

Therefore, no strong general consensus exists regarding the general relationship between employee wellbeing and performance as well as what employee wellbeing factors have an effect on employee performance. This ambiguity regarding the relationship between employee wellbeing and employee performance exists for several reasons, but arguably the main reasons are the level of inconsistency in results and the importance placed on organisational context.

These are expanded upon further below, but from a broad perspective the literature presents many studies that reveal a positive relationship between employee wellbeing and performance while other studies state that no relationship or a negative relationship exists. When compounded with the wide omission of many important employee wellbeing concepts, such as physical activity, healthy eating, the role of managers, alcohol misuse and tobacco use, it becomes clear why the ambiguity exists.

Methodological issues are also present that limit the discussion surrounding employee wellbeing and employee performance. The greatest hindrance to the debate is the lack of standardised metrics brought on by the separation of the literature between studies that view employee performance in financial measures (productivity ratios, net sales or leg of net sales divided by number of employees and Tobins Q) and those that view employee performance using behavioural outcome measures (presenteeism, absenteeism and employee turnover).

Regardless of which perspective is taken, which individual outcome measures are used and which methods are employed there also exists a lack of recognition for the potential differences over the short and longer terms. There is limited discussion regarding whether employee wellbeing affects employee performance differently in the short term than it does in the long term. This limits the discussion as it means policy decisions are based on partial knowledge and information that does not consider the widest range of factors that could affect organisations.

Studies are often based on single cross sections of data which means the current discussion is limited to discussing associations that occurred at one specific point in time. Most studies lack any analysis of how the employee wellbeing-performance relationship could change over time. While there are studies that have used a longitudinal design, this is the first study that has combined different measures of wellbeing that encompasses traditional and often omitted wellbeing variables and analysed this relationship against a diverse range of organisation sizes, industries and sectors over time via a repeated cross section analysis.

The Bristol Workplace Wellbeing Charter served as a case study for this analysis. It enabled this research to analyse if workplace health interventions are beneficial to organisations that participate in them, and if these are beneficial then how great is the effect. Using the Charter as a foundation for the approach allows for a broader discussion about policy implications regarding the use of workplace health interventions in the context of organisations, regardless of size, industry and sector.

7.1.1 Research Questions

As a result of these broad issues surrounding the discussion of employee wellbeing and employee performance, the following research question and sub-research question were identified.

Research Question: Is there a relationship between employee wellbeing and employee performance and, if so, to what extent to employee wellbeing factors affect employee performance?

Sub Question: What impact does an organisations engagement with the Bristol Workplace Wellbeing Charter have on its employee's performance and, if so, what are the policy implications?

7.2 THE LITERATURE

The literature review outlined many issues present within the literature but none more so than the inconsistent nature of the literature, which is arguably the most important issue discussed throughout this study. This inconsistency has potential implications for future research and for practitioners. Future research is hindered as the literature is supposed to act as the foundation of any new study but instead it shows that there is potential for a positive, negative or no association between wellbeing and performance of workers, and these associations vary in magnitude. Future empirical research should focus on integrating qualitative methods with the aim of helping to identify potential themes and directions for research.

For practitioners, the literature could limit their ability to form solid foundations for an effective wellbeing strategy as it is difficult to know what policy steps should be taken in order to achieve a desired outcome. For example, if a local government wishes to reduce absenteeism then the literature does not serve as an effective base for this policy decision due to the number of contradictory studies.

This study shows that various wellbeing factors have no important effect on employee performance outcome measures. The results in this thesis have shown that when an association was found between some factors of wellbeing and performance then the relationship is often negative or against theoretical expectations. Although resolving inconsistencies in the literature was not an aim of this study, these findings highlight the complex nature of studying employee wellbeing and performance. They show that employee wellbeing is a highly individual concept that is dynamic and difficult to quantify when studied as a group across various sectors and industries.

The literature review emphasised how the literature rarely acknowledges, and generally omits, the nuances that exist within many of the employee performance outcome measures. This mainly exists for presenteeism and absenteeism, although for presenteeism

this issue could not be resolved in this thesis as the issue concerns the rigid perception of the term which is based on the assumption that as soon as a person becomes ill, to any varying degree, then they are not able to perform at their maximum potential. This issue is not a gap that could be resolved within this study as the main aim of the study was not to change how presenteeism is thought of and measured, although it is acknowledged that this is a crucial step in expanding the literature and improving upon the knowledge available.

The nuance ignored for absenteeism is the type of absenteeism faced by organisations as this could be short and/or long term. There is a difference between the type of absences that employees take with most absences not lasting longer than a week due to common issues such as the cold or flu. However, despite this differentiation much of the literature treats all types of absenteeism the same and analyses absenteeism as one collective term and idea, without accounting or exploring if there is a difference based on the type of absenteeism.

This study identifies that there are differences in results depending on the type of absenteeism as the results showed how employee wellbeing factors that are found to be associated with general (short term) absenteeism are different to the factors that are associated with long term absenteeism. This is the first study to empirically show this nuance in this manner and the first to highlight that future research should differentiate between these two forms of absenteeism. This could make the literature more useful for practitioners, as it would split the literature based on the type of absenteeism, meaning practitioners can make more informed decisions based on the literature that corresponds to the type of absenteeism they are seeking to reduce.

Throughout the literature terms such as employee wellbeing are often narrowly conceptualised. This is likely to be the result of various definitions and measures available, but ultimately how employee wellbeing is conceptualised within the literature is due to the importance placed on the organisational context and the extent to which this dictates what variables are analysed. Most studies draw on evidence from only one sector or industry meaning employee wellbeing is thought of in the same broad terms, such as job satisfaction and engagement, but these terms can be measured through organisation, industry or sector specific methods.

While such results are useful for a specific organisation, this practice does become limiting when a study is looking to use the literature as a base for more general inferences. What works in one industry and sector may not necessarily work for another, so if the aim of the literature is to move towards a theory that explains the employee wellbeing-performance

relationship then organisational context cannot continue to have such an important role in future studies.

The design of this study sought to diminish the importance of organisational context in the employee wellbeing and performance relationship. This study focused on organisations from different sectors and industries that varied in size and allowed for more employee wellbeing concepts to be included in the study than are standard in the literature. This approach resulted in a more rounded and complete analysis of employee wellbeing.

Another omission from the existing literature is the role organisational context has in the widespread omission of many important wellbeing variables, namely behavioural variables such as healthy eating, physical activity, and tobacco use and cessation efforts as well as alcohol misuse. These are all aspects of employee wellbeing that have been found to be associated to serious mental and physical health conditions as well as being associated with reductions in absenteeism, employee turnover and presenteeism. However, these aspects of wellbeing are studied in isolation and are often omitted from broad empirical studies that focus on more traditional aspects of wellbeing such as job satisfaction, engagement and mental health.

This omission means that there is a lack of literature which discusses the effects these behavioural variables can have on performance when studied alongside more traditional variables, and hence it is not clearly known how these aspects of wellbeing interact with employee performance. This is also true for various control variables such as age, tenure, being disabled and having caring responsibilities; all of which tend to be overlooked by much of the literature despite the various findings stating these are important determinants of employee performance.

This study included all four of these behavioural variables as well as various control variables in the main analysis, and the results showed that for all three performance outcome measures at least one of these behavioural variables had a statistically important association with employee performance. Future research should include these variables in their analysis as they have been found to be just as important as the traditional aspects of employee wellbeing that are often included. Moreover, the results presented here suggest the employee wellbeing factors that had the greatest association with employee performance tended to be those that are regularly omitted from existing empirical studies.

7.3 WHAT HAS BEEN FOUND?

The results show the literature suffers from systematically not including various important wellbeing concepts. This is a finding that is consistent across all three performance outcome measures, the source of which comes from the omission of the behavioural factors and certain control variables. However, the factors that could create this bias differ depending on the outcome measure being analysed. For example, the results showed that improved organisation support for healthy eating is associated with lower absenteeism but this is the only behavioural factor that had no effect on presenteeism and employee turnover.

This finding supports the literature that generally showed these behavioural factors of wellbeing were associated with less absenteeism, presenteeism and/or employee turnover (HERO, 2013; NICE, 2012; ERS, 2016; Brown et al., 2011; NICE, 2008; CDC, 2013; Healthy Working Lives, no date). The main source of omitted variable bias in the literature seems to come from omitting gender and age. These were found to have some of the greatest and most consistent effects on absenteeism and employee turnover, suggesting that not including these variables could create bias.

The results suggest that omitted variable bias appears to be a greater concern for employee turnover. Half of the behavioural factors as well as some control variables appear to have important effects on employee turnover. Mental health was found to have an important effect on employee turnover despite often being omitted from the employee turnover literature, supporting various studies in the employee turnover focused literature (Baba et al., 1998; Goetzel et al., 2002; NICE, 2009; Ryan, 2011; Paile, 2011; ERS, 2016; Lerner and Henke, 2008; Sainsbury Centre for Mental Health, 2007).

In general these results support the suggestion that those studies that narrowly conceptualise wellbeing by focusing on some specific factors could experience omitted variable bias. Specifically, the results support the idea that future research should be including behavioural factors in employee wellbeing-performance analyses and the scope of control variables should be broadened to include age, caring responsibilities and having a disability.

The results showed there were differences by gender, as some wellbeing factors affected male and female employee performance differently. For example, the results show that engagement affected absenteeism for both genders in the same direction but it had a stronger association for males than it did for females. However, absenteeism was the only performance outcome measure that gender had an important effect on which further

underscores that different measures of employee performance are affected by different aspects of employee wellbeing including employee characteristics.

This outlines the role the workforce demographic can have on the results obtained in an econometric model, as well as the role that it can have on the success of any employee wellbeing strategy. These findings suggest there is a need to separate any empirical analysis by gender to better understand the role that gender has on employee wellbeing and their associated performance. For practitioners this suggests that when trying to improve employee wellbeing, organisations and policy makers will need to consider if one gender dominates the population being improved, however more research is needed in order to ensure that any policy decision is properly informed.

The results show that organisational support can be associated with adverse employee performance. It was found that improved organisational support for mental health and wellbeing, absence management and alcohol misuse are associated with greater absenteeism, and improved organisation support for alcohol misuse was found to be associated with higher short and long term absenteeism. These results contrast with many studies in the literature that have shown that improved organisational support leads to less absenteeism (Unum, 2015; NICE, 2015).

However, the results showed that improved organisation support for mental health and wellbeing is associated with lower presenteeism. This emphasises the different effect employee wellbeing factors can have on different performance outcomes. These results support many studies in the literature that have shown that improved organisation support for various dimensions of wellbeing reduces presenteeism (Huver et al., 2012; Caverley et al., 2007; Bierla et al., 2011; Ramsey, 2006; Cooper and Dewe, 2008; Seymour et al., 2005; Rolfe et al., 2006).

In contrast to this, and in line with the results with respect to absenteeism, the results showed that improved organisational support for mental health and wellbeing was associated to greater odds of employee turnover. This effect of organisational support with respect to employee turnover is in contrast to results found by Joarder and Sharif (2011) and Brough and Frame (2004) but is supported by Batt and Valcour (2003), highlighting the variation in the results within the literature.

While these results show that organisation support does not always have the expected positive association with employee performance, they show that the policy being present is not the most important determinant, rather it is the type of support that is offered. Supporting this point is the finding that improved organisation support for healthy eating is associated

with lower long term absenteeism. By showing that organisation support can be associated with lower absenteeism, this suggests that if implemented properly, and if received favourably by employees, improved organisation support can have an important role in improving absenteeism.

These findings outline indirectly the role that managers and management can have on employee performance. The results show this is a complex and dynamic aspect of wellbeing where the effectiveness of management is largely determined by the nuance of what type of support is offered given what employees want and simply improving the amount of support may not be beneficial.

While qualitative data is needed to expand upon why some forms of organisation support affect some performance measures and others do not, this study has shown that the role of managers and management do have an integral effect on wellbeing and performance. This means the theoretical models that place management at the centre of the employee wellbeing and performance relationship are correct. It also highlights the need for more empirical research in order to further understand the dynamics and nuance of this relationship as well as which aspects of leadership affect specific aspects of employee performance.

The results showed how the aspects of employee wellbeing that are associated with short and long termer absenteeism are different. There is a difference between what elements of employee wellbeing affects short term and longer term absenteeism, and the literature could be misguided in the generally accepted approach that labels every measure of absenteeism as just absenteeism. Future empirical studies should differentiate between these two types of absenteeism and be aware that how they have measured absenteeism is likely to play a key role in what results they generate, and hence which policies they recommend.

A consistent theme that was also apparent was that any discussion regarding the possible reasons for these findings is purely speculative. This is because a quantitative study can only identify what trends are present, it is not possible to explore why the trends have occurred and the extent to which these influence employee's wellbeing and performance. This could only be possible if qualitative approaches are also used which further outlines the need for future research to not take a one sided approach and try to incorporate both approaches.

From chapter 4 it is evident that this approach would allow for a study to identify that employee's perception of organisational support, value and voice has declined over time and this has affected their job satisfaction, engagement, behaviour outside of the workplace and the type and intensity of absenteeism that they are comfortable to take. This knowledge, if

gained through qualitative approaches, could greatly enhance the theoretical understanding of the relationship between employee wellbeing and performance as well as the practical implementation of health interventions like the Workplace Wellbeing Charter.

7.3.1 Policy Implications

The results showed that across all three performance outcome measures there were many variables that had either no effect or an unexpected effect on employee performance. For presenteeism those that were found to have no effect were all Charter variables, but this was only partially true for absenteeism and employee turnover where it was found that physical activity had no effect. Employee wellbeing variables that had no effect on absenteeism and employee turnover were flexibility for absenteeism and engagement, healthy eating, some aspects of mental health and wellbeing and absence management for employee turnover. Unexpected results were observed across all performance outcome measures with the most notable results being that physical activity is associated with greater presenteeism.

While these results are noteworthy, ultimately they highlight the need to combine quantitative and qualitative approaches. Due to the absence of qualitative methods in this thesis it is not possible to know and/or discuss why these results occurred. Not all wellbeing factors will have a universally positive effect on performance but the results suggests the benefits of the Charter will largely depend on what dimension of employee performance an organisation is trying to improve.

Across the three outcome measures the variables that have been found to have no effect or an unexpected affect differs. Organisations should have a clearly defined aim when participating in the Charter along with regular internal monitoring about how the intervention is performing. This will ensure they are benefiting as much as they possibly can from their participation in the Charter.

