

INCREASING PHYSICAL ACTIVITY THROUGH MOTIVATIONAL
INTERVIEWING WITH ADULT FORENSIC PSYCHIATRIC INPATIENTS

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Chapter 1 – Introduction to the Thesis

This introductory chapter provides a synopsis of this thesis, beginning with some background to the inception of the research and a brief introduction to the mental health unit within which it was conducted. It goes on to provide an overview of each of the thesis chapters and also contains the thesis abstract.

Background to the Development of the Research.

The research for this thesis examines the promotion of physical activity (PA) through Motivational Interviewing (MI) within a medium-secure unit housing long-term, forensic, psychiatric inpatients. After ‘discovering’ MI some 20 years ago and using this approach in health club and community settings, the author explores the utility of MI within this work setting. Whilst presenting and promoting the approach of MI to Occupational Therapy (OT) colleagues in 2007, a colleague asked ‘What has this got to do with our clients who have mental illness and offending behaviours?’- This question provided the basis of the author’s subsequent systematic review, revealing the paucity of knowledge regarding the specific influence of MI on the uptake of PA within forensic mental health settings. This review, presented in Chapter 5, provided the impetus for the research of this thesis exploring the effects of MI on the uptake of PA for this client group. It is possible that the client-centred approach of MI is the antithesis of current methods of improving health behaviours amongst care staff in this setting, some of whom can be more direct and coercive in their methods. Therefore, the research also explores the knowledge and views of co-workers towards MI. In this way recommendations could be made regarding the use of MI for health behaviour change in this setting and the challenges that may exist to training co-workers. Because of the lack of similar research in this environment, the lack of resources, and the variability of the client group, it was decided to cast the research as ‘action research’, which, because of its ‘non-classical’ nature, will be presented in chapters, a style recommended by Dick (1992). It was also felt appropriate to present the inpatient participant results as single case design studies, as recommended by Barker and Jones (2011) for exercise-related research concerned with some PA interventions.

Introduction to the Unit

The mental health unit (The Unit) involved in this research is a 29-bed, medium-secure, forensic, psychiatric unit for males. Clients have a history of mental illness or personality disorder and some kind of offending history generally precipitated by their illness or condition. The Unit has been the workplace of the author since 2007 and consists of two wards; 'Ward 1', an 'acute' ward taking patients new to the unit in order to assess and stabilise their mental state, and 'Ward 2', a rehabilitation ward intended for patients progressing toward discharge. The role of the author within The Unit is to facilitate PA sessions, create a system of screening and induction and provide information and support related to the health, fitness and well-being of patients and staff.

Staff of the multi-disciplinary team (MDT) harbour concerns for the physical health of inpatients, exacerbated by the fact that many are trained in mental rather than physical healthcare. This has created confusion for some about how to engage more of the patients in activities that will benefit their physical health, such as exercise sessions. In 2009 an audit was commissioned amidst Trust-wide concerns about the declining physical health of mental health inpatients. Data from 59 of 123 inpatients showed that 15% had diabetes and 42% were overweight (appendix 12). Whilst the audit showed that a large percentage of inpatients had engaged in some form of exercise, data was not available to illustrate the details of this. Within The Unit, attendance figures to PA sessions have fluctuated over time. Most patients have attended a PA session at some point but there are some whose mental health precludes them from attending at all. Those at greatest risk of physical health issues tend to have the greatest variability in attendance, which seems to be reflective of the unpredictable and changeable nature of the individuals at The Unit. Although the author was involved with the development of a health promotion policy for the forensic directorate in April 2010, the Trust still lacks an over-arching policy for health promotion.

Research concerning the regulation of PA in UK psychiatric units is lacking and there is no data concerning the availability and competence of exercise specialists in psychiatric settings (Jones and Beney, 2004). The importance of activity preference, support for efforts made, and perceived barriers have been acknowledged for effective health promotion in general populations, but these factors have not been recognised in studies associated with those with severe mental illness (Ussher, Stanbury, Cheeseman & Faulkner, 2007). Significant gaps exist in understanding how best to promote PA with mental health service users generally. Within the forensic directorate of the Trust, the process of induction for PA sessions is standardised within policy only up to the point of initial health screening. The Physical Activity Readiness Questionnaire (PAR-Q) (Appendix 1) is administered to patients prior to any PA in order to establish potential signs, symptoms or risk factors for disease that may affect the amount and type of activity they are recommended to do. Further to this, approaches to engage service users in PA are diffuse and not well documented. However, there is agreement amongst facilitators that promoting attendance to activity sessions amongst service users is an 'uphill struggle'. In May 2010, a sample of the MDT at The Unit convened to discuss physical health concerns of the clients, prompted by the extreme nature of poor physical health of some particular clients. The meeting consensus was that the 'duty' of health promotion should be shared throughout the MDT and a greater emphasis should be placed on this issue. A report was subsequently generated by the researcher illustrating the general issue of poor physical health of inpatients and the importance of physical activity and good dietary intake (appendix 13).

Overview of the Chapter Contents

Chapter 2 – The importance of, and challenges to, increasing physical activity. This chapter highlights the importance of PA in relation to physical and mental health and explores the issues around participation in PA generally. It is intended to illustrate factors that impact the extent to which PA is undertaken in general populations in order to create a perspective for the difficulties within the specific research environment. It was also intended to

describe how various approaches to encouraging PA have been ineffective and how MI may serve to improve the uptake of PA at an individual level.

Chapter 3 – Motivational Interviewing: Principles and theory. This chapter introduces MI, describes the main principles involved with the approach, and discusses the theoretical basis of MI in relation to Self Determination Theory (SDT) and ‘change talk’. It discusses some of the factors theorised as accounting for the ‘mechanism’ of MI.

Chapter 4 – Motivational Interviewing: Applications. This chapter extends the previous chapter’s theme by illustrating some of the issues arising from the application of MI to different settings and for different behaviours. It discusses the importance of the measurement of MI, examines training implications, and reviews a variety of settings within which MI, and variations of MI, have been used. This is then related to some of the paradoxical challenges faced by staff working in the specific research environment, after which the rationale for the use of MI in this setting is explained.

Chapter 5 – The efficacy of Motivational Interviewing for improving health behaviours with adult psychiatric inpatients: A systematic review. As a precursor to the research, this chapter presents the systematic review, conducted as part of the doctoral process in response to the question of how MI has been used to improve the health behaviours of forensic psychiatric inpatients. The findings illustrate the lack of specific research of this kind, providing a springboard for the action research related to this thesis.

Chapter 6 – Methodology for the research of the thesis. This chapter details the rationale and methodology for the action research conducted for the thesis. It explains the procedures and materials involved in the research, as well as information regarding the participants and how the outcomes will be analysed.

Chapter 7 – Results of the research of the thesis: Service-users. This chapter contains the results for each of the case studies involved in the

research, in terms of their IMI scores, satisfaction questionnaires, and visit frequencies to sessions. The process and content of each of the consultations are discussed within each of the nine case studies presented, with each study following the same basic procedure. Information regarding the participant concerned, their diagnosis and presentation, and how this may affect their response to the intervention is provided at the start of each case, with a contextual analysis and a critique at the end of each case report.

Chapter 8 – Results of the research of the thesis: Multidisciplinary staff. This chapter details the outcomes from the questionnaire administered to the staff participants. Outcomes are largely presented in terms of benefits and challenges to the implementation of MI within the Unit.

Chapter 9 – Discussion of the outcomes for inpatient participants. This chapter discusses the inpatient participant outcomes and factors involved with the administration of the MI intervention. The discussion incorporates all aspects of the research including recruitment, delivery of the intervention, and data collection issues, and draws on other research for critical reflection of the outcomes.

Chapter 10 – Discussion of the outcomes for the staff participants. This chapter discusses the staff participant outcomes and factors involved with the administration of the staff questionnaire and the subsequent outcomes. Implications for the implementation of MI training within the Unit are discussed, with a critical reflection of the outcomes in relation to relevant research.

Chapter 11 – Conclusion for the thesis. The chapter draws from the research as a whole and makes conclusions regarding the use of MI with this client group, along with recommendations for the implementation of MI within the Unit and the healthcare trust, of which it forms a part.

Chapter 12 – Reflective Chapter. This final chapter details the personal experience of the researcher during the process of the creation, development and execution of this thesis.

Thesis Abstract

The treatment and recovery of forensic psychiatric inpatients can take many months and often years, within which time health issues such as obesity and diabetes can develop. Encouraging beneficial health behaviours with this client group is notoriously difficult for a variety of reasons and anti-psychotic medication paradoxically often serves to exacerbate physical health concerns. There is a dearth of research concerning effective interventions for improved physical health for this client group, perhaps because security and staffing issues present significant challenges to conducting research in this environment.

This exploratory piece of action research employed multi-staged Motivational Interviewing (MI) sessions in nine case studies, the aim of which was to explore the utility of the approach in increasing physical activity (PA) with forensic psychiatric inpatients. Changes in PA and intrinsic motivation were assessed over three months and clients were surveyed on their views of the approach. A question exists over the propriety of client-centred care in a setting that is often necessarily restrictive and controlled. Challenges to a broader implementation of MI for health promotion amongst the multi-disciplinary care team (MDT) are considered, and were explored through the use of a staff survey. Outcomes for the research suggest that MI is a useful and valued approach to facilitating changes in physical activity levels with forensic psychiatric clients. There may be others from this environment for whom the approach is inappropriate, and there is a need for further research with clients whose health concerns are significant but who do not readily present for activity sessions. Outcomes from this research further suggest some of the MDT may be philosophically aligned with some aspects of the client-centred ethos of MI, yet still maintain a belief in the propriety of directive and authoritarian methods for promoting health. This may present a challenge to the training of MI if a broader implementation of MI for physical health issues is considered, and limited survey data may not have revealed the full extent of this challenge.

Chapter 2 – The Importance of, and Challenges to, Increasing Physical Activity.

The argument for the value of PA to physical and mental health is supported by a wealth of evidence (Azar, Ball, Salmon, Cleland, 2008; Asztalos et al., 2009; Blair et al., 1989; Dimeo, Bauer, Varahram, Proest, & Halter, 2001; Gupta et al., 2011; Haskell, et al 2012; Paffenbarger, Hyde, Wing, Hsieh, 1986; Paffenbarger et al., 1993; Teychenne, Ball, Salmon, 2008;). The importance of PA for good health cannot be understated: In relation to coronary heart disease (CHD), an inactive lifestyle has as great a negative impact on health as that of smoking and almost as great as high cholesterol levels (DoH, 2004). It is estimated that 40% of deaths through CHD can be associated with a lack of adequate PA and the risk of developing CHD is almost twice as high for physically inactive people (P.O.S.T., 2001).

Physical Activity and Mental Health

Although mental health is ‘an indivisible component of general health’ (STAKES, 2008; HMG/DH, 2011) and the World Health Organisation and Commission of the European Communities recognise mental health as an essential part of a person’s general health - ‘there cannot be any health without good mental health’ (STAKES, 2008) - the terms ‘mental’ and ‘physical’ health are used within this thesis to illustrate the professional roles of certain carers and to make clear the concerns pertaining either to those of the ‘mind’, as perceived through our perceptual senses, or the somatic ‘body’. The health of people with severe mental illness is often compromised by associations with drug and alcohol abuse (Menezes et al, 1996) smoking, lack of PA, poor dietary habits, and poor adherence to medications (Phelan, Stradins, & Morrison, 2001). Forensic psychiatric patients, detained under sections of the mental health act, are particularly prone to developing poor physical health during the time it takes to stabilise and improve their mental health. Psychiatric patients have higher rates of physical ill-health than general populations, much of which goes undetected (Gray, 2012; Koran et al., 1989; Makikyro et al., 1998; Lawrence, & Holman, 2003; Wahlbeck, Westman, Nordentoft, & Gissler, 2011)

and mental health service users are twice as likely to die of CHD and four times more likely to die of respiratory disease than general populations (Berren, Hill, Merikle, Gonzales, & Santiago, 1994; Harris & Barraclough, 1998; Barr, 2001; Phelan, Stradins, & Morrison, 2001). Evidence supporting the promotion of exercise within acute inpatient settings leads experts to suggest this should now form a part of treatment (Faulkner and Biddle, 2002; Biddle & Mutrie 2008, Carless & Douglas, 2012). Mutrie (2000) recommends aerobic and anaerobic exercise to alleviate depression. Biddle (2000) has shown emotion and mood is improved during effort toward the mastery of skills in PA and PA conducted in group climates. Fox (2000) says that 'global' esteem is improved as 'physical esteem' is enhanced through exercise, whilst Taylor (2000) shows that anxiety and stress is reduced by moderate exercise. A review by Taylor, Ussher, & Faulkner (2007) illustrate how PA interventions independently aid attempts to quit smoking. Positive social experiences may be gained by mental health service-users from group-based PA (Carter-Morris & Faulkner, 2003; Carless & Douglas, 2004) and PA and sport generally have the potential to offer a sense of purpose and meaning to the lives of people with mental health problems (Raine, Truman & Southerst, 2002). Many service users understand and value the potential benefits of PA, although clear barriers to becoming more active exist for this group (Ussher, Stanbury, Cheesman and Faulkner, 2007). Historically, there has been a '...limited inclusion of PA in mental health interventions' (Reynolds, 2001, p331).

The Challenges to Increasing Physical Activity Levels

In order to maintain good health, one recommendation for adults is to achieve 30-minutes of moderate PA (such as brisk walking) at least five days a week (DoH, 2004). Although PA in Britain has increased since 1997, levels are still relatively low with only 28% of women and 40% of men achieving the recommended amount of activity to stay healthy (NHS information Centre, 2009). This problem is magnified in mental health settings (Richardson et al., 2005), and what is known about effective interventions to increase PA levels is unclear, especially in specialist settings (Hillsdon, Foster, Naidoo, & Crombie, 2004; Hillsdon, Foster, Thorogood, 2005). Little data is available to enable a

better understanding of how to increase PA in people with mental health problems (Carless, 2007) and research has been called for to address this issue (Richardson, et al, 2005; Johnston, Nicol, Donaghy, & Lawrie, 2009; Roberts & Bailey, 2011). Schroeder (2007) points to five influential domains of good health; genetics, social circumstances, environmental exposures, behavioural patterns, and health care. Evolutionary determinants may also play a part. Researchers suggest that 'hunter-gatherer genes' have not changed in over 40,000 years and that we are 'programmed' to conserve energy through inertia once we have expended the energy required to find food (Eaton, et al, 2002; Eaton, Eaton, 2003; Chakravarthy, Booth 2004). For most people now, much less effort is required to obtain food and the apparent predisposition toward preserving calories presents a challenge to achieving healthy levels of PA. The development of technology has served to further reduce PA. According to Prentice and Jebb (1995), between the late 1960's and early 1990's energy intake in the UK - specifically fat intake – actually declined whilst obesity levels dramatically rose. This coincides with an increase in television viewing hours and the number of cars per household for the same period. Environmental challenges to PA are significant. The National Institute of Clinical Excellence (NICE) have made recommendations for environmental adaptations to promote more activity, highlighting our guiding policies, transport systems, roadways, public spaces, buildings and schools (NICE, 2008). Socio-economic circumstances also play a significant role in our health behaviours, and differences exist between social classes in respect to the health behaviours of smoking, physical activity, alcohol drinking and diets (Whitehead, 1980; Naudi, 2011).

As a multi-factorial problem, an integrated approach to effective health promotion is recommended at population/social, environmental, community and individual levels (Kelly, Charlton, & Hanlon, 1993; Naidoo & Wills, 2000). Increasing PA has been largely unsuccessful at the population level according to national self-reports (Hillsdon, Cavill, Nanchahal, Diamond, & White 2001; Townsend et al., 2012). It is often thought that people lack the information required to make healthy choices, but information about long-term health and survival is more available now than it has ever been. Government campaigns

such as 'Change4Life' have included national television advertisements. Attempts to promote healthy behaviours through 'social marketing' have been implemented since 1996 (Hillsdon, et al 2001); the 'Active For Life' campaign was commissioned for three years in order to influence the PA awareness and levels of defined population target groups. An evaluation of this campaign revealed no significant increase in awareness of the recommended amount of PA and no increase in the self-reported levels of PA of the population of England (Hillsdon, et al, 2001). PA has been given the endorsement of GPs through 'GP Referral' schemes, intended to enable all people, many from lower social class banding, to access exercise facilities at much reduced rates through a GP's referral. An evaluation of this scheme shows it has done little to increase PA levels in the UK despite a proliferation of the programmes across the country (Pavey et al., 2011). Even for people who can afford a health and fitness club membership, maintaining an active lifestyle is a challenge. Research funded by the Fitness Industry Association (FIA) in 2002 revealed that as much as 40% of members who join a health club do not visit the club at least once a week in the first month of their membership, with 10% of these not visiting at all in the first month. This was shown to be an important factor in determining how long they stayed as a club member (Hillsdon, 2001).

Whilst an integrated approach to health promotion may be the ideal, Schroeder (2007) suggests the biggest influence to health behaviours can occur at an individual level. How health professionals communicate health messages appears to be key. Health promotion in the West has been largely influenced by the 'Medical Model' (Doyal & Doyal, 1984), the essence of which is to 'measure' a person's health and prescribe solutions for improvements. In the case of PA, this has often taken the form of 'fitness testing' but this is not well supported as a positive motivational approach for change. Some authors argue it has a negative effect on motivation, particularly where this has been used with children (Naughton, Carlson and Greene, 2006; Harris, & Cale 2007). In one of the biggest trials of its kind, Hillsdon, Thorogood, White, & Foster (2002) concluded that even the act of *advising* people to become more active may be less effective at increasing PA levels than leaving them to their own devices. Whilst the delivery of health information is important, the authors suggest it is

not what is said to people but how it is said that makes the difference, a message that is echoed in the case of mental health service users by Carless and Douglas (2012). According to Roberts & Bailey (2011, in Carless & Douglas, 2012), the views and experiences of service users are critical in encouraging a greater participation in the development of successful change (Carless & Douglas, 2012). This focus on the delivery of the message and the involvement of individuals in their health behaviour plans introduces the approach of Motivational Interviewing (MI), which has shown good promise in helping practitioners facilitate health behaviour changes in a broad range of settings.

Chapter 3 - Motivational Interviewing: Principles and Theory

MI is an approach to helping people move toward change, developed from the clinical experiences of psychologists William Miller and Stephen Rollnick. In the latest edition of their book, Miller and Rollnick (2013) define MI at three different levels: For the layperson, MI is a collaborative conversation style for strengthening a person's own motivation and commitment for change. For the pragmatic practitioner, MI is a person-centred counselling style for addressing the common problem of ambivalence about change. Finally as a technical therapeutic definition MI is a collaborative, goal oriented style of communication with particular attention to the language of change. It is designed to strengthen personal motivation for and commitment to a specific goal by eliciting and exploring the person's own reasons for change within an atmosphere of acceptance and compassion (Miller & Rollnick, 2013).

Originating from work done in the field of drugs and alcohol addictions, MI has since been used by practitioners in a wide range of settings including mental health, dual diagnosis, primary health care including diabetes, weight change, nutrition, medication adherence, & HIV, gambling, smoking, and criminal justice clients (Sciacca 2009, Rollnick, Butler, Kinnersley, Gregory, & Mash, 2010). An understanding of MI incorporates a range of inter-related elements including basic principles, the MI 'Spirit', practitioner micro-skills, and the recognition of client 'change talk' (Rosengren 2009). Although MI does have some directive qualities (Miller & Rollnick 1991), the principles of MI are essentially client-centred (Rogers, 1951) and opposed to more paternalistic and purely directive approaches, such as the Medical Model. This has been the main approach used in Western healthcare but is criticised, particularly within psychiatry, as being 'reductionist' and 'inhumane' (Shah & Mountain, 2007). Within the approach health providers assume an expert role, directing discussions and prescribing objective solutions for health-risk behaviour leaving little consideration for the psychological, social or behavioural determinants of health (Engel, 1977). Although knowledge about the importance of these dimensions in healthcare has increased and a greater emphasis has been placed upon psychosocial models of care, especially during the 2000's

(Craddock et al., 2008), evidence suggests that healthcare practitioners, especially in mental health nursing, are still inclined to 'measure' health outcomes and prescribe solutions and may lack the knowledge and confidence to facilitate more collaborative behaviour change interventions (Terry & Cutter, 2013).

Time constraints may play a part and working to understand and take account of a client's perspective about change is undoubtedly more involved than simple advice-giving. But this tends to render the client a 'passive' recipient, which can disengage them from the process of change (Roberts & Bailey, 2011). The tendency for practitioners to try to actively 'fix' their clients by 'doing for them' or being very direct, is known in MI-terms as the 'righting reflex' (Miller & Rollnick, 1991; Rosengren, 2009, Miller & Rollnick, 2013). Whilst this 'instinct' may be natural and appropriate for some situations, perhaps where immediate or imminent danger threatens, it is generally counter-productive for long-term behaviour change. This is because the experience of being told, advised, or warned about what to do or not do, however well-meaning, can unsettle our sense of autonomy and, according to Brehm's Reactance Theory (1966), threaten our sense of behavioural freedom. Rather than this producing a move toward change, the outcome is more often the defence of current behaviours in order to restore our sense of behavioural freedom. This effect has been reported by numerous authors in relation to the hospitalisation of patients (Taylor, 1979; Raps, Peterson, Jonas, & Seligman 1982) and in the context of health education and promotion (Fogarty, 1997; Dowd, 2002). Within this literature 'reactance' has been characterised by the expression of anger and counterarguments (Dillard and Shen, 2005; Rains, 2013), and as being particularly evoked according to certain personality variables (Dowd, 2002). However, although Karno and Longabaugh (2005) discovered that change outcomes were poor when clients with high measures of anger and reactance were counselled by very directive practitioners, the full picture is less clear. Though the concept of what constitutes 'directive' may need exploring in more detail, behavioural outcomes for some clients measuring low in anger and reactance appeared to be positive (Karno and Longabaugh, 2005). Even so, Raps and colleagues (1982) suggest that, whilst an infringement on some

clients' sense of autonomy may not always result in reactance, it may lead to 'learned helplessness', which is also unhelpful if the goal of an intervention is self-sufficient recovery.

As the antithesis of paternalistic approaches, in order for MI to be effective a philosophical change is required in how roles within the behaviour change discussion are viewed. For example, it must be acknowledged that the client is an expert in their own right about themselves and that, though they may lack certain specialist knowledge about issues of change, they can, and should, play the part of chief architect regarding whether, and how, change occurs. The MI practitioner serves to facilitate this process through four fundamental principles, upon which MI has been based; the expression of empathy, developing discrepancy, rolling with resistance, and supporting self-efficacy (Miller & Rollnick, 1991; Arkowitz, Westra, Miller, & Rollnick, 2008; Rosengren, 2009). Each of these principles will now be discussed in turn.

Principles of MI

Express empathy. Rogers (1961) suggested that, in the context of the helping relationship, three core qualities - the expression of empathy, congruity, and unconditional positive regard - were necessary and sufficient in of themselves to facilitate movement toward healthy change in clients. Empathy can be described as the ability to perceive the internal meanings and emotional states of another as if one were the person concerned, but without ever losing the 'as if' condition (Rogers, 1959). The art of expressing empathy lies in understanding these internal frames of reference, without judgement, in light of their possibly being inconsistent with our own beliefs. It can be easy to assume that inactive clients who don't change lack motivation, as if this were a personality trait or basic commodity. However, it is more helpful to imagine that a client is simply more motivated toward other goals, such as comfort through inactivity. They may also have concerns about changing their current behaviour. Striving to understand a client's way of thinking enables a more helpful discussion to evolve regarding the possibility of change, without a client feeling 'threatened' by the practitioner's 'righting reflex'. MI embodies the client-centred

philosophy, and MI practitioners work hard to understand a client's perspective around the issues of change through the use of active listening skills. Practitioner empathy has been shown to independently influence behaviour change outcomes, accounting for two thirds of the variance in outcomes of problem drinkers, and half and one quarter of the variance of outcomes over 12 and 24 months respectively (Miller & Baca, 1983 in Miller & Rose, 2009). Similar effects have been shown for interpersonal counsellor qualities in numerous research (Luborsky, McLellan, Diguier, Woody, & Seligman, 1997; Luborsky, McLellan, Woody, O'Brien, & Auerbach 1985; McLellan, Woody, Luborsky, & Goehl 1988; Gaume, Gmel, & Daeppen, 2008). Once again, though, expressing empathy is not a technique and can only be effective if grounded in 'authentic caring' (Elliott, Bohart, Watson, & Greenberg, 2011).

Develop discrepancy. Practitioners often promote behaviour change using a variety of good and sensible reasons, ignoring the ambivalence many people feel about the prospect of change. To be attracted to change *and* attracted to the status quo is the essence of ambivalence, but is quite natural and very common (Maio, Vesses, & Bell, 2000; Newby-Clark, McGregor, Zanna, 2002). For example, many people talk about wanting to improve their fitness through exercise but are simultaneously motivated toward things that prevent them from doing this, such as watching TV in the evening. This apparent split in our motivation means we often talk about the issue of becoming more active as if we're in a state of two minds. In MI, talk about change is referred to as 'change talk' and talk about staying the same, 'sustain talk' (Miller & Rollnick, 2002). Typically, people are more influenced by their own arguments for change than they are by someone else's (Janis & King, 1954; Briñol, McCaslin, & Petty, 2012). One of the goals of MI is to elicit change talk so that the client explicitly highlights the potential benefits of change themselves. This means they are not easily able to argue against these reasons since they are their own. Nevertheless, the challenge is to reconcile their change talk with their current behaviour and the MI practitioner plays a role in developing these discrepancies through active listening skills. This is helpful since the extent to which a practitioner is able to encourage client change talk may independently influence motivation to change (Amrhein, Miller, Yahne,

Palmer, & Fulcher, 2003; Amrhein, 2004; Moyers, Martin et al., 2007; Glynn & Moyers, 2010). Equally, according to Festinger's Dissonance Theory (1957), the psychological discomfort – dissonance - arising from disparities between our attitudes and our behaviours moves us to reconcile these disparities in some way. Ordinarily this can occur through some qualifying statement such as, "I know I should be more active to live longer, but a friend of mine was very active and they ended up dying of a heart attack anyway". If a client has been engaged in change talk, the less likely sustain talk will apply and the greater the likelihood that these apparent discrepancies will be reconciled through behaviour change.

Roll with resistance. Some approaches to helping others change insist upon the acceptance by a client of a problem or a 'label'. For example, within the Twelve Steps programme for recovery from alcohol dependence, clients who did not accept that they were an 'alcoholic' were deemed to be 'in denial' (Nowinski, & Baker, 1992). This model assumes that one cannot move forward in recovery until a client accepts that they are 'powerless' against their drinking behaviour and must accept help. The position of MI is that there can be no denial without an accusation, and therefore 'denial' is characterised as a product of interpersonal discord (Miller & Rollnick, 1991). Clients 'in denial' or those who seem resistant to helpful suggestions are usually just asserting their right to autonomy, even though they may be aware that the advice is good. Nonetheless, this inertia is unhelpful for the therapeutic process, clients feeling that practitioners are against them, and practitioners feeling frustrated that 'nothing seems to work'. In MI terms, encountering resistance with a client does not mean a client is particularly difficult, rather that the approach the practitioner has taken is inappropriate. In this sense, the next best thing to do would be to 'roll with resistance' and try something different in order to move forward. This phrase is allegorical, akin to rolling with the force of an opponent in a game of judo or 'riding' a boxer's punch, the overall aim being not to meet force with force but to accept the client's position and try to come alongside their way of thinking in order to move forward together.

Support self-efficacy. Self-efficacy (Bandura 1977) refers to the confidence one has in the ability to succeed with a specific course of action. This differs from overall confidence since the factors that influence self-efficacy relate to the experiences one has with a specific task or outcome. For example, whilst someone may be characterised as having a confident personality, they may nonetheless have low self-efficacy in certain environments according to their experiences of them. Many new or non-exercisers have low self-efficacy for exercise since feelings of competence and ability may be lowered, increasing self-consciousness and concerns that exercise may result in harm (Du, Everett, Newton, Salamonson, & Davidson, 2012). An MI practitioner's goal would be to discuss the client's experiences that would support their self-efficacy, such as their past successes, the success of others who are similar to them, and perhaps the beliefs a practitioner has in their client's ability to succeed. Indeed, the practitioner's beliefs in whether a client can change have been shown to have a strong effect on whether behaviour change occurs (Leafe & King, 1977).

The Spirit of MI

As an approach influenced by such a variety of interacting concepts and factors, MI can be difficult to master. Practitioners have sometimes confused MI with other approaches and chief protagonists have been at pains to highlight some of the discrepancies between other approaches and MI (Miller & Rollnick, 2009). Certain 'tasks' have been identified in the approach, such as The Typical Day and The Decisional Balance, and these appeal to many practitioners interested in learning about the techniques of MI. MI is also underpinned by the client-centred philosophy, requiring practitioners to be adequately schooled in listening skills. But MI is more than the sum of its parts, and the elusive 'spirit' of MI - the way of being with a client - encapsulates the techniques and philosophy, which can make MI a challenging approach to come to terms with for some. The spirit of MI has been described by Miller and Rollnick (1995) as MI's defining quality and is developed with a client through collaboration, evocation and autonomy (Rosengren, 2009). In essence, practitioners work in partnership with a client to understand their agenda. They will strive to

understand and nurture a client's reasons for change, encouraging them to verbalise these where they can. They accept that clients are autonomous and will sometimes choose not to change. This is hard because it can feel as if they have 'failed' in some way, which can evoke feelings of wanting to somehow 'push harder'. Paradoxically, this will take them further away from the spirit of MI. To become fluent and effective with MI takes patience and challenges some of our intuitive instincts to help others change. Some circumstances, particularly those that are time-limited, may not be suited to the application of full-blown MI. Nevertheless, personal change is often a much longer process (Miller & Rollnick, 2013) and practitioners should seek and apply those facilitative processes that are known to influence positive change and avoid those that are known to hinder it.

Four Processes of MI

Miller & Rollnick (2013) describe four processes of MI that serve to replace an older notion of 'phase 1' and 'phase 2' strategies of an MI session: Phase 1 strategies were thought of as those that would enhance motivation when people were particularly ambivalent about change; phase 2 strategies were for developing commitment and talking about an action plan for change. The challenge for this process format was that it did not wholly account for the ebb and flow of a client's motivation throughout MI sessions and, whilst the process format for the thesis research was predicated on the notion of phase 1 and 2 strategies, Miller's & Rollnick's third edition of 'Motivational Interviewing' (2013) describe four processes that fit more with the possible fluctuating dynamics of an MI session. These are 'engagement', 'focussing', 'evoking', and 'planning', and are represented as overlapping steps to illustrate the possibility that, although one process may go before another, they are underpinned by one another and may require revisiting throughout the session.

Engagement. 'Therapeutic engagement is a pre-requisite for everything that follows' (Miller & Rollnick, 2013, chp 3). Engagement refers to the initial period of an MI session during which a practitioner seeks to engender trust in a client such that they feel a comfortable, active participant within their session.

Miller & Rollnick (2013, chp 3) describe engagement as 'the process of establishing a mutually trusting and respectful helping relationship'. This can be achieved very quickly or sometimes it may take much longer to establish and many factors can affect this. They list five factors that influence the engagement or disengagement of clients and suggest practitioners should be mindful of the following:

1. Why a client has attended the meeting? Ask and listen.
2. What is the sense of how important a client's goals might be for them?
3. Be welcoming in whatever way is practical and appropriate. Respond positively and look for ways to make a client feel welcome.
4. Provide the client with some sense of what to expect.
5. Offer hope – provide an idea of what can be done and how it can help, illustrating this with honest examples of others.

(Miller & Rollnick, 2013)

Focussing. Miller & Rollnick (2013) describe focussing as the process of establishing an agenda for the MI session. Whilst this must include a client's agenda, sometimes a practitioner must balance their duty of care with the needs of a client, and this may involve raising an issue of concern they have about the client or a client's health behaviour. In this sense, focussing can sometimes involve a meeting of agendas. Although focussing can imply the setting of a particular goal for the session, Miller and Rollnick (2013) describe this in terms of moving toward a point on the horizon. This implies that the focus need not be necessarily too narrow and that flexibility is important. In terms of a consultation about PA, what may come up in discussion could warrant a change of focus if it is deemed mutually appropriate, such as the need to talk about diabetes care or diet.

Evoking. Miller & Rollnick (2013) state that evoking lies at the heart of MI. In contrast with paternalistic approaches, this process involves exploring and encouraging the client to vocalise their own ideas about personal change both in terms of why this is important to them and how they feel it may best be

achieved. It may feel easier for a practitioner to provide all the 'answers' and may feel that this is a very helpful thing to do. The trouble is that, if a client fails to make the necessary changes toward achieving a goal, they may simply account for this by conceptualising the practitioner's answers as wrong. Another danger is the threat this could present to a client's sense of autonomy, as discussed earlier, which could lead to disengagement by the client from the process of change altogether. Evoking a client's reasons for change through their own language is one of the proposed mechanisms of MI (Amrhein, 2004), as discussed in the 'theoretical' section of this thesis.

Planning. The process of planning involves both developing change commitment and a plan of action (Miller & Rollnick, 2013). At this point, once the motivation for change appears to have tipped the balance of ambivalence in favour of thinking about a plan for change, it can seem quite safe for practitioners to make suggestions. However, to do so can, once again, evoke reactance, and so the focus should be maintained on encouraging the client to think of planning options themselves. As Miller & Rollnick (2013) suggest, often clients can move forward themselves once the decision to make a change has been reconciled with competing motives. It can also be risky to assume a client's motivation will not regress should other considerations arise that appear to take precedence. In this case, earlier processes may need to be revisited.

Toward a Theoretical Framework for MI

There has been much debate about how MI might work in theoretical terms, and many papers written in response to the call for a defining theory of MI (Miller & Rose, 2009). As a 'bottom-up' approach, developed and influenced by a variety of clinical factors, MI has always lacked an overarching theory. However, for numerous years MI has been linked to Deci and Ryan's (2000) Theory of Self Determination (SDT) (Tobin, 2003; Markland, Ryan, Tobin, Rollnick, 2005; Vansteenkiste & Sheldon, 2006; Britton, Williams, Conner, 2007; Ryan, Patrick, Deci, Williams, 2008; Haase, Taylor, Fox, Thorp, Lewis, 2010). This has led to a dedicated discussion at the 9th Annual Meeting of the International Society of Behavioral Nutrition and Physical Activity (2012)

regarding the ways in which MI and SDT may complement each other. MI and SDT are both person-centred and emphasise practitioner expression of empathy and unconditional regard. They also share the idea that long-term change is driven by internal motives and meanings rather than goals that are imposed by others (Teixeira, Palmeira, & Vansteenkiste, 2012). Such are the links between the two models that the question was posed as to whether SDT can be thought of as the theory MI and MI the intervention of SDT (Teixeira, et al, 2012).

Deci and Ryan (2000) postulated that motivation can be considered in a variety of ways, impacting on behaviour differentially. For example, motivation driven by external rewards such as prizes or praise is 'extrinsic', and that driven by internal rewards such as feelings of pride and self satisfaction/achievement, is 'intrinsic'. Though further subclasses are described, they suggest that individuals persist best with intrinsically motivated behaviours that are a product of their feelings of competence, autonomy and relatedness in relation to that behaviour (Tobin, 2003). The guiding principles of MI can be thought of as synchronous with SDT since they chiefly seek to respect a client's autonomy and promote competence by supporting self-efficacy. Ideally, these two models would be merged in order to create a practical *and* well-grounded theory (Teixeira, et al, 2012). However, Teixeira et al (2012) suggest that some of the concepts from both models need defining more precisely in order for this to happen.

Much of this work might involve developing greater synchrony between terms used. MI and SDT both use the term 'motivation' for example, although Deci and Ryan have differentiated this term and similarly labelled terms can confer differing interpretations (Patrick & Williams, 2012; Teixeira, et al, 2012). Equally important would be empirical testing of hypotheses from both frameworks (Teixeira, et al, 2012). Authors of both models have contributed to the debate. Miller and Rollnick (2012) affirm MI as a 'bottom-up' model, admitting it has lacked a well-developed theory, but contend that determining a theory has never been 'a primary scientific interest' for them. They suggest there may be a natural fit between MI and SDT, since SDT's focus on

autonomy, competence and relatedness is well-addressed in MI (Miller & Rollnick, 2012). Whilst they state that SDT may be able to address some of the inconsistencies in outcomes from MI research, they concede their own interests are not focussed on developing such a systematic integration (Miller & Rollnick, 2012). Deci and Ryan also acknowledge commonalities between the models but also highlight the importance of distinction between terms (Deci & Ryan, 2012). Citing important differences between 'control' and 'dependence', and 'autonomy' and 'independence' that are echoed by others (Vansteenkiste, Williams, & Resnicow, 2012), they argue that autonomy is conceptualised within SDT as more than just leaving others alone to do what they like. This view of autonomy is akin to that of MI and involves 'scaffolding' information, particularly of a technical nature, in order to facilitate reflective choices, which are subsequently respected as of the client's choosing (Deci & Ryan, 2012). This is more about being 'autonomy supportive' than simply promoting autonomy, per se. Deci and Ryan (2012) state this requires one to understand and respect the internal frame of reference of another and to encourage exploration of options without resorting to pressure or control, even in subtle ways, all of which are synchronous with the approach of MI.

Nonetheless, there are differences between the models. MI is a 'bottom-up' model, fed and developed by trial and error and practical intuition, whereas SDT is a 'top-down' approach (Vansteenkiste, et al, 2012), where the theory has been established first. Some argue this has limited the application of MI to 'health-related or clinical situations' whereas SDT has been used more widely as a macro-theory of motivation (Vansteenkiste, et al, 2012). SDT has its roots in laboratory research that grew into the realms of education, work organisations and healthcare (Deci & Ryan, 2012). Whilst the model's authors confirm the application of SDT in healthcare as a top-down model, they point out that SDT did not start as a theory to be tested but developed gradually from 'interesting questions' and a series of theoretical propositions (Deci & Ryan, 2012). They also state the use of SDT in a variety of settings has continued to expand and refine the model. The historical development of each model is undoubtedly different, MI having grown atheoretically and primarily from within the realm of health behaviour change (Deci & Ryan, 2012). Semantically,

certain terms may also be different. A main feature of MI is to improve intrinsic motivation to change. SDT argues that true intrinsic motivation is about doing something of one's own volition for the enjoyment of the activity. Therefore, the MI view of intrinsic motivation is cast as 'internalised extrinsic motivation' through the SDT lens (Patrick & Williams, 2012) since the process of MI involves facilitating a change in client behaviour that is otherwise challenged by the client's competing motives.

A concern of SDT's authors regarding any future 'marriage' between SDT and MI appears to be the apparent change of focus from the concept of autonomy to that of 'change talk' to explain its central mechanism. Autonomy is central to SDT and authors describe this as crucial to understanding goal pursuit and the difference between the maintenance or lapse of behaviour change (Teixeira, Silva, Mata, Palmeira, & Markland, 2012; Vansteenkiste, et al, 2012). Deci and Ryan (2012) argue that focussing on change talk per se rather than autonomy would move the models further apart and insist that attention be given to the quality rather than the amount of change talk if the models are to maintain synchrony. They suggest that, without detailed analysis, change talk could either reflect internalised states and therefore a greater degree of autonomy, or be reflective of the concerns of others, which would be more controlled. From a SDT perspective, these differences would predict potentially different behavioural outcomes (Deci & Ryan, 2012). This concern is acknowledged within MI by Miller and Rose (2009) who suggest the mere act of client's 'talking up' change is unlikely to bring about change in of itself and that change talk is more likely to be the explicit sign of underlying psychological processes that mediate behavioural change.

Establishing these processes represents a significant challenge but the 'detailed analysis' suggested by Deci and Ryan (2012) has indeed been the preoccupation of some MI researchers seeking to explain 'mechanisms', 'active ingredients' and 'what works in MI' (Amrhein, 2004; Morgenstern et al., 2012). Others have looked for within-session 'predictors' of change, exploring the role of the therapist in evoking change talk as a mechanism in itself (Magill, Apodaca, Barnett, & Monti, 2010; Glynn, & Moyers, 2010). Much of this work

has been conducted by psycholinguist Paul Amrhein who identified that change outcomes during MI sessions appear to be contingent upon how and when clients verbalise their desires and willingness to change (Amrhein, Miller, Yahne, Palmer & Fulcher, 2003; Amrhein, 2004). Based upon his original work in the analysis of natural language (Amrhein, 1992) and taking desire, ability, reasons, need and commitment to be reflective of motivation for change, Amrhein demonstrated it was the strength of this commitment language that reliably predicted change outcomes (Miller & Rose, 2009). Moreover, the frequency of a client's commitment language throughout an MI session was also important, especially when it occurred toward the end of a session (Amrhein, et al, 2003; Miller & Rose, 2009; Magill, 2010). Evidence shows that intense training of counsellors in MI can increase the frequency and strength of client change talk (Amrhein, Miller, Yahne, Knupsky, & Hochstein, 2004; Houck & Moyers, 2008; Miller et al., 2004 in Miller & Rose, 2009), which is promising for improving client outcomes if change talk is a mechanism for change.

Whilst research has continued to draw parallels between SDT and MI (Patrick & Williams, 2012; Resnicow & McMaster, 2012; Teixeira, et al, 2012; Teixeira, Silva, et al, 2012) and the language of MI research continues to echo the influence of 'change talk', a defining theory of MI remains elusive despite the efforts by some to forge ahead with a systematic integration (Vansteenkiste, Williams & Resnicow, 2012). Researchers have continued to support the use of MI with SDT, often in research involving physical activity (Tobin, 2003; Haase, et al, 2010; Fortier, Duda, Guerin & Teixeira, 2012; Hardcastle, Blake & Hagger, 2012) consistently appearing amidst the conjecture are the influences of autonomy-supportive environments and practitioners who preferentially and consistently evoke 'change talk' with their clients. But if establishing a theory of MI has presented a challenge to research, then identifying and measuring the quality of MI has been equally as challenging.

Chapter 4 - Motivational Interviewing: Applications

Identifying MI for Research and Training

The absence of a universally agreed theory for MI or knowledge of causal processes creates confusion over determining whether what is being delivered in the name of MI, is actually MI. In a critique of one of the earliest systematic reviews of MI conducted by Dunn, DeRoo & Rivara, (2001), Rollnick (2001) pointed out that MI developed from a 'notion' that the way in which others were spoken to about change was chiefly influential in the extent to which they became amenable to change. In this sense, he emphasised that MI was more of a counselling style than a set of techniques (Rollnick, 2001) and that the inductive manner in which MI has developed has made it difficult for researchers of MI to be conclusive about the active properties of the approach (Rollnick, 2001). Within another critique of the same review Miller (2001) encouraged the monitoring of MI fidelity. He highlighted the fact that research lacking fidelity measures could significantly affect reviews of MI, which may introduce a bias towards the efficacy of the approach. The importance of fidelity measures for behaviour change interventions generally, has been emphasised more recently in a review by Breckon, Johnston & Hutchison (2008) who point to a 'lack of clarity and consistency' regarding the processes of interventions, and conclude there exists an over-emphasis on 'outcomes' and 'significance' in intervention research. Fidelity is described by Belg and colleagues (2004) as the methodological strategies used to monitor and enhance the reliability and validity of behavioural interventions. Since practitioners' self-assessment of MI competence has been historically unreliable (Miller, Yahne, Moyers, Martinez, & Pirritano, 2004), the 'measuring' of MI has invariably involved the independent 'coding' of transcripts of MI sessions (Miller & Rose, 2009) in order to discern MI-consistent practice; the gold standard according to Belg and colleagues (2004). A coding system for this has been developed and modified since 1997 (Miller, Moyers, Ernst, & Amrhein, 2003) and includes the use of the Motivational Interviewing Skill Code (MISC), version 1.0 of which was developed in 2000 and amended to version 2.0 in 2003. This was designed to evaluate the skills of MI practitioners, enabling the identification of aspects of MI

that are most effective to outcomes. It also highlighted the MI skills that provide the biggest challenge to learning for practitioners (Miller, et al, 2003). An addendum was made to the MISC in 2008 with the Client Language Assessment in Motivational Interviewing (CLAMI) (Miller, Moyers, Manuel, Christopher & Amrhein, 2008), designed to specifically elucidate more information pertaining to client change talk. Further to the development of the MISC, the Motivational Interviewing Treatment Integrity (MITI) code was designed (Moyers, Martin, Manuel, & Miller, 2005) 'as a treatment integrity measure for clinical trials of MI' and to provide feedback about practice improvement (Moyers, et al, 2005). These measures require MI sessions to be audio-taped and transcribed before the coding of practitioner skills and client responses is made, which inevitably raises a question over coder competence. However, research has shown good inter-rater reliability with the coding schemes of the MISC and the MITI (Moyers, Martin, Catley, Harris, & Ahluwalia, 2003; Pierson et al., 2007).

Whilst these are not the only means of measuring MI, most similar methods require the taping and transcribing of sessions or the evaluation of video recording, such as the VASE-R (Rosengren, Hartzler, Baer, Wells, & Dunn, 2008). Another method of establishing whether MI has been delivered could be simply to ask the client. Madson and colleagues (2012) developed a method of assessing clients' perceptions of the use of MI by clinicians. This scale measures the integrity of MI from the client's perspective and is suggested for use in 'any setting' (Madson, et al, 2012), although the scale was trialled in inpatient mental health settings in particular. The authors point out the value of the scale to settings where taping or observation of MI sessions is not possible, which, within the risk and security sensitive environments of forensic psychiatric units, would be highly valuable. As it is explained later in this thesis, this scale would have been ideal to use for this research had it been available at the time.

Aside from establishing mechanisms and evaluating the skills of practitioners, the development of MI coding schemes have been useful in evaluating MI training, the effects of which have shown to be promising

(Schoener, Madeja, Henderson, Ondersma, & Janise, 2006; Bennett et al., 2007; Barwick, Bennett, Johnson, McGowan, & Moore 2012). However, learning MI is not easy (Miller & Rollnick, 2009) and variability in the ability of some practitioners to adopt and maintain MI has been recorded by some researchers (Baer et al., 2004). Baer and colleagues (2004) point out baseline differences in knowledge and skills of MI between groups and a potential for the deterioration of some skills following training. In their review of MI training for general healthcare practitioners, Soderland, Madson, Rubak, & Nilson (2011) suggest caution with the interpretation of training research outcomes because of methodological inconsistency. There may also be issues with the focus of some MI training. Madson, Loignon, & Lane (2009) highlight a historical lack of emphasis on training in *phase 2* skills for MI. These skills relate to strengthening commitment with clients toward the end of MI sessions, the language of which at this point was identified as especially important in predicting outcomes (Amrhein, 2004). This makes the monitoring of MI fidelity even more important and Belg and colleagues (2004) recommend multiple training sessions, booster sessions, and regular supervision of intervention training in order to avoid a 'drift' in skills.

Given the potential variability in training outcomes, the question may arise over whether MI can be learned by anyone. The Health Foundation (2011) conducted a review of the characteristics of MI training, trainers and practitioners and crucially found 'a paucity of published research' investigating the character or personality traits of MI practitioners. The components of 'empathy' and listening skills were found to be important in some studies but it was not clear whether these were deemed to be learnable skill sets or practitioner traits. The review identified MI practitioner roles as varied, consisting of medically-oriented groups such as GPs, medical students, and nursing staff, to social workers, peers, carers and layworkers, psychologists and counsellors. It may be deterministic and inflexible to imagine that some people could not learn MI because of their personality, but there seems to be certain distinctions between effective and ineffective practitioners aside from the ability to adopt MI skills. One of these is the extent to which practitioners are willing to avoid MI-inconsistent techniques (Health Foundation, 2011).

In a study of the integration of MI into the national exercise referral scheme in Wales, Moore, Moore and Murphy (2012) discovered that some people rejected the approach of MI, considering their existing practise as effective. Others considered it unnecessary when clients were ready to change and some found MI difficult to reconcile with structured data gathering processes. Avoiding MI-inconsistent methods may be especially challenging for some professions given the orientation of the basis of medical training is the Medical Model. In fact, the Health Foundation review (2011) found evidence that practitioners less willing to endorse a disease model were generally more effective with MI. Ultimately, the review illustrated evidence that having an aptitude for and an affinity with the philosophy of MI determined those who would use and be more effective with MI in practice. This may require a more flexible way of viewing how clients or patients should be dealt with, particularly if the environment is ostensibly punitive, such as a prison environment or detention centre. A method of establishing knowledge of MI and attitude toward MI philosophy was developed by Leffingwell (2006) with the Motivational Interviewing Knowledge and Attitudes Test (MIKAT). Although this was created as a training evaluation tool, it was deemed useful in a modified form for this research for establishing the extent to which the knowledge and attitudes of staff at the Unit were consistent with the philosophy of MI.

MI and Physical Activity

As an intervention to encourage PA, MI has been trialled in a number of settings, many of which have shown promising outcomes in follow-ups of up to 6 months (Martins & McNeil, 2009). Longer-term outcomes are less promising and the main criticism of many trials with MI has been their methodological rigour and consistency (Martins & McNeil, 2009). However, MI does offer some utility in this area. Between 1995 and 1997, an experimental project in a socioeconomically disadvantaged area of Newcastle involving 523 participants illustrated relatively positive outcomes for only the most 'intensive' MI interventions (Harland, White, Drinkwater, Chinn, Farr, & Howell, 1999). A follow-up at 12 weeks illustrated modest improvements for the MI intervention offering a greater number of sessions compared with a control group, but after

one year these had not been sustained. This project warned of the dubious cost-effectiveness of exercise referral schemes utilising brief interventions such as MI. However, it was unlikely the essence of MI was given a fair evaluation in this trial, since the process included a mix of baseline testing, evaluation (judgment) against normative values, direct advice, and reward vouchers. The MI was delivered by a health visitor 'trained in MI', with no indication of fidelity assessment.

Another trial, the largest of its kind at the time, involved over 1600 participants in the general population randomly assigned to a 'brief negotiation' (BN) or 'direct advice' (DA) group promoting increases in PA, and a control group with no intervention (Hillsdon, et al, 2002). Whilst all three groups increased PA levels after a year, an intention-to-treat analysis illustrated no statistical differences between intervention groups. There was a statistical difference in PA uptake between the MI group and the control. Interestingly, the control group increased PA levels beyond those of the DA group suggesting, perhaps, that people were more inclined to change activity levels by merit of being involved with research than they were after being give direct advice about PA. Although a protocol was adhered to, fidelity to MI utilising a validated coding scheme was not reported. Brodie and Inoue (2005) suggest MI may be a particularly useful intervention for 'older populations'. They showed an 'effective' use of MI in a three-arm study promoting PA for 60 people with chronic heart failure. Detail of the MI intervention was lacking, with only broad principles and core skills referred to and there was no fidelity measure. The MI groups illustrated increased PA over 5 months compared with a group delivering structured exercise programme advice. As a follow-up to this, the trial was published again to illustrate how MI had been effective in improving the participants' quality of life (Brodie, Inoue, & Shaw, 2008).

In more recent years the quality of MI research appears to have improved in relation to training and fidelity. Hardcastle, Taylor, Bailey and Castle (2008) conducted a trial of an adapted MI intervention in a primary care-based setting to improve the PA, diet and health status of 334 participants over 6 months. Interventions were delivered by activity and diet specialists who had

been trained in MI, although outcomes were of mixed success. PA increased from MI counselling but aspects of diet only improved in the non-intervention control group. Training in MI was conducted by the author in two, four-hour sessions involving an introduction to the principles of MI and 'stage 1' strategies in the first session, and 'stage 2' strategies in the second. Role play sessions were tape recorded as part of training and reviewed through a 'structured dialogue' with the trainer. Fidelity of the MI intervention sessions was not reported. Hardcastle, Blake & Hagger (2012) investigated the effectiveness of MI in increasing PA levels with 207 participants in a disadvantaged community. The outcomes were promising after 6 months, participants having increased activity levels significantly. The intensity – number of sessions – of MI appeared again to be a factor in this outcome. Whilst recognising the lack of attachment for MI to any one theory and describing in some detail MI's associations with SDT, this study makes only scant reference to the influence of change talk in MI. Nevertheless, the training of practitioners delivering the intervention appears to have been more thorough; delivered by a MINT (Motivational Interviewing Network of Trainers) trainer, training tapes were coded using the MITI, observational feedback was given, and 6 months experience was gained in MI before data was gathered. Ongoing supervision was also provided. This represents an advanced level of training for this complex intervention. Despite this, quantified coding of sessions was not conducted. This was acknowledged as a limitation by the authors. Aside from increases to PA, the authors suggest MI can be 'easily integrated' into routine practice. In an extension of their previous study, Hardcastle, Taylor, Bailey, Castle & Hagger (2013) examined the sustained effects of MI on PA and other lifestyle factors after 12 months following the MI intervention compared with an information-only group. Previous issues and limitations apply but significant PA increases were sustained.

Other trials of MI to improve PA have been conducted with different client groups, although many of these did not include a control group, had small numbers of participants, and generally lacked methodological rigour with, for example, the monitoring of fidelity. Bennett, Lyons, Winters-Stone, Nail, & Scherer (2007) compared MI against a control to increase PA with long-term cancer survivors. Outcomes in PA for the MI group were statistically better than

the control and the authors suggested the influence of self-efficacy was a major contributory factor. Sjöling, Lundberg, Englund, Westman & Jong (2011) trialled the effectiveness of MI coupled within a physical activity on prescription programme in order to increase leisure time activity for people with hypertension. The multi-factored nature of this kind of trial and lack of comparison group makes it difficult to attribute outcomes to MI in particular but these were favourable and authors suggest the combination can help to increase lifestyle PA. A randomised control trial underpinned by SDT and incorporating elements of MI was conducted in order to reduce depression scores of 361 participants through PA (Chalder et al., 2012). The rationale for this trial – TREAD-UK - was explained in detail in relation to SDT and MI by Haase and colleagues (2010), highlighting pertinent factors of confidence, autonomy, control and social support. In particular, the rationale emphasised the influences of autonomous motivation on 'greater participation and adherence to exercise' and autonomous self regulation and intrinsic motivation on 'longer-term behaviour change' (Haase, et al, 2010).

The authors further illustrate how the strategies of MI map onto the elements of SDT's competence, autonomy and relatedness. The results of the actual trial did not illustrate a reduction in depression ratings or antidepressant use. However, participants in the intervention group reported increased PA levels over 4, 8 and 12 months of follow-up. As an intervention designed to improve PA levels in the longer-term, this was deemed to be successful by the authors (Chalder, et al, 2012). The training of the facilitators of this intervention consisted of a 2-day workshop with directed readings around MI and instruction for use of a 'comprehensive' intervention manual. Regular supervision support was also provided. No provision for fidelity measure was reported for the intervention. Perhaps because of cultural or situational differences, MI might not be appropriate for all groups, at least in relation to certain aspects of the approach. Miller, Marolen and Beech (2010) reported the perceptions of African American women with Type 2 diabetes to MI as part of a PA counselling intervention. Participants who watched examples of a contrasting MI and non-MI DVD perceived the MI intervention as effective in terms of health communication but rated the client-centred nature of MI less favourably

compared with their 'traditional' experience of a more paternalistic approach. They considered this more representative of 'good counselling'.

MI and Mental Health Conditions

MI has been used to treat a variety of mental health conditions and Arkowitz and colleagues (2008) present a collection of examples of how MI has been used to improve outcomes with client groups with 'psychological problems' such as anxiety, post traumatic stress disorder (PTSD) symptoms, depression, suicidal ideation, eating disorders, gambling, medication adherence with schizophrenia, and dual diagnosis. Outcomes for these groups are varied and have differential implications given the purpose of MI is not always the same. Some applications of MI have also been adapted or used in conjunction with other interventions, such as cognitive behaviour therapy (CBT) (Britton, Patrick, Wenzel, & Williams, 2011). Indeed, a meta-analytic review of MI in controlled clinical trials suggest larger effect sizes for MI generally are seen when it is used as such (Burke, Arkowitz, & Menchola, 2003). Whether MI is entirely applicable for different groups given their specific and varying needs is the question, as illustrated by Miller and colleagues (2010) in the previous chapter.

The psychological conditions listed above most relevant to the population in this research are anxiety, depression, suicidal ideation, and schizophrenia. MI as an approach for the treatment of anxiety has been promising although some of the tasks of the process have presented difficulties in application (Westra & Dozois in Arkowitz, et al, 2008). Specifying a focus, identifying 'good things' in the decisional balance and maintaining the spirit of MI have been challenging, the first and last of these being apparently crucial elements to the essence of MI (Miller & Rollnick, 1991, & 2009). Establishing when the empathic underpinning of MI is more or less applicable in counselling of this client group is also important and exhortations are made for further research into the most effective of MI's processes with this group (Westra & Dozois in Arkowitz, et al, 2008). More recently, research has shown MI to be effective in changing specific behaviours in relation to a range of anxiety disorders such as obsessive-compulsive disorder (OCD), general anxiety disorder (GAD), social anxiety

disorder and others (Westra, Aviram, & Doell, 2011). However, these authors advise caution regards the sensitivity of self-report measures of motivation for these groups and suggest analysis of in-session behaviour is more accurate for assessing motivational changes in anxiety. Zuckoff, Swartz & Grotte (in Arkowitz, et al, 2008) describe the need for MI to be used as a 'pre-therapy' for clients with depressive symptoms given the low rates of attendance to psychotherapeutic treatment for this condition. They describe a number of challenges to the application of MI, the first of these being to balance the structure of a session with the needs of the client, suggesting that flexibility is key; the structure of a session should, in some cases, give way to the empathic listening nature of MI's client-centred core. Another issue is duration of session time. Simply speaking, focus should be given to aspects of the session most important to the client.

Other issues relate to the maintenance of clarity between the roles of counsellors and the purposes of the MI sessions and psychotherapy, but the authors indicate their preliminary research is promising and warrants further investigation. As a framework for the treatment of depression itself, Arkowitz and Burke (in Arkowitz, et al, 2008) echo the promise of MI as a pre-therapy and further emphasise the value of developing intrinsic motivation and resolving ambivalence for this group. They highlight three main challenges to the application of MI. Depression is often presented with other disorders such as anxiety or substance use, which makes the initial focus of problem behaviour especially important. The authors suggest it is more helpful for the client to begin working on the symptoms of their depression as a means of progressing toward underlying issues. Adapting to shifts in foci over sessions can also be challenging given that this can occur with the empathic nature of the approach. Finally, depressed clients can be extremely passive, with great expectations that the practitioner will direct them. Whilst it may be possible to elicit reasons for passivity and to provide suggestions within the philosophic nature of MI, the authors make plain that MI may not suit everyone and that some clients may simply respond better to more directive approaches, at least until their depressive symptoms improve.

With suicidal clients, the promotion of autonomy and emphasis of choice within MI can present significant difficulties given that, in Britain at least, it is illegal to take one's own life. However, Zerler (in Arkowitz, et al, 2008) asserts that MI presents 'an excellent opportunity' with this group to promote autonomy, develop the therapeutic alliance and examine ambivalence in the face of comparative treatments that explicitly limit treatment options and 'infantilise' clients. The literature base on the use of MI in suicidality is sparse but Britton, Patrick, Wenzel, and Williams (2011) offer an integrative framework for the use of MI with CBT, using SDT as a means of understanding the mechanism for this. CBT has been a particularly useful means of preventing suicidal behaviour (Britton, et al, 2011) and the authors suggest the ambivalence about living and dying often felt by suicidal people makes MI an appropriate adjunct to this treatment. They also feel MI can help with the ambivalence some people feel about attending for treatment for these feelings. In relation to SDT, MI is thought to work to help support the basic psychological needs of autonomy, competence and relatedness. This is important because it is thought people who lack this support can develop not only extrinsic life goals but also experience a lack of vitality and increased depression and anxiety (Britton, et al, 2011).

In the context of severe mental illness (SMI) it is possible that schizophrenia may come most readily to mind. Whilst promise for the efficacy of MI has been illustrated in many clients groups, this specific group is perhaps the most contentious regards propriety of use. For example, a review of the use of MI to increase antipsychotic medication in patients with schizophrenia revealed a sparse literature base, and all studies had used MI in conjunction with some other intervention such as CBT (Drymalski & Campbell, 2009). Whilst complex interventions may be appropriate with complex conditions, conclusions regarding the effective use of MI as a stand-alone treatment are understandably limited. This has been compounded by methodological issues pertaining to all relevant studies reviewed. The review reported specific challenges to the use of MI with this group, such as 'cognitive deficits', lack of energy, and 'disinterest' (Corrigan, McCracken & Holmes, 2001, in Drymalski & Campbell, 2009), although others suggest MI can be useful to develop 'insight' into the diagnosis

of schizophrenia (Rusch & Corrigan, 2002, in Drymalski & Campbell, 2009). Some authors exploring the utility of MI in psychiatry propose that it is no more effective than other 'techniques' for treating addictions although concede that it may just work faster (Chanut, Brown, & Dongier, 2005).

Beyond the realm of dual diagnosis, MI has almost never been used as a stand-alone treatment (Moyers, 2011) and the paradox still exists regarding the marriage of client-centred MI, where the practitioner resists an 'expert' role, with more directive treatments such as CBT, which can convey a greater degree of structure and teaching (Moyers, 2011). Moyers (2011) raises pertinent questions over the use of MI with differing client groups, including the extent to which ambivalence must be a necessary pre-condition given that the resolution of ambivalence is often a primary goal of MI. Can MI be used, for example, where ambivalence is not a presiding issue? Another is the extent to which ambivalence can be resolved in a mental health condition within which it is one of the core characteristics, such as schizophrenia (Moyers, 2011). These questions become particularly salient for this research given the nature of most of the clients' conditions. Moyers (2011) defers to Westra and colleagues (2011) for an indication of how MI may effectively be extended for use for major mental health problems. Once again, the strength of evidence for MI is limited by methodological concerns, but some well-controlled studies indicate support for MI in reducing substance abuse and increasing medication compliance (Westra, et al, 2011).

Forensic Mental Health: A Specialist Setting

The evidence for the specific use of MI within forensic mental health is extremely limited. The main aim of this research is to explore the validity of MI for mentally disordered offenders (MDO) who contend with numerous issues that make attending to their physical health needs particularly problematic. In the first instance, MDO's can experience conditions of severe mental illness and socially challenging personality or behavioural conditions; some are prone to bouts of extreme psychosis. Attempts to help them deal with these conditions often involve anti-psychotic medication, the latest types of which have a

tendency to increase bodyweight. Oftentimes, the backgrounds of these service users are under-privileged. They may also have long histories of an 'authority' attempting to direct their behaviour, albeit with legitimate purpose. This can make them particularly sensitive to perceived attempts to control their autonomy, even if this is to help them improve their health. Sometimes, the importance of physical healthcare can run relatively low in a service user's hierarchy of personal importance, which can make encouragement toward a 'healthier' lifestyle appear fruitless.

One way of 'motivating' clients to become more active is to promote PA as 'the norm'. Some mental health units in Norway make PA sessions mandatory for their clients (Tetlie, Eik-Nes, Palmstierna, Callaghan, & Nottestad, 2008; Tetlie, Heimsnes, & Almvik, 2009). In Broadmoor hospital, whilst not mandatory, attendance to PA sessions is care planned for many patients through the MDT. The paradox is that, whilst clients may become more active, this may adversely affect the development of self-sufficiency and the promotion of empowerment. Patients transferred from Broadmoor psychiatric hospital to The Unit often take time to adjust to the environment but in many cases decide not to continue attendance to PA sessions once they realise they do not have to, despite the continued encouragement of the MDT. This may be because the motivation to be active has not been intrinsically developed. Potentially, positive health changes can be made through the advocacy of a service user's Responsible Clinician (RC). This may have some good effect although two main concerns persist. The first is that, even if client changes come from the advocacy of an RC, it is unlikely these changes will be associated with actual intrinsic motivational changes. The second is that the RC is an advocate of the benefits of PA for their clients. PA does not routinely form part of the care-plans of patients at The Unit and the reciprocal benefits of physical activity for mental health do not seem to be prioritised. One RC, long-since gone from The Unit, admitted he was less concerned with promoting PA because he considered his job to be the improvement of the mental, not physical, health of his clients. Similarly, Faulkner and Biddle (2002) highlighted three emergent themes amongst mental health nursing staff: That exercise and PA was a beneficial 'distracting' strategy rather than an important part of a

patient's recovery; that exercise is a lifestyle choice and the responsibility of the individual; that 'mental' and 'physical' health are separate and different.

Another central issue to explore is how the nature of the environment may affect the implementation of MI amongst the care staff. For example, if MI can be found to hold good potential for this group, it may be extremely difficult for care staff to maintain a client-centred perspective in the face of the verbal and physical assaults they encounter by patients, which almost inevitably heighten their sensitivity toward issues of risk. The apparent conflict between the use of client-centred approaches and the forensic mental health environment has been explored by others, albeit in a limited way. An unpublished dissertation highlights the potential difficulties in reconciling client-centred approaches within penal-related institutions and questions the validity of client-centred approaches in forensic occupational therapy (Kerr 2001, unpublished). On the one hand it can be argued that the forensic environment is necessarily restrictive, which naturally limits the extent to which collaborative and therapeutic relationships can be developed. On the other, the aim of the carers in this setting is to encourage development of MDOs toward 'recovery'. This requires the service user to develop a sense of autonomy, control, and personal agency toward self-sufficiency, all of which are encouraged through client-centred practice. A review by McMurrin (2009) explains how MI has been used as part of probation officers' induction training plans, such is the perceived value of the approach to changing behaviours of those in penal institutions. This review was organised in order to establish a more solid understanding of the application of MI to its use in such settings and a concern was highlighted that 'the popularity of MI may have outstripped' its evidence base (McMurrin, 2009). The review reveals some utility for MI with offenders in treatment retention, enhanced motivation to change, and reduced offending, but care with the integrity of the application of MI and the articulation of a theory of change are recommended (McMurrin, 2009).

Rationale for the Use of MI within the Forensic Mental Health Setting

The decision to use Motivational Interviewing as an approach in this work was made through a number of factors. Firstly, the author has used MI to help clients change aspects of their health behaviour for 20 years. Support for the approach has been gathering and it has been used to underpin the training given to Health Trainers, the role developed by the Department of Health for local community health improvements (2008). The format of the interview process in this research mirrors a care pathway for PA called 'Let's Get Moving', commissioned by the Department of Health. This pathway was developed in collaboration with some of the author's past colleagues and associates and is intended to be administered as MI. Though it is questionable whether the pathway is used in this way, since this was not contingent upon having had training in MI, it has been trialled by a number of health authorities and successfully tested in a feasibility trial in 14 surgeries for delivery in primary care and widespread implementation (DH, 2009).

The approach fits well with the Recovery model of mental health care (Turton et al., 2009). This 'service-user led' approach seeks to empower service-users in the facilitation of their own care pathway to recovery, the tenet of which resonates strongly within MI. The author works in the Occupational Therapy department at The Unit, within which the Recovery model is currently being promoted and 'trained' to care staff throughout the MDT. Client-centred philosophy is fundamental to the ethos of Occupational Therapy (OT). OT is underpinned by core ethical principles, one of which is the principle of 'autonomy', or 'self determination' (Ethics Commission, 2010). The emphasis here is the 'empowerment' of individuals and encouragement toward informed personal choice for clients, alongside the belief that all forms of activity can have a therapeutic benefit (Pearmain, COT, 2010). Authoritarian and directive approaches can invoke strong reactance (Brehm, 1966; Miller, 2000; Dillard & Shen, 2005; Miller, Lane, Deatrick, Young, & Potts, 2007), but one of the main aims of MI is to 'roll with resistance' by adopting an alternative strategy (Miller & Rollnick 1991); preferably one that is more in keeping with the client's perspective. Ussher and colleagues (2007) recommend the facilitation of PA for

people with severe mental illness is best achieved through 'professional support, and enhancing self-efficacy by combating barriers and tailoring to preferences'. These factors are all important facets of the approach of MI.

Evidence suggests that client-centred approaches such as MI are more effective than traditional advice-giving in dealing with lifestyle issues of change (Britt, Hudson, & Blampied, 2004). MI has been used with some success in the areas of physical activity and diet (Resnicow et al., 2001; Hillsdon, Thorogood, White, & Foster, 2002; Breckon, Lavalley, & Golby, 2003; Brodie, & Inoue, 2005), smoking cessation (Colby et al., 1998; Brown et al., 2003; Soria et al., 2006), and for a variety of care issues within mental healthcare (Steinberg, Ziedonis, Krejci, & Brandon, 2004; Zygmunt, Olfson, Boyer, & Mechanic, 2004; Elbogen, Mustillo, Van Dorn, Swanson, Swartz, 2007). Reviews have also been conducted regarding the effectiveness of interventions for physical health generally (Samele, Hoadley, & Seymour, 2006) and for MI as an intervention for health issues (Britt et al 2002; Burke, Arkowitz, Menchola, 2003; Rubak, Sandboek, Lauritzen, & Christensen, 2005) and in a variety of areas such as mental healthcare. Whilst MI has been used for a variety of offending behaviours with forensic mental health service users (Hartshorn, Hughes, & Duckworth, 2004; Morrow, 2008), the evidence base for MI within forensic mental health settings is extremely limited. The author's systematic review (Lyon & Byron-Daniel, 2010 unpublished, in preparation) did not reveal any research focussing on the use of MI to facilitate 'physical' health behaviour changes such as diet or exercise in this setting. Since this review, a single piece of relevant research has been conducted involving a single case study, from which it was suggested that MI must be employed within groups to be most effective for this inpatient group (Shagoury, Currier, & Fetter, 2010). This advocacy should be viewed with caution in light of the single case-study design. Therefore, it is this relative gap in the literature and the author's own use of 'MI' in this setting that merit this research, which is intended to develop an understanding of how MI may promote effective health changes for forensic mental health inpatients. It is also hoped that some of challenges to the implementation of MI may be highlighted within this specific environment.

Chapter 5 - The Efficacy of Motivational Interviewing for Improving Health Behaviours with Adult Psychiatric Inpatients: A Systematic Review

Systematic Review: Abstract

The efficacy of Motivational Interviewing (MI) was investigated for the improvement of health behaviours of adult psychiatric inpatients. A systematic review was conducted, with all types of study considered; a narrative review was chosen due to the heterogeneity of papers retrieved. Thirteen databases were searched, from which 8 studies were identified after exclusion criteria were applied; 5 RCT's for individual MI, 1 experimental study for group MI (GMI) and 2 pilot studies for GMI. Health behaviours involved were alcohol and illicit drug misuse. All papers, bar one, involved short-term, voluntary psychiatric inpatients and most outcomes were assessed as participants became outpatients. One paper concerned a longer-term, forensic setting, involving a pilot test for GMI but was of insufficient quality for recommendations. Four of the eight papers illustrated positive outcomes for MI, although only two were of sufficient quality for any kind of recommendation. Methodological issues were identified with all papers, the most salient being the quality by which the MI intervention was implemented and evaluated. The use of MI in improving health behaviours with adult psychiatric inpatients was not supported by the evidence of this review. However, because of the nature of the settings and the limited behaviours investigated, implications are for more detailed MI research with a variety of physical and mental health behaviours, particularly within long-term settings and with sectioned inpatients.

Systematic Review: Introduction

Motivational interviewing (MI) is “a collaborative, person-centred form of guiding to elicit and strengthen motivation for change.” (Sciacca et al 2009). It is a counselling intervention finding favour across a range of settings and behavioural domains (Britt et al, 2004; Burke et al, 2003; Hettema et al, 2005; Knight et al, 2006; Rubak et al, 2004; Samele et al, 2006), differing from paternalistic interventions in that the importance of the approach lies in the necessary development of the MI ‘spirit’; the way of ‘being’ with a client. This is best developed through expressing Rogers’ (1951) core therapeutic qualities of unconditional acceptance, genuineness, and accurate empathy. However, little is known about the efficacy of MI within ‘long-term’ psychiatric in-patient settings such as forensic, secure mental health units where patients are often detained for months and sometimes years.