The Charter could be more effective if it is restructured to include aspects of employee wellbeing that were found to have an important effect across performance outcome measures. This is due to so many Charter variables appearing to have no effect on various dimensions of employee performance with the results suggesting engagement or flexibility could be more effective standards to include. Engagement was found to have an important association with presenteeism and absenteeism, suggesting that employee engagement could be more beneficial to participating organisations than almost any Charter variable. Flexibility was found to be associated with lower levels of presenteeism, implying this could only benefit those organisations that want to focus solely on reducing presenteeism.

Based on the results from all three empirical chapters if the Charter was restructured then the results indicate the health and safety standard could be removed. This had the least effect of all the Chartered variables and if replaced this would mean that the Charter could implement either an engagement or a flexibility standard without increasing the total amount of standards.

While these results do suggest the Charter could be restructured, ultimately the type of restructure depends on what the Charter's main performance outcome is. For example, if the main aim of the Charter is to reduce absenteeism and presenteeism, then an engagement standard is most suitable whereas a flexibility standard is most suited where the aim is to solely reduce presenteeism. Any restructuring would need to be based on more research that confirms the findings presented here.

Across both data collection periods the results showed the magnitude of the coefficients reduced over time, and this change was largely observed in Charter variables. For wellbeing factors that had positive coefficients this means the variables were either moving towards improved employee performance, or did change entirely to be associated with improved performance over the data collection periods.

However, for those aspects of wellbeing that had a negative coefficient in both time periods this could show a time effect. This result could show the product life cycle effect of health interventions, as suggested in Chapter 2, as the results show that most variables were still associated to improvements in employee performance, but these aspects of wellbeing were associated with less of an improvement in employee performance over time.

While the results mean that over time these variables were moving towards being associated with improved employee performance, and this suggests that organisations participating could benefit from being involved with the Charter, the results also suggest that the interventions should be dynamic. The results signal that once health intervention policies are introduced they quickly become assimilated and normalised and so the effect on employee performance is no longer felt. This means for organisations to continue to benefit from participating with health interventions like the Charter then the organisation and provider of the health intervention should continuously adapt and change their policies to ensure that they are relevant and effective.

For future research this shows the time between the introduction of a health intervention or policy and when the data is collected can have substantial consequences on the results obtained. Moreover, the results show that repeated cross-sectional studies need to be conducted over longer time periods, as a time period of between 12 and 18 months

between data collection periods may have been able to identify clearer trends. This would provide a more definitive and clear indication of how the Charter affects employee wellbeing and performance and how this changes over time.

This study is the first study to show empirically that the factors contributing to employee wellbeing do not affect presenteeism, absenteeism and employee turnover in the same way, and that it would be wrong to assume that all aspects of employee wellbeing have the universal positive associations with employee performance that one would hope for. The results show this difference could be due to many different reasons including measurement methods, the role of organisation context, the breadth of the variables analysed, the sample of the workforce, the attitudes of the workforce and how policies are introduced.

Because of this variation, future research must not just focus on some traditional factors, or those that are only relevant to a specific sample, but instead they should include a wide variety of workplace factors, behavioural factors and control variables along with various performance measures that cover general and long term forms of outcomes.

By combining this empirical approach with a strong qualitative approach, many of the issues that have been observed within the literature could be resolved or improved upon and generate more consistency across empirical studies. Future policy decisions, by governments and organisations, could then be better informed and more appropriate.

7.4 Contributions to Knowledge

To the best of this author's knowledge, a number of potential contributions to knowledge have been made by this study. The most important contribution made by this study is the finding that there does exist a relationship between employee wellbeing and employee performance, and this finding is not a straight forward finding due to the number of caveats attached. For example, the study found that each individual factor of wellbeing can have a different relationship with employee performance depending on the performance measure being evaluated and that there is a difference regarding the relationships between employee wellbeing and short and long term absenteeism.

Both of these examples are their own contributions to knowledge, as is the finding that the same factor of wellbeing can have a different relationship with short and long term absenteeism. These contributions outline the complexity and nuance within the relationship between employee wellbeing and employee performance in a way that has not been done before within an empirical analysis.

This study also created and evaluated a new measure of employee turnover that goes beyond turnover intention and is a closer representation of actual employee turnover. This form of actionable employee turnover could be used as a new alternative to measuring employee turnover when actual employee turnover is missing or self-reported data is being utilised. Also, this study provides the most thorough empirical evaluation of the role of management within the employee wellbeing and employee performance relationship. This evaluation goes beyond the theoretical discussions that tend to dominate this aspect of the literature, as well as those that represent the role of management using a limited number of variables.

Additionally, all of these contributions to knowledge have been found in a study that has created one of the broadest measurements for employee wellbeing to be used in an empirical evaluation and has collected this data from organisations of every size and from a variety of sectors and industries. This approach is a contribution in its own right as this approach has shown that it is possible to conduct a study that can be applicable to almost all organisations and has evaluated the relationship between employee wellbeing and performance within a context that has removed, or greatly reduced, a number of biases such as omitted variable bias and organisational context.

This study, through the research design utilised, the data that was captured, the methods of measurement used and the statistical analysis techniques employed has added a significant amount of knowledge, depth and nuance to a growing area of literature that will become more important to society and local and national governments over the coming years and decades.

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APPENDIX A – EMPLOYEE QUESTIONNAIRE

Thank you for taking the time to complete this questionnaire about health and wellbeing at work. This data is being collected by researchers at the University of the West of England as part of some research into the effectiveness of workplace health interventions.

- **All responses will remain anonymous and confidential**.
- **If you do not wish to disclose certain types of information then feel free to skip the question**.
- If you would like more information about the research, please get in touch. Contact details are provided at the end of this survey.

This questionnaire should take about 15 minutes to complete.

Your Contact Details

We would like to send you a follow up survey early next year. In order to do this, we will need a work email address for you. Your email will be used to generate a random number for referencing your survey responses; neither you nor your organisation will be identifiable from this reference number and it will not be used for any other purpose.

Q1 What is your email address?

Lifestyle Questions

Healthy Eating

Q2 Please answer yes or no to the following statements

	Yes	No	Don't Know	Does Not Apply
There are vending machines at my place of work	❍	❍	❍	❍
Vending machines have healthy alternatives	❍	❍	❍	❍
My organisation has an on-site cafe/restaurant	❍	❍	❍	❍
On-site cafes/restaurants have healthy options available	❍	❍	❍	❍

Q3 To what extent do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
My organisation provides support for a healthy diet	❍	❍	❍	❍	❍	❍
My organisation provides me with information on healthy eating	❍	❍	❍	❍	❍	❍
I have been offered a tailored programme to improve my diet	❍	❍	❍	❍	❍	❍

Q4 How often do you undertake the following

	Never	Rarely	Sometimes	Often	All of the Time
I consume five portions of fruit and vegetables a day	❍	❍	❍	❍	❍
I have a takeaway or fast food 2-3 times a week	❍	❍	❍	❍	❍

Physical Activity

Q5 To what extent do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree	Does Not Apply
My organisation provides me with information on the benefit of physical activity	❍	❍	❍	❍	❍	❍
My organisation supports me to be physically active	❍	❍	❍	❍	❍	❍
There are organisation sports clubs/teams that I am encouraged to join	❍	❍	❍	❍	❍	❍
My organisation advocates active travel	❍	❍	❍	❍	❍	❍

Q6 How often do you undertake the following

	Never	Rarely	Sometimes	Often	All of the Time
I exercise 2-3 times per week	❍	❍	❍	❍	❍
I take part in sports teams outside of work	❍	❍	❍	❍	❍

Smoking

Q7 Do you smoke cigarettes or roll ups?

- ❍ Yes
- ❍ No, please go to Q9

Q8 How many do you smoke a day?

- ❍ 0-5
- ❍ 6-10
- ❍ 11-15
- ❍ 16-20
- ❍ 21+

Q9 Do you use an e-cigarette?

- ❍ Yes
- ❍ No
- ❍ Sometimes

Q10 To what extent do you agree or disagree with the following regarding your smoking habits

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
I am aware of a smoke-free policy	❍	❍	❍	❍	❍	❍
I am aware of the smoke-free and tobacco control laws	❍	❍	❍	❍	❍	❍
My organisation is able to support me with quitting smoking	❍	❍	❍	❍	❍	❍
"No smoking" signs are clearly stated around my workplace	❍	❍	❍	❍	❍	❍
I often use smoking as a means of reducing work related stress	❍	❍	❍	❍	❍	❍

Alcohol and Substance Use

Q11 Do you consume alcohol? If no please go to Q13

- ❍ Yes
- ❍ No

Q12 How many units do you consume on a typical day when you're drinking alcohol? (1 pint of lager = 2.3 Units, 1 small glass of wine =1.5 units, 1 large glass of wine = 3 Units and 1 pint of cider = 2.6 Units)

- ❍ 0-3 Units
- ❍ 4-9 Units
- ❍ 10-15 Units
- ❍ 16-21 Units
- ❍ 21 or more units

Q13 To what extent do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
My organisation provides information on the impact of alcohol on my health	❍	❍	❍	❍	❍	❍
My organisation would provide me with support relating to alcohol misuse	❍	❍	❍	❍	❍	❍
I am aware of guidelines regarding the use of alcohol at business functions	❍	❍	❍	❍	❍	❍
I have undertaken alcohol awareness training	❍	❍	❍	❍	❍	❍
I often consume more alcohol than is recommended	❍	❍	❍	❍	❍	❍
I often use alcohol as a means of reducing work related stress	❍	❍	❍	❍	❍	❍
I have used other legal substances to reduce workplace stress e.g. prescription tablets	❍	❍	❍	❍	❍	❍

Workplace Questions

Q14 To what extent do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
I am aware of an organisation communication policy	❍	❍	❍	❍	❍	❍
I am consulted on any decisions regarding organisational change	❍	❍	❍	❍	❍	❍
I am informed about policies to manage complaints and issues	❍	❍	❍	❍	❍	❍
I am recognised for high standards of work	❍	❍	❍	❍	❍	❍
I am provided with opportunities to attend training courses	❍	❍	❍	❍	❍	❍
I am able to suggest ideas to management	❍	❍	❍	❍	❍	❍
There are regular performance reviews in place	❍	❍	❍	❍	❍	❍
My performance reviews are beneficial to my development	❍	❍	❍	❍	❍	❍
I understand how my performance contributes towards organisational goals	❍	❍	❍	❍	❍	❍

Q15 To what extent do you agree or disagree with the following statements regarding the flexibility of your current role?

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
I can choose whether I work over my contracted hours	❍	❍	❍	❍	❍	❍
I am able to balance work and home-life commitments	❍	❍	❍	❍	❍	❍
I can work at home	❍	❍	❍	❍	❍	❍
I often work at home	❍	❍	❍	❍	❍	❍
I have influence over the amount of work I do	❍	❍	❍	❍	❍	❍
I can work flexible hours depending on my needs	❍	❍	❍	❍	❍	❍
My work allows me to fulfill my caring responsibilities	❍	❍	❍	❍	❍	❍

Training and Development

Q16 To what extent do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
I am provided with the opportunities to progress within the organisation	❍	❍	❍	❍	❍	❍
I am provided with training opportunities to develop my career	❍	❍	❍	❍	❍	❍
I receive training to support me in doing my job effectively	❍	❍	❍	❍	❍	❍
The training I have received is of a high quality	❍	❍	❍	❍	❍	❍
Additional training is available to help me deal with the pressures of work	❍	❍	❍	❍	❍	❍

Q17 Do you pay for your training?

- ❍ Yes
- ❍ No
- ❍ Some, as a percentage how much do you pay _____

Q18 The training I receive is specific to...(Please tick all that apply)

- ❍ What my organisation does
- ❍ What my industry does
- ❍ What my role within the organisation is
- ❍ Other, please state _____
- ❍ Don't know

Sickness Absence

Q19 How many absences have you had in the past three months due to ill health?

Q20 Have you had any notable absences in the past 12 months? (A notable absence is one that required self-certification or a fitness note).

- ❍ Yes, please state how many days _____
- ❍ No, please go to Q23

Q21 During those periods of absence to what extent do you agree or disagree with the following statements.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
My manager kept regular contact with me	❍	❍	❍	❍	❍	❍
My manager was supportive whilst I was off sick	❍	❍	❍	❍	❍	❍
My manager was supportive when I returned to work	❍	❍	❍	❍	❍	❍
I feel my career has been negatively affected as a result of being absent	❍	❍	❍	❍	❍	❍
I was supported in returning to work	❍	❍	❍	❍	❍	❍
My organisation made it clear what adjustments were available to me to support my return to work	❍	❍	❍	❍	❍	❍
My organisation shows real concern about my health and well-being	❍	❍	❍	❍	❍	❍

Q22 Did you feel under pressure to return to work by your organisation?

- ❍ Yes
- ❍ No
- ❍ Slightly

Q23 To what extent do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
I am aware that my organisation has an attendance management policy in place	❍	❍	❍	❍	❍	❍
My organisation actively raises awareness regarding long term health conditions	❍	❍	❍	❍	❍	❍
My organisation would support me if I had a long term health condition	❍	❍	❍	❍	❍	❍
I am aware that there are formal return to work procedures following a notable absence	❍	❍	❍	❍	❍	❍

Health and Safety

Q24 To what extent do you agree or disagree with the following statements regarding health and safety within your workplace

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
Appropriate health and safety training has been given to me	❍	❍	❍	❍	❍	❍
I feel comfortable raising any health and safety concerns that I may have	❍	❍	❍	❍	❍	❍
There are designated health and safety officers	❍	❍	❍	❍	❍	❍
I have been consulted when my organisation has adopted a new health and safety policy	❍	❍	❍	❍	❍	❍
I have been made aware of all emergency meeting points	❍	❍	❍	❍	❍	❍
There are signs warning me of any hazards that I may face	❍	❍	❍	❍	❍	❍

Opinions of Work

Q25 To what extent do you agree or disagree with the following statements regarding your job satisfaction

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
I am satisfied with the work that I do	❍	❍	❍	❍	❍	❍
I am proud to work for my organisation	❍	❍	❍	❍	❍	❍
I feel that my role is meaningful	❍	❍	❍	❍	❍	❍
I enjoy my job	❍	❍	❍	❍	❍	❍
I get a feeling of accomplishment from doing my job	❍	❍	❍	❍	❍	❍
My pay reflects my level of contribution	❍	❍	❍	❍	❍	❍
I believe my levels of pay are fair	❍	❍	❍	❍	❍	❍
I worry about my job security	❍	❍	❍	❍	❍	❍

Q26 To what extent would you agree or disagree with the following statements regarding your employer/organisation

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree	Does Not Apply
I speak highly of my organisation to my friends	❍	❍	❍	❍	❍	❍
I would be happy for my friends and family to use my organisation's products/services	❍	❍	❍	❍	❍	❍
My organisation inspires the very best in me in the way of job performance	❍	❍	❍	❍	❍	❍
I try to help others in the organisation when I can	❍	❍	❍	❍	❍	❍
I volunteer to do things outside of my job that contribute to my organisation's objectives	❍	❍	❍	❍	❍	❍
I regularly go beyond what is required of me	❍	❍	❍	❍	❍	❍
I feel like I have to go beyond what is required for my career to progress	❍	❍	❍	❍	❍	❍
I feel a strong sense of belonging to my organisation	❍	❍	❍	❍	❍	❍

Q27 To what extent do you agree or disagree with the following statements regarding your commitment to your organisation

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
I often think of changing job	❍	❍	❍	❍	❍	❍
I see myself with a different organisation within 12 months	❍	❍	❍	❍	❍	❍
I do not wish to leave my current organisation	❍	❍	❍	❍	❍	❍
I receive suitable non-financial rewards for the work I do	❍	❍	❍	❍	❍	❍

Q28 Have you actively sought alternative employment in the last 12 months?

- ❍ Yes
- ❍ No, please go to Q30

Q29 What were the main reasons?

Mental Health and Wellbeing

Q30 To what extent do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
I am provided with information regarding stress and other mental health concerns	❍	❍	❍	❍	❍	❍
My organisation would support me if I had a mental health issue	❍	❍	❍	❍	❍	❍
I would feel comfortable discussing a mental health issue with my manager	❍	❍	❍	❍	❍	❍
I would feel comfortable discussing a physical health issue with my manager	❍	❍	❍	❍	❍	❍
I believe my manager would be willing to discuss any mental health issue should I have one	❍	❍	❍	❍	❍	❍
I am aware of my legal entitlements regarding working conditions	❍	❍	❍	❍	❍	❍
I am aware of a bullying and harassment policy being in place	❍	❍	❍	❍	❍	❍

Q31 To what extent do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
I am involved in the development of any mental health policies	❍	❍	❍	❍	❍	❍
I am provided with the chance to have training in mental health awareness	❍	❍	❍	❍	❍	❍
I am surveyed by my organisation about my mental health wellbeing	❍	❍	❍	❍	❍	❍
I am encouraged to take part in volunteering and out of work activities	❍	❍	❍	❍	❍	❍

Q32 Have you had any experience of any physical or mental health issue that impacts upon your day to day job?

- ❍ Yes, mental health
- ❍ Yes, physical health
- ❍ Yes, both
- ❍ No

Q33 In the past 2 weeks, how much of the time did any health problem make it difficult for you to perform your normal job duties?

- ❍ None of the time
- ❍ Some of the time
- ❍ Half of the time
- ❍ Most of the time
- ❍ All of the time

Q34 Does your organisation offer any support to help reduce stress within the workplace?

- ❍ Yes, please state _____
- ❍ Some
- ❍ No, please go to Q35
- ❍ Don't know, please go to Q35

Employment Details

Q35 How many hours do you work in an average week?

- ❍ 0-10 hours
- ❍ 11-20 hours
- ❍ 21-30 hours
- ❍ 31-40 hours
- ❍ Over 40 hours

Q36 How long have you been with your organisation?

- ❍ Less than 1 year
- ❍ less than 3 years
- ❍ less than 5 years
- ❍ More than 5 years

Q37 What is your contractual status? (Tick all that apply)

- ❑ Full time
- ❑ Part time
- ❑ Fixed term contract
- ❑ Temporary contract
- ❑ Volunteer
- ❑ Other, please specify _____

Q38 Do you receive any performance related pay?

- ❍ Yes
- ❍ No

About You

Q39 How old are you?

- ❍ Under 30
- ❍ 30 - 39
- ❍ 40 - 49
- ❍ 50 - 59
- ❍ 60 and over

Q40 What is your gender?

- ❍ Male
- ❍ Female

Q41 What is your ethnicity?

- ❍ White
- ❍ Mixed / Multiple ethnic groups
- ❍ Asian / Asian British
- ❍ Black / African / Caribbean / Black British
- ❍ Other ethnic groups, please state _____

Q42 Do you consider yourself to have a disability?

- ❍ Yes
- ❍ No

Q43 Do you have caring responsibilities? (This includes children)

- ❍ Yes, please state who you care for _____
- ❍ No

Q44 Are you aware of workplace well-being initiatives organised by your organisation?

- ❍ Yes
- ❍ No

Q45 If yes, please state below how have these initiatives affected you whilst at work?

If you have any enquiries please contact:

Kieran Hart

Doctoral Researcher

Bristol Business School

University of the West of England, Bristol

Professor Don Webber

Bristol Business School

University of the West of England, Bristol

[redacted]

[redacted]

Thank you for taking the time to complete this questionnaire.

APPENDIX B – MANAGER'S QUESTIONNAIRE

Thank you for agreeing to take part in this questionnaire which aims to evaluate the Bristol City Council's Workplace Wellbeing Charter. The data is being collected by researchers at the University of the West of England and will help provide the evidence needed to secure ongoing investment in workplace health. All responses will remain anonymous and confidential. If you do not wish to disclose certain types of information then feel free to skip the question. Contact details are provided at the end of this survey.

This questionnaire should take no longer than 15 minutes to complete.

Lifestyle Questions

Healthy Eating

Q1 Is there a healthy eating plan in place?

- ❍ Yes
- ❍ No

Q2 To what extent do you agree or disagree with the following statements regarding healthy eating

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
Information on healthy eating is provided to all employees	❍	❍	❍	❍	❍	❍
The organisation promotes healthier eating	❍	❍	❍	❍	❍	❍
Healthy choices are promoted by the organisation through an internal pricing strategy	❍	❍	❍	❍	❍	❍
Eating facilities are intentionally situated away from work areas	❍	❍	❍	❍	❍	❍
I encourage employees to eat away from work areas	❍	❍	❍	❍	❍	❍
Employees are consulted on any healthy eating intervention	❍	❍	❍	❍	❍	❍

Q3 To what extent do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
There are planned events to show the importance of healthy eating, including tailored programmes to improve employees understanding	❍	❍	❍	❍	❍	❍

Physical Activity

Q4 Is there a physical activity plan in place?

- ❍ Yes
- ❍ No

Q5 To what extent do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
Information is provided to all employees about the benefits of being physically active	❍	❍	❍	❍	❍	❍
Staff are encouraged to take the minimum number of breaks	❍	❍	❍	❍	❍	❍
Staff take regular breaks exceeding the minimum required	❍	❍	❍	❍	❍	❍
The organisation promotes physical activities within the local area and/or those led by the organisation	❍	❍	❍	❍	❍	❍
I encourage physically active ways of travelling to work	❍	❍	❍	❍	❍	❍

Smoking and Tobacco Use

Q6 Please answer yes or no to the following statements

	Yes	No	Don't Know	Does Not Apply
All staff are aware of the smoke-free policy	❍	❍	❍	❍
Electronic cigarettes come under the smoke-free policy	❍	❍	❍	❍
The organisation provides various stop smoking services	❍	❍	❍	❍

Q7 To what extent do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
Information about the long term health effects of smoking is provided to all employees	❍	❍	❍	❍	❍	❍
I am able to provide extra support to those who want to quit smoking	❍	❍	❍	❍	❍	❍
Employees are encouraged to use e-cigarettes as an alternative to tobacco	❍	❍	❍	❍	❍	❍
There is a procedure for employees to report breaches of the smoke-free policy	❍	❍	❍	❍	❍	❍
"No smoking" signs are clearly located in the workplace	❍	❍	❍	❍	❍	❍

Q8 To what extent do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
Employees are made aware of areas where they are allowed to smoke	❍	❍	❍	❍	❍	❍
Stop smoking services are promoted within the organisation	❍	❍	❍	❍	❍	❍
Staff are allowed time off to attend these services	❍	❍	❍	❍	❍	❍

Alcohol and Substance Misuse

Q9 Does your organisation have an alcohol and substance misuse policy in place?

- ❍ Yes
- ❍ No, please go to Q11

Q10 Has the alcohol and substance misuse policy been developed with employee representatives?

- ❍ Yes
- ❍ No
- ❍ Don't know

Q11 To what extent do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
Information regarding the effects of alcohol and substance misuse is provided to employees	❍	❍	❍	❍	❍	❍
I support employees who need external help	❍	❍	❍	❍	❍	❍
I am aware of the link between alcohol and mental health	❍	❍	❍	❍	❍	❍
I am aware why employees may not want to come forward with any alcohol related issues	❍	❍	❍	❍	❍	❍
Noticing the signs of misuse is an important feature of my training	❍	❍	❍	❍	❍	❍

Workplace Questions

Communications

Q12 Does your organisation have a formal communications policy in place?

- ❍ Yes
- ❍ No

Q13 Are health and wellbeing issues discussed with employees?

- ❍ Yes
- ❍ No, please go to Q15

Q14 How often are these issues discussed with employees?

- ❍ Never
- ❍ Rarely
- ❍ Sometimes
- ❍ Often
- ❍ All of the time

Q15 To what extent do you agree or disagree with the following statements regarding communications and engagement with your team?

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
I inform and support employees through any organisational change	❍	❍	❍	❍	❍	❍
I make employees aware of the importance of raising concerns	❍	❍	❍	❍	❍	❍
I am aware of the main issues that impact upon my employees health and wellbeing	❍	❍	❍	❍	❍	❍
I make decisions with employee input	❍	❍	❍	❍	❍	❍

Training and Development

Q16 Have you had training in how to have difficult conversations with employees? (conflict resolution etc.)

- ❍ Yes
- ❍ No

Q17 Have you had training in how to identify staff health and well-being issues?

- ❍ Yes
- ❍ No

Sickness Absence

Q18 Does your organisation have a formal attendance policy in place?

- ❍ Yes
- ❍ No

Q19 To what extent do you agree or disagree with the following statements?

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
Line managers are encouraged to maintain contact with absent employees	❍	❍	❍	❍	❍	❍
Causes of absences are collected and monitored	❍	❍	❍	❍	❍	❍
There are formal measures I can take if trends in absences appear	❍	❍	❍	❍	❍	❍

Q20 To what extent do you agree or disagree with the following statements regarding prolonged and recurring absences? A prolonged absence is seen as one that lasts for more than 3 weeks.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
Appropriate support is discussed and provided following a statement of fitness to work	❍	❍	❍	❍	❍	❍
Pressure is placed upon myself to encourage employees to return as soon as possible	❍	❍	❍	❍	❍	❍
Return to work policies support recovery	❍	❍	❍	❍	❍	❍
Return to work policies support an early return to work	❍	❍	❍	❍	❍	❍

Health and Safety

Q21 To what extent do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
Sufficient information is provided regarding the risks employees face	❍	❍	❍	❍	❍	❍
Employees undertake relevant and appropriate health and safety training	❍	❍	❍	❍	❍	❍
New hazards are identified and implemented into existing health and safety procedures	❍	❍	❍	❍	❍	❍
Health and safety concerns can be raised by employees through a formal procedure that is in place	❍	❍	❍	❍	❍	❍

Q22 Please answer yes or no to the following questions

	Yes	No	Don't Know	Does Not Apply
I have undertaken health and safety training	❍	❍	❍	❍
Health and safety meetings take place	❍	❍	❍	❍
Health and safety meetings are recorded	❍	❍	❍	❍

Q23 To what extent do you disagree or agree with the following statements regarding performance management

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
I conduct regular performance appraisals	❍	❍	❍	❍	❍	❍
I would like to conduct performance appraisals more frequently	❍	❍	❍	❍	❍	❍
I use the performance appraisals in my decision making process	❍	❍	❍	❍	❍	❍
I believe the organisation is committed to improving employees' work-life balance	❍	❍	❍	❍	❍	❍
My pay reflects the level of contribution I make	❍	❍	❍	❍	❍	❍

Wellbeing

Q24 Is there a health and wellbeing strategy in place?

- ❍ Yes
- ❍ No, please go to Q26

Q25 Has the strategy been developed with employee representatives?

- ❍ Yes
- ❍ No
- ❍ Don't know

Q26 To what extent do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
Reducing stigma surrounding mental health illness is a part of the organisational culture	❍	❍	❍	❍	❍	❍
Employees are made aware of their legal entitlements regarding working conditions	❍	❍	❍	❍	❍	❍

Q27 To what extent do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
I encourage employees to come forward with any mental health issues they may have	❍	❍	❍	❍	❍	❍
I would feel comfortable discussing an employee's mental health	❍	❍	❍	❍	❍	❍
I would feel comfortable discussing an employee's physical health	❍	❍	❍	❍	❍	❍

Q28 Please answer yes or no to the following statements

	Yes	No	Don't Know	Does Not Apply
Education about mental health illness can be provided to all employees by the organisation	❍	❍	❍	❍
There is a stress prevention system in place	❍	❍	❍	❍
I encourage employees to use the stress prevention system	❍	❍	❍	❍

Q29 To what extent do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Does Not Apply
Our organisation sees health and wellbeing as an important determinant of productivity	❍	❍	❍	❍	❍	❍
Information about health and wellbeing is provided to all employees	❍	❍	❍	❍	❍	❍
I notify employees about health and wellbeing initiatives	❍	❍	❍	❍	❍	❍

Q30 Are surveys on employee wellbeing regularly conducted?

- ❍ Yes
- ❍ No, please go to Q32

Q31 Are action plans drawn up as a result of the wellbeing surveys?

- ❍ Yes
- ❍ No
- ❍ Don't Know

Q32 The following question seeks to identify how important each management activity is to your organisation and how well it performs in enabling you to meet your organisational objectives. Please state how important each management activity is to achieving the strategic goals of your organisation and how effective each management activity is in your organisation achieving its goals.

	Strategic Importance			Effectiveness			
	Not Important	Important	Very Important	Not Effective	Effective	Very Effective	Does Not Apply
Effective leadership	❍	❍	❍	❍	❍	❍	❍
Attendance management	❍	❍	❍	❍	❍	❍	❍
Health and safety	❍	❍	❍	❍	❍	❍	❍
Mental Health and wellbeing	❍	❍	❍	❍	❍	❍	❍
Tobacco use cessation	❍	❍	❍	❍	❍	❍	❍
Increasing physical activity	❍	❍	❍	❍	❍	❍	❍
Healthy eating	❍	❍	❍	❍	❍	❍	❍
Preventing excessive alcohol consumption	❍	❍	❍	❍	❍	❍	❍

Employment Details

Q33 Are you aware of workplace well-being initiatives within your organisation?