It is well known that there is an association between drug and alcohol abuse and severe mental illness (Menezes et al, 1996). But those suffering from serious mental illnesses are also at a significantly increased risk of physical health impairments arising from other health-related behaviours such as smoking, lack of physical activity (PA), poor dietary habits, and poor adherence to medications (Phelan et al, 2001). These issues are problematic and have prompted the closure of many long-term mental hospitals in favour of the development of community mental health teams (Phelan et al, 2001). But where patients are detained under sections of the mental health act within longer-term psychiatric units, such as those of a forensic nature, physical as well as mental health concerns remain a concern. Paradoxically, working toward stabilising and improving an individual’s mental health for their own and public safety may take many months and even years, within which time the risk of developing obesity and associated metabolic conditions, such as diabetes, increases. Serious mental illness increases sedentary behaviour (Farnham, 1999) and conditions of overweight and obesity are exacerbated by anti-psychotic medication. Through a variety of health inequalities, premature mortality is increased by 2.4 times within this population (Berren, 1994).

Dualist notions of delineation between physical and mental health are outdated and a consensus now exists regarding the reciprocity of benefits between physical and mental health. Mental health experts now argue that meaningful activities, such as PA, contribute significantly toward mental health and should become an integral part of treatment, not just a leisure option (Burbach, 1997). Nevertheless, the problem of engagement exists and, whilst the need to tackle this issue is recognised (Ohlsen, Peacock & Smith 2005, Cohen & Phelan 2001, Seymour 2003), the methods by which health behaviours may be improved are varied, both in their nature and success (Samele, 2006). Whilst an 'integrated' approach to improving health behaviours in those with serious mental illness is recommended (Samele, 2006), most attempts to help are derivations of the diagnostic and prescriptive medical model. This can be problematic when dealing with a client group with a history of health-defeating behaviours, and for whom smoking, eating high-calorie foods and remaining relatively inactive can be adaptive behaviours in the absence of being able to take drugs or alcohol.

Liberman (1994) suggests 'adherence problems' are characterised by a lack of collaboration between health professionals and their clients, whilst Prochaska (1992) argues for an improved match between interventions and a client's stage of readiness. Collaboration and readiness are key factors to the approach of MI, and yet Samele and colleagues (2006) identified only one study examining the effects of MI on improved physical health; for smoking in psychiatric outpatients. Occupational Therapists (OT's) work specifically to promote meaningful activities and develop the engagement by mental health patients in behaviours intended to improve their recovery and enhance their well-being, including those that would impact on their physical health. Attempts to create engagement are invariably client-centred; an approach designed to develop an understanding, collaborative and non-judgmental therapeutic relationship. Evidence suggests that client-centred interactions concerning lifestyle changes toward 'health' are more effective than traditional advice-giving (Britt et al 2002) and, more specifically, that the collaborative nature of this approach is more conducive to psychiatric patients with, for example, schizophrenia (Bellack & Clemente 1999).

Whilst the philosophy of MI may resonate with OT's, its use to aid recovery from psychiatric illness is not commonplace within inpatient settings. This may be because the 'spirit' of the approach can be more easily damaged than it is nurtured, and a paternalistic style is usually less effort to deliver. It may be even less familiar to psychiatric nursing staff whose training is oriented from the diagnostic 'medical model', with an emphasis on the administration of anti-psychotic and mood-stabilising medication. Whilst medication is undoubtedly important, the precepts of MI are also embedded in the policy documents of recovery (Slade, 2009) and should be an integral part of healthcare training. Some of the facets of MI can be challenging to maintain – respect for autonomy and a non-judgmental attitude, for example - particularly in forensic settings, but their influence in achieving successful behaviour change is no less important for those with mental illnesses than in general populations. Evidence shows that the degree of therapist collaboration and flexibility in treatment options – key facets of MI - can directly influence patients' motivation to change (Miller & Rollnick, 1991; Ziedonis et al, 1996; Carey, 1996; Ziedonis & Trudeau, 1997).

Because of the potential diversity of methods used to examine the effects of MI within a possibly wide variety of behaviours encompassing the term 'health', it was considered a systematic review of the literature would be most appropriate to evaluate the overall utility of the approach. The aims of this review are to systematically search for published and unpublished literature concerning the use of MI with adult psychiatric inpatients. The scope of the review is to consider all types of study and for the term 'health behaviour' to encompass all behavioural outcomes deemed to influence either physical or mental health, including smoking, physical activity, diet, medication adherence, illicit drug use and alcohol abuse. It is intended for the review to inform health professionals within multi-disciplinary psychiatric teams regarding the use of MI for health behaviour change within the psychiatric inpatient setting, particularly that of the author's own workplace; a medium-secure, forensic mental health unit.

Systematic Review: Method

Search Strategy. The following electronic databases were searched: AMED: Allied and Complementary Medicine (1985 to February 2009), ASSIA: Applied Social Sciences Index and Abstracts, British Nursing Index (1994 to February 2009), British Nursing Index Archive (1985 to 1996), CINAHL, the Cochrane Library, EMBASE (1980 to 2009 Week 09), MEDLINE(R) In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) (1950 to Present), PsycARTICLES, PsycINFO (1806 to February Week 4 2009), PUBMed, ScienceDirect, Sportdiscus.

The following search terms were used for AMED and databases supported by the OVID platform and then adapted for all other databases; 'PSYCHIATRIC', 'PSYCHIATRIC PATIENT', 'PATIENT', 'INPATIENT', 'MOTIVATIONAL INTERVIEW', 'MOTIVATIONAL INTERVIEWING', 'MOTIVATIONAL ENHANCEMENT', 'MOTIVATIONAL COUNSELLING'. The question for this SR was designed with relevance to the author's work setting of a secure forensic mental health unit for adult male psychiatric inpatients. Preliminary searches including the term 'FORENSIC' yielded no results of relevance. The author considered the question would remain pertinent by omitting this term in order to broaden the search. Terms for health outcomes were not used in accordance with recommendations of the Cochrane Handbook for Systematic Reviews of Health Promotion and Public Interventions.

A grey literature search was conducted of SIGLE, requests were made for articles and papers through the MI Listserve (an email communication system for MI specialists), and the MI website was also searched. References were checked of five other reviews with relevance to mental health interventions and motivational interviewing (Britt et al 2004, Burke et al 2003, Hettema et al 2005, Rubak et al 2004, Samele et al 2006). Further information regarding papers and contents of studies were obtained by approaching authors and associates of authors of all papers that appeared relevant.

Selection of Papers. Figure 1 illustrates the process by which papers were excluded from the review. Inclusion/exclusion criteria were selected for relevance to the setting within which the author worked at the time. Papers were retained if they involved the following combination of factors: Motivational Interviewing, adults (18 years+), inpatient settings, psychiatric illness. Only papers illustrating the use of MI as a specific term, or of Motivational Enhancement, were selected. Those describing adapted MI interventions, interventions named as something else whilst utilising some MI ‘techniques’ or MI used in conjunction with a significant proportion of non-MI intervention were excluded. Authors were contacted in cases where the content and quality control of the MI intervention were unclear.

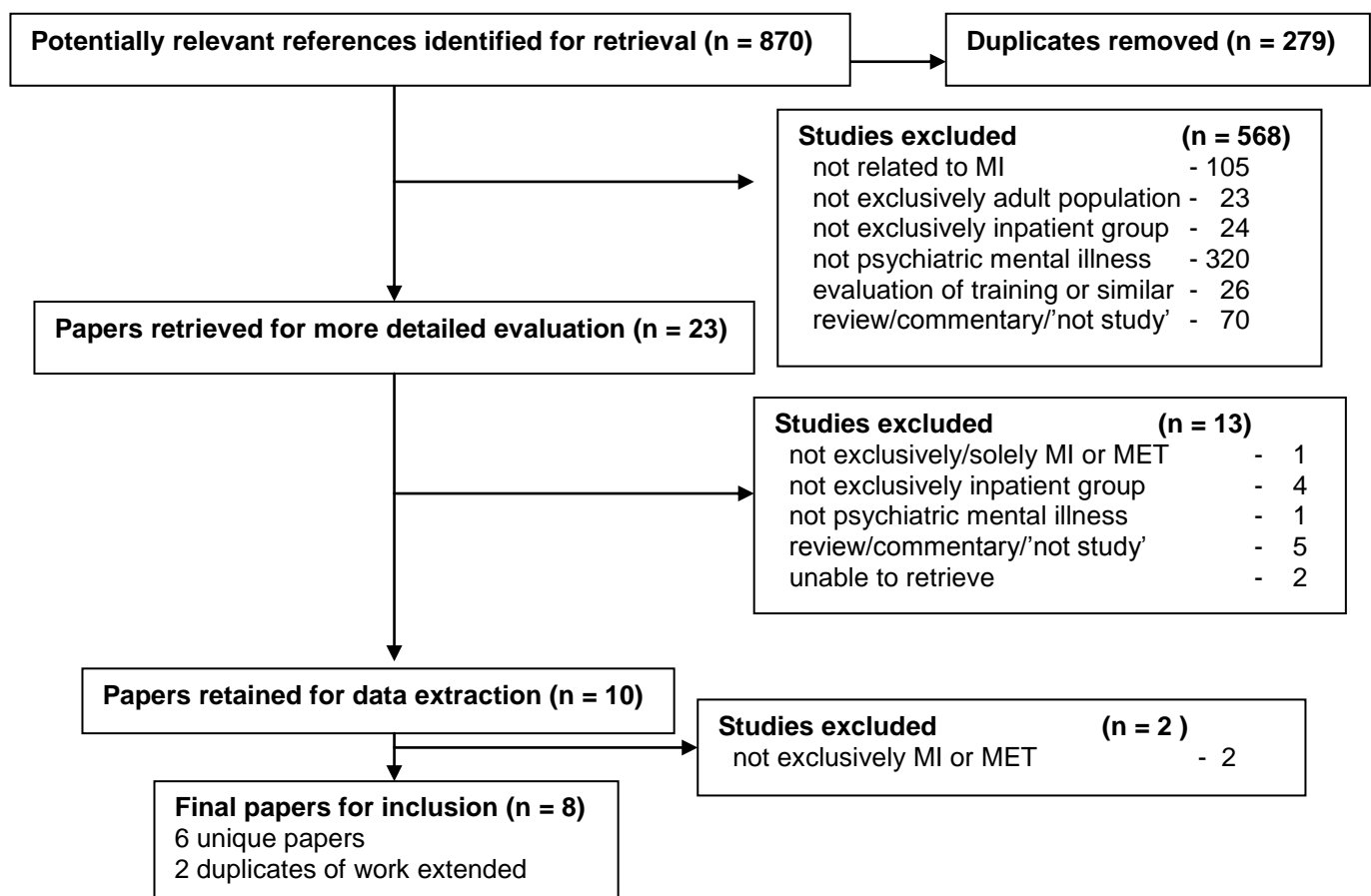


Figure 1. Flow diagram of selection process for papers through the review

From an initial list of 870 articles generated from the search terms, a preliminary review was made where duplicates and papers failing inclusion

were excluded by examination of titles and abstracts. This list was double reviewed by a fellow doctoral student on the author's course. The remaining articles were retrieved, where possible, in hard copy and the exclusion criteria applied again. These too were double reviewed, this time by the author's supervisor. Data extraction was carried out on the remaining papers by the author and his supervisor, utilising an adapted JADAD form. Further exclusions were made and the final set of papers included two papers by author's who had extended their original work. The quality of papers was assessed using the adapted JADAD form. Studies were noted in terms of ordered methodology, with randomised controlled trials (RCT's) carrying most weight in terms of 'value' and experimental studies, cohort studies, and case control studies given progressively less 'value'. Papers with any other methodology were recorded as 'other' and given least weighting. Consideration was also given to how MI was quality-controlled and evaluated. Papers with comprehensive descriptions of essential aspects of MI and those with evaluative processes for the MI delivered were considered of highest value. Quality was also considered higher if a number of MI sessions were used rather than just a single session.

Systematic Review: Results

A systematic literature search produced a total of eight papers that met inclusion criteria, the results of which are summarised in table 1. All MI-related studies were considered for this review, including RCT's, cohort and non-experimental studies for individuals and groups. In light of the heterogeneity of studies returned and the small number of them it was considered appropriate to present a narrative review of the results, in line with guidelines by Pettigrew and Roberts (2006). Narrative reviews are a 'vital part' of, amongst other things, most empirical theses, enabling an improved synthesis of studies with differing methodologies and outcome measures compared with meta-analyses (Baumeister & Leary, 1997). Narrative reviews are also useful for contributing to theory building and for making a case for a null-hypothesis conclusion (Baumeister & Leary, 1997). The first of these points is particularly pertinent for MI since a question exists over a theoretical basis (Miller & Rose, 2009). Wong,

Greenhalgh, Westhorp, Buckingham, and Pawson (2013) suggest the narrative review is useful when mixed methods are used across studies, complex interventions have been used, or when there are questions over the mechanisms by which programmes achieve – or do not achieve – their goals. These are all salient issues in the use of MI. The process of this review follows the guidance offered by Green, Johnson, & Adams (2001) and Wong and colleagues (2013), in terms of format and headings.

Study	Setting	Sample size & characteristics	Intervention	Length of follow-up & response rate	Health behaviour outcome/measure	Baseline characteristics
Baker et al (2002)	Acute public psychiatric hospital, Australia 'Majority of sample' – single males	160 inpatients, male, average age 30.87	RCT 1x30-60mins individual MI vs. control group, Alcohol and other drug (AOD) use information only	3 months, 112 participants (70%)	Participation in SSMS - 'engagement'	No significant effect found for MI
Baker et al (2002)	Acute public psychiatric hospital, Australia	160 inpatients, male, average age 30.87	RCT 30-45mins individual MI vs. control group, AOD info only	3 months 112 (70%) 6 months (73.1%) 12 months (71.9%)	Reduction of AOD use – SCID & OTI	No significant effect found for MI
Hulse & Tait (2002)	Voluntary, short-stay psychiatric wards – 3 metropolitan hospitals, Australia	120 inpatients, 65 males, 55 females, average age 31.7 Ages 18-64	RCT 45mins individual MI prior to discharge vs. control - information pack	6 months, 83 participants (69%) reassessed, 77 provided data	Alcohol consumption - SAD-Q, NH&MRC diaries	Favoured MI ($\chi^2 = 7.3$, df 1, $p < 0.01$).
Hulse & Tait (2003)	Voluntary, short-stay psychiatric wards – 3 metropolitan hospitals, Australia	120 inpatients 65 males, 55 females Ages 18-64	RCT 45mins individual MI prior to discharge vs. control - information pack	5 years 118	Alcohol consumption – time to first alcohol-related event	No significant effect found for MI.
Moore et al (2005)	Medium secure mental health unit, UK	4 inpatients	Pilot group 2xweek group MI, 60mins/session. No control	Three months mentioned	Individual outcomes – alcohol & polydrug reduction & abstinence	Favoured MI No data available
Santa Ana et al (2007)	Short-stay University-based psychiatric hospital, USA	101 inpatients 63 males, 38 females	Controlled trial Group MI 2x120mins sessions vs. control group with therapist	1 & 3 months 97 (96%) - 1 month, 87 (86%) - 3 months	Alcohol & illicit drug consumption – retrospective estimates Aftercare attendance – no. days	No significant effect found for MI.
Swanson Et al (1999)	2 inner-city private hospitals, USA	121 inpatients	RCT Standard treatment (ST) + 15mins URICA feedback + 60min individual MI vs. ST alone	Unclear	AOD - First aftercare appointment	Favoured MI (42% vs 16%; $[\chi^2] = 7.68$, df1, $p = .01$).
Van Horn & Bux Jr. (2001)	Psychiatric/ substance abuse dual diagnosis, urban, university-affiliated psychiatric hospital, USA	Unclear but average group sizes 5-10 inpatients/week	Pilot group 45mins, 2xweek group MI. No control	Unclear	Reduction of alcohol & drug use stated but unclear & no results recorded	Unclear but states in favour of MI from clinical perspective

Table 1. Motivational Interviewing interventions to improve health behaviours with psychiatric inpatients.

Systematic Review: Analysis of Results

Randomised Controlled Trials (RCTs) – MI for individuals. Baker and colleagues (2002) conducted an RCT to examine the effectiveness of MI on the attendance by psychiatric inpatients to a specialist substance misuse service (SSMS). 160 inpatients of an acute public psychiatric hospital, assessed between September 1996 through to July 1998, were randomly assigned to receive either one, 30-60-minute MI session or information about their AOD use with encouragement to reduce it. The MI session was delivered immediately following a 'pre-intervention assessment' and all participants were introduced to the SSMS and encouraged to attend. Therapists were 'four well-trained psychologists' given initial training and weekly supervision by the first author. One hundred and sixty nine patients were identified as potentially suitable from medical records or by referral from hospital staff and 160 met the inclusion criteria of being a psychiatric inpatient, capable of interview, liable to reside in the local geographical area in the subsequent 12 months post-study, and with prior AOD use at a level suitable for intervention. At the 3-month follow-up data was available from 112 (70%) participants.

The main outcome of interest was 'engagement' with the SSMS, defined as any attendance in the three months following initial interview and mean attendances over this time. These were obtained from records kept by staff at the SSMS. Between-group differences were analysed using *t*-tests for which a threshold of significance of $P < 0.01$ was adopted. There was no significant difference in attendances at the SSMS between the intervention and control groups; MI group, 13/79 participants, 16.5% compared with control group, 14/81, 17.3% ($\chi^2 = 0.02$, $df = 1$ ns). Average attendances of the MI group was 4.46 sessions (SD = 3.23) compared with 5.79 sessions (SD = 2.81) for the control group ($t_{(25)} = -1.11$ ns). This difference was not statistically significant.

In a later paper extending the follow-up periods to six and 12 months for this same research group, Baker and colleagues (2002) further report that participants were paid a \$20.00 fee for attendance to each assessment session and that the MI session lasted between 30-45 minutes rather than the 60 reported in the previous paper. The focus of the MI in this paper was on its effectiveness in reducing short- and medium-term AOD use. This was determined for current and historical drug use using the Alcohol Use Disorders and Non-alcohol Psychoactive Substance Use Disorders sections of the Structured Clinical Interview for DSMIII-R (SCID), administered pre-treatment and at 3, 6, and 12 month follow-ups. The Opiate Treatment Index (OTI) was also used to establish drug use in the month prior to interview for 11 classes of drugs. Eighty-nine of the 160 participants (55.6%) completed all three follow-up phases. Four participants died between pre-treatment and 3 months follow-up, a factor not reported in the previous paper, and two participants died between 3 and 6 months. Forty-three MI and 46 control participants completed all three assessment phases. There were no significant group main effects found at any follow-up point. No further clarity was made regarding the delivery of the MI.

Hulse and colleagues (2002) employed an RCT to evaluate an MI intervention aimed at reducing 'excessive' alcohol use by short-term, voluntary psychiatric inpatients in three general hospital settings. The psychiatric ward census of each hospital was regularly checked for new admissions and of 144 suitable people, 120 were enrolled (83%) by invitation over 18 months between 1994 and 1995; 65 men and 55 women with a mean age of 31.7 years. The Alcohol Use Disorders Identification Test (AUDIT) was used to screen for excessive alcohol use during the six-month period prior to hospitalisation and the primary dependent outcome of alcohol reduction was measured through a self-reported questionnaire, the Severity of Alcohol Dependence Questionnaire (SADQ-C). Another questionnaire, the Symptom Checklist SCL-90-R was used to establish overall psychological distress (Global Severity Index, GSI). For the week immediately prior to hospitalisation, daily and weekly alcohol consumption was assessed,

classified according to National Health and Medical Research Council (NH&MRC) criteria and recorded for each participant. Participants were randomised prior to discharge. Fifty-eight received an information package whilst 62 received an MI, described as 'an individual, 45-minute treatment based on the non-judgmental approach advocated by Miller', delivered by 'experienced research staff with nursing or clinical psychology backgrounds'. A clinical psychologist specialising in alcohol brief interventions gave initial training followed by six-monthly 'booster' sessions.

After six months participants were invited to return to the hospital for an interview, with a diary of their previous week's alcohol consumption, of which 83 (69%) participants were reassessed. Forty-seven had received an MI and 36 an information pack, a difference that was not statistically significant ($\chi^2 = 2.7$, df 1, $p = 0.10$). Seventy-seven of the 83 provided weekly alcohol consumption data, 45 having received an MI and 32 an information pack. This difference was not statistically significant ($\chi^2 = 1.4$, df 1, $p = 0.396$). Unwilling participants were sent a questionnaire and diary and asked to complete and return them. Efforts were made to follow up un-returned questionnaires by staff through post and telephone. 'Missing data' was treated conservatively through an 'intention to treat' analysis, which assumed the missing data remained unchanged from baseline levels. In terms of NH&MRC classification change, the MI group had a significantly greater proportion of 'improvers' than the control group ($\chi^2 = 7.3$, df 1, $p < 0.01$). Weekly consumption had significantly reduced for both groups since baseline ($F = 86.1$, df 1,70, $p < 0.001$). The main effect of Group (MI vs control) was not significant, although the MI group had significantly higher consumption levels than control at baseline but lower consumption than the control at follow-up ($F = 8.2$, df 1,70, $p < 0.01$). After adjustments for age, gender, GSI and degree of baseline dependence (SADQ-C) this Group/Time interaction was still significant ($F = 6.8$, df 1,65, $p < 0.025$).

Hulse's and colleagues' (2003) second paper extended the same work as above. The aim was to compare medium-term (5 year) health outcomes

for the MI and control groups and to compare the intervention groups as a whole with matched controls after five years. Of the 120 original participants, 118 were identified from record linkage data covering hospital morbidity and mortality, and the mental health services databases and covered all episodes in the 12 months prior to enrolment in the study up until November 2001. Adjusting for age, sex and AUDIT classification, survival to a first alcohol-related event was not affected statistically by treatment group (*Wald* (DF1) = 0.75, *P* = 0.39).

Swanson and colleagues (1999) investigated the effect of standard treatment (ST) plus an MI compared with ST alone on the proportion of psychiatric inpatients attending their first aftercare appointment. One hundred and twenty-one voluntary psychiatric inpatients were enrolled from within two inner-city, not-for-profit, short-stay hospitals. The 'stage of change' of all patients was assessed using the University of Rhode Island Change Assessment scale (URICA). ST-only involved an intake assessment by the multidisciplinary team, from which an individualised care plan was developed involving pharmacologic and psychosocial treatments. Feedback from the URICA was not given to this group. The MI group received ST plus a 15-minute feedback on their URICA at the start of their hospitalisation and a 60-minute MI, 1-2 days prior to discharge. The authors describe the five key principles of MI that were developed and followed by therapists; four upper-level undergraduate psychology students who had volunteered their assistance.

MI training involved the 'assignment of relevant readings', six hours of didactic instruction, examples of MI modelled by the authors, and role-play rehearsals with feedback given, along with daily supervision. Enrolment to the study was sought from the patients by the therapists and assignment to a group was achieved using a random number table. Using Chi square analyses, results showed that a significantly greater proportion of the MI group attended their first aftercare appointment than did the ST-only group (47% vs 21%; $[\text{chi}]^2 = 8.87$, *df*1, *p* = .01). It was also found that, within the

overall sample, dually-diagnosed patients receiving MI attended more appointments than those receiving ST alone (42% vs 16%; $[\chi]^2 = 7.68$, $df1$, $p = .01$).

Experimental Trial - MI for groups. Santa Ana and colleagues (2007) investigated the effect of adding a group MI (GMI) to standard care, on attendance to aftercare and AOD use. Two hundred and eleven dually diagnosed psychiatric inpatients attending a voluntary, short stay university-based hospital were initially assessed and 101 eventually enrolled on the study. All patients received standard care but were additionally assigned to either GMI or therapist attention activity control (TAAC). The first author delivered the GMI and TAAC interventions, and a research assistant, blind to the patients' assigned conditions, conducted follow-up interviews 1 and 3 months later. Substance use patterns were retrospectively assessed for a previous 31-day baseline, using a 'good psychometric' calendar-based method. One- and three-month follow-ups were similarly assessed. The number of attendance days at outpatient or residential treatment, support meetings (12-step or self-help), or physician/professional appointments for substance use treatment was also collated at baseline and follow-ups. The TAAC and GMI involved two, 120-minute sessions, the first of each of these conducted a day after baseline assessments. In the TAAC patients' anonymous questions, comments or topics were picked from a box and used for discussion. The GMI was based on a GMI protocol manual. An extensive range of MI-related tasks was employed and key aspects of the 'spirit' of the approach emphasised. The first author, a doctoral-level psychology candidate with an 'intensive MI workshop training' background, followed a manual in delivery of the GMI and was supervised by a licensed psychologist with formal MI training, who provided feedback on tapes of the therapy sessions.

Ninety-seven (96%) of the 101 participants completed 1-month follow-up (48-GMI, 49-TAAC) and 87 (86%) completed 3-months (44-GMI, 43-TAAC). At one month, 39 GMI and 39 TAAC participants had attended

aftercare, with GMI averaging 25.4 (SD = 22.7) sessions compared with TAAC averaging 16.8 (SD = 17.5) sessions. The authors report this as 'approaching statistical significance' ($p = 0.06$). By three months, 65 patients had attended aftercare, 37 from the GMI and 28 from the TAAC, with no statistically significant difference between average numbers of sessions (GMI $M = 21.1$, $SD = 21.3$ vs TAAC $M = 10.7$, $SD = 12.1$, $p = .02$). In terms of alcohol abstinence, there was no statistically significant difference at 1-month between groups ($p = .12$) or at 3-months ($p = .29$). In terms of illicit drug abstinence, there was no statistically significant difference between groups at 1-month ($p = .70$) or at 3-months ($p = .21$).

Pilot Tests – MI for groups. Van Horn and colleagues (2001) describe the development and pilot test of a GMI used with inpatients in the dual diagnosis unit of an urban, university-based psychiatric hospital. The authors' focus was on development and clinical issues in the implementation of such a programme. Empirical support for the effectiveness of the intervention was not a product of the pilot. During the 4-month pilot period, 304 patients were admitted to the unit. Within the 20-bed unit the average length of stay was 5.8 days, meaning many patients could only attend two MI groups. Consequently, sessions were developed to 'stand alone' in order that anyone might benefit without the need for previous attendance. In designing the groups the authors were guided by the five basic clinical principles of MI, although limitations of time meant they decided to focus upon what they believed was the most salient issue for participants; ambivalence about change. Sessions were no longer than 45-minutes and all patients were invited to attend twice-weekly sessions. Daily attendance was typically 5-10 patients. Sessions were structured, with high levels of direction and leader activity since 'some people with limited information-processing ability benefit from and attend more sessions designed in this way'. The authors could only report on what they learnt from setting up and running the groups, but they 'appeared to be successful' in terms of the participants' engagement and level of interest in the material and the enthusiastic participation of group members in some of the exercises. Other unit staff also reported on the

group's 'success' in terms of how they had been enthusiastic subjects of discussions later in the day.

Moore and colleagues (2005) organised a similar pilot test of group MI within a medium-secure mental health unit for forensic inpatients with substance misuse problems. Background theory of the stages of change and trans-theoretical model were explained in the paper, along with how these linked in with the MI intervention. Important key principles of MI were also described, including those alluding to the development of the 'spirit' of MI, such as empathy during sessions and respect for client autonomy. A group treatment manual was developed with two main modules, designed according to the relative stage of change of the participants. The first module covered 14 sessions, the second; 15. Patients, were self-referred or referred by staff, and were initially assessed for their stage of change during a one-to-one meeting. Four patients attended the pilot group, and outcomes were assessed using the University of Rhode Island Change Assessment (URICA) over approximately seven weeks. Three were assessed, with positive subjective outcomes and the fourth did not return the follow-up questionnaire. The clients apparently 'found the groups to be useful' and identified goals during treatment, which they 'appeared to have maintained...three months later'.

Systematic Review: Discussion

Four of the eight papers in this review illustrate positive outcomes for the use of MI on health behaviours concerned; Hulse and colleagues (2002), Moore and colleagues (2005), Swanson and colleagues (1999), Van Horn and colleagues (2001). Two of the four were RCT's, although three of the eight papers illustrating no significant effect were also RCT's. The balance of findings in this review are influenced not just by differences in outcomes between RCT's, but also by differences affecting the quality of the papers reviewed, such as; methodological rigour, study design, the implementation of the MI interventions and the caveat emptors of the authors themselves.

Papers with positive outcomes for MI. Despite Hulse and colleagues (2002) reporting a significant reduction in alcohol consumption and NH&MRC classification at 6-months for inpatients as a result of an MI intervention, some issues conspire to weaken the strength of this outcome. The authors propose limitations in terms of a lack of group homogeneity. However, this factor potentially affects all of the papers in the review, since patients with a variety of mental illnesses were involved. One of the main concerns of the study is the manner in which the health behaviour was measured through a self-report diary of the previous week's alcohol consumption. Since the results show how consumption levels had reduced for both groups over time, it is possible that merely being part of this study prompted this effect, with participants responding to demand characteristics of the research and simply not reporting drinking episodes. The method of randomisation in both of Hulse's and colleagues' (2002) (2003) studies was not made clear. A lack of procedural clarity makes it difficult to assess the rigour of the research in such instances and weakens the application of outcomes. Another factor affecting the quality of the study was a lack of detail regarding the design and implementation of the MI. Although this study favours the intervention, this issue alone makes it difficult to understand the difference between this and other interventions.

Although Moore and colleagues (2005) reported favourably on the development and piloting of a group MI programme, it is clearly difficult to generalise these findings to other settings because of the lack of scientific rigour with which this pilot was conducted. This is unfortunate because this is the only paper involving longer-term inpatients held under section within a medium-secure unit. As such, it offered the greatest potential for recommending the applicability of MI within such settings. The paper illustrates little meaningful data from the four participants recruited to the group and all results are subjective. The authors declared the group a success on the basis of how they 'felt' the groups had encouraged members to think about change and, as such, the paper lacks reliability for the support of MI.

The results from Swanson and colleagues (1999) favour MI as a means of improving treatment adherence among psychiatric inpatients with substance-use disorders, although the authors note some important potential limitations. The lack of a better quality control group meant that outcomes might have been enhanced as a much through differences in attention given to each group as the interventions themselves. The extent to which the addition of an MI to standard treatment would account for aftercare attendance amidst many other possible reasons for this is questionable. Also, despite the relative intensity of therapist training, which is well described in the paper, the authors note that a lack of interview performance monitoring leaves the quality of the MI's open to question. This key issue is a criticism of most of the studies in this review. However, the study methodology was made explicit, including recruitment and randomisation procedures and the description of important MI factors such as the spirit as well as the tasks are suggestive of sensitivity to these important facets of the method. Overall, the quality of this study is improved with explicit reporting of methodology and intervention implementation, despite the limitations described.

Although Van Horn and colleagues (2001) reported in positive terms on the implementation of a group MI programme, it is not possible to recommend the MI intervention on the basis of a lack of empirical support from this paper, a fact that the authors also acknowledge. Methodological issues such as how recruitment was conducted require greater clarity, and without any kind of control, the perceived success of the intervention may have been as much a product of this novel group coming together as it was the MI orientation itself. The way in which the groups were 'structured', with 'high levels of direction and leader activity' also fit less well into a MI paradigm, casting doubt over the extent to which the groups were actually 'MI'. Positive correlations ascertained from MI in this work would be difficult to recommend for other psychiatric settings, particularly where inpatients had longer residencies. Nevertheless, from the experiences of this pilot group, the authors attest to their belief in the promise of the intervention and encourage further, more detailed and rigorous research into why their intervention was so apparently successful experientially. In light of these points, only Hulse's

and colleagues' (2002) and Swanson's and colleagues' (1999) studies carry any weight in terms of quality for this review.

Papers reporting no significant effect for MI. In Baker's and colleagues' (2002) first study looking at increases in SMSS attendance after MI, the authors located some of the confounders within 'the severity and chronicity of substance use problems and mental illness', citing this, along with a relative lack of 'readiness to change' by some participants, as a possible cause of a lack of 'engagement'. The authors also suggest a longer intervention conducted closer to hospital discharge may have been more effective. The length of intervention is recorded as a 'quality' issue within the methods section of this review and appears to be something that affects and potentially weakens all of the RCT's in this review.

The method of randomisation in both of Baker's and colleagues' (2002) (2002) studies lacked clarity, as did the means by which the intervention was administered. It is unclear how the 'spirit' of MI was maintained or evaluated and it is possible that, in the absence of this 'way of being' with a client, the MI fell short of its full potential effectiveness. Baker also describes how feedback and information was provided to the MI group, but it is not clear how this differed to the provision of information for the control group. It is unclear as to the role the first author played in the actual delivery of the intervention aside from the training. The proximity of the author to both research and intervention delivery can influence outcomes, an issue also identified in Santa Ana's and colleagues' (2007) paper by the author herself. However, this tends to be in the direction of positive effect for an intervention and this study did not report a significantly positive effect. In Baker's and colleagues' (2002) second paper, outcomes were measured over three, six and 12 months for AOD use for exactly the same sample group. All of the previous issues apply for this paper. In Hulse's and colleagues' (2003) second paper looking at 5-year outcomes for MI and control groups the same confounding issues apply for this paper as were reported concerning his first paper, above.

Despite Santa Ana's and colleagues' (2007) study yielding no statistical support for the use of GMI in increasing attendance to aftercare for AOD use, the authors remained optimistic about the efficacy of GMI, suggesting that lack of power from small numbers were responsible for a lack of observed differences. However, limitations were noted, the main one being that only one person administered both the intervention and control. As discussed in Baker and colleagues (2002), this type of bias can weaken the applicability of outcomes to others interested in the work. And like other studies in this review, this study was weakened by a lack of methodological rigour, the authors recognising that appropriate randomisation would have improved the quality of this research. There was also a lack of clarity regarding the recruitment of participants. A major assumption of this study is that MI can be effectively delivered in a group format. This is not something that has empirical support; MI was originally intended as an individual intervention and this in itself may have been one of the reasons for a lack of observed effect.

Although this review is relatively small in terms of numbers of papers, and limitations seem inherent in most of them, one broader question arises concerning the strength of evidence represented by the methodologies employed for research in this area. For example, should the RCT represent the 'gold standard' (Ritter, 2012) of methods for research in such settings as it apparently does in others? This issue is discussed again in the rationale for the adoption of action research for this thesis and makes the point that research of complex interventions in healthcare can be misrepresented by the use of RCTs because of the variable nature of the settings and the complexity of the interventions used. The integrity of an intervention is important for the application of RCTs and Hawe, Shiell & Riley (2004) argue that as long as the theorised mechanisms of an intervention remain unchanged for different situations, controlled trials for complex interventions are possible.

Ritter (2012) supports this view of RCTs and maintains they are important for establishing programme impacts on participants. Ritter (2012)

cites Torgerson & Torgerson (2008) who state that RCTs are the best method for establishing causal relationships between interventions and outcomes. Ritter's comments are in response to a paper questioning the validity of the RCT as the gold standard of complex interventions for children (Stewart-Brown, Anthony, Wilson, Winstanley, Stallard, Snooks, & Simkiss, 2011), a question echoed by others in nursing (Beeckman & Van Hecke, 2012) and with implications for others in surgery (Ergina et al., 2009). One issue here is that RCTs do not take account of the variations occurring in many procedures otherwise considered as routine. Another is that the outcome of effectiveness for many researchers is not always the only important factor; acceptability, feasibility, meaningfulness, staff training and structure of treatment are also important (Beeckman & Van Hecke, 2012). Other considerations are how intervention components may work dependently or independently of each other (Avery et al., 2013). This latter issue is relevant as far as the mechanisms of MI are concerned since these are still being considered and debated (Miller & Rose, 2009). Whilst supporters of the RCT may concede there are times when shouldn't be used and that other methodologies have their place (Ritter, 2012), a criticism of the RCT, as with other methods, concerns integrity. Grossman and MacKenzie (2006) suggest that any RCT is considered superior in terms of research quality to other forms of research and yet many RCTs, or at least the reporting of them, can leave a lot to be desired. This review illustrates the point in some cases where, for example, the transparency of the randomisation process is not clear (Baker, 2002). Had the inclusion criteria for studies in this review been as strict as they are with Cochrane reviews (Higgins, & Green, 2008), it is possible that there would have been no studies included to review and the value these studies can provide in this under-represented area of research would have gone unreported. Whilst rigour in research is undoubtedly important, the acceptance of the RCT as a higher quality methodology by default is a concern. This is especially the case when other methodologies that are necessarily adopted because of the limitations of a setting may be undervalued. The impact of one variable on another is rarely straightforward in healthcare, and methodologies accounting for factors

that are meaningful to the individual, clinical teams and daily practise occupy an invaluable space in research.

Systematic Review: Conclusion

This review was intended to be the basis of the research for this thesis and, as such, illustrates a gap in the literature that would otherwise inform about how MI may be helpful in increasing PA within a forensic psychiatric inpatient population. Whilst only two papers in this review carry any weight in support of MI, a concern for this thesis is that none of the health behaviours addressed in this review involve anything other than alcohol and/or drugs misuse, compounded by the fact many outcomes were assessed in a community setting. Clearly, the gap in the literature for the application of MI to improve behaviours other than those related to alcohol or drugs within this target group is wide. The research of this thesis can begin to offer an important contribution to filling this void, although certain issues are important for consideration. One is that MI has only usually been used as a stand-alone treatment in the drug and alcohol research setting (Moyers, 2011). This presents a challenge to deconstructing the active components of MI when it is used with other interventions in other settings, one of which has been CBT. Though CBT has been used particularly 'effectively' with MI (Burke, et al, 2003), in the absence of a clear theoretical underpinning and ideas about active mechanisms, it seems important to isolate the application of MI in a forensic psychiatric setting in an attempt to identify its value in this setting and possibly the working mechanisms for change. Another issue refers to the target population.

Whilst MI has been employed to improve physical activity for various client groups and used in mental health and offender settings, it has never been used to help offenders with mental health conditions to improve their health behaviours such as physical activity. Currently, this makes it difficult not only to recommend MI as an intervention for other health behaviour improvements but also to find any utility from the findings of this review for

long-term inpatients, especially those who have been sectioned. In terms of future research, this draws into question the assertion of Hawes and colleagues (2004) that RCTs are an appropriate form of research methodology for complex interventions since, not only are the mechanisms of MI not clear, but the target group within this thesis research have diverse and complex needs. The implications are that, whilst more research may be warranted to test the efficacy of MI for improving a wider variety of health behaviours for this client group, a greater understanding of the challenges to research with this group is required. This may limit the propriety of use of the RCT and increase the utility of other forms of research at least until more is known about research in the realm of forensic mental health. For example, one challenge facing researchers in this setting is the maintenance of MI integrity. Security issues preclude recording of sessions for coding, and confidentiality, are particularly sensitive concerns. Nevertheless, the findings of this review serve to illustrate the importance of maintaining a high quality of MI implementation and rigour of study characteristics. To this end, it seems apparent that MI researchers must attend to the integrity of what is understood to be MI in order to take account of these challenges. In consideration of the above, the research for this thesis will investigate the effects of MI as part of an induction to and review of PA sessions within a forensic mental health unit in order to benefit the health behaviours of this under-represented group.

Chapter 6 - Methodology for the Thesis Research

Introduction to the Methodology

An induction to, or review of, physical activities was provided to forensic psychiatric inpatients at a medium-secure mental health unit. The induction comprised three staggered Motivational Interviewing 'consultations' and an introduction to the available physical activities at the unit. The aim of the research was to establish the propriety of the approach in facilitating behaviour changes toward physical activity (PA) with this client group. Outcomes were measured according to a client feedback questionnaire about the style of the consultation, a composite of Deci and Ryan's Intrinsic Motivation Inventory and an analysis of the visit frequency to activity sessions 3-months prior to and post the induction intervention. Multi-disciplinary staff at the unit were also surveyed about their views on the propriety of client-centred methods of health behaviour change, such as Motivational Interviewing, with this client group. The survey was a modified questionnaire adapted from the Motivational Interviewing Knowledge and Attitudes Test consisting of 'True/False' questions concerning attitudes toward health behaviour change, 'Yes/No/Unsure' questions concerning the understanding of MI and attitudes toward further training, and an 'order task' asking respondents to prioritise tasks and processes thought best to enhance behaviour change.

Rationale for the Methodology

The issues involved with developing and carrying out this research are numerous and complex and have impacted on the ability of researchers to conduct any large-scale work in this forensic mental health context in the past. Some of the complexities and challenges have been uncovered by the author through the process of this research, although some of these issues were envisaged from the outset. This meant that, whilst a 'classical' form of methodology, such as randomised control trial (RCT) or other form of experimental approach, may have, theoretically, added robustness to the

work, the particular challenges faced in this environment led more naturally toward the form of 'action research' and single case design studies. This made more sense as the research progressed, especially in light of the lack of research conducted in this area (Lyon and Byron-Daniel, 2010, unpublished, in preparation), also MacKenzie and colleagues (2010) suggest that RCT's are not always 'suitable or practical'. Similarly, but perhaps more strongly, Pawson and Tilley (1997) argue that the RCT is not always appropriate and that treating complex programmes as single interventions, where divining what works for whom and in what circumstances, is 'misguided'. The choice of action research fits with the Medical Research Council's (MRC) guidance for conducting 'complex interventions', which are described as those with 'several interacting components' (Craig, Dieppe, Macintyre, Michie, Nazareth, Petticrew, 2008). The interacting components for this client group are discussed in the introduction. However, this guidance was updated from its original form (MRC 2000) after criticism that it failed to take into account the complexities of 'policy related programmes' and 'contextual variation' (MacKenzie, et al, 2010), factors that impacted upon the research in this case. Although this guidance was updated according to the feedback, MacKenzie and colleagues (2010) still maintained that the guidance does not go far enough in recommending other forms of research methodology and that RCT's are not always the most appropriate form of research.

Aside from the above, one of the main difficulties in adopting an experimental methodological design was the challenge of finding a comparison group and suitable outcome measures. Historically, all patients expressing an interest in attending PA sessions within the unit undergo an 'induction' involving the completion of a Physical Activity Readiness Questionnaire (PAR-Q), as a screening for potential physical health concerns, a discussion designed to ascertain reasons for attending activity sessions, and an explanation and demonstration of exercise equipment within the sports hall. An MI-based approach has been consistently used by the researcher to encourage greater participation in PA sessions during the discussion aspect of these induction sessions. The essence of this research

was to evaluate a more structured version of an MI consultation used as part of the usual induction when encouraging clients to become more physically active. It was envisaged that the number of patients who would be able and willing to take part in the research would also limit the power of a classical style study. Whilst the MRC recommendations have been useful in terms of guiding the planning, implementation and evaluation of this research, the lack of any previous research of this nature meant it was important the research was exploratory in nature in order to establish a clear understanding of the nature of the problem at hand and to direct future research in this environment.

Preparation of the Research

Despite receiving a degree of workplace funding for this research, the resources available to conduct it were known to be extremely limited. These arose chiefly from the staffing levels of the workplace and the necessary policy-related restrictions and constraints of the workplace setting. The first issue arising in this sense was the lack of help that could be garnered from other members of staff working within the unit. Simply put; staffing for effective ward management is extremely stretched on a daily basis, so enlisting the aid of existing staff to aid in data collection etc was not feasible. Recruiting help from outside of the unit in order to deal with this issue was similarly impractical since all personnel have to undergo Criminal Records Bureau (CRB) checks that can take many weeks to complete, requiring management approval and considerable expense. Coupled with this, many external contractors are unwilling to come to work at the unit because of the nature of the forensic mental health setting; the unpredictability of the patients and the nature of many of their offences have been cited as being off-putting and some contractors have increased their costs to attend the unit because of this. Consequently, the time, available allowances, and considerations required for this were considered impractical for the size of the project.

Ultimately, this meant the project would be conducted by the primary researcher in all aspects of administration and data collection, although this in itself would provide important material for reporting upon within the context of this piece of action research. Indeed, the unpredictable nature of the environment of the Medium Secure Unit (MSU) lends itself to a more fluid approach to research because of the many obstacles that can present on a daily basis. For example, one of the participants became unsettled during the research and had to be secluded for a short time, impacting on his inclusion in the study, and a Serious Untoward Incident (SUI) occurred prior to the start of the study, which threatened the closure of the unit. Ultimately, this heightened the security issues at the time and prevented the otherwise planned tape-recording of the consultations, presenting methodological limitations to the quality control of the research. Nevertheless, some help was gained from an Occupational Therapy assistant working in the department during the research period, who helped with data collection from some of the patients after the intervention was administered. This was agreed voluntarily in order that the person could gain experience in research processes for her own interests in pursuing psychological study and was possible because the assistant had already undergone all of the necessary checks and induction procedures required for this forensic setting.

Method of the Research

At the time of the research, a total of 26 patients were split across the acute and rehab wards, 20 of which were eligible to take part in this research. They were approached individually by the researcher and verbally offered an induction to or review of the PA opportunities at the unit. The nine who agreed to this were given an explanation of the research, verbally and in writing, and were asked if their review could form part of the research. All nine patients agreed to this and PAR-Q's (appendix 1) were completed or renewed accordingly. The nine comprised five patients from the acute ward and four from the rehab ward. Alongside this, a survey of the MDT staff was made using a modified questionnaire. Staff were approached in person by

the Health and Fitness Instructor and asked if they might consider taking part. Information sheets and consent forms were included.

Design of the Research

The nature of this action research was exploratory both in terms of exploring the propriety and challenges of the approach within this environment and also in establishing the difficulties inherent in conducting research of this type within this setting. Nevertheless, certain aims were decided upon for the research:

- To gather participant perceptions of the MI consultation through the use of a satisfaction questionnaire
- To make before and after comparisons of participants' intrinsic motivation using Deci and Ryan's intrinsic motivation inventory (IMI)
- To make before and after comparisons of participants' attendance to activity sessions
- To survey MDT staff about their thoughts and understanding of the use of MI as an intervention within the forensic psychiatric setting.

The 3-stage format of this process framework was conceived as a result of the author's experience with this framework in previous settings in the fitness industry. The aims of this were:

- 1st consultation; up to one hour - to explore and consolidate motivation for PA toward the negotiation of an action plan
- 2nd consultation; 15-30 minutes, 2 weeks after the first - brief review to maintain stability to new action plans.
- 3rd consultation; up to one hour, 4 weeks after the second – review to consolidate progress and re-motivate plans if necessary.

This multi-staged process was developed by the researcher and previous colleagues to enhance membership retention of private health clubs, and was intended to support new members with their exercise plans. Within the forensic psychiatric research environment, it was envisaged that a single MI intervention would be unlikely to yield lasting effects and that a multi-staged intervention would be more appropriate support for this group. The consultations were designed according to MI related 'tasks' that were ordered in relation to how they explore and develop motivation and negotiate planning for change (appendix 4). 'Phase 1' tasks were intended to explore and build motivation and 'phase 2' tasks were intended to aid the development of client-centred action plan. These tasks were as follows:

Phase 1 tasks – to explore and develop motivation.

- Introduction to the consultation – to explain the purpose of the meeting and ensure the client is aware of what the discussion is about.
- A Typical Day – to initiate conversation and build rapport, focussing on how PA currently fits in to a client's typical day
- Readiness – to determine, in turn, the importance of changing PA levels for a client, and the confidence they have in achieving this.
- Decisional Balance – to talk about the benefits and costs of making a change in activity levels and of staying the same

Phase 2 tasks – to negotiate realistic plans to meet the motives previously explored.

- Enquiring about change – to determine activity preferences and develop a weekly plan for these
- Outcome expectations – to understand how the effects of activity will be perceived as being successful
- Contingency planning – to explore the possible barriers to becoming more active and discussing how these may be dealt with.

It was intended for sessions to be tape-recorded and coded for quality control. However, a serious untoward incident at the time of the research prevented the use of recording devices from being allowed in the face of heightened security concerns. Instead, notes were made of the consultations in formatted booklets (appendices 4, 7 & 8) and participants' perceptions of the interviews were solicited using a semi-structured questionnaire. At the time, a validated 'pencil and paper' evaluation in relation to MI 'integrity' was not available. This was attempted through the design of a brief questionnaire by the author (appendix 5) in relation to factors considered salient to MI integrity and included questions relating to the length of the consultation, overall satisfaction and expectations, and perceptions and values of choice, judgment and coercion throughout the consultation. Participants were asked to give a rating of satisfaction for each question from 0 to 5, the object being to discuss ratings for further insight.

Further evaluation of the effect of the consultation upon the intrinsic motivation of the participants was made through use of the Deci and Ryan's Intrinsic Motivation Inventory (appendix 6). This questionnaire, was constructed from validated questions representative of a variety of sub-scales thought to relate to intrinsic motivation. The sub-scales chosen for this research were;

Interest/enjoyment;	Perceived competence;
Effort/importance;	Pressure/tension;
Perceived choice;	Value/usefulness;
Relatedness.	

The sub-scales were chosen in consideration of how relevant they were to the approach of MI either in terms of how it potentially promoted or encouraged the factor or reduced it. They were therefore deemed appropriate indicators of the effect of an MI intervention. Patients were asked to complete the IMI before and after the period of evaluation. The participants' visit frequency to activity sessions was monitored over three

months following the intervention and compared with their activity attendances three months prior to the intervention. For parity, the comparisons were individualised and based upon the amount of sessions they had planned to attend during their consultations.

The MDT were surveyed through the administration of a questionnaire, based upon the Motivational Interviewing Knowledge and Attitudes Test (MIKAT) (Leffingwell, 2006), but extended with questions thought pertinent to implementation issues (appendix 9). The MIKAT was designed as an evaluation tool for training outcomes for MI with 'right' or 'wrong' answers essentially designating MI-consistent or MI-inconsistent knowledge/attitude. It has been used in this research as a means of gauging the knowledge and attitudes of staff toward MI who may or may not have heard about this approach in relation to its use to facilitate physical health behaviour changes. Some of the questions were adapted by the researcher to reflect the different health behaviours in question. The questionnaire was also extended for this research with added questions relating to whether staff understood and practised MI currently, supported its principles, and were receptive to further training in MI. These were intended to highlight challenges for the broader implementation of MI at the unit. This aspect of the research was to gauge the methods and approaches currently favoured and used for health promotion by staff since it is possible these are not MI-consistent and may be counter-productive in the promotion of positive health behaviours, such as telling people what they need to change 'for their own good'.

Participants – Service Users

Participants were adult, male inpatients from the 'acute' and 'rehab' wards of a medium-secure forensic psychiatric unit. It was not considered necessary to impose minimum number restrictions for this since any data gathered was considered to be of value in the absence of any research

conducted of this kind. The recruitment period was conducted over the three months.

Inclusion criteria:

- adult (between 18-65 years of age)
- male
- psychiatric inpatients residing at Marlborough House
- English-speaking
- successful completion of PAR-Q, signed by their Responsible Clinician (RC)
- apparently stable in mental state (agreed by MDT)
- without acute signs of psychosis, anger or emotional preoccupation

Exclusion criteria:

- patient's choice
- females
- non-English-speaking
- non-residents of Marlborough House
- diminished mental capacity
- the presence or development of acute psychosis
- having 'failed' the PAR-Q

Participation was voluntary contingent upon successful completion of a PAR-Q, which was reviewed and agreed by the patients' responsible clinicians (RC). Informed consent was gained from each participant outlining the participants' agreement to take part, their right to withdrawal, safety, confidentiality and anonymity.

Participants – Staff

Staff from the MDT having clinical contact with patients including Occupational Therapists, nursing staff, psychologists, doctors and senior

staff such as ward managers, were invited to complete questionnaires. Staff were approached individually by the researcher and offered an information sheet, consent form and the questionnaire to consider, the purpose of the research being explained verbally. They were asked to return the questionnaires to the researcher if deciding to participate.

Materials Used in the Research

Hard copy versions of the following forms and sheets were produced:

- A modified PAR-Q (appendix 1) to establish the physical health propriety of service-user participants.
- An informed consent form (appendix 2), and information sheet (appendix 3) for service-user participants.
- MI-formatted booklets for recording notes of the consultations (appendix 4)
- A semi-structured questionnaire to assess service-user participants' perceptions of the consultations (appendix 5).
- Deci's and Ryan's Intrinsic Motivation Inventory (IMI) (appendix 6).
- An informed consent form and information sheet for staff participants (appendix 10 & 11).
- A questionnaire for staff participants (appendix 9).

Procedure of the Research

The suitability of potential participation was established for all patients through discussions with the MDT involved in their care. All resident and new patients at the unit, deemed suitable for participation in PA by the MDT, were spoken to individually by the Researcher and invited to a PA induction or review. All patients were given an information sheet to read or have read to them and they were asked for their review/induction to become part of the

research, the purpose of which was explained to them verbally. Those who did not agree at the time were offered the information sheet to read for further consideration and all were given the review or new induction who wished to have this. For all participants, a date was arranged for their first consultation. At each stage of the consultation a participant's mental capacity for making decisions was established by asking whether they understood the information relevant to the decision and could retain this in order to use it as part of the decision-making process, and by making sure they were able to effectively communicate their decision (Mental Capacity Act, 2005).

It was planned to conduct initial consultations individually in the privacy of the ADL kitchen of ward 1 and the group room of ward 2 of the unit. However, the venue for consultations changed according to what appeared to be most appropriate and 'naturalistic' as the research progressed. Ultimately, this was either the sports hall or somewhere private on the participant's ward. The HFI conducted all consultations and recorded information in the MI booklets. An explanation or review of the sports and exercise equipment was also offered. The IMI was to be administered after each consultation by the HFI and again after three months in each case. However, it became apparent that the risk of evoking demand characteristics would be high unless a confederate could be used to help administer this questionnaire. This was made possible through the coincidental employment of an OT Assistant who was keen to gain experience in psychological research for her own study pursuits. Ultimately, the confederate administered the IMI's and the consultation satisfaction questionnaires. After each consultation dates were agreed in principle for the follow-up sessions, the first being for two weeks later to be conducted in privacy during a participant's activity session. After this session, the second follow-up was arranged for four weeks later and conducted similarly. It was planned to ask participants to complete the satisfaction questionnaire within two days of the first consultation and for this to be administered by the HFI. Attendance to activity sessions was recorded as a matter of course for all patients at the unit.

From the start of the service-user research MDT staff were approached in person by the HFI and invited to complete a hard-copy questionnaire regarding their thoughts about the use of client-centred methods for health promotion in the forensic psychiatric setting. There was no limit to the number of staff asked to do this and as many opportunities as possible were taken to ask a variety of staff to participate.

Results and Analysis of the Research

The results were analysed using a mixed methods approach. Results for each participant will be presented individually and in relation to the consultation, the satisfaction feedback, the IMI and the visit frequency to sessions. The outcomes of the consultations will be presented as a narrative and described according to the apparent challenges, successes and difficulties encountered during the sessions. Feedback from the participants' satisfaction questionnaire will be presented and analysed descriptively. The IMI scores will be presented and compared pre and post intervention for sub-scale scores. The outcome of the visit frequency to sessions by service-users will be reported by comparisons between the amount of sessions attended three months before and after the participant's consultation. The pre-intervention frequency number will be established according to factors previously known as individually preferential to the participant in question.

Chapter 7 – Results of the Research

The Use of MI with Service Users

A total of nine adult male service-users took part in the first part of this research; five from the acute 'Ward 1' and four from the rehab 'Ward 2'. The results will be presented in the form of case studies for each of the participants. The details of the consultations will be presented first, illustrating the responses to, and relevance of, the components of the MI consultation. Responses to the 'satisfaction' questionnaires will then be presented, followed by the pre- and post-intervention scoring for each sub-scale of the IMI's, and the pre- and post-intervention attendance frequencies to activity sessions. Each case study will conclude with a contextual analysis and action critique of the results.

Service Users - Case Study 1: Participant 'A'

Participant 'A' was a 37-year old man, newly admitted at the time of the research and had no previous PA history within the unit. His diagnosis was paranoid schizophrenia. He had been medicated variously with Quetiapine, Amisulpride and Haloperidol, all of which are antipsychotic medication to ease the positive (hyper, psychotic) and negative (withdrawn) symptoms of 'schizophrenia'. The possible adverse effects of these include dizziness and fainting, weight gain, insomnia, anxiety, lethargy, tremors, sexual dysfunction and limb stiffness. 'A' reported experiencing some of these symptoms and was historically inconsistent in taking his medication. He presented as quiet and withdrawn but spoke clearly and politely when required. He appeared to be introverted, although this was at odds with his reported past presentation which, according to 'A', was more outgoing and akin to his 'true self'. He seemed guarded in some of his responses to questions about becoming involved in the research but generally seemed curious about doing so. Although the effects of his medication were likely to

account for physical consequences such as weight gain, tremors, and muscle stiffness, it was also likely that his motivation to attend meetings or activity sessions would be affected. In this sense, whilst it was thought that MI would not be unsuitable for this client, it was possible his antipsychotic medication would present a challenge to any enhancements in 'A's motivation developed from the MI process. It was also possible that the negative symptoms of his diagnosis, which are not as commonly eased with medication as the positive effects, may affect his continued engagement in the process. His diagnosis of paranoia also suggested he might find the process of MI quite intrusive, especially since MI is about prompting a deeper discussion about motives to change, with some of the outcome measures being of a relational nature i.e. how he felt about his relationship with the researcher. It was anticipated that his apparent introverted nature coupled with paranoia might make the process of developing change talk quite challenging.

'A's consultation took place in the Activities of Daily Living (ADL) kitchen in Ward 1 and began with an introduction and explanation of the consultation. This seemed useful since he seemed to visibly relax from his initial, tense, demeanour. He was also asked to complete the first IMI. As a means of building rapport and developing an idea of where activity fit into his daily routine, 'A' was asked to describe a 'Typical Day' for him. This discussion was quite brief since his short time at the ward meant he had not developed what he would call a typical day. Whilst this discussion yielded limited information it did serve to generate some rapport.

The next part of the consultation led into 'scaling questions' (appendix 4, section 3) where 'A' was asked to rate the importance he attached to PA on a scale of 0 – 10, with 10 being the most important. He was also asked to rate – on a similar scale - the confidence he thought he had in being able to maintain his PA levels. This exercise was intended to generate an idea of 'A's readiness and motivation and he rated both scales relatively highly. In order to understand potential challenges and barriers to his motivation, this task was developed by asking him what would need to change for him to rate

himself more highly for each scale. Furthermore, asking why he rated himself as high as, and not lower than, he did was intended to develop understanding of why activity was as important as it was or what things had made him as confident about it as they had. 'A's 'high' ratings appeared to stem broadly from his previous experiences in the community. However, aside from the information-gathering of this task, the over-arching issue of rapport-building was also important.

It had been written into the consultation plan to ask further scaling questions about overall 'readiness', but it was felt this was not necessary given the preceding discussion, which segued well into the Decisional Balance (DB). The DB was a task through which 'A's potential ambivalence was discussed, explored by asking about the good and less good things to be gained from PA. This gave an indication to 'A's' motives and goals for change and also his concerns about and dislikes of PA. However, in order for this exercise to be 'grounded' in reality, it was also necessary to ask 'A' about the good and less good things of not changing. This was phrased in the first part as, 'things he would need to do less of in order to take part in PA' and, in the second as, 'things that might concern him in the future if he were not able to do this regularly'. 'A' was limited in his responses so the use of open questions and reflections was especially important to develop this section. The DB was summarised and, from a number of suggested options, 'A' chose to talk about developing a plan for increasing his PA.

'A' was shown the weekly schedule for available activity at the unit and was asked about how he might wish to shape his plan. He made choices based on his preferences and experience, and it was apparent he had some good ideas about how much activity he needed to do in order to achieve the benefits he had described earlier. His plans were affirmed and supported and he seemed happy to continue with these and review them later. He also had some dislikes which were important to take into account. 'A' was reminded he had been advised to limit his activities to those of a 'moderate' intensity by his Responsible Clinician (RC), which he agreed he would do stating he

disliked doing anything too strenuous. Inviting A to design his own activity plan was useful since he seemed clear about what he would like to do for this. He also seemed to become more vocal during this time, talking more than he had in earlier stages of the consultation. Whilst exploring 'A's outcome expectations he became apparently reticent once again and some rephrasing was required to clarify questions. He said he would mainly know if things were working for him if he continued to enjoy his activity and hoped that his badminton would improve. 'A' admitted that his motivation might fluctuate from time to time, so discussing how he could deal with these occasions was useful. He said this might occur if he became unwell, so contingencies were discussed for this. The consultation was summarised and a visit to the sports hall was arranged to introduce him to the equipment. 'A' completed the satisfaction feedback questionnaire and the consultation lasted approximately 40 minutes.

A's follow-up consultations. The first follow-up with 'A' was conducted privately in the sports hall during an exercise session. This was helpful in determining that 'A' was coping well with his plans. It also felt a more 'natural' environment to have this discussion. It was apparent he valued the interest shown in him, although discussions with 'A' were always quite brief and he did not volunteer information readily despite the use of open questions and reflective listening statements. This seemed to improve as contact with 'A' increased over time. The second follow-up was conducted in the day area of his ward, which was scheduled for four weeks after the second but came about opportunistically after meeting 'A' on the ward. He agreed to a progress discussion in a quiet area and the processes of the consultations were followed according to the formatted booklets (appendices 4, 7 & 8), within which notes were recorded. 'A' had maintained his plan and the meetings seemed to flow well.

A's feedback: The consultation satisfaction questionnaire. The feedback questionnaire, given to 'A' to rate the value of his MI consultation, was based upon questions that related to simple things, such as the length of the session, and more complex issues related to perceived choice during sessions and the extent to which this was valued. Ratings options were between 0 and 5, though the meanings of the ratings were individualised and terms for the extremes of 0 and 5 were idiosyncratic for each question. The key to the ratings is given below followed by the numerical responses given by 'A' to the questionnaire:

Table 2. Satisfaction Questionnaire: key to ratings and meanings

Question	Rating options
1	Too long/not long enough - 0 1 2 3 4 5 - Just right
2	Not at all what I expected - 0 1 2 3 4 5 - All I thought it would be
3	Not at all happy - 0 1 2 3 4 5 - Very happy
4	Not at all - 0 1 2 3 4 5 - Very much
5	Not at all - 0 1 2 3 4 5 - Very much
6	Not at all - 0 1 2 3 4 5 - All the time
7	Not at all - 0 1 2 3 4 5 - Extremely
8	Not at all - 0 1 2 3 4 5 - I felt judged a lot
9	Not at all - 0 1 2 3 4 5 - Very interested
10	Not at all important - 0 1 2 3 4 5 - Extremely important
11	Yes or No
12	Not at all - 0 1 2 3 4 5 - Extremely
13	Yes or No

Table 3. Satisfaction Questionnaire: Ratings for participant 'A'

	Question	Rating
1	Did you feel the length of the consultation was appropriate?	4
2	Was the consultation what you expected it to be?	3
3	How happy were you with the consultation?	3
4	How much do you feel the consultation encouraged you to make your own decisions?	4
5	How much do you value this?	3
6	How much do you think the Instructor tried to push or coerce you into doing things you didn't want to do?	1
7	How much do you like being in control of your own decisions?	4
8	How much do you feel your responses were being judged by the instructor?	2
9	How much do you feel the instructor was genuinely interested in the way you see things?	4
10	How important is this for you?	3
11	Did the consultation encourage you to think more about changing your activity levels?	No
12	Do you feel this is a good thing for you to do?	4
13	Can you suggest anything else that would have made the consultation more effective?	No

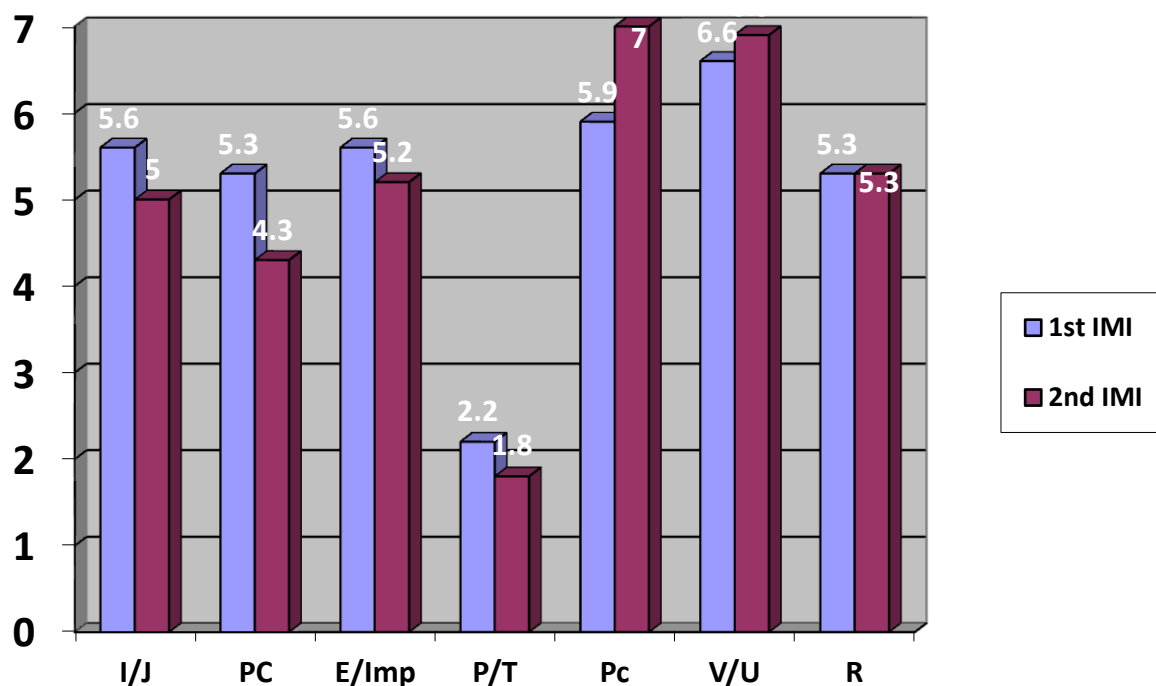
Although this was a semi-structured questionnaire, 'A' did not elucidate on any of his answers, although he was prompted by the administrator for further feedback. He gave each question only a score, none of which were at the extremes of the scales. 'A' seemed to feel the length of the consultation was appropriate although indicated his experience of the consultation was at odds with his expectations of this. 'A' seemed to indicate he was not completely happy with the session. He indicated that he had been mainly encouraged to make his own decisions during the consultation, although rated how much he valued this lower. He also largely felt he had not been pushed or coerced into making decisions and indicated he preferred being in control of his own decisions. He did not seem to feel that he was being judged during the session, although this rating was not as low as it might have been and he also largely felt there was genuine interest being expressed in the way he saw things. He indicated this was not extremely important to him. He responded that the consultation had not encouraged him to think more about changing his activity levels but indicated that doing

so would be a good thing to do. He responded that he had nothing else to suggest to make the consultation more effective.

Intrinsic Motivation Inventory

This questionnaire was based on an inventory of experiential 'sub-scales' thought to be influenced by motivational states. It is designed to assess an individual's subjective experience of, in this case, physical activity. The authors of the inventory recommend that sub-scales are chosen by researchers from a bank of scales in consideration of how they relate to the research in question. However, whilst the sub-scale of 'interest/enjoyment' is considered the main self-report of intrinsic motivation per se, other sub-scales are theorised as being positive predictors of self-report and behavioural measures of intrinsic motivation (Deci & Ryan, 2000) and were considered by the author as being appropriate for the intervention under investigation because of the multi-dimensional nature of physical activities related to exercise. The 'pressure/tension' sub-scale is theorised as being a negative predictor of intrinsic motivation and the 'relatedness' subscale is suggested for use with interventions where the development of relationships are deemed relevant (Deci & Ryan 2000). The questionnaire was intended to identify differences between participants' experiences of physical activities in their recent past and those they performed up to 3-months after the intervention. Participants were asked to give a rating between 1 – 'not at all true', to 7 – 'very true' for each question (see appendix 6). Questions for all sub-scales were randomly distributed throughout the questionnaire. Results were obtained by dividing the sum of the scores for questions in each sub-scale by the number of questions in each sub-sale. The graph below illustrates the average of scores given for each sub-scale of the inventory.

Table 4. 'A's comparative score averages for the Inventory sub-scales.



Key:

I/J – Interest/enjoyment PC – Perceived competence

E/Imp – Effort/importance P/T – Pressure/tension

Pc – Perceived choice V/U – Value/usefulness R - Relatedness

It can be seen from the average scores prior to and after the intervention that there were some differences.

Indicators for decreased intrinsic motivation. These included a decrease of 0.6 in average ratings for interest/enjoyment, 1 for perceived competence, and 0.4 for effort/importance.

Indicators for increased intrinsic motivation. There was decrease of 0.4 in the rating of pressure/tension, an increase of 1.1 in the rating of perceived choice and 0.3 in the rating of value/usefulness. There was no difference in the ratings for relatedness.

Visit Frequencies

The totals of participants' attendance to physical activity sessions was recorded 3 months prior to and 3 months post the intervention. These visit frequencies were individualised and based, in the first instance, on the number of sessions available to participants and on the type and amount of sessions the participant in question 'normally' attended if they had a history of attendance to sessions at the unit. They were compared with, in the second instance, with the total amount they had planned to attend within their consultation, had actually attended. In both instances, figures are also expressed in terms of the attendance percentage of the number available or planned.

Table 5. Comparison of 'A's visit frequencies to activity sessions.

	Number of sessions						Research Endpoint
	3 Months prior			3 Months post			
Intervention date	Total	Attended	%	Total planned	Attended	%	
5.10.10	0	0	0	33	33	100	5.1.11

Being new to the ward, 'A' had no history of attendance to physical activity sessions. Therefore, comparison data was unavailable. From the point of his consultation, 'A' had planned to attend a total of 33 activity sessions. At the end of three months he had attended 33 activity sessions, which was 100% of his plan. However, this total of sessions comprised of attendance to a variety of available sessions across the timescale and not necessarily only the sessions he had indicated he would attend each week.

Contextual Analysis of 'A's' Outcomes

Although the outcome of this case study could not be compared with anything previous to the intervention, it illustrated a complete fulfilment of the plans 'A' made during the consultation even though the IMI reflected a decline in some of the ratings related to intrinsic motivation. One of the biggest changes in 'A's' IMI average scores was for perceived competence, which decreased to his lowest post-intervention rating. 'A' played badminton in the community and considered himself fairly competent. However, this was also a favourite sport with co-patients at the Unit at this time. 'A's' comparison of his abilities in respect of this may have accounted for this decline. Another area of decline was for interest/enjoyment, the main self-report of intrinsic motivation. However, 'A' fulfilled his attendance plans and apparently maintained his motivation despite this. The decline for effort/importance also did not seem to adversely affect 'A's' behavioural outcomes and may have been counteracted by the increase in his ratings for value/usefulness. A relatively large increase was seen in his ratings for perceived choice, which was a major focus of the intervention.

Allied to the improvement of intrinsic motivation was the reverse scoring for pressure/tension and 'A' reported a small decline in this area. It is suggested that the nature and atmosphere of the activities – in short, the way they were conducted – may have accounted for this reduction. Although this rating was not particularly high initially, 'A' had very recently been admitted to the unit and may have felt reassured by the 'relaxed' nature of the sessions. It is noteworthy to say that 'A' enquired only about the reason for the questions regarding relatedness on the IMI. His ratings for this area remained unchanged and moderately high but his enquiry seemed to suggest this construct was unusual to him. Again, this may have been because he was new to the unit and had not had time to develop the therapeutic relationship with carers that others had.