❍ Yes
❍ No

Q34 If yes, please explain how these initiatives affected your approach to performance management?

Q35 If you are happy to be contacted in the future to take part in a second survey could you please provide an email address below

If you have any enquiries please contact:

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Kieran Hart

Doctoral Researcher

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APPENDIX C - COMPANY DATA SHEET

Thank you for agreeing to provide the following data. This data will be used to create the productivity measures which are crucial to evaluating the Bristol City Council's Workplace Wellbeing Charter.

All responses will be treated in the strictest of confidence and will be used only for the purpose outlined above. All data will remain entirely anonymous. Whilst we would like as many responses as possible, if you do not wish to disclose certain types of information or the question does not apply then feel free to not answer the question.

This data is being collected and analysed by researchers from The University of the West of England, Bristol.

1. How many employees does your organisation currently employ? This includes full-time employees, part time employees (works fewer than 35 hours per week) and full-time equivalents
2. How many employees have left the organisation in the past 12 months? (This includes voluntary and involuntary incidents)
3. What was the value of the organisation's total turnover for the past financial year?
4. What was the total amount spent on raw materials for the financial year end?
5. What was the total amount spent on other expenses for the financial year end? (This includes rent, leasing and similar expenses)
6. What was the total amount spent on employee costs for the past financial year?
7. How many hours were worked in an average week by your employees over the past 4 weeks?

Contact Details

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APPENDIX D – FACTOR ANALYSIS RESULTS

Cornish (2007) states that factor analysis seeks to reduce the data into a smaller subset of variables which are made up of underlying latent variables. This is supported by Rahn (no date) who goes further to state that multiple observed variables should have a correlation to an unobserved latent variable, which leads to similar patterns of responses within the dataset. The necessity for a linear relationship is supported by numerous authors (Tryfos, 2001; UCLA, no date; Garret-Mayer, 2006) as this means that a smaller number of latent variables can be used to represent larger dataset and still generate similar results.

However, despite this correlation existing and the same patterns of responses being observed, it remains possible to have different results due to different methods given the same data. UCLA (no date) state that this is due to the multiple methods and possible rotations that can be used when analysing factors. A major reason for this could be different rotations as an orthogonal rotation assumes that factors are not correlated unlike an oblique rotation which does allow for correlation between factors.

Rahn (no date) states that factor analysis is used to analyse complex concepts for variables that have underlying relationships. For example, it can be seen that our concepts of mental health incorporates many variables and that these variables are related. Therefore, factor analysis enables many relationships to be reduced to common themes.

Garret-Mayer (2006) states that there are a number of different applications for factor analysis:

1. It can identify underlying factors which enables further understanding of the relationships within a concept.
2. Factor analysis screens variables as it allows one or a few variables to represent many variables.
3. Factor analysis enables simpler summarising of the data due to the reduced number of variables.
4. Factor analysis enables clustering within the sample as individuals can be grouped based on their factor scores.

There is some debate concerning the number of assumptions that are used in factor analysis. According to Garret-Mayer (2006), there are three main assumptions that are used in this process:

1. The error has a constant variance and is on average equal to zero.
2. The covariance between the factors and the error is equal to zero.
3. Conditional independence is assumed so observed variables are assumed to be independent of each other. This means that the explanatory variables are only related to each other through their mutual relationship with the factor.

In contrast to the final assumption outlined above, Cornish (2007) states that for factor analysis to be used the variables should be linearly related to each other and at least moderately correlated with each other. If this is not the case then there will almost be the same number of factors as there are variables that were originally observed, which would defeat the point of conducting a factor analysis.

There are four main components of a factor analysis: correlation matrix, eigenvalues, rotation and The Kaiser-Meyer-Olkin (KMO) statistic. The correlation matrix shows the correlation between variables. It is generally used to illustrate the presence of multicollinearity and while there is a lot of debate surrounding what figure should be used to identify a correlation that is too high Field (2005) suggests using the figure of 0.9. The correlation matrix for a factor analysis will also show the determinants which, according to Field (2005) and UCLA (no date), needs to be greater than 0.00001 to avoid computational problems.

Eigenvalues show the variances of the factors with the rule of thumb being that a factor is accepted if the eigenvalue is greater than one for a sample of 250 or more. The eigenvalues will also show how much of the variation in the observed variables is explained by the factor, usually as a percentage (Rahn, no date; Garret-Mayer, 2006; Field 2005).

According to Cornish (2007) and Garret-Mayer (2006), the overall aim of factor rotation is to load variables highly onto one factor whilst ensuring that these variables are loaded as lowly as possible on the remaining factors. If this does not occur (i.e. a variable is loaded highly onto two factors) then this variable is said to be split loaded (Gie Yong and Pearce, 2013). Overall this should make the factors easier to interpret as, according to Field (2005), it optimises the factor structure.

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is a measure of how compact the correlations are within the variables (Field, 2005). The statistic will range between 0 and 1 with 0 meaning that there is diffusion within the correlations (and hence factor analysis should not be used) and a measure of 1 meaning the correlation is relatively compact (and therefore factor analysis is fully appropriate). Kaiser (1974) recommends

accepting values that are greater than 0.5 but goes on to describe a score between 0.5 and 0.7 as mediocre, between 0.7 and 0.8 as good, between 0.8 and 0.9 as great and greater than 0.9 as superb.

Summary of Results

The number of potential variables is found by combining all statements and questions asked within both questionnaires for each concept. The table also shows the number of factors that have been identified for each concept. Based on these tables it can be seen that the factor analysis for both data collection periods were successful in reducing the data. This process had the same benefit across both data collection periods, with the second period only having one extra factor for alcohol and substance misuse. A concern with this process is that while the data have been reduced and is more manageable, the quality of the data available could have suffered. However, this does not appear to be a concern as all broad concepts in both questionnaires capture a large percentage of the variation that was originally observed.

General Results from Factor Analysis in the First Data Collection Period

Wellbeing Concept	**Number of Original Variables**	**Number of Factors**
Healthy Eating	9	2
Physical Activity	6	1
Leadership	9	1
Flexibility	7	1
Training and Development	7	2
Absence Management	14	2
Health and Safety	6	1
Job Satisfaction	8	1
Engagement	8	1
Commitment to Employer	6	2
Mental Health and Wellbeing	14	2
Tobacco Use Cessation	8	2
Alcohol and Substance Use	9	2
Total	**111**	**20**

General Results from Factor Analysis for the Second Data Collection Period

Wellbeing Concept	**Number of Original Variables**	**Number of Factors**
Healthy Eating	9	2
Physical Activity	6	1
Leadership	9	1
Flexibility	7	1
Training and Development	7	2
Absence Management	14	2
Health and Safety	6	1

Job Satisfaction	8	1
Engagement	8	1
Commitment to Employer	6	2
Mental Health and Wellbeing	14	2
Tobacco Use Cessation	8	2
Alcohol and Substance Use	9	3
Total	**111**	**21**

5.4.2.2 Specific Results

The aim of this section is to highlight how the factor analysis has performed and to discuss in more detail what factors have been created and what they represent.

Healthy Eating

Tables 5.6 and 5.7 show that two factors have been created from the initial 9 statements that account for 75.48% and 73.59% of the variance in both time periods respectively. The determinants are 0.013 and 0.018 which means that there are no strong computational problems as this is greater than the 0.0001 critical value and the KMO statistics are 0.763 and 0.0735 which is a good score and indicates that factor analysis is appropriate. The factors identified can be titled OrgOptionsHE which represents the opportunities that are provided to the employees by their employer to improve their diet, and OrgSupportHE which represents the support that employees receive from their employers to help improve their diets. The statements asking employees how often they consume fruit and veg and takeaways were omitted from the analysis for both time periods due to low communalities.

Factor Analysis Statistics in both Time Periods for Healthy Eating

First Data Collection Period				**Second Data Collection Period**			
Determinant	0.013			0.018			
KMO Statistic	0.763			0.735			
			Eigenvalue				
Component	Total	% of Variance	Cumulative %	Component	Total	% of variance	Cumulative %
1	4.039	57.71	57.71	1	3.74	53.39	53.39
2	1.240	17.72	75.48	2	1.41	20.21	73.59

Factor Analysis Components in both Time Periods for Healthy Eating

First Data Period	**Component**		**Second Data Period**	**Component**	
	1	2		1	2
ThereAreVendingMachines	0.738		VendingMachinesAtWork	0.751	
VendingMachinesHaveHealthyOptions	0.826		VendingMachinesHaveHealthyOptions	0.826	
OnsiteCafeorRestaurant	0.899		OnsiteCafeRestaurant	0.851	
CafesorRestaurHealthyOptions	0.932		CafeRestaurHealthyOptions	0.9	
OrganSupportsHealthyDiet		0.885	OrgSuppHealthyDiet		0.885
ProvidedInfoOnHealthyEating		0.869	InfoProvidedHealthyEating		0.851

OfferedProgrammeToImproveDiet	0.847	TailoredProgImproveDiet	0.879

Physical Activity

Tables 5.8 and 5.9 show that one factor has been created from the original 6 statements and questions related to physical activity and this one factor explains 82.11% and 77.53% of the variation for each time periods respectively. It can be seen that the determinant is 0.040 and 0.071 meaning there are no strong computational issues. The KMO statistic is 0.853 and 0.832 which is a great score meaning that factor analysis is appropriate. The factor identified has been titled PhysicalActivity which represents how the organisation helps support and encourage their employees to be more physically active. The following statements were omitted due to low communalities: I exercise 2-3 times per week and I take part in sports teams outside of work. The omission of these statements from the factor analysis highlights that they are important variables by themselves and so these can be included in the models as single statements.

Factor Analysis Statistics for both Time Periods for Physical Activity

First Data Collection Period				**Second Data Collection Period**			
Determinant		0.04		0.071			
KMO Statistic		0.853		0.832			
			Eigenvalue				
Component	Total	% of Variance	Cumulative %	Component	Total	% of variance	Cumulative %
1	3.28	82.11	82.11	1	3.10	77.53	77.53

Factor Analysis Components in both Time Periods for Physical Activity

First Data Period	**Component**	**Second Data Period**	**Component**
	1		1
InfoProvidedBenefitsOfPA	0.926	InfoProvidedBenefitsOfPA	0.896
OrganSupportsPhysicalActivity	0.929	OrganSupportsPA	0.919
TeamsorClubsIcanjoin	0.880	TeamsClubsICanJoin	0.874
AdvocatesActiveTravel	0.889	AdvocatesActiveTravel	0.830

Leadership

Tables 5.10 and 5.11 show the original 9 statements have been reduced to one underlying factor that account for 77.42% and 77.13% of the variation within the 9 statements for both time periods. The determinant is 0.00000653 and 0.001 meaning there are no strong computational issues for the second data collection period. Whilst the determinant for the first data collection problem indicates that there are computational problems in order to have a consistent analysis the factor analysis outcome will be maintained. The KMO statistic is 0.957 and 0.939 which is a superb score, meaning that factor analysis was appropriate to use. The factor identified has been titled Leadership which represents the leadership within the organisation, specifically this focuses on communication between managers and employees in a variety of aspects. The following statements are omitted from the second data collection period due to low communalities: I am aware of an organisation communication policy and I am consulted on any decisions regarding organisational changes.

Factor Analysis Statistics in both Time Periods for Leadership

First Data Collection Period				**Second Data Collection Period**			
Determinant		0.00000653		0.001			
KMO Statistic		0.957		0.939			
			Eigenvalue				
Component	Total	% of Variance	Cumulative %	Component	Total	% of variance	Cumulative %
1	6.99	77.42	77.42	1	5.40	77.13	77.13

Factor Analysis Components in both Time Periods for Leadership

First Data Period	**Component** 1	**Second Data Period**	**Component** 1
ConsultedOrganChange	0.852	InformPoliciesManageIssues	0.865
InformedComplaintManPol	0.897	RecognisedHighStandardsWork	0.885
RecognisedHighWork	0.882	OppAttendTrainingCourses	0.853
OppTrainingCourses	0.908	AbleToSuggestIdeas	0.902
AbleSuggestIdeas	0.928	RegPerfReviews	0.865
RegPerfReviews	0.877	ReviewsAreBeneficial	0.853
RevsAreBeneficial	0.844	KnowPerfContributesOrgGoals	0.922
KnowPerfImpactsOrganGoals	0.891		
AwareCommsPolicy	0.836		

Flexibility

Tables 5.12 and tables 5.13 show that factor analysis has identified one underlying factor within the original 7 statements which account for 81.76% and 77.93% of the variation original observed for each time period. The determinants are 0.008 and 0.019 meaning there are no strong computational issues. The KMO is 0.903 and 0.898 which is a superb score for the first data collection period and a great score for the second. This means that factor analysis was appropriate to use. The factor that has been identified is termed Flexibility which represents the measures in place that facilitate flexible working as well as the employee's perspective on what they can achieve as a result. Due to low communalities the statements I can work at home and I often work at home were omitted.

Factor Analysis Statistics in both Time Periods for Flexibility

First Data Collection Period				**Second Data Collection Period**			
Determinant		0.008		0.019			
KMO Statistic		0.903		0.898			
			Eigenvalue				
Component	Total	% of Variance	Cumulative %	Component	Total	% of variance	Cumulative %
1	4.09	81.76	81.76	1	3.90	77.93	77.93

Factor Analysis Components in both Time Periods for Flexibility

First Data Period	**Component**	**Second Data Period**	**Component**
	1		1
ChooseWorkOverHours	0.903	CanChooseWorkHours	0.889
BalanceWorkLife	0.942	BalanceWorkLife	0.918
InfluenceAmountWork	0.864	InfluenceOverWorkload	0.839
WorkFlexiblyDepOnNeeds	0.936	WorkFlexiblyDepOnNeeds	0.919
FulfillCaringResponsibilities	0.872	FulfillCaringResponsibilities	0.846

Training and Development

Tables 5.14 and 5.15 show that factor analysis identified two factors that represent 82.02% and 83.25% of the variance of the original 6 statements for both time periods. The determinants were 0.003 and 0.009 and the KMO statistics were 0.882 and 0.87. This means there were no computational issues with the factor analysis and that this was appropriate to undertake for training and development. The two identified factors are TrainingAndDevelopment which represents the training and development opportunities available to the employee and the nature of the training (quality, if paid for and purpose). HowMuchPayForTraining represents how much the employee pays for their training if they do pay for it. One question was omitted from the analysis due to low communalities and that is the training I receive is of high quality. This may be because it is important in its own right.