The triangulation of outcome data suggest the intervention was effective in helping 'A' initiate and maintain his activities during this period. However, certain aspects of his feedback raised more questions. In particular, it would be useful to know how the consultation needed to change in order for 'A' to be completely happy with it. Was this a question of how well MI was conducted or something about the MI session that participants felt less comfortable with? For example, according to his feedback, 'A' seemed to undervalue the importance of decision-making and, since he reported that the session had encouraged him to do this, it may have accounted for his feedback for how happy he was with the consultation. In a similar vein, the nature of many patients' conditions is paranoia and mistrust. This may have influenced 'A's ratings for questions concerning his perceived judgment and congruence of the instructor. Finally, he stated the consultation had not encouraged him to think more about making changes to his physical activity levels. This may simply have been a reflection of 'A's relative motivational state in the sense he was already at the point of thinking about becoming more active.

Action Critique of 'A's' Case Study

As the first case study to be conducted, several issues were highlighted for the consideration of modification, the first of these being location. Since private rooms were not available, the ADL kitchen was considered a suitable alternative to conduct the consultations. Whilst this offered some privacy, the notices had not stopped occasional interruptions by other staff. Aside from the 'privacy' issue, the environment seemed 'detached' and at odds with the nature of the discussion. It was considered that the sports hall may provide a more 'congruent' environment for the types of consultations involved. Nevertheless, the decision was made to continue the use of the ADL kitchen for consultations for the meantime with the addition of enhancing the notice to all staff and patients that a private session was taking place. However, the follow-up meetings with 'A' were conducted in the sports hall. This appeared to be more conducive to the type of

discussion. The importance of enlisted help with the research was highlighted in terms of administering the feedback questionnaires and IMIs. It became apparent that 'A' may have felt obliged to respond favourably in the researcher's presence, a factor he even mentioned whilst completing these. Since this help was not immediately available, one option was to offer participants the IMI and satisfaction questionnaires to take away and complete by themselves. The concern was that forms would not be completed and, if they were, it might be some time after the consultation, which could cloud their recollection of the session. Also, they might not be completed exclusively by the participants. With this in mind, it was decided that, for the time being, the forms would be completed by the participants with the researcher. However, within a week or so of beginning the research, it had been possible to recruit a helper to administer and collect the feedback data.

Despite concerns about 'A's medication and the negative symptoms of his diagnosis affecting his continued motivation to engage, his outcomes were very positive. Whether this was a result of the type of intervention is uncertain and a presiding concern was the degree to which the interviews could be deemed as being 'MI'. Because audio-taping was not possible in order to code the sessions for this, the reliance was on the experience of the researcher to 'get this right'. Since the 'target behaviour' of physical activity had been established, the main focus was on expressing interest in the client's agenda, emphasising and supporting his decision-making and providing affirmations and encouragement for his plans. Throughout the tasks of the session, reflective listening and open questions were used to develop understanding, with closed questions for clarification of issues. Was this enough to develop the 'spirit' of collaboration and negotiation? It was difficult to feel these 'skills' had developed the conversation since 'A' had seemed quite reluctant to talk freely during the session. This may have been a product of his state of mind at the time, which had been a concern at the start of the research. However, 'A' had maintained attendance and engagement and had overcome the potentially de-motivating effects of his medication and negative symptoms of his diagnosis.

His apparent reluctance may have been the result of his being new to the ward coupled with his diagnosis of paranoia. His responses were also congruent with his generally introverted presentation at the time, since his feedback about the initial session was positive. Nevertheless, the emphasis of future sessions would be on developing conversation through active listening but also offering more explanations in order to alleviate potential feelings of paranoia.

Service Users - Case Study 2: Participant 'B'

Participant 'B' was a 20 year old male who had been resident at the unit for a number of months. He had a diagnosis of schizoid personality disorder with no evidence of psychosis and was not taking any medication at the time of the research. He presented as friendly and amiable although he could also come across as over-confident and boisterous. He had a history of struggling with motivation for activities offered at the unit even though he had always been known to enjoy sports. It was felt by some staff that he was 'wasting' his days and that he should be more strenuously encouraged to engage in ward activities generally, such was the nature of his relative inertia at times. However, he could be adamant in his decisions and was not easily persuaded to do things he felt uncomfortable with or did not want to do. He often sought activities that would enable him to show off his sporting skills or that gave him some kind of immediate pleasure. It was thought this intervention would be of particular value to him since it encouraged his decision-making, did not propose to evoke reactance, and worked toward the development of a plan. His relationship with the researcher was deemed to be good but it was anticipated that he might be challenged by the requirements of attending scheduled meetings and regular activity sessions. 'B' had a history of relying on others and was often reluctant to make decisions of his own. His care plan involved encouraging him to make more of his own choices independently of others and the process of MI was well suited for this. It was anticipated that this aspect of MI – emphasising personal choice – may present some challenges for 'B'.

'B's first consultation was held in the ADL kitchen of Ward 1. The discussion was apparently welcomed by 'B', who answered questions enthusiastically. He was generally quick and decisive in answering questions during each stage of the consultation. However, there were times when he did seem to take more time in answering some of the questions. Despite being eager to respond, it was necessary to reflect on 'B's answers at times in order to understand more fully his responses. The Typical Day was more

useful in determining 'B's routine than it was in developing rapport, since he was already quite eager to talk. The Scaling Questions were also useful in developing a discussion around his motivation, which he reported as being quite high at the time. Although he rated his Confidence (to maintain activity) scale relatively high, he rated his Importance (for being active) scale even higher. Asking him about this segued into the Decisional Balance and the benefits of activity as he saw them. It was felt a fairly comprehensive exploration was made here. After the decisional balance was summarised, from a list of suggested options, 'B' chose to discuss a plan of activity. He was currently attending activity sessions at the unit but was keen to discuss a plan of activity that would meet his reviewed goals. From a variety of suggestions, he made some appropriate choices to meet his goals. He was commended for this and the details of his plan were recorded. This part of the consultation appeared to be very useful for 'B' and fit in with the objectives he had from the OT team about his decision-making.

'B' was known for becoming quickly bored with plans and so Outcome Expectancies and Contingency Planning were useful areas to discuss. He said much of what he planned depended upon the mood he was in, so reminding him of what he had talked about might be a useful contingency at times. Some of the activities he had planned were also less appealing than others so he thought this might take some extra effort and possibly some individual sessions, which were factored into his plan. The consultation was summarised and had taken approximately 30 minutes. 'B' was still talking enthusiastically about his plans as a date for his next session and future follow-ups was arranged. The satisfaction questionnaire and IMI were conducted with 'B' a few days later by a research helper. All aspects of the session were covered in detail and 'B' was encouraged to make all his own decisions.

Follow-up Consultations

A few days after his consultation, 'B's behaviour deteriorated prior to an impending court appearance, which eventually culminated in his isolated

seclusion. 'Seclusion' involves being physically restrained and held in a secure room until behaviour can be de-escalated safely for the patient's and others' safety. His period of disturbance lasted approximately two weeks, during which time his passes to all activities were suspended. After the MDT agreed his continued inclusion in activities, he was asked if he wished to continue with the research. This was discussed with him and it was agreed that he would continue as if his inclusion in the research had been suspended. Two weeks later, the next discussion with 'B' was conducted as the first follow-up in a quiet and private area of the day area of his ward.

'B' reported that he felt his energy and motivation had declined since his seclusion and he felt less motivated to attend sessions. He had been attending as many as he felt he could and said he was fairly happy with the way things were going although he had not dedicated as much time to the kinds of activities that would help him with some of his goals. It was felt that reviewing the motives for 'B's' activities through use of the Decisional Balance might help and it seemed 'B's' motives had not changed, although his confidence for achieving them had decreased. The second follow-up was conducted in the sports hall after another four weeks and it became clear that, although 'B' had continued to attend sessions, this was sporadic in nature. Another full consultation was conducted and 'B' appeared to have adjusted his expectations in light of the recent past. He was encouraged in his plans and offered continued support for his efforts.

Feedback: The Consultation Satisfaction Questionnaire

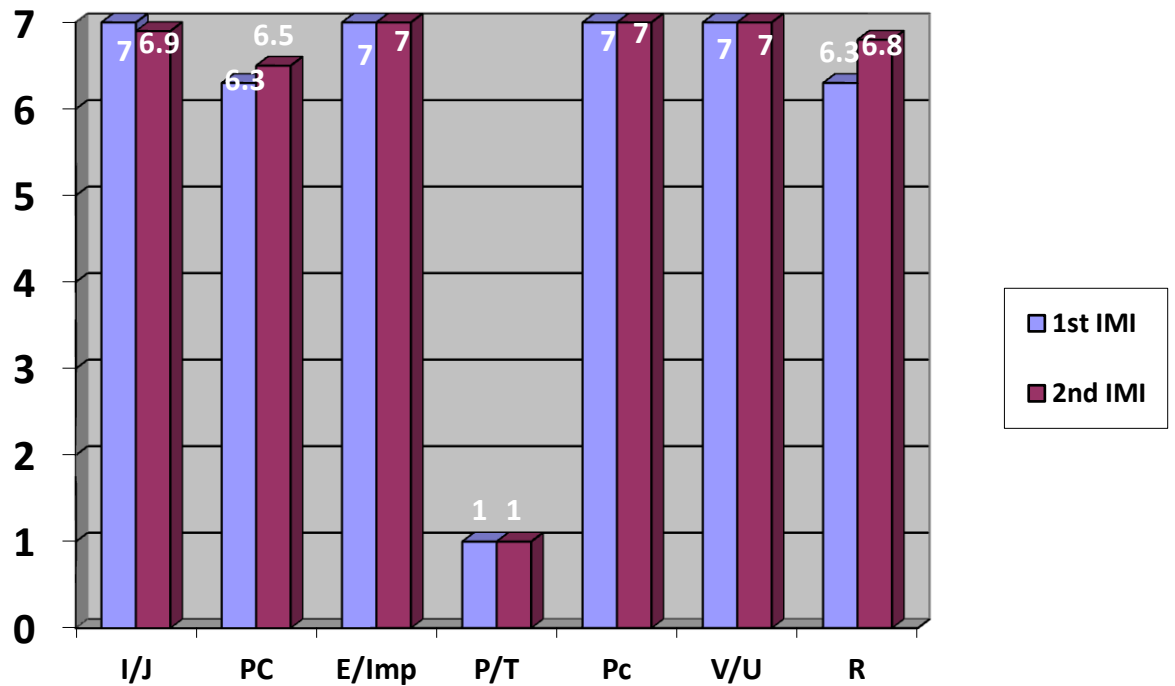
Table 6. Satisfaction Questionnaire: Ratings for participant 'B'

Number	Question	Rating
1	Did you feel the length of the consultation was appropriate?	5
2	Was the consultation what you expected it to be?	5
3	How happy were you with the consultation?	3
4	How much do you feel the consultation encouraged you to make your own decisions?	5
5	How much do you value this?	5
6	How much do you think the Instructor tried to push or coerce you into doing things you didn't want to do?	0
7	How much do you like being in control of your own decisions?	5
8	How much do you feel your responses were being judged by the instructor?	0
9	How much do you feel the instructor was genuinely interested in the way you see things?	5
10	How important is this for you?	5
11	Did the consultation encourage you to think more about changing your activity levels?	No
12	Do you feel this is a good thing for you to do?	5
13	Can you suggest anything else that would have made the consultation more effective?	No

'B's' responses to the satisfaction questionnaire were, for the most part, in the extremes. On the basis of these, he indicated the length of the consultation was 'just right', that the consultation was 'all I thought it would be' but that there was something about the consultation that he was not completely happy with, having rated this at 3. He indicated the consultation 'very much' encouraged him to make his own decisions and that he valued this 'very much'. He also indicated that the instructor had not tried to push or coerce him into doing things and that he liked being in control of his own decisions. He indicated he did not feel judged by the instructor and that genuine interest had been shown. He indicated this was very important to him. He indicated the consultation had not encouraged him to think more about changing his activities but stated he thought that doing so was a good thing. He did not suggest anything else that might make the consultation more effective.

Intrinsic Motivation Inventory

Table 7. ‘B’s comparative score averages for the Inventory sub-scales.



Key:

I/J – Interest/enjoyment PC – Perceived competence

E/Imp – Effort/importance P/T – Pressure/tension

Pc – Perceived choice V/U – Value/usefulness R - Relatedness

As he had done so for the feedback questionnaire, ‘B’ tended to rate the IMI sub-scales in the extremes. Consequently, the IMI sub-scale average comparisons indicated small differences between some of the pre and post-intervention assessments.

Indicators for decreased intrinsic motivation. These included a decline of 0.1 in average ratings for interest/enjoyment.

Indicators for increased intrinsic motivation. There was an increase of 0.2 for perceived competence and 0.5 for relatedness. All other comparisons were unchanged.

Visit Frequencies

Table 8. Comparison of 'B's visit frequencies to activity sessions.

	Number of sessions						
	3 Months prior			3 Months post			Research Endpoint
Intervention date	Total	Attended	%	Total planned	Attended	%	
8.10.10	61	28	45	73	27	37	8.1.11

Prior to the intervention, 'B's' total number of sessions was based upon all available group sessions only. Of these he had attended 28 sessions, which was 45% of the total available to him. From his consultation, 'B' had planned to attend a total of 73 activity sessions, which included planned group and individual sessions. At the end of the research period he had attended 27 activity sessions, which was 37% of his plan. Although this was mitigated by a period of suspension, the research end-point was extended to account for this period.

Contextual Analysis of 'B's Outcomes

'B's' personality made him a particularly good candidate for the trial of this intervention. Although he presented with very high ratings of the IMI overall, with little variance between the pre and post-outcome IMI data, his behaviour historically fluctuated frequently between attendance to, and long periods of absence from, activities. This was despite his clear ability to perform most activities very well. Indeed, his rating for the perceived competence sub-scale increased slightly post-intervention. The extreme ratings given as part of his feedback for both the IMI and the questionnaire seemed to reflect the extreme nature of 'B's plans at times. However, it was unfortunate that 'B's behaviour declined during the research period because this seemed to affect his energy and motivation to attend activities and fulfil his plans. Nevertheless, 'B' presented initially as motivated and interested in

overcoming his known tendency to lapse from his plans and spoke enthusiastically about this during his consultation and subsequent discussions. His consultation feedback was supportive of the indices of the approach but must be moderated by his known tendency toward extremes and over-confidence, and the possibility of demand characteristics, especially since the therapeutic relationship between the researcher and 'B' was deemed to be good; he had historically reported that the researcher was one of the few people he trusted. However, he reported the consultation had not prompted him to think more about changing his activity levels, despite his having actually begun to attend sessions regularly prior to his behavioural deterioration.

Action critique of 'B's' case study

With the interview room still out of commission and there being no sign of the interruptions ceasing whilst in the ADL kitchen, further thought was given to holding the consultations in the sports hall. Indeed, most of the follow-up meetings were conducted there whilst participants was exercising. This seemed a more appropriate and naturalistic setting. 'B' was not apparently deterred by the interruptions and the consultation seemed to flow quite naturally; possibly a product of 'B's talkative nature. Though he answered questions quickly, he would occasionally take more time to answer some, presumably because the nature of the questions had given him something unusual to consider. This was taken as a positive aspect of the session. It was felt the spirit of negotiation was maintained throughout the session, which was not only important for the quality of the approach, but for 'B's care plan, within which he had been encouraged to make more of his own decisions. He did not seem to have any problems with making his own choices when prompted to do so. The session had also prompted 'B' to consider future activities that were not limited to the Unit.

Since the session lasted approximately 30 minutes, the concern was that justice had been done to the approach in terms of spirit and

thoroughness. A focus had been maintained on developing the consultation through reflections and open questions even though 'B' was very talkative. It is possible the duration was a function of 'B's' apparently action-oriented state and that dwelling too long on ill-matched tasks could be counter-productive. However, he spoke enthusiastically about his plans toward the end of the session, which was encouraging. Because of the risk of demand characteristics in relation to the completion of the feedback forms, a helper had been enlisted to administer these since the first sessions of the research. 'B' said he was happy for the helper to collect this data from him within the days following the session, which was a positive development of the research in terms of data collection.

The deterioration in 'B's' behaviour was uncharacteristic of his usual presentation and lasted two weeks, but he eventually calmed enough to engage in reasonable discussions. This had been a surprise for the MDT and very unusual behaviour for B. He was very disturbed during this period although not psychotically so, and when he became settled 'B' reported a loss of energy and motivation. He stated that, although he was less inclined to attend PA sessions, he knew what the benefits were and still wanted to achieve his aims. He eventually began attending groups again when this was agreed by the MDT and after further discussions with the researcher.

Service Users - Case Study 3: Participant 'C'

Participant 'C' was a 28 year old male who had been at the unit for over two years. He had a diagnosis of paranoid schizophrenia and personality disorder and had been medicated chiefly with Risperidone for psychosis and Citalopram to alleviate depressive symptoms, the possible adverse effects of which were insomnia, anxiety, weight gain, nausea, sexual dysfunction and tremors. 'C's presentation could vary according to his perceptions of others on the ward from one day to the next. Generally, he was pleasant, chatty and good humoured but he could be extremely sensitive to comments of any kind, occasionally perceiving the most innocent of remarks as a potential slur against him. His relationship with the researcher was good and he was receptive to engaging in the research process. However, 'C' often sought the reassurance of others and had, at times, sought clarification of comments made by the researcher. Although it was possible his medication could adversely affect his motivation, his extremely sensitive nature coupled with his history of being susceptible to the negative effects of his diagnosis were thought to be greater potential confounders for the process; some of the MI tasks may have appeared intrusive and he may have struggled to maintain attendance and engagement. He also often preferred direct instruction from others, which represented a challenge to the MI process of encouraging his own choices. However, the MDT were of the view that 'C' should be encouraged and supported in making and expressing his own decisions concerning his life goals.

'C' had an extensive history of PA whilst at the unit. His first consultation was held in the ADL kitchen of Ward '1' and he seemed interested in the study and asked questions about the purpose of it all, which were answered. He was forthcoming in his responses and it felt easy to reflect on his responses. The Typical Day was useful in determining his daily schedule and may have increased the feeling of rapport. He responded to the motivations scales well and classed himself as relatively high on all the ratings. However, his confidence to maintain PA over time was lower than his

ratings of importance and overall readiness. He attributed this to the variable way his mood would be from day to day. During the Decisional Balance, 'C' described the main benefits and shortcomings of PA to him. This included underlying factors of what achieving the benefits of activity meant to him. Active listening skills here appeared particularly helpful and 'C' was very responsive to this discussion. However, in conclusion of this section and listing the possible options for further discussion, 'C' appeared uncomfortable with the emphasis of decision-making being on him. Nevertheless, he chose to talk about the development of a plan.

Despite apparently appearing uncomfortable with making decisions, 'C' was quite clear about what he thought he should do in relation to his activity and emphatically described an 'ambitious' weekly schedule. Concerns were expressed by the researcher by asking permission, giving information in a neutral way and then asking for feedback from 'C'. This was mainly in relation to how he would maintain the 'loaded' plan he had described. 'C' explained his reasons for this and maintained his confidence in the plan. This was acknowledged and he was encouraged to be aware of any feelings of 'burn out' that might equally damage his intentions. He agreed with this. It seemed to be useful to go on to discuss 'C's' outcome expectancies and contingency plans since he had some specific ways by which he felt he would notice success and how he might falter with his plans. These were discussed and recorded. The consultation lasted approximately 40 minutes. 'C' was asked to complete the feedback questionnaire and IMI with a colleague, to which he agreed. It was felt that the spirit of negotiation was maintained well in this consultation and, despite 'C's' tendency to avoid making decisions, he was encouraged quite successfully to be the main architect of his plan. It was felt listening skills were utilised effectively, including affirmations which supported 'C's' decisions and choices, and that concerns were expressed with respect.

Follow-up Consultations

'C's first follow-up consultation was in the day area of his ward, sat at a table in a quiet area. This proved quite useful since he began by expressing concerns about being able to maintain the plan he had chosen; the volume for this consisted of him doing double sessions every day. He was asked how he thought he might alter this, to which he said he could cut down the amount he was doing and try to do only one session per day and perhaps make this every other day if he felt this was still too much. Affirmations of his recognition of this were given and continued support offered. Reference was made to what others like him had done in similar positions in order to maintain progress. Although it may have been quite early to notice any physical changes in reality, 'C' was sure he had noticed some. His perceptions of this were deemed most important and he was commended for his efforts.

'C's second follow-up consultation was conducted individually in the sports hall at the unit. He had been making good attendance, which had also been noted by the MDT, and this was a comprehensive review of his plans. It had been noted that 'C' had modified his plans over the time of the research and always made efforts to inform the researcher about this. A reduction of his confirmation-seeking behaviour was part of his care plan but he always reported his changes as statements rather than queries to support his decisions. A review of the Decisional Balance illustrated some similarities to the first but also some new benefits and 'C' was commended for using his initiative with his plans.

Feedback: The Consultation Satisfaction Questionnaire

Table 9. Satisfaction Questionnaire: Ratings for participant 'C'.

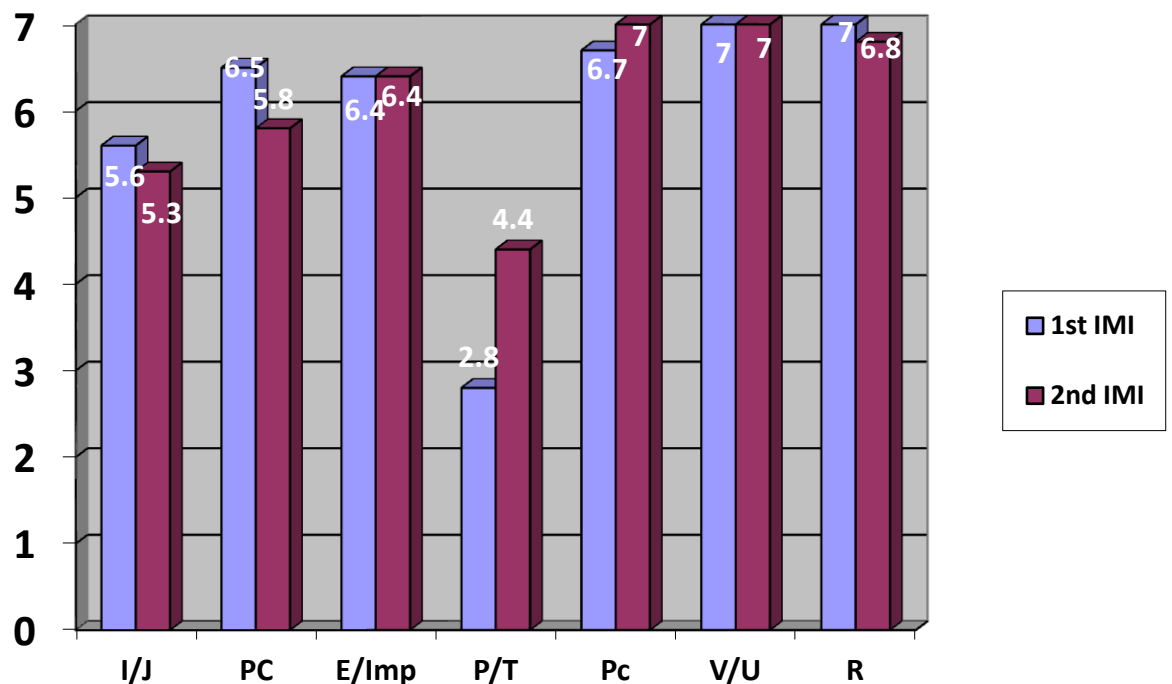
Number	Question	Rating
1	Did you feel the length of the consultation was appropriate?	5
2	Was the consultation what you expected it to be?	4
3	How happy were you with the consultation?	5
4	How much do you feel the consultation encouraged you to make your own decisions?	4
5	How much do you value this?	3
6	How much do you think the Instructor tried to push or coerce you into doing things you didn't want to do?	0
7	How much do you like being in control of your own decisions?	1
8	How much do you feel your responses were being judged by the instructor?	0
9	How much do you feel the instructor was genuinely interested in the way you see things?	5
10	How important is this for you?	5
11	Did the consultation encourage you to think more about changing your activity levels?	No
12	Do you feel this is a good thing for you to do?	4
13	Can you suggest anything else that would have made the consultation more effective?	'friendly', 'interested'

'C' gave ratings for his feedback, with no further comments except one at the end. This was in reference to the how he felt the instructor was friendly and interested during the consultation. Some of his answers illustrated the lack of value he appeared to put on his own decision-making, whilst others, on the whole, illustrated the extent to which this was achieved during the consultation. He indicated the length of the consultation was 'just right' and that, on the whole, it was what he expected it to be, although this response may have been mitigated somewhat since he rated it 4 rather than 5. He indicated he was 'very happy' with the consultation and that it had, for the most part, encouraged him to make his own decisions. He indicated he did not value this as equally high. He indicated that the instructor had not tried to push or coerce him into things he did not want to do. He indicated that he did not like making his own decisions. His responses illustrated he felt the

instructor was genuinely interested in the way he saw things and that he had not felt judged. He also indicated this was very important to him. He stated the consultation had not encouraged him to think more about changing his activity levels but appeared to indicate he felt this was a good thing for him to do.

Intrinsic Motivation Inventory

Table 10. ‘C’s comparative score averages for the Inventory sub-scales.



Key:

I/J – Interest/enjoyment PC – Perceived competence
 E/Imp – Effort/importance P/T – Pressure/tension
 Pc – Perceived choice V/U – Value/usefulness R - Relatedness

There was some degree of movement in pre and post-intervention average sub-scales for ‘C’, much of which was toward an apparent decline in intrinsic motivation.

Indicators for decreased intrinsic motivation. These included a decline of 0.3 in average ratings for interest/enjoyment, 0.7 for perceived

competence, and 0.2 for relatedness. Average ratings for pressure/tension increased by 1.6.

Indicators for increased intrinsic motivation. Whilst ratings for effort/importance and value/usefulness remained unchanged, ratings for perceived choice increased by a value of 0.3.

Visit Frequencies

Table 11. Comparison of 'C's visit frequencies to activity sessions.

	Number of sessions						Research Endpoint
	3 Months prior			3 Months post			
Intervention date	Total	Attended	%	Total planned	Attended	%	
12.10.10	63	29	46	76	56	74	12.1.11

Prior to the intervention, 'C's' total number of sessions was based upon group sessions available and arranged one to ones. Of these 63 sessions, he attended 29 of them, which was 46% of this total. From his consultation, 'C' planned to attend 76 sessions and attended 56 of these, which was 74% of his planned total.

Contextual Analysis of 'C's Case Study

The behavioural outcome for 'C' was positive in favour of improved attendance to activity sessions; he exceeded the number and percentage of sessions attended by comparison with his pre-intervention record. Although this corresponded well to some of the IMI sub-scale changes, there were others that it did not. These were for interest/enjoyment, perceived competence, and relatedness. The reverse scoring value for pressure/tension also increased and appeared relatively high. However,

these changes may be accounted for by 'C's known tendency toward sensitivity and his frequent unfavourable comparison of himself with others. Besides this, these ratings, though relatively high, were the lowest of 'C's ratings across the sub-scales. 'C's higher sub-scale ratings remained mostly unchanged and very high and emphasised effort/importance, perceived choice and value/usefulness. In real terms, this corresponded well with his regular attendance to sessions and his frequently speaking positively about how well he thought he was doing. 'C's consultation feedback was favourable and supportive of the MI approach. However, this may be tempered with the knowledge that he was known to try to respond in relation to how he thought his carers wanted him to respond, when giving feedback.

As it was anticipated, he reported undervaluing decision-making and being in control of his own decisions. Despite this, the attendance outcome is illustrative of the success he had in developing his own plan of activity and maintaining this. Whilst the consultation may have played its part in this, this may have been as much a function of the overall support of his care-team at this time and the encouragement he was having in making progress toward discharge. This, and his relatively motivated state, may be reflected in his stating that the consultation did not encourage him to think more about making changes to his activity levels since he may have been already doing this.

Action Critique of 'C's Case Study

The continued use of the ADL kitchen for this research process was not problematic in this case. Though prone to interruptions from staff, this session was not disturbed and would continue to be used for initial consultations. 'C' was very agreeable to taking part in the research and appeared interested in the study, asking questions about the purpose of it all. He was very forthcoming in the interview, which made it easier to reflect on his responses than with other cases. The focus had been on developing

active listening from previous interviews, which may have accounted for this apparent improvement, but it was as likely a combination of 'C's' presentation and responses allied with the focus on these skills. He responded to the motivations scales well and classed himself as relatively high on all the ratings. However, his confidence to maintain his PA over time was also lower than his ratings of importance and overall readiness. He attributed this to the variable way his mood would be from day to day, although for several recent months he had presented as bright and highly motivated, which coincided with a change in his medication. Nevertheless, his history of severe depression served to maintain concerns amongst staff. Indeed, had it not been for the improved change in his presentation the outcomes of the MI process with 'C' may have been very different.

The 'spirit' of this consultation was thought to be collaborative and supportive of 'C's' autonomous decisions, exemplified by the fact he had made decisions which were considered overly ambitious initially. Concerns had been respectfully expressed about this and, despite continuing with his plans, 'C' had accepted he needed to moderate his efforts during his first review in order to avoid becoming de-motivated. 'C's' insistence of maintaining his initial choices suggested he valued making his own choices – prizing his autonomy – more than was generally thought. He certainly seemed capable of doing this and of self-regulating his choices when he found them potentially damaging to his motivation. Whilst this was a very positive outcome for 'C' in terms of his plans generally, it was nonetheless at odds with his history of frequent requests for reassurance and his sensitivity to the possibility of upsetting someone. It was considered that the approach used with 'C' in the name of MI was conducive to this positive outcome. However, his willingness to please others did raise concerns about the reliability of the feedback from the satisfaction questionnaire. Nevertheless, in terms of the consultation, utilising listening skills effectively were important in order to express support for the choices he was making. This, and other interviews, emphasised the ideas that, despite often similar diagnoses amongst participants, individual presentations require flexibility in the deployment of interpersonal skills.

Service User – Case Study 4: Participant ‘D’

‘D’ was a 43 year old male who had been at the unit for 2 years. He had a diagnosis of unspecified schizophrenia and had some history of attendance to PA sessions at the unit. He was residing on Ward 2 and being medicated, at the time of the research, with Aripiprazole, the possible side effects of which were numerous but most likely to be agitation, anxiety and insomnia. ‘D’ was prescribed medication PRN (Pro Re Nata – ‘as required’) to cater for these effects but was not reporting adverse symptoms at the time of the research. From the consistency of his presentation it was not thought his medication would affect how ‘D’ responded to the MI process. However, his general presentation was somewhat quiet, ‘slow’ and introverted, and developing conversation with ‘D’ was often challenging. He seemed comfortable with silences and was somewhat reticent in divulging information to staff. This aspect of his presentation did present potential challenges to the MI process and it was intended that open questions, reflective listening and patience would be a particular requirement. ‘D’ was also prone to rising late from his slumbers and occasionally missing appointments. This was thought to present a challenge to his continued and regular engagement in the process. Despite his reserved nature he was known to be assertive with staff in relation to his preferences and it was anticipated that ‘D’ would be protective of his autonomy if he felt any coercion. He had not been engaged in any physical activity within the previous 6 months and had always managed to avoid the opportunities when asked or had conflicting appointments. Nevertheless, he often spoke about becoming more active and, after considering the offer, had agreed to take part in the research.

‘D’s consultation was conducted in the group room of Ward 2; a quiet room of the ward used for ward rounds. The Introduction and Typical Day appeared to reassure ‘D’ and helped develop the discussion around the issue of physical activity. His ratings of readiness were relatively low and it was deemed especially important to initially ask questions that would elicit

'change talk' and potentially boost his motives for change. These were phrased as why he had given that rating and not a lower number. It was apparent that 'D' was not highly motivated toward making big changes to his activity levels, which came through from the way he talked as much as his ratings. Nonetheless, an exploration of his motives through the Decisional Balance seemed to reveal some definite benefits for becoming more active and some concerns about not changing. Consequently, when a summary was offered and 'D' was asked how he would like the discussion to continue, he opted to talk about increasing his activity levels. He had some clear ideas about his activity plans, which were modest in relation to the benefits he hoped to gain.

When this discrepancy was respectfully expressed, it appeared that what he hoped to gain more from activity, above physical changes, was a sense of wellbeing, which resonated in the way he talked about his chosen philosophy of Buddhism. He did say that he would try to increase his activity by walking on the passes he had, but this did not form part of his plan. Although 'D' had opted to attend one private activity session per week, this was more than he had been doing and was commended and supported. He was assured that if he wished to increase this amount, then he could always discuss the options for this later. It was felt that discussing expectancies for 'D' after this would, in some ways, be like going over 'old ground' since he had already spoken about and alluded to the 'wellbeing factor' and a sense of 'kharma' that he hoped to maintain from this. When asked about contingencies and keeping the plan going, 'D' spoke confidently about maintaining this unless he had appointments that clashed at the same time. He said that he was now committed to the plan he had but might need reminding about this from time to time. It was agreed that a weekly schedule might help him keep on track. It was agreed that 'D' would have reviews of his plan after two weeks and again four weeks later. He agreed to complete the feedback form and IMI with a colleague later.

Follow-up Consultations

'D's' first follow-up was conducted in the sports hall during his activity session, which felt natural and appropriate. He had managed to maintain his plan and appeared pleased with the formal aspect of this. He said that other carers had also expressed their support of this and he saw this all as helping him toward his discharge. His follow-up four weeks later was conducted in the sports hall, again during one of his sessions. He confirmed his satisfaction once again and a review of his efforts emphasised the wellbeing benefits he was apparently achieving from the activity. Although he indicated a preference for attaining a 'better' physical state in terms of some weight reduction, 'D' did not seem highly motivated toward making the changes that would enable this. This was apparent from his 'change talk' about this, which was judged to lack intensity and commitment. He expressed general satisfaction with the way things were going and he was assured of continued support for his future plans.

Feedback: The Consultation Satisfaction Questionnaire

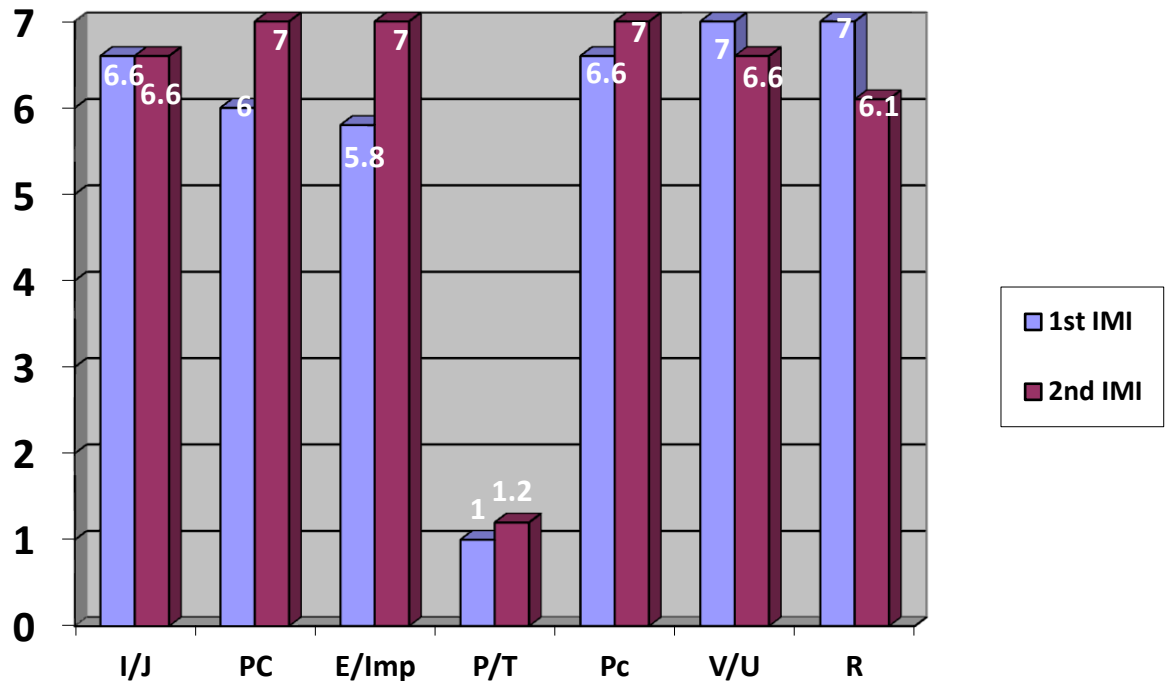
Table 12. Satisfaction Questionnaire: Ratings for participant 'D'.

Number	Question	Rating
1	Did you feel the length of the consultation was appropriate?	5
2	Was the consultation what you expected it to be?	4
3	How happy were you with the consultation?	5
4	How much do you feel the consultation encouraged you to make your own decisions?	5
5	How much do you value this?	5
6	How much do you think the Instructor tried to push or coerce you into doing things you didn't want to do?	0
7	How much do you like being in control of your own decisions?	5
8	How much do you feel your responses were being judged by the instructor?	0
9	How much do you feel the instructor was genuinely interested in the way you see things?	5
10	How important is this for you?	5
11	Did the consultation encourage you to think more about changing your activity levels?	Yes
12	Do you feel this is a good thing for you to do?	5
13	Can you suggest anything else that would have made the consultation more effective?	'...a good chat'

'D' responded to the questions with ratings and, apart from adding he felt the consultation was a 'good chat', gave no indication of how it may have been different. However, all of 'D's' responses appeared to indicate satisfaction with the session and were supportive of the MI-related indicators of this. The one exception to this was his rating for his expectations of the session, which he gave a 4 rather than a 5. He indicated the session had encouraged him to think more about changing his activity levels and that he thought this was a good thing to do. He had nothing else to add but reported he thought it was a 'good chat'.

Intrinsic Motivation Inventory

Table 13. 'D's comparative score averages for the Inventory sub-scales.



Key:

I/J – Interest/enjoyment PC – Perceived competence

E/Imp – Effort/importance P/T – Pressure/tension

Pc – Perceived choice V/U – Value/usefulness R - Relatedness

There were small differences in 'D's average IMI sub-scales.

Indicators for decreased intrinsic motivation. These included a decline of 0.4 in average ratings for value/usefulness and 0.9 for relatedness. Average ratings for pressure/tension increased by 0.2.

Indicators for increased intrinsic motivation. These included increases of 1 for perceived competence, 1.2 for effort/importance, and 0.4 for perceived choice. Values for interest/enjoyment remained unchanged.

Visit Frequencies

Table 14. Comparison of 'D's visit frequencies to activity sessions.

Intervention date	Number of sessions						Research Endpoint
	3 Months prior			3 Months post			
	Total	Attended	%	Total planned	Attended	%	
21.10.10	21	0	0	9	5	56	21.1.11

Prior to the intervention, 'D's total number of sessions was taken from a twice a week frequency, none of which he attended. From the consultation, 'D's plan was to attend 9 session over three months, of which he attended 5. This was 56% of his planned attendance.

Contextual Analysis of 'D's Case Study

Although 'D's pre-intervention records show no previous attendance to physical activity sessions in the prior 3 months, he had attended some sessions at the Unit since admission. However, he had a tendency to try to avoid sessions and had eventually stopped attending altogether. It is considered some measure of the success of the intervention, therefore, that he began attending sessions again and completed 56% attendance to his plan, modest though this was in terms of overall numbers. This corresponded with most of the ratings on his IMI, which increased moderately in the areas of perceived competence, effort/importance and perceived choice. There were some indicators of decreased motivation in the areas of value/usefulness and relatedness, and pressure/tension also increased slightly. But overall, his rating for interest/enjoyment remained unchanged and his sub-scales were all relatively high. 'D' also reported positive feedback about the consultation, rating most aspects of this positively and stating that it had encouraged him to think more about changing his activity levels. He commented that this had been a 'good chat'.

Although demand characteristics should not be overlooked, 'D' was known to be a contemplative individual and often gave serious thought to decisions and comments he made. The therapeutic relationship between 'D' and the researcher was deemed to be good, although this had developed entirely as a function of his limited involvement with exercise whilst at The Unit. His progression status was that he was soon to be discharged. Movement between the acute Ward 1 and the rehab Ward 2, and discharge from the unit, often involved patients becoming disengaged from their therapeutic activities, especially concerning the exercise environment. In this case, 'D' managed to maintain his visits to exercise sessions up until he was almost due to leave.

Action Critique of 'D's Case Study

'D's was the first consultation to be conducted from Ward 2 and the group room this was held in was appropriate in this case. There were no interruptions and the discussion lasted approximately 30 minutes. Initial concerns about the degree to which an in-depth discussion could be developed with 'D' given his quiet nature were legitimate and the discussion was not expansive, despite the use of active listening. Nevertheless, the process was followed and the MI tasks were useful in as much as they provided valuable structure to the session, the outcome of which was a plan of 'D's design. Whilst this plan was 'minimal' and may have been at odds with the kind of plan others may have hoped for 'D', the important thing was it was more than he had been doing and he maintained the plan well. Despite voicing a desire for some physical outcomes, it seemed 'D's main motives were for mental benefits rather than physical. These motives were supported and affirmed and the consultation was deemed to have honoured the 'spirit' of MI through collaboration, autonomy support and evocation. Indeed, it was necessary for the researcher to be mindful of the value of what can often be perceived by some as 'limited' programmes, rather than imagine they should be following something more involved.

Service User – Case Study 5: Participant ‘E’

‘E’ was a 50 year old male who had been at the unit for approximately 18 months. He had a diagnosis of paranoid schizophrenia and was medicated on Haloperidol and procyclidine at the time of research. The possible adverse effects of this medication were blurred vision, dry mouth, lethargy and sexual dysfunction although ‘E’ was not reporting any of these symptoms. He was, however, taking procyclidine to control tremors. This was not anticipated to have any adverse effects on his taking part in the MI process. ‘E’ had a history of attending physical activity sessions, albeit that this was sporadic and infrequent. His presentation was quiet but he was generally social on the ward and would respond quietly and intelligently when spoken to. The therapeutic relationship was deemed to be good between ‘E’ and the researcher although it was acknowledged by staff that developing such relationships with ‘E’ was slow and difficult, which was a consequence of his movement ‘through the system’. This often meant he had to truncate relationships he had developed when he moved from one unit to another. His coping mechanism for this was to try to remain detached, since he found it difficult to repeatedly leave relationships behind. This represented a possible challenge to the development of the therapeutic alliance and the MI process, since ‘E’ was known to recede abruptly from relationships if he thought he may be moving to another setting in the future. Indeed, this was part of ‘E’s imminent plans at the time. ‘E’ was asked if he would take part in the research whilst he was out ‘on pass’ with the researcher. He took some time to consider this, eventually agreeing after a week. His first consultation was conducted, in private and uninterrupted, in the ADL kitchen of Ward 1.

From the point of asking ‘E’ about his Typical Day, he gave long consideration to the questions asked throughout the consultation. Since the answers did eventually come, this was taken to mean he was giving serious consideration to his answers, although it could have meant he was suspicious or cautious of the questions. The key here was to be patient and not to allow the silences to prompt more questions before the answers were

given. The Introduction and Typical Day did not seem to relax 'E's demeanour, although it did provide some information about the kind of schedule he usually followed. Although he gave relatively high ratings of importance and confidence to attend physical activity sessions, he gave a much lower rating on the overall readiness scale. He explained that, although PA was important to him and he was confident of keeping this going, he was less ready to change his present level of PA. This had implications for the possibility of other components inherent within the concept of 'readiness'; perhaps, as 'E' was describing his reasons, this had something to do with emotion. The discussion moved into the Decisional Balance and 'E' described his motives for being more active were more about his mental health and being social than gaining any physical benefits, as such. This section was deemed very useful for the consultation and was explored well. 'E' was clear, when offered the options for further discussion, that he did not want to increase his physical activity at this point but decided to talk about a plan for his current levels.

It was apparent that 'E' valued an organised programme throughout the week and he wanted to factor the two health walks he was doing into this. He was asked about how things were different in the past when he was doing more activity, to which he said he'd enjoyed doing more and felt energetic up to a point but said it had ended up with him feeling as if he was doing too much. This had a negative effect on his mental health and he found it was putting him off from doing any activities on the therapeutic programme. It was suggested that our discussion seemed to reflect the process of his having discovered for himself an amount and type of activity that was just enough to suit his needs but not so much as to adversely affect his mental health. He agreed with this. 'E's outcome expectancies were discussed in terms of his feeling well and maintaining good mental health, which was useful. The deterioration of his mental health was a big concern for him. Discussing ideas for how he might overcome difficulties in maintaining his plan may have been useful, although he did not appear too concerned with his plan lapsing. This may have reflected the degree of readiness he had given earlier and the reasons he gave for this. He agreed to complete the feedback form and IMI

with my colleague, which was arranged for later in the week. 'E's consultation took longer than others at about 45 minutes, which could be explained in terms of the time it took for him to answer questions. Nevertheless, it was felt the spirit of negotiation was maintained and that 'E' had given each area of discussion good consideration.

Follow-up Consultations

'E's first follow-up was conducted during one of the walks he attended as part of his plan, which was appropriate in terms of confidentiality and how it felt in that environment. He was satisfied with his progress and stated he felt he had benefitted in the outcomes he had hoped for. His second follow-up was conducted during another walk, within which his plan was reviewed in more detail. 'E's responses to questions were a lot quicker during these follow-up sessions and he seemed to be more comfortable with the discussions. He decided to maintain his current activity levels and was satisfied with his progress. 'E' was waiting to be discharged to another unit within the near future.

Feedback: The Consultation Satisfaction Questionnaire

Table 15. Satisfaction Questionnaire: Ratings for participant 'E'.

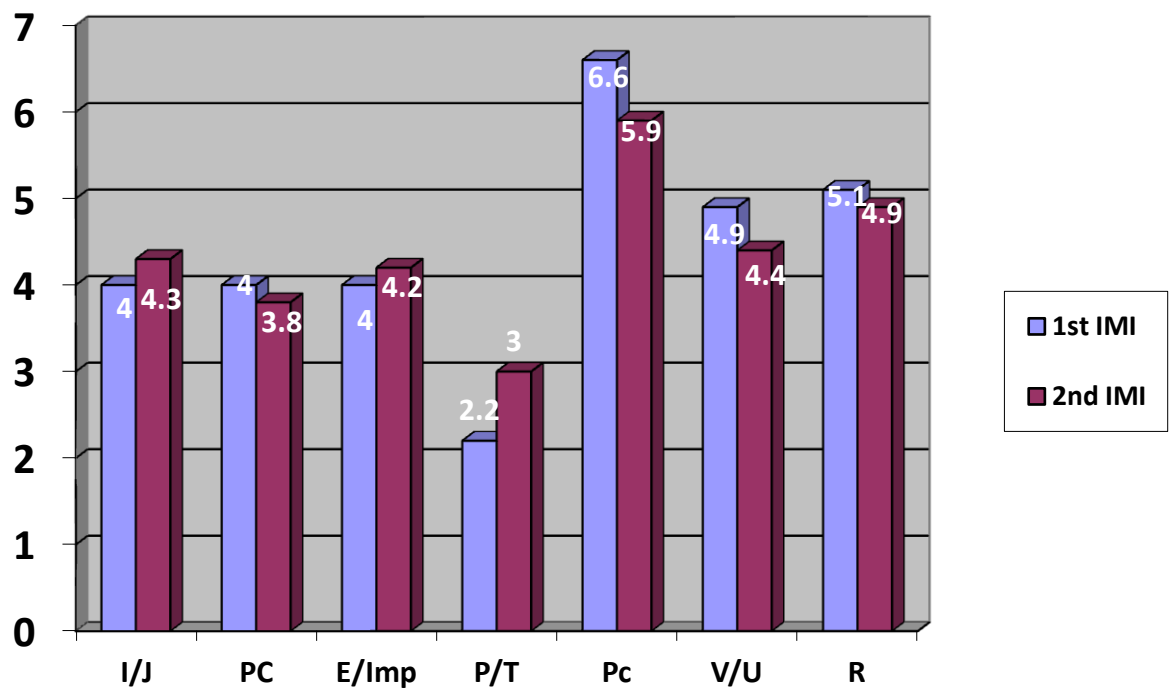
Number	Question	Rating
1	Did you feel the length of the consultation was appropriate?	5
2	Was the consultation what you expected it to be?	3
3	How happy were you with the consultation?	5
4	How much do you feel the consultation encouraged you to make your own decisions?	5
5	How much do you value this?	5
6	How much do you think the Instructor tried to push or coerce you into doing things you didn't want to do?	2
7	How much do you like being in control of your own decisions?	4
8	How much do you feel your responses were being judged by the instructor?	3
9	How much do you feel the instructor was genuinely interested in the way you see things?	5
10	How important is this for you?	5
11	Did the consultation encourage you to think more about changing your activity levels?	Yes
12	Do you feel this is a good thing for you to do?	4
13	Can you suggest anything else that would have made the consultation more effective?	'No'

'E' responded to the questions with only a rating and gave no indication of how the consultation may have been different. His responses indicated satisfaction with the session overall and were supportive of the MI-related indicators of this. He indicated the session length was appropriate but that the session may not have been all that he expected it to be. However, he indicated that he was happy with the consultation, that it had encouraged him to make his own decisions and that he valued this highly. He also indicated that he mainly liked to be in control of his own decisions. Although 'E's indicated low ratings for 'coercion' and 'judgment', there appeared to be some reservation in these. He indicated that the instructor had been genuinely interested in the way he saw things and that this was extremely important for him. He stated that the consultation had encouraged him to

think about changing his activity levels and that this was a good thing for him to do. He did not have anything further to add.

Intrinsic Motivation Inventory

Table 16. ‘E’s comparative score averages for the Inventory sub-scales.



Key:

I/J – Interest/enjoyment PC – Perceived competence
 E/Imp – Effort/importance P/T – Pressure/tension
 Pc – Perceived choice V/U – Value/usefulness R - Relatedness

There were differences in all of ‘E’s average IMI sub-scale comparisons.

Indicators for decreased intrinsic motivation. These included a decline of 0.2 in average ratings for perceived competence, 0.7 for perceived choice, 0.5 for value/usefulness, and 0.2 for relatedness. Average ratings for pressure/tension increased by 0.8.

Indicators for increased intrinsic motivation. These included increases of 0.3 for perceived competence, and 0.2 for effort/importance.

Visit Frequencies

Table 17. Comparison of 'E's visit frequencies to activity sessions.

	Number of sessions						Research Endpoint
	3 Months prior			3 Months post			
Intervention date	Total	Attended	%	Total planned	Attended	%	
22.10.10	41	23	56	19	12	63	22.1.11

Prior to the intervention, 'E's total number of sessions were based upon a frequency of 4 sessions per week; 2 walks and 2 group sessions. He attended 23 of these sessions, which was 56% of that total. From the consultation, 'E's plan was to attend 19 sessions over three months, of which he attended 12. This represented 63% of his planned attendance.

Contextual Analysis of 'E's Case Study

'E's involvement with physical activities at The Unit had been variable during his section and occasionally had an apparently adverse affect on his mental state if he did too much. Whilst 'E' recognised the benefits of physical activity he was also concerned about the possible negative effects and so proceeding with care was paramount. 'E's behavioural outcome in terms of attendance was favourable for the intervention and the attempt to carefully negotiate a plan with him seemed to have been successful on the whole. However, he had been recommended for a discharge a short time after beginning the research and 'E's coping method for his frequent movements

from place to place was to disengage not only with activities, but from people too. In this sense, it is possible that he would have attended more of his planned sessions had his discharge not been impending. This latter issue may have accounted for the decreases in IMI scores, particularly for the sub-scale of relatedness.

These scales on the whole were rated fairly low, which appear to indicate relatively low intrinsic motivation. This was aligned with a relatively high rating for pressure/tension, which is inversely related to intrinsic motivation. 'E's feedback for the consultation was supportive of most aspects of the structure and MI-constructs of the session, although it may not have been all that he was expecting it to be. He also seemed to be in doubt about how much his responses were being judged by the instructor and the extent to which he had been coerced or pushed into doing things he did not want to do. These ratings, whilst low, did not indicate he felt completely un-judged or that his choices were completely his own. The therapeutic relationship between the researcher and 'E' was deemed to be fairly good, but it was felt he was a difficult person to talk with; he often seemed suspicious of others and unwilling to develop relationships to any great extent. This was attributed to his coping mechanism of detachment, mentioned previously. Despite this, he responded that he had been encouraged to make his own decisions and had felt the instructor had been genuinely interested in his views. He also indicated that he felt the consultation had encouraged him to think about changing his activity levels and that this was mainly a good thing for him to do.

Action Critique of 'E's Case Study

This consultation was conducted in the ADL kitchen of Ward 1, which was not disturbed. The therapeutic relationship with 'E' was good and he had often spoken about his thoughts and feelings whilst out on health walks with the researcher. Whilst he seemed to be willing to collaborate during the

interview, he took some time before answering questions, which was interpreted as him giving serious thought to the process. This may have also explained the amount of detail he eventually gave in his answers. However, he was usually more spontaneous in talking whilst out on walks. This could have meant he felt uneasy or suspicious about the formality of the process. Rather than this being a sign that MI was inappropriate for 'E', it may have been that conducting this process whilst out on a one-to-one walk would have been a more 'natural' way of developing the discussion. 'E's follow-up sessions were actually conducted in this way. Nevertheless, 'E's answers were relatively detailed and he seemed to have taken the process seriously. He explained that, although PA was important to him and he was confident of keeping this going, his habit of detaching himself from things before he got too close to them meant that he was not as ready as he might have been to make more extensive changes. It was felt the MI principles of developing discrepancy through congruence and empathy enabled 'E' to feel safe enough to explain this. He said his life had been a constant process of 'moving on' and this had sometimes caused him some emotional disturbance if he had become 'too involved' in activities or people.

It became apparent that the ratings 'E' had given during the interview and for the outcomes would have been affected by this. 'E's consultation was a little longer than others conducted, but only as much because he often took quite a long time to answer questions. Nevertheless, he responded well to the process and the spirit of negotiation appeared evident throughout. 'E' was a thoughtful and considerate individual when mentally well, which became apparent during his consultation. It seemed he was giving good consideration to questions and was more sure of his responses as a result of this. The session lasted approximately 30 minutes and it appeared the process of MI encouraged him to make his own decisions about his plans and prompted him to consider increasing his activity more formally. Asking open questions generated good responses and helped develop the discussion with 'E', and reflecting on his answers encouraged him to elaborate for clarity. This had particularly useful with 'E'.

Service Users – Case Study 6: Participant ‘F’

‘F’ was a 37 year old male who had been at the unit for approximately three years. He had a diagnosis of schizoaffective disorder and was being medicated mainly on Clozapine, a relatively new antipsychotic often given to people diagnosed with Schizophrenia who have not responded to treatment with other kinds of medication. The possible side effects of this are drowsiness, tiredness, excessive salivation, tachycardia, weight gain and dizziness. Some of these effects required consideration for the type and amount of physical activity type he might do, and the lethargy typically experienced by people taking Clozapine was thought to present a major challenge to ‘F’s motivation to maintain regular attendance to activity sessions and follow-up discussions. ‘F’ was typically motivated by things that would improve his mental well-being and chances of progression toward discharge, but he had often stated his medication made it difficult to maintain motivation at times. ‘F’ was residing on Ward 2 at the time of the research. He was acutely sensitive to somatic symptoms and was known to cease his engagement in activities if he felt at all affected by, for example, dizziness or pains of any kind. In some situations this is advisable, and it may have been a benefit to ‘F’ that he took his symptoms so seriously. He had a history of attending physical activity sessions, although his attendance had dropped progressively over the previous 6-8 months and he reported his physical health was declining. ‘F’ had been diagnosed with Type 2 diabetes during his current admission. His presentation, when mentally stable, was bright, affable, loud, and jovial and he was mostly appropriate and sensitive to propriety around the ward. He was often ready to share a joke with others and was generous to those he thought well of. He was acutely sensitive to how his presentation was perceived by his carers and was keen for this never to be taken in such a way that it may impede his progress. He would often take time to explain his words or actions and would occasionally make agreements with co-patients in order to avoid offending them. However, he had an abiding sense of paranoia that appeared to fluctuate on a rising scale in relation to his mental stability. Although he had good insight and would

joke about this at times, it was apparent this paranoia was never far from the surface of any presentation. In relation to this, it was considered that 'F' would be at high risk for demand characteristics during the MI process coupled with the possibility of suspicion at the process and nature of the questions, even though he had a good therapeutic relationship with the researcher. His consultation was conducted in the group room of Ward 2 and he agreed to this enthusiastically.

'F' appeared slightly tense at the start of the first session and the Introduction seemed to put him at ease about the purpose of such a 'formal' process. Although his daily schedule was fairly well known, he described his Typical Day from his perspective and this also promoted good rapport. He presented as a relatively motivated individual and gave high ratings of importance and readiness. However, he rated his confidence to continue activities over time slightly lower, which seemed to reflect his realistic understanding of the difficulties he sometimes faced in being more active. This was a useful precursor to a discussion regarding an increase in his activities and the Decisional Balance was useful in reviewing the benefits and costs of making a change to his routine. Like others, the benefits to his mental health were as important, if not more so, to 'F' than the aesthetic or health benefits of activity. Even so, he said losing weight would be an added bonus if this happened. His main aim was to feel better about himself and to be able to adopt a more regular pattern of wake and sleep, which he said would help him when he leaves the unit in taking up anticipated work. A summary was made of 'F's motives and, from a number of options, he chose to talk about a plan of increased activity.

'F' was very familiar with the kinds of activities he would need to do in order to achieve his aims, so planning involved the negotiation of a return to the kinds of sessions he had done before. This involved a review of the current ward programme, from which he chose a number of options. A discussion about his outcomes and contingencies was quite brief but also useful and he seemed to understand well what he needed to do in order to overcome potential inertia.

Whilst the consultation had been productive and it was felt the 'spirit' of negotiation had been developed and maintained throughout, it had not seemed as 'natural' a discussion as many that had occurred between the researcher and 'F'. Some of his responses had seemed quite guarded. Nevertheless, he seemed happy with the outcome and said he would welcome a visit by a colleague to conduct the feedback and IMI with him. The session had taken about 30 minutes and 'F' had been very involved with the decision-making. However, by the planning stage of the consultation it was felt that 'F' was responding to questions in a way that suggested he wanted to move along with things quite quickly. This feeling was accommodated in keeping with the spirit of the session.

Follow-up Consultations

'F's first follow-up was conducted two weeks later, as part of an opportunistic conversation during one of his scheduled walking sessions. Although he was pleased with having done more activity than he had done in a while, he was disappointed in not having attended as many sessions as he had planned. This was not so much for the benefits he hoped for but for the routine he wanted to get into which would mean he was rising earlier. He was fairly settled with his new routine but was given reassurance about his feelings of anxiety after competitive activities in the sports hall on occasions. Four weeks later, 'F's second follow-up was conducted as part of one of his activity sessions in the sports hall. This seemed appropriate and 'natural' and was conducted in a casual conversational style as he was walking on the treadmill. This review illustrated that 'F' had achieved some of the main benefits he said he wanted, including being with others, enjoying himself and feeling better about himself. He said he had managed the anxiety of competition by reducing these kinds of activities and was pleased with the way he was managing his weight, although he hadn't lost all that much. The main benefits for him were the social aspect of the sessions, especially on the health walks in the community. He said that the main thing for him was being able to feel better in himself, which he had set originally as his main aim. The 'spirit' of these follow-ups was deemed to be MI-congruent and the

settings they were conducted in seemed to encourage a more natural 'feel' to the meetings.

Feedback: The Consultation Satisfaction Questionnaire

Table 18. Satisfaction Questionnaire: Ratings for participant 'F'.

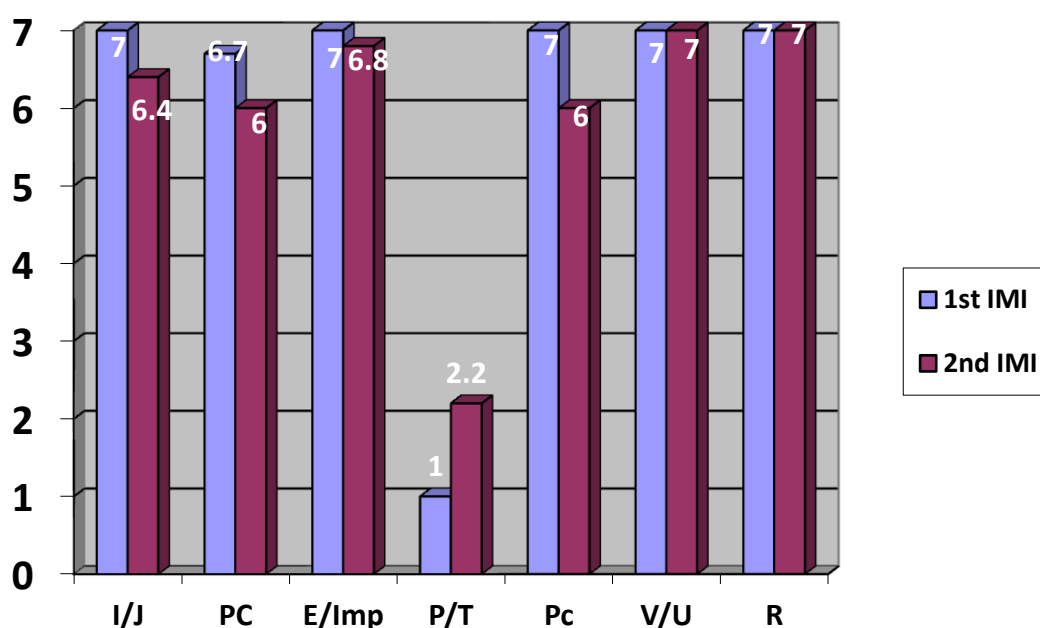
Number	Question	Rating
1	Did you feel the length of the consultation was appropriate?	5
2	Was the consultation what you expected it to be?	4
3	How happy were you with the consultation?	5
4	How much do you feel the consultation encouraged you to make your own decisions?	4
5	How much do you value this?	4
6	How much do you think the Instructor tried to push or coerce you into doing things you didn't want to do?	0
7	How much do you like being in control of your own decisions?	4
8	How much do you feel your responses were being judged by the instructor?	1
9	How much do you feel the instructor was genuinely interested in the way you see things?	5
10	How important is this for you?	5
11	Did the consultation encourage you to think more about changing your activity levels?	Yes
12	Do you feel this is a good thing for you to do?	5
13	Can you suggest anything else that would have made the consultation more effective?	'no'

'F' responded to the questions with only a rating and gave no indication of how the consultation may have been different. His responses indicated satisfaction with the session overall and were supportive of the MI-related indicators of this. 'F' indicated he thought the session was appropriate and that it was mainly what he thought it would be. He indicated that he was happy with the session, that he generally thought it had encouraged him to make his own decisions and that he valued this. On the whole it appeared from his rating that he liked being in control of his own ideas. He did not feel his responses during the session had been judged by the instructor or that he had been pushed or coerced into doing things he did not want to do. He

indicated the instructor had been genuinely interested in what he had to say and that this was important to him. He stated the session had encouraged him to think more about changing his physical activity levels and that this was good for him to do. He did not have anything further to add to improve the consultation.

Intrinsic Motivation Inventory

Table 19. ‘F’s comparative score averages for the Inventory sub-scales.



Key:

I/J – Interest/enjoyment PC – Perceived competence
 E/Imp – Effort/importance P/T – Pressure/tension
 Pc – Perceived choice V/U – Value/usefulness R - Relatedness

‘F’s average ratings across all sub-scales were relatively high, with reverse scoring for pressure/tension being concomitantly low. Pre- and post-ratings revealed some differences in most of ‘F’s average IMI sub-scale comparisons.

Indicators for decreased intrinsic motivation. There was a decline of 0.6 in average ratings for interest/enjoyment, 0.7 for perceived

competence, 0.2 for effort/importance and 1 for perceived choice. Average ratings for pressure/tension increased by 1.2

Indicators for increased intrinsic motivation. Average values for value/usefulness and relatedness remained unchanged and high.

Visit Frequencies

Table 20. Comparison of 'F's visit frequencies to activity sessions.

	Number of sessions						Research Endpoint
	3 Months prior			3 Months post			
Intervention date	Total	Attended	%	Total planned	Attended	%	
5.11.10	73	13	17	47	28	60	5.2.11

Prior to the intervention, 'F's session total was based upon all available group sessions and the two 'health walks' per week. He attended 13 sessions, which was 17% of that total. From the consultation, 'F' attended 28 of 47 planned sessions in three months, representing 60% of his planned attendance.

Contextual Analysis of 'F's Case Study

'F's behavioural outcome was supportive of this intervention. Three months after the process, he attended over twice as many activity sessions as he had prior. 'F's IMI scores were all relatively high and even the decreases in these post-intervention left them higher than many participants'. It would appear that these decreases did not adversely affect 'F's motivation to attend his planned sessions. The relationship between the researcher and 'F' was deemed to be exceptionally good, which make demand characteristics a greater possibility. Nevertheless, all outcome measures of this intervention were supportive of the intervention. 'F's feedback for the

consultation illustrated high – although not maximal – ratings for the MI-constructs. However, 'F' indicated that the consultation had encouraged him to think about changing his activity levels. This is quite possible given that his attendance to pre-intervention sessions had only been at 17%. It was also considered that 'F's impending discharge possibly played a part in his heightened motivational state, since he often talked excitedly about this. However, it has been noted that this condition tends to reduce the engagement of many patients at The Unit.

Action Critique of 'F's Case Study

This was the second interview to be conducted on Ward 2 and, yet again, the arrangements for this were satisfactory with no disturbances. Although it was deemed that 'F's outgoing nature may pre-dispose him to the easy development of an open discussion, this was not the case and it seemed to take much longer than anticipated to develop the interview. Indeed, it was deemed that this did not actually develop to its full potential and 'F' appeared to be quite careful and guarded about his responses to questions. This was in keeping with concerns about his paranoia and he did not appear to relax fully during the interview. This was a reminder to the researcher about the dangers of assumptions. Nevertheless, 'F' answered all questions asked of him and cooperated well during the session. The active listening deployed in order to develop the discussion and convey empathy appeared to have a limited effect and 'F's responses seemed not wholly congruent, almost as if he was unsure of what to say.

In an attempt to assuage the effects of demand characteristics, he had been previously encouraged to respond as honestly and faithfully as he could and had been offered reassurance about the nature of the process. Despite this, the impression was that he responded during the interview in the most 'appropriate' way, and this effect was possibly amplified by the relationship between 'F' and the researcher. However, it was felt the spirit of the session was MI-congruent and 'F' had been encouraged to develop his own plan.

Although he was often keen to please, it was also known he did not appreciate threats to his autonomy. In the researcher's experience, he dealt with this passively and pro-socially at the time but reacted to this in the long-term by either ignoring advice or complaining about this in discussions with trusted others. Despite concerns about 'F's motivation being adversely by his medication, it appeared that something about the MI process had been successful in helping him to maintain his efforts.

Service User – Case Study 7: Participant ‘G’

‘G’ was a 21 year old male who had been at the unit for approximately 18 months. He had a diagnosis of emotionally unstable personality disorder and was being medicated on Aripiprazole and Mirtazapine. The main side effects of these drugs were agitation, anxiety and insomnia, and hallucinations and weight gain. ‘G’ reported feeling agitated from time to time and would become quite paranoid on a regular basis. He also often suffered low moods, for which he was prescribed Mirtazapine. His daily presentation often fluctuated between boisterousness and elation to quiet, brooding, introversion and his mood could be easily influenced by different information he might receive concerning factors such as his progress, medication, family news or how his football team had performed. It was thought these mood fluctuations could challenge his engagement in the MI process, and that he might only attend meetings and activity sessions if he was ‘in the right mood’. Nevertheless, when asked about taking part in the research, ‘G’ said he was very keen and that he had been thinking about becoming more active recently as a date for his discharge was impending. His history of attendance to activity sessions was infrequent and sporadic and his motivation to fulfil exercise plans in the past was known to ebb and flow.

He was often strongly influenced by others and, in spite of his care plan activities, would often choose to socialise with his friends. This would represent a challenge He was considered a good candidate for this process. ‘G’ was known to be ‘up front’ and honest in whatever he had to say and he appreciated honesty in return. He also appreciated the interest taken in him by staff about his care, which was apparent in his demeanour after most individual discussions with him about this. However, ‘G’ had a tendency to be impulsive and it was anticipated that he would be less concerned about the reasons for, and processes of, the intervention and would want to talk immediately about action plans. Given his history of unfulfilled engagement in physical activity, it was thought he may benefit from more discussion about his motives for change. ‘G’ was aware of his tendency to become de-

motivated and often associated this was factors outside his personal agency, such as not having the right equipment. It was thought his motivation might be enhanced if he could be encouraged to talk more about how he might benefit from change and what challenges he might need to make contingencies for.

His consultation was conducted in the day area of Ward 2 by his request and, since this was quiet at the time, this was agreed. The Introduction section for 'G' seemed appropriate to explain although, as predicted, he seemed to have decided for himself what he wanted to talk about in the session. He quickly wanted to focus on his outcomes and, rather than stopping him or pulling him back according to a fixed agenda, a flexible style was used in order to maintain the spirit of the session. The session was more casual and informal than consultations with others but 'G' appeared very motivated and began to talk openly about his physical activity plans and what he wanted to achieve from this. However, he was known to have had previous enthusiastic attempts at becoming involved with more activity that had quickly 'run out of steam' and it was deemed relevant to ask 'G' about this. At this point 'G' was introduced to the rating scales and the researcher's concern about his maintaining enthusiasm seemed to be reflected in the differential between the importance and the confidence and 'readiness', scales. He also indicated verbally, with apparent irony and humour, that he had struggled to keep his plans going in the past.

'G' was waiting to be discharged from the unit and the timescale for this was unknown and somewhat unpredictable, depending upon a variety of factors. Nonetheless, he appeared keen to become more active at this point and his reasons for this were explored through the Decisional Balance. This conversation developed somewhat naturally since 'G' was eager to talk about his motives but and the various pros and cons of being and not being more active at this time were consciously guided by the researcher's questions. From this point 'G' was offered some options for further discussion, which appeared to seem quite odd to him. This may have been because he assumed a plan of increased activity would automatically be discussed.

Although it was felt important to state the options for further discussion, this may have been inappropriate and potentially at odds with the spirit of the session at that time. Initially, 'G' stated that he wanted a 'programme' to be written for him. However, it was suggested that, whilst this was possible, if the programme was not of his choosing then there may be aspects to it that he wouldn't like and he would be less likely to stick to it. He accepted this and a weekly schedule of physical activity was discussed, which proved useful since it became apparent he had other commitments that would need consideration.

'G' was asked about his outcome expectations, of which he was fairly clear and then about the difficulties in maintaining his plan. This appeared to highlight the high degree of risk to dropping out of the plan since 'G' stated he was easily influenced by others who might ask him to do other things at the time of his sessions. Nonetheless, he thought having a regular schedule would counteract this. He was receptive to working through the feedback questionnaire and IMI with a colleague later and an approximate date was arranged for this. This session lasted for approximately 30 minutes and was the most informal 'feeling' of those conducted to that point but also felt more congruent with the spirit of MI. There was a clear sense of moving to different topics for discussion when the time was right and having been guided by the client in this to a great extent. This may have been a reflection of the need for flexibility when conducting MI sessions, both in terms of the format of the session and also the environment.

Follow-up Consultations

The first follow-up was two weeks later and conducted in the sports hall. 'G' was pleased with how he had started the first week but apparently frustrated about 'struggling' in the following week. He highlighted the difficulty he had with motivation at times 'making excuses' not to carry on, feeling that the equipment is not right and other such external factors. He was encouraged and commended for his efforts, which did seem to encourage him in carrying on. Four weeks later, it transpired that his discharge schedule

had progressed more quickly and 'G' had been spending time off the ward visiting his discharge unit. Despite this, he was pleased with having maintained his plans to exercise by doing so in the community. A review of his motives seemed useful and productive and he thought he might be able to stay at this level of activity albeit in a different environment away from the unit. He also seemed more aware of what would help him keep on track with his plans, much of which was influenced by confidence issues and support from others. He was encouraged once again and praised for his efforts and appeared genuinely pleased with this feedback, speaking enthusiastically about keeping his plans going and thanking the researcher for the support.