Factor Analysis Statistics in both Time Periods for Training and Development

First Data Collection Period				**Second Data Collection Period**			
Determinant		0.003		0.009			
KMO Statistic		0.882		0.870			
			Eigenvalue				
Component	Total	% of Variance	Cumulative %	Component	Total	% of variance	Cumulative %
1	4.68	66.88	66.88	1	3.99	66.44	66.44
2	1.06	15.14	82.02	2	1.01	16.802	83.25

Factor Analysis Components in both Time Periods for Training and Development

First Data Period	**Component**		**Second Data Period**	**Component**	
	1	2		1	2
OppToProgress	0.898		OppProgressInOrganisation	0.897	
OppToDevCareer	0.925		OppToDevelopCareer	0.941	
SupportDoingJobEffectively	0.927		TrainSuppDoingMyJob	0.931	
TrainingIsHighQuality	0.857		TrainDealWorkPressures	0.901	
TrainingDealWorkPressures	0.889		PayForTraining	0.785	
DoYouPayForTraining	0.796		SomeAsPercentage		0.996
HowMuchTrainingPaid		0.987			

Absence Management

Tables 5.16 and 5.17 show that factor analysis identified two factors from the 15 variables that were included in the analysis which represented 87.96% and 86.98% of the variation in both time periods. The determinants were 0.000000000269 and 3.537 in both time periods and the KMO statistics were 0.916 and 0.915. This means that there were no computational issues for the second data collection period and that factor analysis was appropriate to use for absence management. Similar to Leadership, the first data collection periods determinant is below the critical value but to maintain consistency the factor will be maintained. The two factors that were identified are OrgSupportAM which represents the ways in which the organisation supports the employees while they are absent and the support received when returning to work, and AwarenessAM which represents the employee's awareness of formal policies and if organisation makes them aware of long term conditions.

Two questions were omitted from the analysis as they had low communalities, they were: how many absences have you had in the past three months due to ill health? And have you had any notable absences in the past 12 months? These appear to be important in their own right.

Factor Analysis Statistics in both Time Periods for Absence Management

First Data Collection Period				**Second Data Collection Period**			
Determinant	0.000000000269			3.537			
KMO Statistic	0.916			0.915			
			Eigenvalue				
Component	Total	% of Variance	Cumulative %	Component	Total	% of variance	Cumulative %
1	7.62	63.49	63.49	1	7.53	62.76	62.76
2	2.94	24.47	87.96	2	2.91	24.22	86.98

Factor Analysis Components in both Time Periods for Absence Management

First Data Period	**Component**		**Second Data Period**	**Component**	
	1	2		1	2
ManagerkeptContact	0.963		ManKeptRegContact	0.966	
ManagerSupportiveWhenOff	0.982		ManSuppWhilstOff	0.979	
ManagerSupportiveWhenReturned	0.977		ManSuppReturnedWork	0.977	
CareerNegAffected	0.852		CareerNegAffected	0.858	
SupportedReturnToWork	0.980		SuppReturnToWork	0.981	
AdjustmentsMadeClear	0.945		AdjustmentsMadeClear	0.952	
OrganConcernWellbeing	0.952		OrgConcernHealthWellbeing	0.927	
UnderPressureToReturn	0.908		PressureReturnToWork	0.876	
AwareAttendManPolicy		0.889	AwareAttendManPolicy		0.881
OrganAwareLongTermIssues		0.919	OrgRaiseAwareLTconditions		0.892
OrganSupportMeLongTermIssue		0.924	OrgSuppIfLTconditions		0.938
AwareFormalReturnProcedures		0.931	AwareReturnWorkProcedures		0.923

Health and Safety

Tables 5.18 and 5.19 show that factor analysis has reduced the 6 statements for health and safety down to 1 underlying trend that accounts for 88.79% and 82.76% of the variation in both time periods. The determinants were 0.002 and 0.001 meaning there are no computational issues. The KMO statistics are 0.921 and 0.929 which is described as a superb score and shows that factor analysis was appropriate. The factor that has been identified is HealthAndSafety which represents the health and safety of the workplace from the employee's perspective. The statement asking if the employee is consulted on new health and safety policies has been omitted from the first data collection period due to low communalities, suggesting that consultation may be a separate issue.

Factor Analysis Statistics in both Time Periods for Health and Safety

First Data Collection Period				**Second Data Collection Period**			
Determinant		0.002		0.001			
KMO Statistic		0.921		0.929			
			Eigenvalue				
Component	Total	% of Variance	Cumulative %	Component	Total	% of variance	Cumulative %
1	4.44	88.79	88.79	1	4.97	82.76	82.76

Factor Analysis Components in both Time Periods for Health and Safety

First Data Period	**Component** 1	**Second Data Period**	**Component** 1
HealthSafetyTrainingGiven	0.928	HStrainingGiven	0.930
ComfortableRaisingIssues	0.951	ComfortableRaisingHSConcerns	0.939
DesignatedHealthSafetyOfficers	0.949	DesignatedHSofficers	0.913
AwareOfMeetingPoints	0.939	ConsultedNewHSpolicies	0.804
SignsWarningOfHazards	0.945	AwareEmergencyMeetingPoints	0.928
		SignsWarningHazardsFaced	0.937

Job Satisfaction

Tables 5.20 and 5.21 shows factor analysis identified one factor from the original 8 statements that represented 83.96% and 84% of the variation in both time periods. The determinants are 0.00000217 and 8.108, the KMO statistics are 0.906 and 0.896 meaning that there were no computational issues for the second data collection period and that factor analysis was an appropriate method to use for both time periods. Once again, the determinant for the first data collection period is below the critical value but to maintain consistency the factor will be maintained. The identified factor is JobSatisfaction which represents the general levels of job satisfaction shown by the employees. The statement I worry about my job security has been omitted due to low communalities and may be a separate important issue.

Factor Analysis Statistics in both Time Periods for Job Satisfaction

First Data Collection Period				**Second Data Collection Period**			
Determinant		0.00000217		8.108			
KMO Statistic		0.906		0.896			
			Eigenvalue				
Component	Total	% of Variance	Cumulative %	Component	Total	% of variance	Cumulative %
1	5.88	83.96	83.96	1	5.88	84	84

Factor Analysis Components in both Time Periods for Job Satisfaction

First Data Period	**Component** 1	**Second Data Period**	**Component** 1
SatisfiedWithWork	0.946	SatisfiedWithWork	0.939
Proudtoworkfororgan	0.932	ProudWorkForOrg	0.927
Roleismeaningful	0.937	RoleIsMeaningful	0.929
Enjoymyjob	0.958	EnjoyMyJob	0.958
Feelingofaccomplishment	0.940	FeelingAccomplishment	0.955
Payreflectscontribution	0.850	PayReflectsContribution	0.855
Levelofpayisfair	0.843	PayIsFair	0.845

Engagement

Tables 5.22 and 5.23 show factor analysis identified one factor that represents 81.72% and 83.06% of the variation from the original 8 statements for engagement in the two time periods. The determinants are 0.000 and 0.0001 meaning there are no computational issues. The KMO statistics are 0.918 and 0.889, which is a superb score for the first data collection period and a great score for the second. This shows that factor analysis was an appropriate method to use for both time periods. The one factor that has been identified is Engagement which represents how engaged the employees are at work and to what extent do they show voluntary commitment and engagement outside of their job tasks.

The following statements were omitted due to low communalities: I volunteer to do things outside of my job that contributes to my organisations objectives (second data collection period) and I feel like I have to go beyond what is required for my career to progress (both data collection periods).

Factor Analysis Statistics in both Time Periods for Engagement

First Data Collection Period				**Second Data Collection Period**			
Determinant		0.000		0.001			
KMO Statistic		0.918		0.889			
			Eigenvalue				
Component	Total	% of Variance	Cumulative %	Component	Total	% of variance	Cumulative %
1	5.72	81.72	81.72	1	4.98	83.06	83.06

Factor Analysis Components in both Time Periods for Engagement

First Data Period	**Component** 1	**Second Data Period**	**Component** 1
SpeakHighlyOfOrgan	0.922	SpeakHighlyOrg	0.936
HappyForFriendsToUseServices	0.927	HappyFFuseProdServ	0.943
OrganInspiresBestInMe	0.882	OrgInspiresBestInMe	0.900
HelpOthersWhenICan	0.933	HelpOthersWhenICan	0.915
VolunteerToDoThingsOutsideOfMyJob	0.849	RegGoBeyondRequired	0.858
RegGoBeyondRequirements	0.892	SenseBelongingToOrg	0.914
StrongSenseOfBelonging	0.919		

Commitment to Employer

Tables 5.24 and 5.25 show factor analysis identified two factors that represent 84.76% and 85.71% of the variation within both time periods. The determinants are 0.043 and 0.036 meaning there are no computational issues for both time periods. The KMO statistics are 0.729 and 0.701 which is a good score and show that factor analysis was appropriate to use for both time periods. . The two factors identified are IntentToStayCE which represents the employee's intention to stay with their employer and IntentToLeaveCE which represents the employee's intention to leave their employer.

Factor Analysis Statistics in both Time Periods for Commitment to Employer

First Data Collection Period				**Second Data Collection Period**			
Determinant	0.043			0.036			
KMO Statistic	0.729			0.701			
			Eigenvalue				
Component	Total	% of Variance	Cumulative %	Component	Total	% of variance	Cumulative %
1	3.21	64.27	64.27	1	3.04	60.74	60.74
2	1.03	20.49	84.76	2	1.25	24.97	85.71

Factor Analysis Components in both Time Periods for Commitment to Employer

First Data Period	**Component**		**Second Data Period**	**Component**	
	1	2		1	2
OftenThinkOfChangingJob		0.971	ThinkChangeJob		0.963
SeeMyselfWithDifferentEmployer		0.947	DifferentOrg12Months		0.976
DoNotWishToLeaveCurrentOrganisation	0.913		DoNotWishLeaveOrg	0.899	
ReceiveSuitableNonFinancialRewards	0.901		ReceiveNonFinancialRewards	0.915	
ActivelySoughtOtherEmployment	0.848		SoughtAltEmployment	0.843	

Mental Health and Wellbeing

Tables 5.26 and 5.27 show factor analysis identified one factor that represenst 84.95% and 82.36% of the variance for both time periods. The determinants are 0.00000484 and 0.000 meaning there are no computational issues. The KMO statistic is 0.930 and 0.919, which is a superb score with both statistics showing that there is no computational issues for the second data collection period and that factor analysis was appropriate. The determinant for the first data collection period is below the critical value but to maintain a consistent analysis the factor will be maintained. The identified factor is OrgSupportMHWB which represents the employee's belief of organisation support as well as their own comfortability with discussing any health related issues.

Many statements were omitted from the analysis due to low communalities. As a result of this a second explorative factor analysis was conducted on these factors and they created the factor described below.

Factor Analysis Statistics in both Time Periods for Mental Health and Wellbeing

First Data Collection Period				**Second Data Collection Period**			
Determinant		0.00000484		0.000			
KMO Statistic		0.930		0.919			
			Eigenvalue				
Component	Total	% of Variance	Cumulative %	Component	Total	% of variance	Cumulative %
1	5.95	84.95	84.95	1	5.77	82.36	82.36

Factor Analysis Components in both Time Periods for Mental Health and Wellbeing

First Data Period	**Component** 1	**Second Data Period**	**Component** 1
InfoRegardingMHConcerns	0.904	InfoProvStressOtherMH	0.875
OrganSupportIfHadMHissue	0.963	OrgSuppMeMHissue	0.933
ComfortableDiscussingMHissue	0.920	ComfortableDiscussingMHissue	0.910
ComfortableDiscussingPHissue	0.939	ComfortableDiscussingPHissue	0.931
ManagerWillingToDiscussMHissue	0.952	ManDiscussMHissue	0.945
AwareLegalEntitlements	0.861	AwareEntitlementsConditions	0.878
AwareOfHarassmentPolicy	0.909	AwareBullyingPolicy	0.878

Mental Health and Wellbeing (ii)

Tables 5.28 and 5.29 show factor analysis identified one factor that represents 80.42% and 76.54% of the variance for both time periods. The determinants are 0.054 and 0.0901, the KMO statistics are 0.853 and 0.846 which is a great score. Both statistics show that there are no computational issues and that factor analysis was appropriate for both time periods. The one identified factor is titled EngagementOppMHWB which represents the opportunities employees have to engage with mental health and wellbeing enhancing opportunities.

The following questions were omitted from both factor analyses due to low communalities: have you had any experience of any physical or mental health issue that impacts upon your day to day job? In the past two weeks, how much of the time did any health problem make it difficult for you to perform your normal job duties? Does your organisation offer any support to help reduce stress within the workplace? These appear to be separate and important issues.

Factor Analysis Statistics for Mental Health and Wellbeing (ii)

First Data Collection Period				**Second Data Collection Period**			
Determinant		0.054		0.091			
KMO Statistic		0.853		0.846			
			Eigenvalue				
Component	Total	% of Variance	Cumulative %	Component	Total	% of variance	Cumulative %
1	3.22	80.42	80.42	1	3.06	76.54	76.54

Factor Analysis Components for Mental Health and Wellbeing (ii)

First Data Period	**Component**	**Second Data Period**	**Component**
	1		1
InvolvedInDevelopMHpolicies	0.877	InvolvedMHpolicyDevelopment	0.842
CanHaveTrainingMHawareness	0.913	ChanceTrainingInMHawareness	0.887
SurveyedAboutMHWB	0.911	SurveyedAboutMH	0.892
EncouragedToVolunteer	0.885	EncouragedToVolunteer	0.877

Tobacco Use Cessation

Tables 5.30 and 5.31 show factor analysis identified 2 factors that account for 84.24% and 83.18% of the original observed variation in both time periods. The determinant and the KMO statistics are 0.008 and 0.010 and 0.856 and 0.828 respectively meaning that there are no computational issues and factor analysis was appropriate to use. The two factors identified are TobaccoCessation which represents if the employee smokes and the organisational processes in place to help them reduce this and AmountSmoked which represents the amount the employee smokes and consists of one question asking this.

Omitted from the analysis due to low communalities is the use of an e-cigarette (both data collection periods), Do you smoke (second data collection period) and I smoke to reduce workplace stress (first data collection period).

Factor Analysis Statistics for Tobacco Use Cessation

First Data Collection Period				**Second Data Collection Period**			
Determinant		0.008		0.010			
KMO Statistic		0.856		0.828			
			Eigenvalue				
Component	Total	% of Variance	Cumulative %	Component	Total	% of variance	Cumulative %
1	3.92	65.40	65.40	1	3.9	64.99	64.99
2	1.13	18.84	84.24	2	1.09	18.19	83.18

Factor Analysis Components for Tobacco Use Cessation

First Data Period	**Component**		**Second Data Period**	**Component**	
	1	2		1	2
DoYouSmoke	0.765		HowManySmoked		0.983
HowManySmoked		0.970	AwareSmokeFreePolicy	0.926	
AwareOfSmokefreepolicy	0.955		AwareTobaccoControlLaws	0.936	
AwareOftobaccoControlLaws	0.942		OrgSuppMeQuitting	0.871	
OrganSupportQuitting	0.869		NoSmokingSignsClear	0.860	
NoSmokingSignsClear	0.881		UseSmokingReduceStress	0.818	

Alcohol and Substance Misuse

Tables 5.32 and 5.33 show factor analysis identified two factors that represent 79.61% of the variation in the original 9 statements and questions. The determinant is 0.102 meaning there are no computational issues and the KMO statistic is 0.790 which is a good score and shows that factor analysis was appropriate. Three factors have been identified. OrgSupportALC represents the organisational support in place to prevent and manage alcohol misuse and the employee's consumption of alcohol (first data collection period only).

UseOfAlcAndSubstances represents the reasons why employee's consuming alcohol and how alcohol and substances are used by employees. The negative loadings imply that this underlying theory is actually measuring the opposite to what was originally measured. Therefore, the statements used in this factor read as: I do not often consume more alcohol than is recommended, I do not often use alcohol as a means to reduce workplace stress and I have not used legal substances to reduce workplace stress. UnitsConsumed represents the units of alcohol that are typically consumed. Once again the negative loading implies the factor is measuring the opposite of what has been measured originally meaning the statement reads I do not consume alcohol.

The second factor outlined here is only present in the second data collection period as the statements that make this factor were omitted from the first data collection period. The third factor outlined above is the second factor in the first data collection period. This factor is titled AlcoholConsumption in the second data collection period as it includes a question asking if the respondent consumes alcohol in addition to how many units are consumed.

Omitted from the analysis due to low communalities is; I consume more than is recommended, I use alcohol to reduce workplace stress and I use other substances to reduce workplace stress.

Factor Analysis Statistics for Alcohol and Substance Misuse

First Data Collection Period				**Second Data Collection Period**			
Determinant	0.102			0.017			
KMO Statistic	0.790			0.812			
			Eigenvalue				
Component	Total	% of Variance	Cumulative %	Component	Total	% of variance	Cumulative %
1	2.98	59.50	59.50	1	3.97	49.56	49.56
2	1.01	20.11	79.61	2	1.32	16.47	66.03
				3	1.01	12.65	78.67

Factor Analysis Components for Alcohol and Substance Misuse

First Data Period	Component		Second Data Period	Component		
	1	2		1	2	3
HowmanyUnits		0.969	HowMuchTypicallyConsumed			0.896
InfoOnImpactAlcoholHealth	0.879		InfoProvidedImpactAlcohol	0.920		
OrganSupportAlcIssues	0.866		SuppProvidedAlcMisuse	0.871		
AwareGuidelinesAtFunctions	0.839		AwareGuidelinesAtFunctions	0.843		
ConsumeAlcohol	0.821		OftenConsumeMoreRecom		-.886	
			OftenUseAlcReduceStress		-.964	
			UsedSubstancesReduceStress		-.810	
			ConsumeAlcohol			-0.504

Correlations between Factors

As has been stated throughout it is expected that multicollinearity will be present between the wellbeing concepts analysed. For this reason, this analysis will not focus on those factors that have a low or moderate level of correlation and instead will focus on those factors that have a high correlation. The exact figure that constitutes a strong or very strong correlation is debated by researchers however it seems to be generally accepted that a figure above 0.7 (Gerstman, No Date) signals a strong correlation and so those factors that have a correlation above 0.7 are the primary focus. The results for both data collection periods are presented in Table 5.34.

Correlation between Factors in the First Data Collection Period

Factor	Correlated Factors
OrgSupportHE	Physical Activity (.748) and Alcohol Misuse (.691).
PhysicalActivity	AlcoholMisuse (.708)
Smoking	AlcoholMisuse (.720)
Leadership	Flexibility (.883), TrainingAndDevelopment (.932) AwarenessAM (.849) HealthAndSafety (.877) JobSatisfaction (.857) Engagement (.869) IntentToStay (.827) EmpPerspectiveMHWB (.844) and OrgSupportMHWB (.725)
Flexibility	TrainingAndDevelopment (.872) AwarenessAM (.840) HealthAndSafety (.829) JobSatisfcation (.836) Engagement (.848) IntentToStayCE (.794) EmpPerspectiveMHWB (.817).
TrainingAndDevelopment	AwarenessAM (.823) HealthAndSafety (.834) JobSatisfaction (.851) Engagement (.842) IntentToStayCE (.827) EmpPerspectveMHWB (.821) and OrgSupportMHWB (.735).
AwarenessAM	HealthAndSafety (.901) JobSatisfaction (.860) Engagement (.879) IntentToStayCE (.828) EmpPerspectiveMHWB (.884) and OrgSupportMHWB (.746).
HealthAndSafety	JobSatisfaction (.847) Engagement (.890) IntentToStayCE (.832) EmpPerspectiveMHWB (.873) and OrgSupportMHWB (.738).
JobSatisfaction	Engagement (.926) IntentToStayCE (.894) EmpPerspectiveMHWB (.851) and OrgSupportMHWB (.720).
Engagement	IntentToStayCE (.892) EmpPerspectiveMHWB (.878) and OrgSupportMHWB (.722).
IntentToStayCE	EmpPerspectiveMHWB (.830) and OrgSupportMHWB (.706)
OrgSupportMHWB	EngagementOppMHWB (.817)

Almost all of the correlations were statistically significant at the 1% level in time period one. Insignificant correlations were due to whole factors such as: AmountSmoked and HowMuchPayForTraining.

Correlation between Factors in the Second Data Collection Period

Factor	Correlated Factors
OrgSupportHE	PhysicalActviity (.744)
Leadership	Flexibility (.852) TrainingAndDevelopment (.889) OrgSupportAM (.825) HealthAndSafety (.842) JobSatisfaction (.827) Engagement (.835) IntentToStayCE (.795) OrgSupportMHWB (.805) EngagementOppMHWB (.704)
Flexibility	TrainingAndDevelopment (.814) OrgSupportAM (.808) HealthAndSafety (.795) JobSatisfaction (.798) Engagement (.803) IntentToStayCE (.768) OrgSupportMHWB (.800) EngagementOppMHWB (.708)
TrainingAndDevelopment	OrgSupportAM (.758) HealthAndSafety (.826) JobSatisfaction (.786) Engagement (.787) IntentToStayCE (.754) OrgSupportMHWB (.753) and EngagementOppMHWB (.706).
OrgSupportAM	HealthAndSafety (.889) JobSatisfaction (.820) Engagement (.851) IntentToStayCE (.794) OrgSupportMHWB (.850) and EngagementOppMHWB (.720)
HealthAndSafety	JobSatisfaction (.844) Engagement (.873) IntentToStayCE (.832) OrgSupportMHWB (.856) and EngagementOppMHWB (.746)
JobSatisfaction	Engagement (.935) IntentToStayCE (.832) OrgSupportMHWB (.889) and EngagementOppMHWB (.772).
Engagement	IntentToStayCE (.890) OrgSupportMHWB (.911) and EngagementOppMHWB (.790)
IntentToStayCE	OrgSupportMHWB (.839) and EngagementOppMHWB (.765).
OrgSupportMHWB	EngagementOppMHWB (.815)

Almost all correlations are statistically significant at the 1% level in the second time period. Insignificant correlations are due to the whole factor being insignificant and this is the case for: AmountSmoked, AlcoholConsumption and PercentTrainingPaid.

In most cases the results could be identifying an issue with how the questions or statements are asked rather than whether these factors are measuring the same thing. In contrast, there are some correlations that could mean that both factors are measuring the same thing. This could be true for the correlation between job satisfaction and engagement and for EmpPerspectiveMHWB and OrgSupportMHWB in the first data collection period. In the second data collection period the correlation between OrgSupportMHWB and EngagementOppMHWB could represent this issue too. These results are unlikely to be due to how the questions and statements were worded but they could be due to the similarities between job satisfaction and engagement as well as the other factors being factors of the same concept. Despite this result implying that these factors are measuring the same aspect of

wellbeing it might be best to not drop any factor as this may introduce greater bias into the results. According to the literature this is often the best response to these circumstances (Studenmund, 2006; Ranjit-Kumar, 2006; Gorman, 2010).

APPENDIX E – ETHICAL APPROVAL LETTER

University of the West of England
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UWE REC REF No: FBL/15/06/41

20th July 2015

Dear Kieran

Application title: Workplace Interventions on Workplace Productivity

Thanks for submitting your extensive documentation for ethics approval. Clearly considerable thought has gone into this design the documentation has now been reviewed by two colleagues. I've reproduced their comments below. Clearly Reviewer 1 has made quite extensive comments. The first one is mainly methodological. I would encourage you to take this as constructive critique of your research design it is more of a suggestion for how to present the findings. They might also be useful in alerting you to the concept of reputational risk. You do not need to respond to the first point made by Reviewer 1.

The other comments are things you need to do a little work to clarify. Please respond directly to me on how you will address these points. They are not onerous. If any amendments to documentation are required please also let us have those.

Reviewer 1:

1. From a research method point of view (and this is not usually appropriate to comment on this in an ethics scrutiny however in this case I think it is appropriate since it is related to the third-party's expectations of the results). I have concern over the implied causal link between the impact of the Workplace programme and the company's productivity. A company's productivity is related to a very wide set of factors. The nature of the workspace is only one of these. It is very difficult if not impossible to untangle the impact of a workspace programme from all these other factors. To attribute changes in corporate productivity to individuals' behaviours and environment is ambitious. Gross consolidated measures vs data from individuals is quite a large leap. The concern is that any results produced will be used as unequivocal evidence of success/failure when it is nothing of the sort. The assertion that "UWE research proves that …" is not necessarily desirable for reputational reasons.
2. One aspect missing is a document making clear to Bristol City Council what the nature of the research outputs will be and what they won't be. I think this is as essential as the information documents for the companies and their employees. If the results are to be used

as “proof” of the efficacy and value of the programme we should ensure that they really are evidence of what is being claimed.

3. I want to ensure that the data confidentiality is secure. Data is going to be collected that is clearly confidential to the respondents and in some cases could compromise the future employment or career ambitions of those employees – this is acknowledged in the documentation (particularly related to mental health). This is a serious responsibility for the University and we ought to be sure we are happy with the arrangements being made. Sufficient data is being collected to tie respondents to their answers. It must not be possible for anyone other than the researcher to make these associations. The data must not be presented in a way in which employers are able to make inferences. The data will be anonymised – are we happy that those anonymization methods are adequate in this project. Since this is a project that is run over a time interval it is imperative that these confidentiality mechanisms are maintained over time.

Reviewer 2:

1. Just one small point the Information sheet covers those participating in the Council’s scheme. Presumably an amended version of this needs to be available for the matched sample and I did not see this in the submission.

If these conditions include providing further information please do not proceed with your research until you have full approval from the committee. You must notify the committee in advance if you wish to make any significant amendments to the original application using the amendment form at http://www1.uwe.ac.uk/bl/blresearch/researchethics.aspx.

Please note that any information sheets and consent forms should have the UWE logo. Further guidance is available on the web: http://www1.uwe.ac.uk/aboutus/departmentsandservices/professionalservices/marketingandcommunications/resources.aspx

The following standard conditions also apply to all research given ethical approval by a UWE Research Ethics Committee:

1. You must notify the relevant UWE Research Ethics Committee in advance if you wish to make significant amendments to the original application: these include any changes to the study protocol which have an ethical dimension. Please note that any changes approved by an external research ethics committee must also be communicated to the relevant UWE committee.

2. You must notify the University Research Ethics Committee if you terminate your research before completion;

3. You must notify the University Research Ethics Committee if there are any serious events or developments in the research that have an ethical dimension.

Please note: The UREC is required to monitor and audit the ethical conduct of research involving human participants, data and tissue conducted by academic staff, students and researchers. Your project may be selected for audit from the research projects submitted to and approved by the UREC and its committees.

We wish you well with your research.

Yours sincerely

Chair, Faculty Research Ethics Committee

c.c *Don Webber*

APPENDIX F – DESCRIPTIVE STATISTICS

Employee Questionnaire

Healthy Eating

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.Dev
There Are Vending Machines	327	0	4	1.51	0.850	215	0	4	1.65	0.857
Vending Machines Have Healthy Alternatives	327	0	4	2.63	1.490	215	0	4	2.68	1.701
On site Cafe or Restaurant	327	0	4	1.51	0.933	215	0	4	1.53	0.975
Cafes or Restaurants Have Healthy Options	327	0	4	2.33	1.613	215	0	4	2.18	1.669
Organisation Supports Healthy Diet	327	0	6	2.58	1.580	215	0	6	2.87	1.479
Provided Information On Healthy Eating	327	0	6	2.68	1.609	215	0	6	2.76	1.534
Offered Programme To Improve Diet	327	0	6	2.09	1.873	215	0	6	2.14	1.748
Consume Fruit and Vegetables	327	0	5	3.17	1.526	215	0	6	3.36	1.453
I Have Takeaway Regularly	327	0	4	1.50	0.949	215	0	6	1.47	0.885

Physical Activity

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
Information is provided on the benefits of physical activity	327	0	6	2.88	1.595	215	0	6	1.65	0.857
My organisation supports me to be physically active	327	0	6	2.62	1.563	215	0	6	2.68	1.701
There are teams and/or clubs that I can join	327	0	6	2.42	1.523	215	0	6	1.53	0.975
My organisations advocates active travel	327	0	6	3.14	1.695	215	0	6	2.18	1.669
I exercise Regularly	327	0	5	3.04	1.740	215	0	5	2.87	1.479
I take part in team sports outside of work	327	0	5	1.29	1.126	215	0	5	2.76	1.534

Tobacco Cessation

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
Do you smoke	327	0	2	1.61	0.730	215	0	2	1.66	0.677
How many cigarettes do you smoke	327	0	4	0.19	0.685	215	0	4	0.23	0.781
Do you use e-cigarettes	327	0	3	1.46	0.932	215	0	3	1.59	0.886
I am aware of a smoke free policy	327	0	6	3.75	2.006	215	0	6	3.95	1.809
I am aware of the tobacco control laws	327	0	6	3.54	2.003	215	0	6	3.78	1.864
My organisation is able to support me with quitting smoking	327	0	6	3.88	2.321	215	0	6	4	2.286
"No smoking" signs are clearly stated around my workplace	327	0	6	3.24	1.988	215	0	6	3.34	1.951
I often use smoking as a means of reducing work related stress	327	0	6	3.88	2.562	215	0	6	3.97	2.475