Feedback: The Consultation Satisfaction Questionnaire

Table 21. Satisfaction Questionnaire: Ratings for participant 'G'.

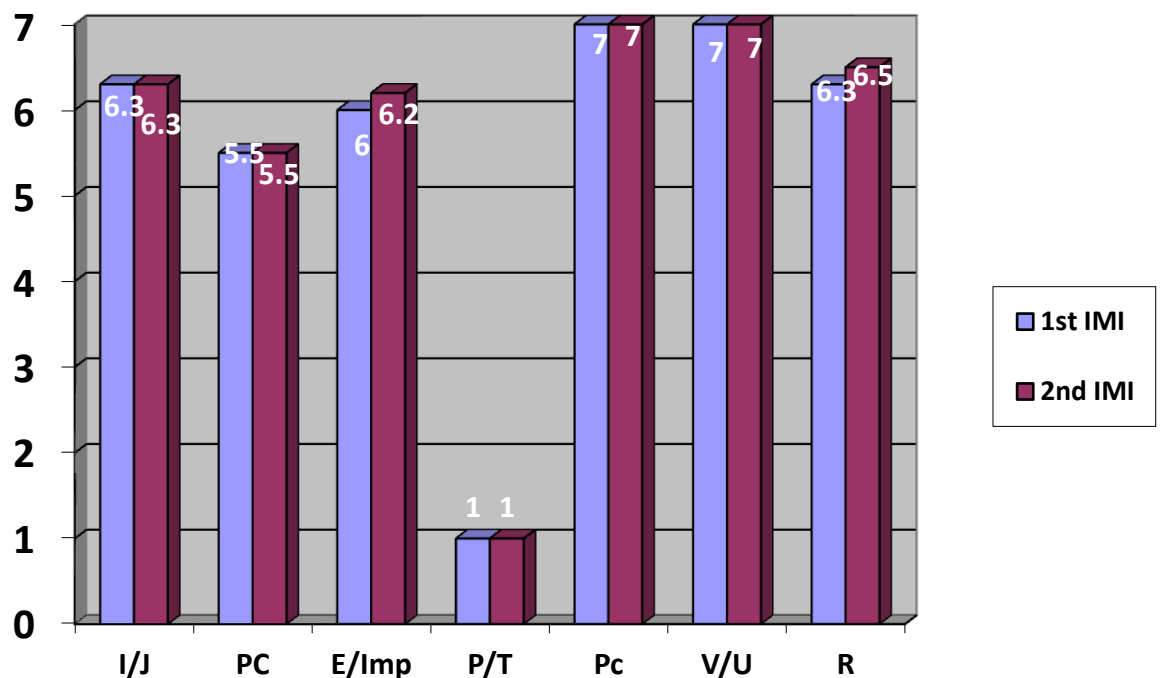
Number	Question	Rating
1	Did you feel the length of the consultation was appropriate?	5
2	Was the consultation what you expected it to be?	5
3	How happy were you with the consultation?	5
4	How much do you feel the consultation encouraged you to make your own decisions?	5
5	How much do you value this?	3
6	How much do you think the Instructor tried to push or coerce you into doing things you didn't want to do?	0
7	How much do you like being in control of your own decisions?	5
8	How much do you feel your responses were being judged by the instructor?	0
9	How much do you feel the instructor was genuinely interested in the way you see things?	5
10	How important is this for you?	5
11	Did the consultation encourage you to think more about changing your activity levels?	Yes
12	Do you feel this is a good thing for you to do?	3
13	Can you suggest anything else that would have made the consultation more effective?	'no'

'G' did not expand on his numerical responses to the questionnaire, which gave no indication of how the consultation may have been different.

However, his responses were extreme ratings for the most part, indicating satisfaction with the session overall and support for the MI-related indicators of this. However, he indicated that he may have been less sure that he valued making his own decisions, rating this at 3, and that he was less sure about whether thinking more about changing his activity levels was a good thing to do, rating this at 3 also.

Intrinsic Motivation Inventory

Table 22. ‘G’s comparative score averages for the Inventory sub-scales.



Key:

I/J – Interest/enjoyment PC – Perceived competence

E/Imp – Effort/importance P/T – Pressure/tension

Pc – Perceived choice V/U – Value/usefulness R - Relatedness

‘G’s average ratings across all sub-scales were relatively high for most of the sub-scales, with reverse scoring for pressure/tension being concomitantly low. Pre- and post-ratings revealed some small differences in one or two of ‘G’s average IMI sub-scale comparisons.

Indicators for decreased intrinsic motivation. There were no declines in any of 'G's average ratings and the reverse scoring for the pressure/tension sub-scale remained unchanged and low.

Indicators for increased intrinsic motivation. Average values for interest/enjoyment, perceived competence, perceived choice and value/usefulness all remained relatively high and unchanged. Values for effort/importance and relatedness both increased by 0.2.

Visit Frequencies

Table 23. Comparison of 'G's visit frequencies to activity sessions.

	Number of sessions						
	3 Months prior			3 Months post			Research Endpoint
Intervention date	Total	Attended	%	Total planned	Attended	%	
5.11.10	56	5	9	36	9	25	5.2.11

Prior to the intervention, 'G's total number of 56 sessions were based upon group sessions and his arranged one to ones. He attended 5 of these sessions, which was 9% of that total. From the consultation, 'G's plan was to attend 36 sessions over three months, of which he attended 9, which represented 25% of his planned attendance. Three weeks before the end of 'G's research endpoint, his discharge from the unit to supported community accommodation was expedited, which curtailed his attendance to more sessions at the unit. Although he reported having attended activity in the community, this was not included in the outcome figures for this research because it could not be verified.

Contextual Analysis of 'G's Case Study

'G's outcome for visit frequencies showed a small increase in the number of activity sessions after the intervention. This may have been more but for the fact that he was discharged from the unit before his research endpoint. It is possible that the knowledge of his impending discharge also accounted for the increased motivation he showed for attending sessions, since he was known to be keen on improving his physical image prior to leaving. However, 'G' was known to be impulsive at times and had 'flitted' in and out of engaging with activity sessions during his stay at The Unit. He was invariably motivated and strongly influenced by others, who were often doing things other than attending sessions. Nevertheless, he had spoken about a strong desire to improve his fitness, strength and body image and reported that he had been attending fitness centres when on weekend leave from The Unit as his time for discharge approached. 'G's apparently high motivation, in this respect, seems to be reflected in his IMI scores, all of which were relatively high and none of which decreased after the intervention. He responded positively to all of the MI-constructs on the feedback questionnaire and stated that the session had encouraged him to think more about changing his activity levels. He was deemed to have a good therapeutic relationship with the researcher but was known to speak impulsively, especially if this reflected dissatisfaction with his care or treatment. He indicated the consultation had encouraged him to make his own decisions even though he was less inclined to value this highly. It was difficult to know what kind of effect the consultation approach had with 'G' because of the multivariate nature of other influences and the blunted, albeit positive, outcome measures.

Action Critique of 'G's Case Study

Although the outcomes of this case were not of the magnitude to illustrate 'significant' differences, the manner in which MI was administered in this case lent an overall 'feeling' of success to this case. Ironically, this was

less intentional than it was of necessity, brought about by the request of 'G' to conduct the consultation in the ward area and by the direction of his discussion from the outset. In previous cases, participants had been willing to wait for me to open and suggest a direction for the discussion. In this case, 'G' did not wait for this and began talking about what he wanted to get from the interview. Nevertheless, this was not deemed to be inappropriate or 'wrong' in any way, but required a degree of flexibility in the administration of the tasks that had not been so obviously required in other cases. The setting for this discussion may, in one way, have been incongruent with the subject being discussed as it had seemed in other cases. However, in this case it seemed to work well and illustrated the utility of the approach and potential for discussions of this type on opportunistic occasions, perhaps by other care staff coached in MI.

As it had been anticipated, 'G' did start by wanting to talk about 'what he needs to do' and, whilst his needs were acknowledged and dealt with by the end of the session, the use of reflective listening encouraged an expansion of the discussion to include his disclosing 'why' he wanted to do what he needs to do. This was thought to be useful since the discussion segued into the challenges he faced in being able to keep his plans going, a subject he moved onto without prompting. Concerns about his paranoia, agitation or anxiety were unfounded on this occasion and 'G' seemed to engage well in the process. He also expressed gratitude for having had the discussion, which was expected since he was known to value any time spent in discussion about his care.

Service User – Case Study 8: Participant ‘H’

Participant ‘H’ was a 20 year-old male who had been at the unit for two years. He had a diagnosis of paranoid schizophrenia and had been medicated previously with a variety of drugs but was taking Clozapine at the time of the research. This was an anti-psychotic medication usually prescribed to ‘treatment resistant’ patients, the possible side effects of which were drowsiness, tiredness, excessive salivation, tachycardia, weight gain and dizziness. ‘H’ had reported a variety of these effects since starting his regime but had managed these effectively and was reporting only tiredness at the time of the research. However, his motivation to rise at a ‘reasonable hour’ and attend scheduled meetings had appeared to suffer. His weight had also increased by observation but he acknowledged this and had stated this was the price he was willing to pay in order to ‘stay well’. ‘H’ had no obvious history of psychosis to which he had generally been observed responding. He usually presented as well-mannered and considerate and was apparently sensitive to the feelings of others. He had stated he always tried to put himself in other peoples’ positions. He was affable and socially enthusiastic but often anxious, especially in group settings within which he was unfamiliar. He described his anxiety as ‘paranoia’ but this would often be for feelings he had in situations that others might also naturally find anxiety-provoking.

He lacked confidence in his abilities and would frequently put himself down. It appeared he had low self-efficacy for a number of situations but he was also forthright in his views and willing to show ability in settings he was familiar with. He could be impulsive and was easily influenced by others, especially those of his peer group and would forgo appointments for the sake of a spontaneous invitation from a friend or colleague. Despite this he did not like upsetting people or feeling as if he had let anyone down. He could talk, with good insight, about his mental state and was generally aware of his development needs. His presentation provided a challenge to the MI process in the sense that he might struggle to attend scheduled meetings. ‘H’ had a

sporadic history of attendance to physical activity sessions, influenced chiefly by whether his close peers were attending. Although he agreed to an activity review and to take part in the research, he was at pains to state that he would be unlikely to change his activity levels. He was assured his involvement would still represent a valid contribution.

'H's consultation was, perhaps, the most informal of all, conducted as it was during a game of pool in the Pool Room on Ward 2. This was nonetheless private, with no one else present during this time. 'H' had a history of expressing anxiety to certain situations he was unfamiliar. Although the session was not tape recorded the Consent form stated that it would be and 'H' had expressed concern and some paranoia about this. He signed the form after reassurance of the confidentiality of the research and understanding that the session would not be taped. In this sense, he appeared reassured by the Introduction to the session explaining the purpose of the meeting and went on to describe a Typical Day, which seemed to serve to relax him further. The consultation was conversational and 'casual' in tone, although the format of the session was followed. The Ratings Scales were useful in understanding 'H's motivation levels, his 'importance' rating given higher than his 'confidence' rating. An exploration of this revealed that he thought that youth was 'on his side', which was why he had not rated the importance higher, and his sense of paranoia and medication was why he was not more confident. Ultimately, he stated that physical activity would need to be more important for him to do more. Nevertheless, he was keen to talk about the activity he was doing at the time.

The Decisional Balance had the potential to provoke a motivation toward doing more activity and 'H' described motives for exercise related to his sense of wellbeing and mental state. However, it became clear that there were more factors about physical activity that he did not like and for which he would need to adapt other preferences. 'H' did appear to switch between talking about the possibility of doing more activity and wondering whether he

should and reiterating the status quo. It seemed as if this was playing out verbally as if 'H' was arguing the issue with himself during this discussion. Nevertheless, he opted to stay at his current level of activity and said he would reserve the option to attend more sessions if his mood, or other peers, influenced him toward this. He stated his outcomes in negative terms, these being not to see too much of a decline in his current state of health. He did not wish to formalise any kind of plan of what he was doing currently. 'H' agreed to complete the feedback questionnaire and IMI with a colleague later in the week and a review was agreed with the researcher for approximately two weeks later. Although a plan for change had not been the outcome, it was deemed the spirit of MI had been maintained and, in this sense, was successful. The participant feedback for this appeared to support this.

Follow-up Consultations

A follow-up meeting was agreed opportunistically after two weeks, which was conducted in a quiet location of the day area of Ward 2. This had been agreed as part of the general protocol for the research, even though 'H' had not developed a plan for review as such. He said that the cold and expense of swimming he had been attending in the past had now put him off from going, although he'd enjoyed this when he had attended. This discussion was intended to be a non-threatening, non-persuasive, 'courtesy call' to express interest in 'H's health and activity levels since the first meeting. His follow-up four weeks later revealed much of the same kind of behaviour and opinion as the first two meetings; 'H' was happy with what he was doing and considered his age to such that he was not worried about increasing activity levels. It was noteworthy that 'H' was waiting to be discharged in the forthcoming weeks and that he was often preoccupied with this.

Feedback: The Consultation Satisfaction Questionnaire

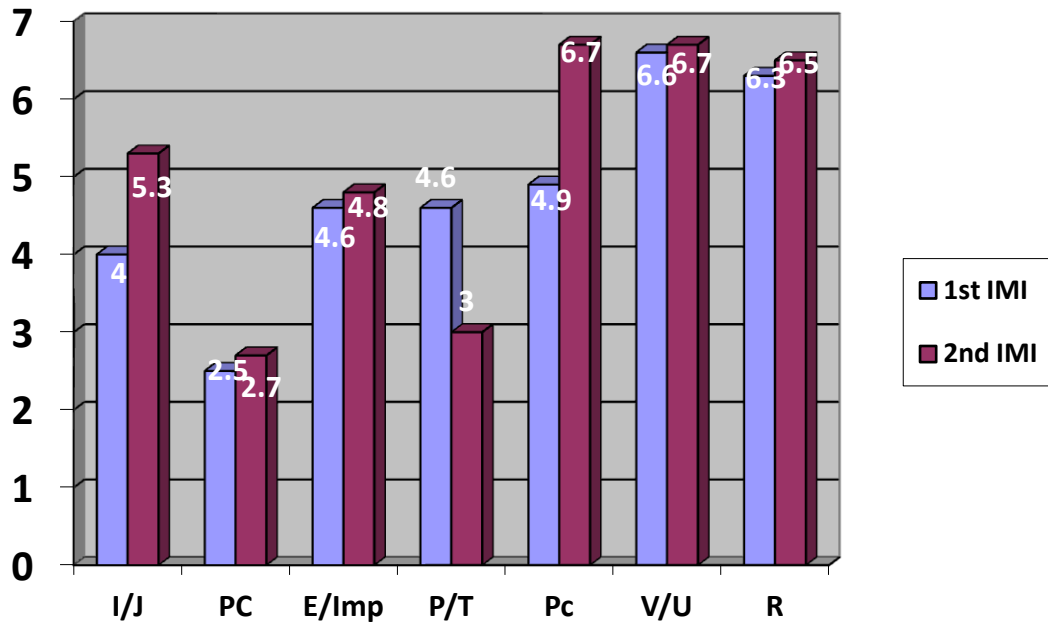
Table 24. Satisfaction Questionnaire: Ratings for participant 'H'.

Number	Question	Rating
1	Did you feel the length of the consultation was appropriate?	5
2	Was the consultation what you expected it to be?	3
3	How happy were you with the consultation?	5
4	How much do you feel the consultation encouraged you to make your own decisions?	5
5	How much do you value this?	4
6	How much do you think the Instructor tried to push or coerce you into doing things you didn't want to do?	0
7	How much do you like being in control of your own decisions?	5
8	How much do you feel your responses were being judged by the instructor?	0
9	How much do you feel the instructor was genuinely interested in the way you see things?	5
10	How important is this for you?	5
11	Did the consultation encourage you to think more about changing your activity levels?	Yes
12	Do you feel this is a good thing for you to do?	5
13	Can you suggest anything else that would have made the consultation more effective?	'no'

'H' did not expand on his numerical responses to the questionnaire, which gave no indication of how the consultation may have been different. His responses were extreme ratings for the most part, indicating satisfaction with the session overall and support for the MI-related indicators of this. However, he indicated that the consultation may not have been what he expected it to be, rating this at 3, and that there may have been some reservation to the value he put on making his own decisions, which he rated at 4.

Intrinsic Motivation Inventory

Table 25. 'H's comparative score averages for the Inventory sub-scales.



Key:

I/J – Interest/enjoyment PC – Perceived competence
 E/Imp – Effort/importance P/T – Pressure/tension
 Pc – Perceived choice V/U – Value/usefulness R - Relatedness

'H's average pre- and post-ratings revealed some positive differences in all sub-scales toward increased motivation.

Indicators for decreased intrinsic motivation. There were no declines in any of 'H's average sub-scale ratings, except for the reverse scoring average in pressure/tension.

Indicators for increased intrinsic motivation. There were increases of 1.3 for interest/enjoyment, 0.2 for perceived competence, although was a relatively low rating, 0.2 for effort/competence, 1.8 for perceived choice, 0.2 for value/usefulness and 0.2 for relatedness. Ratings for pressure/tension reduced by a value of 1.6.

Visit Frequencies

Table 26. Comparison of 'H's visit frequencies to activity sessions.

	Number of sessions						Research Endpoint
	3 Months prior			3 Months post			
Intervention date	Total	Attended	%	Total planned	Attended	%	Research Endpoint
19.11.10	7	3	42	0	3	100	19.2.11

Prior to the intervention, 'H's total number of 7 sessions were based upon the swimming sessions he had agreed to attend in the community. He attended 3 of these, which was 42% of that total. From the consultation, 'H' had not planned to attend any more sessions and had stopped attending the swimming for some weeks. He attended 3 activity sessions from the date of his consultation and reported on having increased his walking whilst out on passes. This was not included in the outcomes for this research since it could not be verified.

Contextual Analysis of 'H's Case Study

'H' was known to be generally disinclined toward physical activity during his stay at The Unit and so was deemed to be a good candidate to examine the utility of this approach. His IMI scores were initially low and illustrative of his relative lack of intrinsic motivation for physical activity. This incorporated a relatively high rating for pressure/tension, which was inversely related to motivation. Although there were sub-scale increases after the intervention, which were particularly high for interest/enjoyment and perceived choice, his frequency outcome did not illustrate a good effect for this. The nature of this behavioural outcome may illustrate demand characteristics for the IMI. Despite this, it was evident during the consultation with 'H' that, at times, he was thinking and talking about the positive benefits of becoming more active for him. Even so, his circumstances in respect of his

impending discharge may have disposed him toward the neglect of these benefits at this time. Indeed, 'H' was noted to have remarked during his consultation that he considered his age and current health status did not warrant a concern or consideration toward increased activity.

Action critique of 'H's case study

'H' appeared the least 'motivated' case in this research and represented a major challenge to the MI process, not so much from the effects of his medication or diagnosis but from his relative state of 'readiness'. This was the kind of case MI is intended to improve motivation outcomes with. The application of MI principles actually began with 'H' before his interview. It was thought that asking for time to sit down and talk with him about his PA would have been out of keeping with what was felt to be his motivational state toward PA even though he had agreed to take part in the research. To avoid any resistance to a formal meeting, it was deemed more appropriate to attempt the interview opportunistically during a game of pool. This further tested the adaptability of the approach to different settings and formats. Apparently, this was appropriate since 'H' readily agreed to the discussion. 'H's responses seemed relaxed and natural throughout the session and initial concerns about paranoia and anxiety with 'H' were not upheld. His motivational readiness was dealt with by employing an almost wholly reflective approach. Initial open questions provided the substance for reflections on the apparent discrepancy between his viewing PA as valuable and the lack of PA in his daily routine. This seemed to be effective in creating two 'voices' of 'H'; one, mainly articulating arguments for remaining the same, but another occasionally questioning the propriety of this in terms of his health. Ultimately, the discussion did not end with a plan, as such. However, the session and the approach was deemed useful in creating a discussion of possibilities with 'H' regarding his PA. Potentially, these kinds of discussions held between patients and care staff may be enough to facilitate a movement of motivation toward greater engagement in PA.

Service User – Case Study 9: Participant ‘I’

‘I’ was a 31 year old male who had been at the unit for approximately 18 months. He had been given a diagnosis of emotionally unstable personality disorder and was being medicated on a variety of drugs including Clozapine for psychosis, Diazepam for anxiety, Lansoprazole for peptic ulcers and Citalopram for depression. However, his diagnosis had been uncertain and this had changed from time to time to reflect mental illness and/or personality disorder. ‘I’ presented as direct and mostly affable and was prone to teasing others, which he usually quickly explained in order for the tease not to go on too long or to be taken too seriously. He was also liable to outbursts of frustration, which were often prompted by the lack of clarity over his diagnosis. He had stated he did not consider himself to have the kinds of illness or conditions that others on the ward had been diagnosed with but he could become extremely anxious and paranoid. He often isolated himself in his room to keep out of the way of other patients, with whom he could become frustrated. Although his history of attending activity sessions was extremely variable he always expressed his interest in being considered for PA sessions. The main challenge to his motivation seemed to be the effects of his Clozapine medication, which left him feeling tired and listless. He would report lacking any energy to do anything and this threatened to be the main challenge to his engagement in the MI process and continued attendance to sessions. Nevertheless, he was keen to take part in the research when asked.

His first consultation was conducted in the sports hall during one of his activity sessions, to which he was quite responsive. Despite having said he would attend activities for some while when asked, this was the first in a while he had committed himself to. He had asked for individual sessions in the past, which had been timetabled, but he had most often failed to attend these. The purpose of the session for the research was explained and he was asked to recount a Typical Day. ‘I’ was direct and very ‘matter-of-fact’, which made it important to accurately reflect what he said; he would not

hesitate to refute inaccurate statements or ridicule anything he thought was at all incongruent. Nevertheless, he was open to questions and answered emphatically. At the time, he placed importance for activity very high, although was less confident in being able to keep this going. He reflected this on his Ratings Scales but was adamant that the only thing that may influence his ratings was the way his medication affected him. He had recently had this changed and seemed to find the change conducive for a more motivated mood. The Decisional Balance was explored well and 'I' stated a number of good reasons for becoming more active.

Although these included physical benefits, he stated that improving physically would boost his sense of confidence in himself and that his concerns about not keeping it all going would have an adverse affect on his esteem. In this regard his main outcome measure was to see some degree of weight loss within the next two months. His plan for maintaining his efforts was to utilise the support of staff at times when he found motivating himself difficult and he asked for encouragement and prompting for this, which was agreed. The consultation lasted approximately 30 minutes and the feeling was that the MI spirit had been honoured during the session. 'I' had been the architect of his plan and was encouraged to consider all aspects of his change plan. He agreed to the follow-up sessions and to complete the feedback questionnaire and IMI with a colleague, the time for which was agreed for later in the week.

Follow-up Consultations

'I's first follow-up was conducted during one of his activity sessions in the sports hall, within which he explained he had attended some sessions but was disappointed not to have attended more. He was also pleased to have lost some weight. The issue of how his medications adversely affected his mood and attendance was evident. Four weeks later, 'I' was still talking about how his medication had mitigated his attendance to more activity sessions than he would have liked. A review of his plans according to the original MI schedule illustrated many of the same costs and benefits of his original plan.

He also found the social aspect of activity was beneficial, although this was lessened on occasions by the behaviour of his co-patients. 'I' stated his medication was something that he felt he could do nothing about but which largely determined his mood and motivation.

Feedback: The Consultation Satisfaction Questionnaire

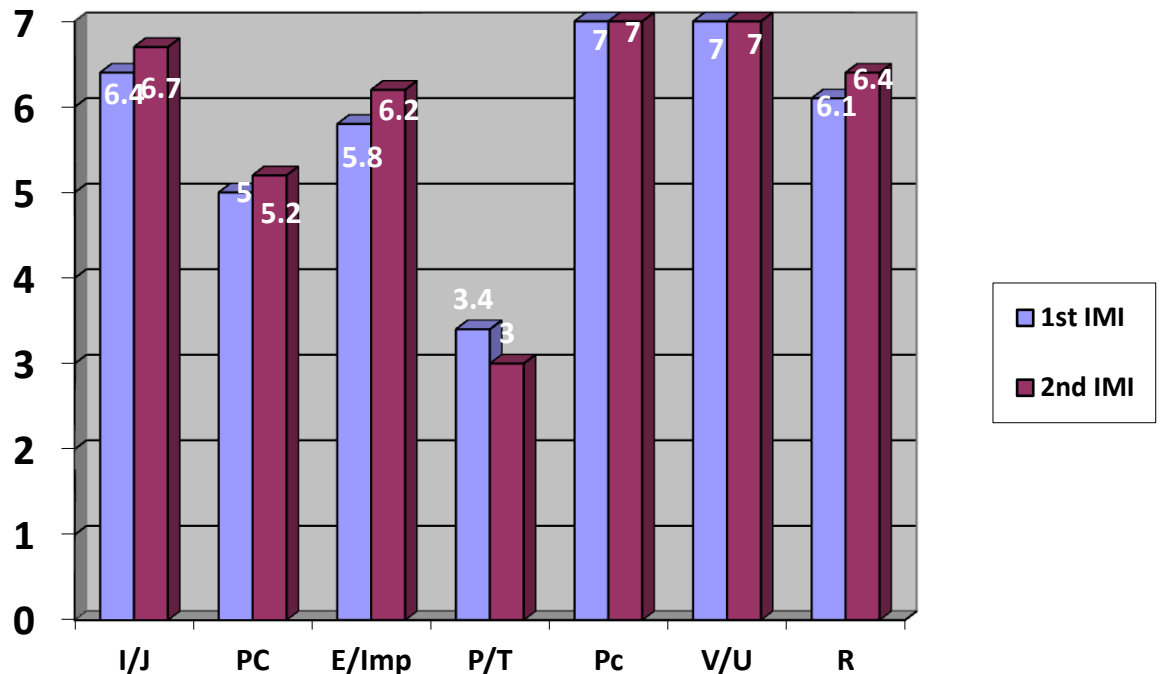
Table 27. Satisfaction Questionnaire: Ratings for participant 'I'.

Number	Question	Rating
1	Did you feel the length of the consultation was appropriate?	5
2	Was the consultation what you expected it to be?	5
3	How happy were you with the consultation?	5
4	How much do you feel the consultation encouraged you to make your own decisions?	5
5	How much do you value this?	5
6	How much do you think the Instructor tried to push or coerce you into doing things you didn't want to do?	0
7	How much do you like being in control of your own decisions?	5
8	How much do you feel your responses were being judged by the instructor?	2
9	How much do you feel the instructor was genuinely interested in the way you see things?	5
10	How important is this for you?	5
11	Did the consultation encourage you to think more about changing your activity levels?	Yes
12	Do you feel this is a good thing for you to do?	5
13	Can you suggest anything else that would have made the consultation more effective?	'no'

'I' did not expand on his numerical responses to the questionnaire, which made it difficult to know how the consultation may have been different. His responses were extreme ratings, which indicated satisfaction with the session overall and support for the MI-related indicators of this. However, his response of '2' illustrated that he may have felt judged to some extent by the researcher during his consultation.

Intrinsic Motivation Inventory

Table 28. 'I's comparative score averages for the Inventory sub-scales.



Key:

I/J – Interest/enjoyment PC – Perceived competence

E/Imp – Effort/importance P/T – Pressure/tension

Pc – Perceived choice V/U – Value/usefulness R - Relatedness

'I's average pre- and post-ratings revealed some positive differences in all sub-scales toward increased motivation.

Indicators for decreased intrinsic motivation. There were no declines in any of 'I's average sub-scale ratings, except for the reverse scoring average in pressure/tension

Indicators for increased intrinsic motivation. There were increases of 0.3 for interest/enjoyment, 0.2 for perceived competence, 0.4 for effort/competence, and 0.3 for relatedness. Ratings for perceived choice and

value/usefulness remained unchanged and high and reduced by a value of 0.4 for pressure/tension.

Visit Frequencies

Table 29. Comparison of 'I's visit frequencies to activity sessions.

	Number of sessions						
	3 Months prior			3 Months post			Research Endpoint
Intervention date	Total	Attended	%	Total planned	Attended	%	
24.11.10	45	1	2	37	5	14	24.2.11

Prior to the intervention, 'I's' total number of 45 sessions were based upon group sessions in the afternoons and his arranged one to ones. He attended 1 of these sessions, which was 2% of that total. From the consultation, 'I's plan was to attend sessions over three months, of which he attended 5, which represented 14% of his planned attendance.

Contextual Analysis of 'I's Case Study

'I' was considered another good candidate for this intervention because of the numerous times he was reported to have said he would do, and wanted to do, more physical activity without this developing into a behavioural fulfilment. In conclusion of his case study, the behavioural outcome, though increased, was modest in consideration his plans. This may have been because the number of sessions in his plan was too ambitious in light of his historical failure to fulfil his intentions. He had a history of enthusiastically stating he wanted to attend all sessions possible at times when he was mobile on the ward but when he was asked at the time of each session, he often declined to attend and remained asleep in his room. He attributed this to the way his medication made him feel. 'I's pre-intervention IMI scores were relatively high and these either remained at the highest

rating or increased marginally post-intervention. The reverse scoring for pressure tension was also relatively high and this decreased slightly too. However, it is not possible to say convincingly that this supported the effects of the intervention in light of the modest increase in attendance to sessions. It is possible that although the 'change-talk' with 'I' was evident, the effects of medication made this difficult to follow through with behaviourally. This is supported by 'I's feedback responses for the consultation, which were all extremely positive and supportive of MI-constructs. He also stated that the session had encouraged him to consider changing his activity levels, despite it being evident that he found this difficult to achieve.

Action Critique of 'I's Case Study

The ultimate development of where interviews were conducted for this research culminated in the exercise environment. Finally, after doing this in various locations, some of which were more conducive than others, conducting 'I's initial interview in the sports hall illustrated the utility of the approach to this setting and seemed more in keeping with the content of the discussion. This discussion was actually held whilst 'I' was exercising. Such was the infrequency of his past attendance that to attend the setting without actually doing something seemed like a waste to him. This called for some flexibility once again and for a 'conversational' quality to the process, which was the aim of each of the sessions. Since 'I' was familiar with the environment and very forthright in his views of the principles of exercise, it was necessary to maintain sensitivity to the spirit of MI in order to avoid any reactance with him. On the whole, this was achieved. Despite the 'success' of this interview, 'I's motivation to maintain his plan was sporadic and initial concerns about his were valid. He attributed non-attendance on each occasion to his lack of energy and drive but was always keen to be prompted to attend when his sessions were due. In such cases, whilst much can be taken as a positive from the administration of MI for the purpose of improving motivation for PA, certain factors, such as medication, may always mitigate the potential potency of the intervention.

Chapter 8 – Results of the Thesis Research: Multidisciplinary Staff

The View of MI by Staff

This aspect of the research assessed the question of the extent to which care staff knew about, understood the principles of, and/or practised MI. Of the 40 questionnaires distributed to the MDT at the unit, 19 completed returns were received from the following positions:

Table 30. Number of staff participants representative of each care discipline

Discipline	Number
Charge Nurses	1
Staff Nurses	5
Occupational Therapists	3
Psychologists	2
Physical Health Doctors	1
Psychiatric Doctors	1
Health Care Assistants	4
Occupational Therapy Assistant	1
Occupational Therapy Student	1
Total	19

The staff feedback questionnaire consisted of three main sections:

- 1) Fourteen 'true-false' questions from the adapted-MIKAT
- 2) A 'prioritisation list' for 15 choices of 'healthy change' principles from the adapted-MIKAT
- 3) Eleven 'Yes/No/Unsure' questions designed by the researcher related to MI knowledge, understanding and receptivity to training.

Responses for the adapted-MIKAT questions were classified as MI-consistent or MI-inconsistent and are presented numerically in absolute and percentage terms. The details of how the majority of staff responded to individual questions are then presented. Feedback for the prioritisation list was classified in relation to how many staff gave ratings in the top and bottom third of the list for each principle.

Results are presented in two main parts; feedback for sections 1) and 2) representing, in turn, a potential benefit and potential challenge to the implementation of MI as a generalised approach to physical healthcare in the forensic psychiatric setting. Results for section 3) are subsequently presented as an amalgamation of issues in relation to the previous results for benefits and challenges.

Potential Benefits Implied from Results of the Adapted-MIKAT

Overall the average number of MI-consistent responses given by all staff for the first set of questions was 8.8. This represents 62.9% of the total number of questions. The range of MI-consistent responses was between 6 and 13. The spread of scores is illustrated in the following table:

Table 31. Illustration of the number of MI-consistent responses given by staff

No. of staff	No. of MI-consistent responses
1	6
5	7
4	8
3	9
2	10
2	11
1	12
1	13

Although responses were varied, staff responded relatively unanimously to some of the questions. In terms of the details of these MI-consistent responses:

Fourteen staff (73.5%) disagreed with the suggestion that 'a carer's beliefs about their client's ability to change have no effect on whether change actually occurs in their client'. A fundamental facet of effective MI is thought to be the belief a practitioner has in their client's ability to change.

Nineteen staff (100%) disagreed with the suggestion that 'substance users need to hit rock bottom before they can change'. The 'hitting rock bottom' idea is a facet of the Twelve Steps Facilitation process of therapy for alcohol and drug use and is the anti-thesis of MI.

Sixteen staff (84%) agreed that '...carers should emphasise the issue of personal choice even if this means the client chooses not to change'. MI espouses the right for all individuals to choose which direction they want to take.

Seventeen staff (89.5%) disagreed with the suggestion that 'people with mental health illnesses/conditions *and* mental capacity are ...incapable of making sound decisions about their physical health'. For a similar question, 18 staff (95%) did not agree with the suggestion that 'drug and alcohol users with mental health conditions are not capable of exerting control over their behaviour.

Ten staff (52.5%) agreed with the suggestion that 'a client's resistance to change is a product of the interpersonal context within which it is encountered'. The MI approach proposes that 'resistance' from a client is experienced by a practitioner from some kind of mismatch between what the client thinks and what the practitioner is saying or doing.

Ten staff (52%) disagreed with the suggestion that 'readiness to change is the client's responsibility – no-one can help them until they are

ready'. MI philosophy contends that 'readiness' comprises aspects of importance and confidence, which are issues for discussion within a consultation and, as such, are subject to influence.

Nineteen staff (100%) thought 'the best way to motivate a client is to help them resolve their ambivalence about change'. The principle aim of MI is to explore the motives of a client in order to help them move toward a resolution of the ambivalence related to a behaviour change issue.

Prioritisation List on the Adapted MIKAT

In addition to the questions, staff were asked to prioritise a list of factors they thought were most important for 'healthy' change, with 1 being most important to 15 being least important. Certain key MI-consistent factors were listed as they appear in the MIKAT. Other choices were made up of principles that were generally deemed inconsistent with MI.

The following table illustrates the MI-consistent and inconsistent principles and details the number of staff giving ratings for each principle.

Table 32. Illustration of ratings given by staff to those principles they deemed most and least important for change.

	Ratings		
	Most important		Least Important
	1-5	6-10	11-15
Non-MI principle			
Breakdown denial	7	7	5
Confront resistance	4	8	7
Acceptance of label e.g. 'lazy', 'addict' etc	1	2	16
Educate about risks	16	3	0
Maximise external pressure	1	2	16
Use subtle coercion	4	7	8
Give direct advice	7	7	5
Give clear consequences	9	8	2
Require abstinence as only acceptable goal	2	1	16
Encourage submission to disease	1	1	16
MI-consistent principle			
Develop discrepancies	5	6	7
Express empathy	17	2	1
Support self-efficacy	15	4	0
Roll with resistance	7	7	5
Avoid argumentation	13	2	4

In relation to the prioritising of factors thought important for healthy change, though ratings for MI-consistent principles were fairly disparate, certain generalised groupings were evident. A clear majority of staff prioritised 'Express Empathy', 'Support Self-efficacy' and 'Avoid Argumentation' for healthy change and undervalued 'Acceptance of label', 'Maximise External Pressure', 'Require abstinence...', and 'Encourage submission to disease'.