Alcohol and Substance Misuse

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
I consume alcohol	327	0	2	0.99	0.534	215	0	2	1.02	0.493
How many alcoholic units consumed	327	1	5	1.71	0.913	215	0	5	1.20	1.054
I am provided with information on the impact of alcohol on my health	327	0	6	2.43	1.586	215	0	6	2.53	1.465
My organisation would support me with an alcohol related issue	327	0	6	2.94	1.709	215	0	6	3.07	1.705
I am aware of alcohol guidelines at business functions	327	0	6	2.80	1.738	215	0	6	3.07	1.679
I have had alcohol awareness training	327	0	6	2.17	1.921	215	0	6	2.26	1.884
I often consume more alcohol than is recommended	327	0	6	2.31	1.822	215	0	6	2.25	1.683
I use alcohol to reduce workplace stress	327	0	6	2.24	1.815	215	0	6	2.03	1.650
I use other substances to reduce workplace stress	327	0	6	2.10	1.958	215	0	6	1.98	1.773

Leadership

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
I am aware of a communications policy	327	0	6	2.40	1.585	215	0	5	2.67	1.541
I am consulted on decisions regarding organisational change	327	0	6	2.20	1.522	215	0	5	2.38	1.544
I am informed about policies to manage complaints and issues	327	0	6	2.61	1.605	215	0	5	2.74	1.564
I am recognised for high standards of work	327	0	6	2.50	1.661	215	0	5	2.74	1.628
I am provided with opportunities to attend training courses	327	0	6	2.83	1.739	215	0	5	2.81	1.667
I am able to suggest ideas to management	327	0	6	2.87	1.779	215	0	6	3.04	1.695
There are regular performance reviews in place	327	0	6	2.71	1.769	215	0	6	2.90	1.667
My performance reviews are beneficial to my development	327	0	6	2.40	1.704	215	0	6	2.32	1.604
I understand how my performance contributes towards organisational objectives	327	0	6	2.78	1.757	215	0	6	2.95	1.664

Flexibility

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
I can choose to work over my contracted hours	327	0	6	2.98	1.818	215	0	6	3.03	1.716
I am able to balance work and life commitments	327	0	6	2.98	1.819	215	0	5	3.11	1.700
I can work at home	327	0	6	2.61	1.940	215	0	6	2.77	1.870
I often work at home	327	0	6	2.29	1.992	215	0	6	2.27	1.788
I have influence over the amount of work I do	327	0	6	2.33	1.603	215	0	5	2.41	1.492
I can work flexibly depending on my needs	327	0	6	3.04	1.865	215	0	6	3.16	1.757
My work allows me to fulfil my caring responsibilities	327	0	6	3.63	2.290	215	0	6	3.77	2.159

Training and Development

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
I am provided with opportunities to progress	327	0	6	2.24	1.636	215	0	6	2.23	1.540
I am provided with opportunities to develop my career	327	0	6	2.37	1.687	215	0	5	2.33	1.552
I receive training to support me in doing my job effectively	327	0	6	2.57	1.723	215	0	5	2.59	1.618
The training I receive is of high quality	327	0	6	2.72	1.837	215	0	6	2.96	1.813
Additional training is available to help me deal with the pressures of work	327	0	6	2.35	1.706	215	0	5	2.21	1.476
Do you pay for training	327	0	3	1.59	0.860	215	0	3	1.66	0.763

Attendance Management

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
How many absences in the previous three months	327	0	14	0.37	1.158	215	0	13	0.44	1.259
Number of notable absences in the previous 12 months	327	1	2	1.75	0.436	215	0	2	1.34	0.757
Number of notable absences (stated)	327	0	90	2.58	9.067	215	0	90	3.65	12.669
My manager kept regular contact with me	327	0	6	0.91	1.698	215	0	6	1.12	1.842
My manager was supportive whilst I was off sick	327	0	6	1.01	1.810	215	0	6	1.22	1.940
My manager was supportive when I returned to work	327	0	6	1.02	1.822	215	0	6	1.24	1.961
My career has been negatively affected by my absences	327	0	6	0.70	1.421	215	0	6	0.85	1.565
I was supported in returning to work	327	0	6	1.02	1.838	215	0	6	1.23	1.948
Adjustments available to me were made clear to me to support a return to work	327	0	6	1.01	1.928	215	0	6	1.22	2.036
My organisation shows real concern about my wellbeing	327	0	6	0.82	1.541	215	0	6	0.96	1.643
I felt under pressure to return to work	327	0	3	0.50	0.943	215	0	3	0.66	1.069
I am aware of an attendance management policy	327	0	6	3.06	1.880	215	0	5	3.35	1.706
My organisation raises awareness of a long term health issues	327	0	6	2.43	1.658	215	0	6	2.58	1.569

My organisation would support me if I had a long term health issue	327	0	6	2.79	1.738	215	0	5	3.07	1.643
I am aware formal return to work procedures follow an absence	327	0	6	3.19	1.877	215	0	5	3.44	1.712

Health and Safety

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
I have been given health and safety training	327	0	6	2.78	1.757	215	0	6	2.95	1.601
I am comfortable raising health and safety concerns	327	0	5	2.99	1.823	215	0	5	3.14	1.650
There are designated health and safety officers	327	0	5	2.93	1.797	215	0	5	3.04	1.675
I am consulted on new health and safety policies	327	0	6	2.22	1.673	215	0	6	2.39	1.556
I am aware of emergency meeting points	327	0	6	3	1.848	215	0	6	3.25	1.699
There are signs warning me of the hazards I may face	327	0	6	2.94	1.809	215	0	6	3.19	1.672

Job Satisfaction

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
I am satisfied with the work I do	327	0	5	2.80	1.827	215	0	5	3	1.739
I am proud to work for my organisation	327	0	5	2.74	1.792	215	0	5	2.96	1.717
My role is meaningful	327	0	5	2.88	1.828	215	0	5	3.01	1.739
I enjoy my job	327	0	5	2.86	1.812	215	0	5	3	1.712
I get a feeling of accomplishment	327	0	5	2.76	1.819	215	0	5	2.96	1.719
My pay reflects my level of contribution	327	0	5	2.19	1.586	215	0	5	2.31	1.543
My level of pay is fair	327	0	6	2.24	1.622	215	0	6	2.36	1.582
I worry about my job security	327	0	6	2.52	1.763	215	0	6	2.87	1.773

Engagement

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
I speak highly of my organisation	327	0	6	2.56	1.727	215	0	6	2.78	1.678
I am happy for friends and family to use my organisations products/services	327	0	6	2.99	1.910	215	0	6	3	1.713
My organisation inspires the best in me	327	0	5	2.15	1.573	215	0	5	2.37	1.556
I help others when I can	327	0	5	3.41	1.915	215	0	5	3.56	1.797
I volunteer to do things outside of my job role	327	0	6	2.62	1.812	215	0	6	2.79	1.800
I regularly go beyond what is required of me	327	0	5	2.98	1.801	215	0	6	3.25	1.765
I feel I have to go beyond what is required of me to progress	327	0	6	2.74	1.818	215	0	6	2.85	1.753
I feel a strong sense of belonging to my organisation	327	0	5	2.47	1.687	215	0	5	2.58	1.601

Commitment to Employer

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
I often think of changing my job	327	0	6	2.53	1.749	215	0	6	2.60	1.696
I see myself with a different employer within 12 months	327	0	6	2.11	1.544	215	0	6	2.20	1.512
I do not wish to leave my current organisation	327	0	6	2.70	1.805	215	0	5	2.92	1.729
I receive suitable non-financial rewards	327	0	6	2.17	1.731	215	0	6	2.20	1.593
Have you actively sought alternative employment	327	0	2	1.28	0.810	215	0	2	1.32	0.794

Mental Health and Wellbeing

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
I am provided with information regarding stress and other mental health concerns	327	0	6	2.49	1.705	215	0	6	2.60	1.600
My organisation would support me if I had a mental health issue	327	0	6	2.73	1.766	215	0	6	2.95	1.694
I would be comfortable discussing a mental health issues with my manager	327	0	6	2.51	1.774	215	0	5	2.62	1.700
I would be comfortable discussing a physical health issue with my manager	327	0	6	2.81	1.837	215	0	5	2.93	1.752
My manager would be willing to discuss any mental health issue should I have one	327	0	6	2.82	1.828	215	0	5	2.93	1.728
I am aware of my legal entitlements regarding working conditions	327	0	6	2.46	1.705	215	0	6	2.68	1.656
I am aware of a bullying and harassment policy	327	0	6	2.94	1.853	215	0	5	3.04	1.738
I am involved in the development of mental health policies	327	0	6	1.59	1.426	215	0	6	1.82	1.553
I am provided with the chance to have training in mental health awareness	327	0	6	2.11	1.673	215	0	6	2.30	1.660
I am surveyed about my mental health and wellbeing	327	0	6	1.83	1.489	215	0	6	2.17	1.597
I am encouraged to volunteer	327	0	6	2.10	1.625	215	0	6	2.22	1.598
Have you had any experience of any physical or mental health issue that impacts upon your day to day job	327	0	4	2.23	1.605	215	0	4	2.18	1.513
In the past 2 weeks, how much of the time did any health problem make it difficult for you to perform your normal job duties	327	0	5	1.21	1.125	215	0	5	1.38	1.243
Organisation offers support to help reduce stress in the workplace	327	0	4	1.87	1.408	215	0	3	1.38	1.197

Employment Details

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
Number of hours worked	327	0	5	2.91	1.790	215	0	5	3	1.670
Tenure	327	0	4	2.58	1.696	215	0	4	2.71	1.644
Contract status						215	0	6	1.06	0.857
Full-time	327	0	1	0.51	0.501					
Part-time	327	0	1	0.17	0.375					
Fixed-Term	327	0	1	0.06	0.228					
Temporary	327	0	1	0.02	0.123					
Volunteer	327	0	0	0.02	0.000					
I receive performance related pay	327	0	2	1.39	0.871	215	0	2	1.45	0.812

Biographical Details

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
Age	327	0	5	2.28	1.655	215	0	5	2.32	1.569
Gender	327	0	2	1.28	0.833	215	0	2	1.31	0.802
Ethnicity	327	0	5	0.88	0.871	215	0	5	0.97	0.875
Disabled	327	0	2	1.34	0.871	215	0	2	1.41	0.815
I have caring responsibilities	327	0	2	1.23	0.826	215	0	2	1.23	0.792
I am aware of wellbeing initiatives	327	0	2	1.16	0.791	215	0	2	1.24	0.782

Managers Questionnaire

Healthy Eating

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
Healthy eating plan is in place	28	1	2	1.89	0.315	25	1	2	1.64	0.490
Information on healthy eating is provided to all employees	39	1	6	2.54	1.411	26	1	6	3.58	1.172
Organisation promotes healthy eating	39	1	6	3.03	1.267	26	2	5	3.58	1.027
Healthy eating choices promoted through an internal pricing strategy	39	1	6	3.26	1.943	26	1	6	4.08	1.845
Eating facilities are intentionally situated away from work areas	39	1	6	3.41	1.446	26	1	6	3.88	1.423
I encourage employees to eat away from work areas	39	1	6	3.31	1.173	26	2	5	3.85	1.120
Employees are consulted on any healthy eating intervention	39	1	6	2.95	1.503	26	2	6	3.5	1.449
There are planned events to show the importance of healthy eating	38	1	6	2.66	1.258	25	1	6	3.2	1.208

Physical activity

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
Physical activity plan is in place	38	1	2	1.76	0.431	26	1	5	4.50	0.860
Information on the benefits of physical activity is provided to all employees	38	1	6	3.13	1.189	25	1	5	3.56	1.044
Employees are encouraged to take the minimum number of breaks	38	1	6	3.50	1.225	25	2	5	3.80	1.155
Staff take regular breaks exceeding the minimum amount	38	1	6	2.84	0.916	25	1	6	3.28	1.137
The organisation promotes physical activities in the local area	38	1	6	3.29	1.250	24	1	5	3.50	0.978
I encourage active travel to work	38	1	6	3.47	1.179	25	2	5	3.16	0.987

Tobacco Cessation

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
All staff are aware of a smoke free policy	38	1	3	1.26	0.644	25	1	1	1	0
Electronic cigarettes come under the smoke free policy	38	1	3	2.03	0.972	22	1	2	3.05	0.213
Organisation provides stop smoking services	38	1	3	2.18	0.834	15	1	4	1.47	0.834
Information on the long term effects of smoking is provided to all employees	38	1	6	2.68	1.188	26	1	5	3.42	0.987
I am able to provide extra support for those who want to quit smoking	38	1	6	3.08	1.302	26	2	6	3.42	1.172
Employees are encouraged to use e-cigarettes as an alternative to tobacco	38	1	6	2.79	1.379	26	1	6	3.07	1.163
There is a procedure for employees to report breaches of the smoke free policy	38	1	6	3.13	1.212	26	1	6	3.69	1.05
“No smoking” signs are clearly located in the workplace	38	1	6	3.58	1.407	26	1	5	3.84	1.190
Employees are made aware of areas where they are allowed to smoke	38	1	5	3.66	0.966	26	2	6	4.19	0.849
Employees are allowed time off to attend stop smoking services	37	1	6	3.05	1.224	26	2	6	3.42	1.172

Alcohol and Substance Misuse

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
Alcohol and substance misuse policy is in place	37	1	2	1.49	0.507	26	1	2	1.08	0.272
Alcohol and substance misuse policy has been developed with employees	18	1	3	2.44	0.922	17	1	3	2.76	0.562
Information on the effects of alcohol and substance misuse provided to all employees	37	1	6	2.68	1.082	25	2	5	3.48	0.872
I support employees who need extra help	37	1	6	3.73	1.097	26	2	6	4.15	0.967
I am aware of the link between alcohol and substance misuse and mental health	36	2	5	3.89	0.797	26	2	5	4.15	0.732
I am aware of why employees may not want to come forward with alcohol related issues	37	3	6	4.22	0.534	26	2	6	4.23	0.765
Noticing signs of alcohol misuse is an important part of my training	37	1	6	2.70	1.372	26	1	6	3.5	1.335

Leadership

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
There is a formal communications policy in place	35	1	2	1.34	0.482	25	1	2	1.20	0.408
Wellbeing issues are discussed with employees	37	1	2	1.19	0.397	26	1	2	1.12	0.326
How often are these issues discussed with employees	28	2	5	3.29	0.600	22	3	4	3.45	0.510
I inform and support employees through organisational change	36	2	6	4.19	0.822	25	3	5	4.40	0.577
I make employees are aware of the importance of raising concerns	36	3	5	4.25	0.604	25	3	5	4.36	0.569
I am aware of the issues that impact my employees health	36	2	5	4.11	0.575	25	2	5	4.24	0.723
I make decisions with employee input	36	3	5	4.28	0.615	25	4	5	4.44	0.507

Training and Development

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
I have been trained in how to have difficult conversations	36	1	2	1.53	0.506	25	1	2	1.24	0.436
I am trained to identify health and wellbeing issues	36	1	2	1.75	0.439	25	1	2	1.52	0.510

Attendance Management

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
A formal attendance management policy is in place	35	1	2	1.20	0.406	25	1	1	1	0
Line managers are encouraged to maintain contact with absent employees	35	1	5	3.83	0.985	25	2	5	4.32	0.945
Absence causes are collected and monitored	35	1	6	4.09	0.853	25	3	5	4.60	0.577
There are formal measures I can take if trends in absences appear	35	2	5	4.03	0.785	25	3	5	4.56	0.651
Appropriate support is discussed and provided following a statement of fitness to work	36	3	6	4.11	0.747	24	3	6	4.75	0.676
I feel pressured to encourage employees to return to work	36	1	4	2.36	0.899	24	1	6	2.58	1.35
Return to work policies support recovery	36	2	5	3.75	0.692	24	3	6	4.42	0.776
Return to work policies support an early return to work	36	2	5	3.33	0.676	24	2	6	3.79	1.062

Health and Safety

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
Sufficient information is provided on the risks employees face	34	2	5	4.12	0.729	25	3	5	4.44	0.583
Employees have had relevant health and safety training	35	2	5	4.00	0.767	25	3	5	4.48	0.586
New hazards are identified and implemented into existing policies	35	1	5	3.74	0.817	25	4	5	4.40	0.500
Health and safety concerns can be raised via a formal procedure	35	1	5	3.97	0.857	25	3	5	4.40	0.651
I have undertaken relevant health and safety training	35	1	2	1.40	0.497	25	1	2	1.08	0.277
Health and safety meetings take place	35	1	4	1.54	0.886	25	1	3	1.24	0.597
Health and safety meetings are recorded	35	1	4	1.86	1.004	25	1	3	1.44	0.821

Performance Management

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
I regularly conduct performance reviews	35	2	6	3.94	0.644	25	2	6	4.52	0.823
I would like to conduct more performance reviews	35	1	6	3	1.213	22	2	6	3.04	1.134
I use performance reviews in my decision making process	35	2	6	3.69	0.932	15	2	6	4.08	0.909
I believe the organisation is committed to improving employee work-life balance	35	2	5	3.91	0.742	26	3	5	4.16	0.625
My pay reflects my contribution	35	1	6	3.26	1.245	26	1	5	3.12	1.130

Mental Health and Wellbeing

	First Data Collection Period					Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
A health and wellbeing strategy is in place	34	1	2	1.41	0.500	24	1	2	1.17	0.381
Health and wellbeing strategy has been developed with employee representatives	21	1	3	1.71	0.956	20	1	3	1.85	0.988
Reducing stigma is a part of the organisations culture	35	1	6	3.43	1.092	24	2	5	4.13	0.850
Employees are aware of their legal entitlements regarding working conditions	35	1	5	3.69	0.963	25	2	5	4.04	0.841
I encourage employees to come forward with any mental health issues	35	2	5	3.71	0.789	25	2	5	4.24	0.879
I would feel comfortable discussing an employee's mental health	35	2	5	3.91	0.742	25	2	5	4.28	0.980
I would feel comfortable discussing an employee's physical health	35	2	5	4.03	0.568	25	2	5	4.52	0.714
Mental health education can be provided to all employees	35	1	3	2.11	0.932	25	1	5	1.84	0.943
There is a stress prevention system in place	35	1	3	1.63	0.770	25	1	5	1.60	0.764
I encourage employees to use the stress prevention system	35	1	4	2	1.283	25	1	5	1.83	1.129
Our organisation sees wellbeing as an important determinant of productivity	35	1	5	3.66	1.027	24	1	5	4.04	1.020
Information about health and wellbeing is provided to all employees	35	2	5	3.49	0.981	25	1	5	4.04	1.060
I notify employees about health and wellbeing issues	35	2	5	3.29	0.957	25	1	5	3.76	1.052
Surveys on health and wellbeing are regularly conducted	33	1	2	1.55	0.506	24	1	2	1.42	0.504
Action plans are drawn up as a result of these surveys	17	1	3	2.18	1.015	8	1	2	1.13	0.354

Awareness of Workplace Initiatives

	First Data Collection Period				Second Data Collection Period				
	N	Min.	Max.	Mean	Std.dev	N	Min.	Max.	Mean	Std.dev
Awareness of workplace initiatives	35	1	2	1.34	0.482	25	1	2	1.24	0.436

APPENDIX G – FULL MODEL RESULTS

Presenteeism

First Data Collection Period

Model Summary

-2 Log Likelihood	Chi-Square	Df	Sig.	Pseudo R-squared	Number of Obvs.
578.483	289.601	8	0.000	0.334	327

Second Data Collection Period

Model Summary

-2 Log Likelihood	Chi-Square	Df	Sig.	Pseudo R-squared	Number of Obvs.
335.228	218.112	10	0.000	0.380	215

Model Results for both data collection periods

	First Data Collection Period			Second Data Collection Period		
	Estimate	Mfx	Sig.	Estimate	Mfx	Sig.
PhysicalActivity	-0.173 (0.102)**	0.040	0.089	-0.154 (0.128)	0.017	0.232
TrainingAndDevelopment	-0.353 (0.153)**	0.082	0.021			
HowMuchPayForTraining	0.164 (0.062)**	-0.038	0.008			
OrgSupportAM	0.164 (0.066)**	-0.038	0.014	0.143 (0.090)	-0.058	0.115
Engagement	0.680 (0.163)***	-0.158	0.000	0.593 (0.289)*	-0.065	0.040
IntentToStayCE				0.686 (0.206)***	-0.075	0.001
IntentToLeaveCE	0.522 (0.088)***	-0.121	0.000	0.656 (0.111)***	-0.071	0.000
OrgSupportMHWB	0.737 (0.157)***	-0.171	0.000	0.535 (0.231)**	-0.058	0.016
Leadership				-0.530 (0.218)**	0.057	0.015
Flexibility				0.355 (0.193)*	-0.039	0.067
JobSatisfaction				-0.531 (0.260)**	0.058	0.041
Disabled	0.616 (0.197)**	-0.011	0.002	1.211 (0.223)***	-0.075	0.000
Other Ethnic Groups				2.120 (0.843)**	-0.056	0.012

ii) Absenteeism

General Absenteeism

First Data Collection Period

Model Summary

	-2 Log Likelihood	Cox & Snell R Square	Negelkerke R Square	Number of Obvs.
1	231.373	0.218	0.355	327

Omnibus Tests of Model Coefficients

	Chi-Square	Degrees of Freedom	Sig.
Step	80.349	11	0.000
Block	80.349	11	0.000
Model	80.349	11	0.000

Model Summary

	Coefficient	Exp(B)	Sig.
OrgSupportALC	0.499 (0.267)**	1.647	0.062
UnitsConsumed	0.359 (0.169)**	1.432	0.033
Leadership	-1.180 (0.553)**	0.307	0.033
TrainingAndDevelopment	0.452 (0.473)	1.572	0.339
HealthAndSafety	1.033 (0.444)**	2.808	0.020
JobSatisfaction	-0.609 (0.372)	0.544	0.101
IntentToLeaveCE	1.141 (0.233)***	3.129	0.000
EngagementOppMHWB	-0.315 (0.267)	0.729	0.237
Age = 50-59	-0.884 (0.429)**	0.413	0.039
Tenure < 3 years	1.407 (0.659)**	4.084	0.033
Tenure > 5 years	1.090 (0.558)*	2.974	0.051
Constant	-2.763 (0.482)***	0.063	0.000

Second Data Collection Period

Model Summary

	-2 Log Likelihood	Cox & Snell R Square	Negelkerke R Square	Number of Obvs.
1	201.312	0.128	0.195	215

Omnibus Tests of Model Coefficients

	Chi-Square	Degrees of Freedom	Sig.
Step	29.484	8	0.000
Block	29.484	8	0.000
Model	29.484	8	0.000

Model Summary

	Coefficient	Exp(B)	Sig.
OnSiteOptionsHE	0.559 (0.219)**	1.750	0.011
TobaccoCessation	-0.479 (0.249)*	0.619	0.054
AbsenceManagement	0.446 (0.172)**	1.563	0.009
Engagement	-0.893 (0.468)*	0.409	0.056
OrgSupportMHWB	0.940 (0.454)**	2.559	0.039
HoursWorked = 21-30	1.639 (0.775)**	5.151	0.034
HoursWorked = 31-40	1.566 (0.694)**	4.786	0.024
HoursWorked > 40	1.543 (0.891)**	4.676	0.083
Constant	-2.602 (0.589)***	0.074	0.000

Long Term Absenteeism

First Data Collection Period

Model Summary

Log Likelihood	Number of Obvs	LR chi2(6)	Prob>chi2	Pseudo R-squared
-287.865	327	179.19	0.000	0.2374

Model Results

	Coefficient	IRR	Gender			
			Males	IRR	Females	IRR
TobaccoCessation	0.733(0.283)**	2.082(0.588)	1.338(1.032)	3.811(3.934)	0.583(0.359)	1.792(0.643)
OrgSupportAM	2.811(0.276)***	16.605(4.577)	3.195(0.821)***	24.4(20.035)	2.634(0.336)***	13.932(4.678)
IntentToLeaveCE	0.556(0.242)**	1.743(0.422)	-0.449(0.873)	0.638(0.557)	0.286(0.323)	1.331(0.426)
EngageOppMHWB	-0.542(0.274)**	0.582(0.159)	-2.352(0.905)**	0.095(0.086)	-0.784(0.336)**	0.457(0.154)
Male	-0.871(0.498)*	0.419(0.209)				
OftenWorkAtHome	-0.230(0.112)**	0.794(0.089)	-0.165(0.148)	0.848(0.126)	-0.288(0.148)*	0.750(0.111)
Constant	-1.601(0.342)***	0.208(0.588)	-2.839(1.203)**	0.058(0.070)	-0.976(0.476)**	0.377(0.179)

Significance Levels

	Significance Level	Gender	
		Males	Females
TobaccoCessation	0.009	0.195	0.104
OrgSupportAM	0.000	0.000	0.000
IntentToLeaveCE	0.022	0.607	0.375
EngagementOppMHWB	0.048	0.009	0.020
Male	0.080		
OftenWorkAtHome	0.041	0.266	0.052
OfferStressReduction	0.000	0.018	0.040

Second Data Collection Period

Model Summary

Log Likelihood	Number of Obvs.	LR chi2(7)	Prob>chi2	Pseudo R-squared
-232.104	215	136.15	0.000	0.2268

Model Results

	Coefficient	IRR	Sig.
OrgSupportHE	-0.916(0.474)**	0.400 (0.190)	0.054
AmountSmoked	-0.395 (0.259)	0.674 (0.174)	0.127
OrgSupportALC	0.809 (0.395)**	2.245 (0.886)	0.040
AbsenceManagement	3.074(0.368)***	21.618 (7.964)	0.000
JobSatisfaction	1.195(0.475)**	3.309 (1.569)	0.012
Engagement	-2.7(0.609)***	0.067 (0.041)	0.000
IntentToLeaveCE	0.614(0.264)**	1.848 (0.489)	0.020
Tenure (< 3 years)	1.691(1.080)	5.422 (5.854)	0.117
Tenure (< 5 years)	2.399(1.215)**	11.010 (13.379)	0.048
Tenure (5 years +)	1.794(1.018)*	6.015 (6.122)	0.078
Constant	-3.586 (0.916)***	0.028 (0.025)	0.000

(iii) Employee Turnover

First Data Collection Period

Model Summary

	-2 Log Likelihood	Cox & Snell R Square	Negelkerke R Square	Number of Obvs.
1	166.522	0.467	0.645	253

Omnibus Tests of Model Coefficients

	Chi-Square	Degrees of Freedom	Sig.
Step	159.125	10	0.000
Block	159.125	10	0.000
Model	159.125	10	0.000

Model Results

	Estimate	Exp(B)	Sig.
TobaccoCessation	-0.418 (0.286)	0.658	0.143
OrgSupportAlcohol	0.575 (0.334)*	1.778	0.085
TrainingAndDevelopment	0.964 (0.434)**	2.623	0.026
IntentToStay	-3.693 (0.550)***	0.025	0.000
IntentToLeave	1.444 (0.374)***	4.236	0.000
Age (40-49)	-1.138 (0.505)**	0.320	0.024
Age (50-59)	-1.731 (0.530)***	0.177	0.001
Age (60+)	-1.865 (0.945)**	0.155	0.048
Ethnicity (Mixed/Multiple Ethnic Groups)	2.429 (1.348)*	11.350	0.071
Ethnicity (Asian/Asian British)	2.344 (1.306)*	10.420	0.073
Constant	0.085 (0.428)	1.089	0.842

Second Data Collection Period

Model Summary

	-2 Log Likelihood	Cox & Snell R Square	Negelkerke R Square	Number of Obvs.
1	126.786	0.417	0.577	171

Omnibus Tests of Model Coefficients

	Chi-Square	Degrees of Freedom	Sig.
Step	92.262	9	0.000
Block	92.262	9	0.000
Model	92.262	9	0.000

Model Results

	Estimate	Exp(B)	Sig.
AmountSmoked	1.012 (0.262)***	2.751	0.000
JobSatisfaction	-1.585 (0.581)**	0.205	0.006
OrgSupportMHWB	2.651 (0.706)***	14.166	0.000
Leadership	-2.671 (0.664)***	0.069	0.000
HealthAndSafety	-1.895 (0.616)**	0.150	0.002
Age (30-39)	-1.796 (0.834)**	0.166	0.031
Age (40-49)	-1.855 (0.717)**	0.156	0.010
Age (50-59)	-1.761 (0.728)**	0.172	0.016
Age (60+)	-2.411 (1.061)**	0.090	0.023
Constant	1.601 (0.633)**	4.958	0.011