Potential Challenges Implied from the Results of the Adapted-MIKAT

Overall the average number of MI-inconsistent responses given for the first set of questions was 5.2. This represents 37.1% of the total number of questions. The range of MI-inconsistent responses was between 1 and 8. The spread of scores is illustrated in the following table:

Table 33. Illustration of number of staff responding to MI-consistent responses

No. of staff	No. of MI-inconsistent responses
1	1
1	2
2	3
2	4
3	5
4	6
5	7
1	8

Although responses were varied, staff responded in the majority to some of the questions. In terms of the details of these MI-inconsistent responses:

Twelve staff (63%) thought that 'overweight or unfit people must accept their 'problem' before they can get help'. 'Labelling' or the external judgment of someone as having a problem is not MI-consistent.

Fourteen staff (73.5%) thought that 'denial is a characteristic of the disease of addiction'. The concept of 'denial' is not MI-consistent in that it is considered there can be no denial without an 'accusation'. MI seeks to avoid judgments, labelling or accusing language in its approach.

Eleven staff (58%) thought that research supports the existence of an 'addictive personality'. 2 staff responded they did not know. MI philosophy suggests that addiction is not an aspect of personality and research does not support this.

Eleven staff (58%) thought that 'when clients are resistant to making healthy changes, persuasion and/or challenging are required to help the person change'. 1 staff (5%) was not sure about this. MI philosophy suggests that resistance comes from a mismatch between what a carer is doing and what a client is thinking. The MI view is that persuasion or challenging only exacerbates this mismatch.

Nine staff (47%) thought that 'resistance to talk about change is an indication of a client in denial'. 1 staff (5%) was not sure about this.

Ten staff (52.5%) thought that 'external pressure and warning of consequences are effective means of promoting healthy changes in others'. MI philosophy suggests that this approach is counter-intuitive; pressure to change provokes reactance in others and warning of consequences is not a strong driver of behaviour change. Many people continue with health risk behaviours despite being aware of the dangers.

Prioritisation List on the Adapted MIKAT

As illustrated in Table 2, certain groupings of choices can be seen. In relation to MI-inconsistent principles, 'Educating About the Risks' and 'Giving Clear Consequences' were considered of most value by staff, whilst most staff under-valued 'Develop Discrepancies'.

Knowledge and Understanding of MI: Current/Future Practise

Staff were also asked about more generally about MI in order to illuminate current practise and receptivity to further training, both in MI and other forms of training. Seventeen staff (89.5%) said they had heard of MI

with 9 staff (47%) reporting that they 'understand what MI is about'. 10 staff (52.5%) said they believe they 'already do MI when dealing with patients'. A further 8 staff (42%) said they were unsure whether they do this or not. Seventeen staff (89.5%) said they 'practise reflective listening with patients'. Fifteen staff (79%) said they would value further training in MI, with 7 staff (37%) stating they would value further non-MI training, such as Cognitive Behaviour Therapy and Health Promotion.

Chapter 9 – Discussion of the Outcomes for Inpatient Participants

Of the 20 eligible patients it was disappointing to have recruited only nine participants because the therapeutic relationships between the researcher and many of the patients were deemed to be 'healthy'. This may have been an error in perception or it may be reflective of the difficulty with recruiting participants for research of this kind within this environment. Many of the patients at the Unit, and most of the participants, were diagnosed with schizophrenia and associated disorders such as paranoia, anxiety, or extreme depression. There appeared to be some suspicion and wariness about taking part in the research, even amongst those that were recruited. For example, when signing consent forms agreeing to have their consultations recorded, some participants questioned how these would be used and stated they would prefer not to be recorded (recording did not eventually go ahead because of a security issue). Recruitment was also challenged by the participants' prioritisation of daily tasks such as smoking or going out on community pass. Indeed, in MI terms, these 'conflicting' motives hold their current health behaviours in a state of inertia. Physical health concerns of the patients tend only to be brought into focus during clinical team meetings (CTM's), after which attendance to therapeutic sessions often seem to occur from patient concerns that not doing so will hinder their progression. Intrinsic motivation, therefore, does not often seem to be the catalyst for attendance. However, since MI is recommended to address similar issues in the recruitment and maintenance to counselling sessions for people with depression (Zuckoff, Swartz & Grotte in Arkowitz, et al, 2008), the value of MI seems evident for PA recruitment if sessions may be considered as interventions in themselves for metabolic concerns.

Another method of improving research recruitment would be to include inpatient participants from other units. A presentation of the preliminary results of this research at a Health and Wellbeing conference in March 2011 prompted some care-workers from another unit to suggest the inclusion of their patients in any future similar research. This has been useful in preparing

the groundwork for extending the research in the future. Ultimately though, since this action research was essentially exploratory in nature, notions of 'power' and 'effect size' were not the main focus and it is deemed the 9 participants have, nonetheless, provided valuable and rich case studies of MI deployed within this specialist setting.

MI acknowledges the client as an equal expert in their own right within the consultation, the 'spirit' of which is one of collaboration (Miller & Rollnick, 2002; Moyers, Martin, Manuel, Hendrickson, & Miller, 2005; Moyers, Miller, Hendrickson, 2005). This collaboration is potentially crucial since it encourages the development of a 'buy in', without which the client may not take ownership of any programme of change. Therefore the focus of all the tasks in the research consultations was to develop motivation and build a commitment to change through negotiation. Some of the earlier, 'phase 1' tasks – the Typical Day, Readiness Rulers, and Decisional Balance – may have been less useful than first envisaged with some of the participants. It seemed the tasks involving the development of action plans were more helpful, generating greater discussion about the practicalities of plans. The reason for this may be accounted for by the relative motivation of the participants, all of whom reported relatively high levels of motivation at the beginning of the consultations.

Westra, Aviram, & Doell (2011) have cautioned about the reliability of using self-report measures with people diagnosed with anxiety, for example, so whether the motivation scales discussed at the beginning of the consultations illustrated accurate levels of motivation for the participants is uncertain; this may have been genuine motivation, a transient state of 'readiness', or the influence of demand characteristics. If genuine, these high motivational states for this research may be masking the effects MI could have shown with less motivated clients and, whilst difficult to achieve, future investigations involving less motivated participants would be helpful. However, since differences in activity levels three months prior to and post the intervention were observed for most participants, it would also have been useful to capture the quality of change talk toward the end of the

consultations. It's possible this may have revealed a greater intensity of commitment language, supporting the theory of this as a mechanism of change (Amrhein, 2004). As it was, a security breach at the Unit at the time of the research that threatened the closure of the Unit meant that all aspects of security and medium-secure standards were reviewed, preventing the use of audio taping equipment. Ultimately, an evaluation of the consultations in terms of the clients' feedback was made using the feedback questionnaire. This was implemented in order to establish 'independent' support for the approach, which is recommended for the fidelity of interventions, amongst other things, by Belg and colleagues (2004). Although a search was conducted for a questionnaire that could evaluate the quality of MI delivered, at the time there was no 'validated' questionnaire for this, prompting the use of the author's own designed questionnaire. It was discovered after the research through a member of the MI community that a researcher had been working to validate such a tool; the Client Evaluation of Motivational Interviewing (CEMI) (Masden, et al, 2012). This could provide a valuable method of assessing the quality of MI consultations delivered in future research of this kind and would have been used in this research had it been available. It was gratifying to see that some of the questions in this validated tool were similar to questions from the author's own questionnaire. Whilst the recording and coding of sessions in this environment may be possible in the future, it is important to note that the application of the 'gold standard' for fidelity coding would require an independent, trained and qualified MI coder. Factors for consideration are; the availability of trained MI practitioners, the cost of hiring and bringing them to the site for necessary on-site coding, and their being subject to necessary but lengthy Criminal Records Bureau (CRB) checks.

In line with the paradigm of action research, some factors were adapted during the course of this research, one of which was the location of some interviews. It had been intended to maintain the consistency and 'formality' of these sessions by conducting them in the privacy of the 'group room' of each ward. However, the availability of these rooms could not be guaranteed, which meant a fixed location was not always possible. The

Activity of Daily Living (ADL) kitchen was chosen as a location because this was typically used for OT-related sessions, although the privacy of this room was variable, despite privacy notices being positioned. Ultimately though, the quality of the sessions in relation to responses from participants and the anticipated development of the therapeutic relationships were lower than expected by the author. This was by comparison with the relationships between participants and the author outside of the research and it was thought the formality of the consultations and their settings may be responsible for this perceived difference.

As the research developed, it was decided to conduct the consultations in more 'natural' locations appropriate to the behaviours in question, such as the sports hall. Eventually, other 'natural' locations were adopted for discussions, such as outside during 'health walks', in the quiet areas of wards, and during one-to-one games of pool. Although this has positive potential for the implementation of MI by other care staff who could conceivably conduct MI-oriented discussions during the usual course of their interactions with patients, an alternative possibility for this relational discrepancy exists. Martino (2007) suggests that people affected by the negative, emotion-limiting symptoms of schizophrenia may talk little during sessions and take more time to respond to a practitioner. This was certainly the experience with some of the participants and may account for the unmet expectation of clients talking more than the practitioner during these sessions. Although outcomes with participants were generally positive in the research of this thesis, Martino (2007) describes a range of challenges to the implementation of MI with people diagnosed with psychotic disorders including a relative lack of internal drive or intrinsic motivation, the impact of multiple life problems such as financial or housing concerns, and the impact of periods of positive symptoms such as delusions, hallucinations and disordered thinking. Therefore, thoughts behind causal mechanisms of MI such as change talk may require adjustment for this environment.

Martino's (2007) conclusion is that it is not known how MI works when used with this client group. That is, if it 'works' at all. Modifications to MI are

cited that may be required for this population such as prompts, examples, lists of options, frequent reviews and summarising, concrete language and short term goals (Carey in Martino, 2007). Some of these elements are perhaps more reflective of an intervention such as CBT than MI and are only suggestions in the limited research conducted in this field. However, from the experience of the research of this thesis, it was found that most of these elements were or could have been valuable during the MI sessions conducted. An adaptation of reflective listening may also be useful, the importance being to keep reflections clear and simple (Martino, 2007). However, whilst compound reflections may be confusing, less than adequately skilled simple reflections may also result in the client asking “Why is he repeating everything I say?”, and becoming suspicious of this. Martino (2007) points to the value of continued trials with this specific population in order to understand more about the complexities of using MI with clients diagnosed with psychotic disorders.

Initial consultations in this research lasted between 30-40 minutes and participants indicated this to be adequate from their feedback. It was felt the main aspects of the consultations were discussed adequately although it is possible, in one or two cases, greater discrepancies may have been developed. The main aim of each session was to maintain the MI ‘spirit’; a feeling that the discussion was not about tricking or manipulating the participants into doing more PA but about expressing honest interest, and honouring the participants’ views about this even if it meant they did not increase their PA levels. Miller & Rollnick (2013) describe the spirit of MI in terms of partnership, acceptance, compassion and evocation. Importantly, these sessions were about conveying to the participants the message that they have what it takes to achieve what they want and support is available to help them should they want or need it. This support included, but was not restricted to, information, advice, explanation, exploration, affirmation and review.

Follow-ups were important in terms of helping participants evaluate and maintain their plans and the constant emphasis on them making

informed choices helped to engender a sense of responsibility about what they were doing. The researcher's belief in their ability to fulfil their goals was reinforced, which often evoked positive and appreciative responses. However, the implicit assumption that all clients within this environment 'have what it takes to achieve what they want' comes with something of a caveat. Some forensic psychiatric inpatients have learning difficulties and others harbour unusual ideas about PA inconsistent with known outcomes. Occasionally, this may call for some form of cognitive reappraisal with a client such that suggestions are made for their consideration. Some of their ideas appear to be intransigent and clients choose to maintain their own beliefs about PA, some of which are concerns and others are about outcomes. The question of how MI may work alongside other forms of interventions such as CBT has been noted earlier in this work through various authors (Chapter 4, MI – applications: MI and mental health conditions).

In a 'special series', Westra & Arkowitz (2011) discuss the integration of CBT with MI for a range of mental health problems and describe the appeal of MI as a complementary or supplementary rather than replacement intervention. Their discussion includes the conditions of eating disorders, depression, suicidal ideation, obsessive-compulsive disorder, generalised anxiety disorder and substance abuse, and although the research of this thesis has isolated MI for investigation, it is likely this kind of integration would find applicability in the context of PA and mental health also. Westra & Arkowitz (2011) suggest a number of ways that MI can complement CBT; since attrition rates from CBT are 'significant', possibly from unresolved ambivalence about attending, MI can serve to pre-engage clients in treatment since the resolution of ambivalence is one of the purposes of MI. MI may also help to increase motivation to complete homework assignments, an emphasised aspect of CBT, but something which clients often fail to do. And there may be value for CBT therapists in adopting a more supportive and less directive approach in order to avoid the high levels of 'resistance' from clients often experienced through more directive styles (Westra & Arkowitz, 2011).

This raises the issue of the marriage between ‘client-centred MI’ and a potentially more ‘directive CBT’, concerns of which are echoed by Moyers (2011), because differences between approaches are known to affect outcomes as well as, and perhaps because of, within-session relational factors (Westra & Arkowitz, 2011). Much of the research for different populations suggestive of the benefits of MI pertain to issues concerning treatment adherence – in OCD, for example (Simpson & Zuckoff as cited in Westra & Arkowitz, 2011) – building motivation for change and improving therapy process (Flynn as cited in Westra & Arkowitz, 2011), and improving engagement (Kertes, Westra, Angus & Marcus as cited in Westra & Arkowitz, 2011). Whilst suggestions for an integrative framework exist (Britton, Patrick, Wenzel, and Williams, 2011), one question not specifically addressed in the discussion of Westra & Arkowitz (2011) is whether the benefits of MI and CBT are reciprocal. That is, are the benefits offered by MI for CBT mirrored by benefits that CBT may offer MI? Within the research for this thesis it was found that certain CBT tasks such as challenging ‘automatic’ thoughts and disputing ‘irrational’ thinking may well have some virtue with this client group. But if the primary intervention of MI does incorporate aspects of CBT, a question arises as to the extent to which the intervention remains MI. This is particularly salient since Miller (2009) has pointed out that MI is not a form of CBT.

Attendance to PA sessions within the Unit is notoriously variable, an issue known to be a concern within other similar units. This is affected by factors such as subjective mental health status, the interaction and relationships between inpatients, the effects of some types of regular medication and PRN – medication provided ‘pro re nata’ or ‘as it is required’ – and the environmental status. An abiding problem within the Unit, particularly for Ward 1, is the prevention and management of drugs on the ward. At times, this issue can be worse than at others, but on a regular basis it is never far from the surface. These factors tend to relegate the patients’ priority of attending PA sessions and are likely to have been influential in the outcomes of this research. Comparisons of visit frequency to PA sessions was a relatively straightforward and obvious outcome to measure, but this

may have also been compromised to some extent by the fact that the approach used by the HFI to encourage participation had historically emanated from MI. Nevertheless, daily records of attendance to PA sessions by all patients at the Unit had been rigorously maintained for almost five years, offering a reliable indication of attendance by all but one participant who took part in the research.

The dose-response relationship for PA is unclear within a mental health context (Faulkner as cited in Faulkner & Taylor, 2005) and, since the research was mainly concerned with encouraging client attendance to PA sessions, activities within sessions were not scrutinised for research purposes. All participants attending sessions engaged in at least some PA since their motives for doing so had been discussed and developed. Indeed, the term 'physical activity' has been used for this research over 'exercise' on the premise that any kind of PA, no matter how little or how unstructured, can be a good thing for this client group. Even so, in each case study, a plan of activity had been negotiated with each participant and, with the exception of one, all participants increased their percentage of attendance to planned sessions. It seems from this that the MI-review of PA encouraged a realistic plan of attendance for each participant and the two and four-week reviews of the plans were helpful in maintaining the participants' attendances to sessions, consistent with literature illustrative of improved outcomes for intensive MI (increased frequency of MI sessions) (Harland et al., 1999; Hardcastle et al., 2012). Allowing for 'normal' fluctuations in motivation and the environment-specific factors mentioned above, the results were very positive and visit frequencies to PA sessions were deemed an appropriate outcome for this research. Even the lowest attendance percentage cases represented an improvement in comparison to previous measures. The results were deemed even more favourable in light of the timing of the research, which coincided with the winter period in December. Indications are that general levels of PA decrease during the winter months (Matthews et al., 2001) along with recreational PA levels and exercise (Atkinson & Drust, 2005; Ma et al., 2006). These decreases in PA are observed in groups ranging from children to the elderly and are thought to be mediated by

opportunities for hunting and crop cultivation in under-developed societies and temperature and rainfall in developed societies (Shepherd & Aoyagi, 2009). Despite this, the nature of the research method, the variability of conditions within the client group, and the variables mentioned above impacting on attendance, statistically significant changes to activity levels were not considered to be a necessary goal for the research.

The main difficulty in evaluating the intervention was in determining whether any changes in behaviour were a function of 'extrinsic' motives, such as material rewards, the exhortation of carers, or demand characteristics, or 'intrinsic' motives related to the personal and internalised values of clients. One way of measuring 'intrinsic motivation' is through the IMI, a series of questions from a range of sub-scales thought to be related to intrinsic motivation. This was felt to be an especially appropriate measure given the theoretical links between MI and SDT, from which the IMI was derived. The IMI has been used to indicate that higher levels of intrinsic motivation are predictive of more frequent participation in exercise (Meis, Kremers & Bouman, 2012), which appeared also to be the case in the research for this thesis. SDT proposes that intrinsic motivation is a product of a personal sense of autonomy, competence and relatedness (Deci & Ryan, 2000) and emphasises the impact of autonomy supportive environments on the development of intrinsic motivation (Rousea, Ntoumanisa, Duda, Jolly & Williams, 2011). Miller & Rollnick (2013) now describe autonomy support as an important factor within the process of MI. Furthermore, Rousea and colleagues (2011) describe the positive effects on mental health arising from autonomous motivation and Medalia, Revheim, & Casey (2000) argue that intrinsic motivation can play an important part in the rehabilitation of psychiatric patients. This is echoed by Abbott (2008) who discusses the important value of SDT to understanding and measuring recovery for users of psychiatric services. Abbot (2008) argues that for service-users with severe mental illness it is extremely important that the social and environmental support provided in their care is carefully structured to enable the development of a sense of competence and autonomy.

Despite this, and whilst MI and SDT may fit well together theoretically, questions still remain regarding how and when these concepts work best together. For example, Rousea and colleagues (2011) suggest that autonomy support can work well in the promotion of PA but the effect is contingent upon who provides this; differences in PA intentions were observed in their research according to whether offspring, partners or physicians provided the autonomy support. This may be a factor in the provision of autonomy support for a forensic psychiatric client group since some staff may not wholly subscribe to this philosophy and others may be more or less sympathetic to a client based on their index offence (offence they were first convicted of or sectioned for), for example. The measurement of intrinsic motivation may also differ between client groups. Choi, Mogami, & Medalia (2009) developed the IMI-SR, an adapted form of the IMI, to cater for the motivational and goal-directed deficiencies often associated with people diagnosed with a psychotic disorder. This may be of use in future research but was not used in this current research because of the differential diagnoses of the participants. Indeed, the specific diagnoses of schizophrenia and schizoaffective disorder may provide a reason for the relative lack of motivation that this client group often presents: Medalia & Brekke (2010) infer from Nakagami, Hoe & Brekke (2010) that the baseline condition of brain physiology critical to motivation – the dopaminergic system (Barch & Dowd, 2010) - determines mechanisms of intrinsic motivation and potential for neurocognitive improvement. This may explain the extent to which some clients diagnosed with psychotic disorders respond to interventions such as MI. However, Nakagami and colleagues (2010) have also illustrated the plasticity of intrinsic motivation over time, and how this is strongly associated with potential for psychosocial functioning. This suggests good potential for the use of motivational theories seeking to develop intrinsic motivation such as SDT within a recovery model (Medalia & Brekke, 2010), and for motivational approaches such as MI. Nonetheless, it seems apparent there are many other factors to consider and investigate in the future related to the topic of this thesis research, its client group and environment.

Since many of the participants rated their IMIs relatively highly across the sub-scales both initially and by the end of the research, it may be this was illustrative of intrinsic motivation to partake in PA. The differences that did occur before and after the intervention have been discussed within the results section in each case, and may be accounted for through an understanding of each individual and their particular situation. For example, the decline in the Competence score for Participant 'A' may be accounted for by a more realistic appraisal of his abilities by comparison with others during activity sessions as much as a consequence of how he was affected by the experience of MI. The IMI asked participants to rate the sub-scales based on their last experience of physical activity, which for 'A' was conducted outside of the Unit. For all others this involved activity based at the Unit, which had been promoted utilising the principles of MI. This served as another potential confounder and may have masked or diminished the magnitude of potential effects of the intervention observed through this outcome measure. Ultimately, for reasons of significant heterogeneity of clients' diagnoses and the multivariate factors impacting upon client motivation, it was deemed appropriate to evaluate the IMI through the single design case studies rather than by gross comparison across all participants. Individual differences between scores were discussed in relation to a client's specific condition and situation. Nonetheless, it was noticeable that, of all sub-scales in each case, the factor scoring most highly concerned the perception of perceived choice, whilst the factor scoring lowest was that of pressure or tension. These diametrically opposed factors within the IMI are supportive of the link between MI and SDT.

Finally, in the absence of a satisfactory coding system for the consultations, the participants were asked about their experience of them. Since suitable models for this were unavailable, a semi-structured questionnaire was designed to gain direct feedback about MI-related factors, such as the extent to which participants thought they were encouraged to make their own decisions. Whilst most of the questions may have given an indication of MI-congruence, the rating by the client of each question on a 1-5 Likert scale was less helpful, especially since most participants did not

elaborate on any answers. Since the questionnaire was not tested or validated, ratings provided could only give a rough indication of whether, for example, decision making had been encouraged. It may have been more helpful, in this respect, to have designed a forced answer questionnaire with only 'Yes/No' as possible responses, with further opportunities to expand on this through discussion. Answers may have been limited through a lack of prompting since the questionnaire was administered by a third party. It is possible that trust and confidence issues affected the extent to which this was felt possible. The client group can be difficult to deal with in some situations, which can evoke feelings of intimidation with staff less experienced in working with this client group.

Similarly, it is possible that the extreme ratings given by some participants may have been moderated by further, exploratory, questions about the consultation experience and it is unclear the extent to which this was done by the administrator given their experience of this kind of work. These issues reflect again the difficulty with conducting research in this environment with limited experienced associates, which ultimately impact on the rigour of the work and the conclusions that may be drawn. Limitations notwithstanding, the client feedback did offer some insight into the quality of the sessions, the ratings providing some indication of whether MI-congruity had been achieved.

Chapter 10 – Discussion of the Outcomes for Staff Participants

In order to determine the propriety of the use of MI within the forensic psychiatric setting, it was important to ascertain the degree to which MI was understood and, if found useful, was willing to be adopted by the members of the MDT. Although the main purpose of the Health and Fitness Instructor is to promote and provide physical activity opportunities including the administration of the PA induction, promotion of good health generally is integral to the role of all staff within a hospital setting. The opportunities for all members of the MDT to interact with clients in ways that may promote good health are frequent, and yet seldom is specific training for this provided. Were it possible to determine the propriety of MI, the next step was to explore potential challenges and opportunities in implementing a wider-scale deployment of MI-related training for healthcare staff. Martino (2007) discusses the training implications for MI with mental health clinicians working with potentially psychotic patients. Because of the sensitivities previously discussed around the issue of communication with people diagnosed with psychotic conditions, he proposes practitioners in this setting will require heightened levels of knowledge and skills in MI in order to determine the propriety of using an approach that relies on the processing and reflecting of patient language (Martino, 2007). He suggests these challenges for practitioners extend to 'learning how to identify and prioritise targets of motivational enhancement or behaviour change' and enhancing their skill sets in order to effectively combine MI with other treatments (Martino, 2007). As discussed in Chapter 4 (MI: Applications: Identifying MI for research and training), the training of MI is not easy, and Belg and colleagues (2004) emphasise ongoing support and supervision to avoid a degradation of skills and approach fidelity. The implication for practitioners learning MI for use with psychiatric clients is that this can be a long and demanding process. Miller and Moyers (2006) describe eight, usually sequential, stages to learning MI:

- Openness to collaboration with clients' own expertise,
- Proficiency in client-centred counselling,
- Recognition of key aspects of client speech that guide the practice of MI, Eliciting and strengthening client change talk
- Rolling with resistance
- Negotiating change plans
- Consolidating client commitment
- Switching flexibly between MI and other intervention styles

The eighth stage of this process is arguably only possible when MI has been learned to a relatively high degree (Martino, 2007). An exploration of the first two stages amongst staff at the Unit was attempted through the use of a questionnaire adapted from an established MI training tool - the Motivational Interviewing Knowledge and Attitudes Test (MIKAT). Questions were adapted from their original form to reflect health concerns more generally and others were included related specifically to how receptive staff would be to further training in MI. In the experience of the author of this thesis, it is common for some people who encounter MI for the first time to consider it is something they already do. They seem to see MI as simplistic and present as overly optimistic about their abilities to deploy the skills of MI. This can be one of the first challenges to trainers of MI and the adapted MIKAT was intended to understand the extent to which this might be an issue for staff at the Unit. The questionnaire was administered to as many staff as possible throughout the MDT but returns were considered low given the period of time these were collected. Returns were especially few from Ward 1, within which a higher proportion of staff work at the Unit. This appeared, in some part, to be reflective of the lack of time staff felt they had in completing the questionnaires. Ward 1 is often the most pressured in terms of staffing shortages but also in terms of patient health concerns. Low recruitment may have been compounded by the questionnaire itself. Although changes were made to some questions, it was decided to keep the questionnaire mainly unchanged in terms of its vocabulary over concerns that changes may have affected the emphasis of the questions.

The MIKAT is arguably 'sophisticated' in its language, which may have put some staff off from attempting to complete it. Feedback from those who did indicated this may have been justified. Future surveys of this kind may be useful if fully adapted to make them easier to understand and even possibly targeted at specific disciplines within the MDT. Another possibility would be to make the questionnaire available online, perhaps through 'Survey Monkey' or 'Qualtrics', two examples of online companies providing questionnaire and survey administrative services. Ultimately, the researcher may have misjudged the extent to which staff could be surveyed by approaching them in person and their degree of receptivity to this. Despite numerous attempts to generate interest and responses, staff returns from Ward 1 are deemed under-represented. Aside from time issues, one possibility for this concerns the 'politics' of the Unit. It is argued by some that the differences in working hours and responsibilities between two groups in particular - nursing staff and the occupational therapy team - have generated a 'schism' in the MDT. Professionally, this rarely manifests in anything other than low grade, but potentially divisive, comments made between staff. However, more subtle manifestations may have been the lack of priority some staff gave to the request to take part in this survey.

'Relational security' is an important and presiding aspect of working with mentally disordered offenders (MDOs). This can be described as: "...the knowledge and understanding staff have of a patient and of the environment; and the translation of that information into appropriate responses and care" (DH, 2010). The management and care of this client group is determined by relational security, and 'appropriate responses' can fluctuate on a daily, or hourly, basis between the control and restraint of an inpatient, perhaps where injuries to staff are sustained, to escorting patients on confidence-building outings to the community. This can be especially true of Ward 1 where 'revolving door' patients are often commonplace and acutely unwell patients are initially nursed in order to stabilise their mental conditions. Clearly, staff tolerance of situations hazardous to security and wellbeing can be sorely tested and the many months and sometimes years of working with the variations in client presentations can, perhaps understandably, leave staff

with less than a 'client-centred' attitude to some patients. And yet the mission statements of wards 1 and 2 include a declaration of client-centred care that should be an integral part of the Recovery Model employed in working with these clients.

The staff survey appeared to reflect these shifts in attitudes, between 'taking a firm hand' with patients and the promotion of empowerment. Returns contained a mixture of MI-congruent and MI-incongruent answers, which was partially encouraging for a client-centred philosophy. Although a directive approach may at times be appropriate, for example when a child reaches up to grasp the handle of a pan on a stove, this mix of responses may be a reflection of the confusion and lack of clear direction about what is the most effective means of promoting good health with this group. This certainly mirrors the researcher's experience in talking with care staff who often seem to be at a loss regarding how best to communicate health messages effectively. Some say clients should be told what to do but often encounter resistance from this approach; others suggest the responsibility is the clients' but are concerned about their own duty of care when this results in inertia. It would appear, from the questionnaire, that a willingness to learn more about MI and a belief that health care should ultimately be client-centred exists amongst staff. However, a significant proportion of care staff with a more direct philosophical approach to the care of these clients also exists. Some respondents tended to indicate more extreme ratings of directive approaches or more generally an approach opposed to the ethos of MI. As a training implication, this may represent a significant challenge. Many trainers of MI are at pains to ensure that prospective trainees are 'open' and willing to learn and are not having the training imposed upon them, perhaps by their organisations. This may mean that attempts to propagate training in MI may never reach full saturation amongst staff at the Unit. The extent of this challenge is unknown since it is considered the limited numbers of survey returns are not wholly representative of staff at the Unit.

Chapter 11 – Conclusion for the Thesis

The objective for this research was predicated on the assumption of the value of physical activity (PA), at any level, to the client group. The forensic psychiatric environment for inpatient groups are an under-researched area, particularly in terms of physical health issues. Research that has been conducted within this specific environment indicates that, whilst the monitoring of physical health is important, it does not, in itself, lead to changes in health parameters of this client group. The recommendation is for 'a more robust lifestyle modification programme' (Vasudev, Thakker & Mitcheson, 2012), although engagement in such programmes for this group is a long-standing issue. This lends support to the aims of this research, which was to illustrate the utility of MI as one such programme that could help modify lifestyle toward PA. In a systematic review, Rubak's (2005) conclusion was that 'Motivational interviewing in a scientific setting outperforms traditional advice giving in the treatment of a broad range of behavioural problems and diseases. Large-scale studies are now needed to prove that motivational interviewing can be implemented into daily clinical work in primary and secondary health care'. The challenges and limitations to conducting this research were numerous and are perhaps indicative of the challenges to conducting such large-scale studies, at least in this setting. Nevertheless, despite the difficulties, it is felt this research represents a valid and ground-breaking contribution and lends significant weight to the value of implementing MI into the clinical work of forensic mental health, especially in light of the scarcity of similar research within this environment.

The purpose of this research was not to confirm MI as a panacea within this environment. Indeed, as it has been discussed, it may be that MI is not recommended for some clients within this setting given their level of recovery, understanding and mental wellbeing. The main purpose was, nonetheless, to explore the effectiveness and propriety of MI as a means of encouraging greater participation in PA for this client group. The outcomes indicate that, at the very least, the approach has done no harm and did not

adversely affect the PA attendance of the participants. In psychological terms, most participants reported the consultations had been effective in encouraging them to think about changing their PA levels, and, behaviourally, this had resulted in all but one of them having maintained the degree of PA they had planned during their consultations. In most cases, this represented an increase in their PA levels. Rollnick (2001) discusses MI in terms of it being a conversation about change and, given the range of further questions that investigating MI seems to throw up – about mechanisms and theories and the operationalising of MI – it seems this might be a good way to think about it, especially if after the conversation changes appear to happen.

Aside from a formal process and the different tasks within this process, if the style of conversation can be promoted to others then the potential for more changes increases. It is, nonetheless, sensible to conclude that a variety of factors influence the health behaviours of forensic psychiatric inpatients and that not one of these in isolation, including MI, is likely to be the single key factor in improving levels of PA. Nevertheless, these outcomes suggest that MI is an appropriate method of encouraging greater participation in PA within this population and the concept and principles of MI are also closely allied with the Recovery Model, the care approach espoused within this environment. Furthermore, it is proposed that health risks such as inactivity or poor diet are given a similar level of importance as drug and alcohol issues and that RC's make similar referrals to MI-practitioners for behaviour change consultations. However, the acceptance by some staff of this philosophy of health care may provide significant challenges to a full implementation of MI for some areas of the Unit.

Recommendations

The current research demonstrates there are numerous merits to providing MI as an intervention for the improvement of health behaviours such as PA. Although the encouragement toward improved health behaviours is a wider team issue, it may be unrealistic to imagine the provision of MI can be made through all members of the MDT at the Unit.

Nevertheless, MI can improve the PA levels of some patients and the therapeutic alliance between patients and staff, and this can ultimately impact on and improve the costs of healthcare within this environment. Therefore, and in light of some of the feedback from receptive staff, it is recommended that MI is promoted as a health improvement intervention within the MDT at the Unit, and a provision for MI training is created for staff willing to adopt this approach more in their clinical work. In respect of the challenges and time constraints of staff, it is strongly recommended that a training plan for MI is created and presented to the unit and ward managers. It is known that at least one ward manager is familiar and sympathetic to the approach of MI, but for effective embedding within the broadest range of staff the importance of a 'top down' advocacy cannot be understated. It is recommended that this training be geared toward the creation of an MI-advocates group and willing staff are recruited to join the group, to meet for training and group supervision periodically. It is suggested the author of this research provides the training for staff at the Unit in order to utilise this resource but that consideration is given to a wider dissemination of MI training across the Trust. The author is currently working on a training programme for effective health communication in conjunction with the Learning and Development department of the Trust. The author will continue to use the approach of MI in his work as the chief advocate for a physically active lifestyle, both with patients and staff at the Unit.

Allied to this, further research of this nature is warranted and the qualitative method of this investigation is relevant since the evaluation of in-session processes for MI is important for recommendations of this method. Therefore, the current research methods employed in this work should be replicated with important additions that were not possible to include for the current research. The first of these is the recruitment of a larger group of participants. Relative baseline motivational states of participants may also influence outcomes, which would warrant attempts to include participants who are less motivated initially. This should be attempted through a more cohesive encouragement by staff at the Unit, with the possible inclusion of participants from other units. With more patients and from different units, it is

suggested that a comparison of styles is attempted by mixing the nature of a directive style with MI between participants across units involved. Difficulties preventing some fidelity measures in the research of this thesis may be surmountable in future work, which would mean the tape-recording and coding of sessions may be possible. Failing this, there now exists a validated method of gaining client feedback regarding the application of MI that can be used for research purposes. Since research of this nature must necessarily be conducted within the secure environment, this would mean the researcher be allocated the time to do this, along with increased resources, such as a research associate for data collection and a budget that would allow a trained MI coder to analyse the results of sessions. Since the current research period was for three months, a longer follow-up period could be considered such as six or even twelve months. The maintenance of periodic MI sessions appears to be useful. Future research should also consider the effects of different types of activities for this client group and the effect that different communication approaches have to encouraging the participation of different activities. This may be helpful in determining the most effective ways of increasing, for example, cardiovascular activities in clients who need to lose weight.

Chapter 12 – Reflective Chapter

As I reflect upon the long and arduous study route of this professional doctorate, I can say I have often felt that I would never actually reach the end. And to some extent, I know that I still haven't; there's always still so much to learn. However, the process has in different parts been enjoyable, frustrating, enlightening, worrying and ultimately fulfilling. I consider myself lucky to have had the opportunity to study this course, but more so to have had an abiding theme for my studies in mind throughout this process. I dread to think what it would have been like had I not had this. Indeed, I have felt for some of my study colleagues with less clear ideas, on numerous occasions. However, my 'theme' has always been concerned with the interface between health psychology theory and putting theory into practise, particularly in the realm of helping others become more physically active.

I was fortunate to secure my current job back in 2007, which enabled me to pursue this doctorate course in line with my interests, and it is within the context of the forensic psychiatric environment that I was able to explore the issues of, what I discovered to be, previously uncharted territory. Conducting this research has taught me a lot about doing research, especially since I found the environment does not lend itself easily to doing this. Even though the idea for how I would construct and conduct my research was always fairly clear to me, the practicalities of doing this in my workplace placed huge restrictions upon carrying it out. I have always been interested in exploring how Motivational Interviewing functions within different realms and the question of whether this approach had any utility within the forensic psychiatric environment was intriguing, from the clients' and the staff perspectives. My interests in the facilitation of practical changes in health behaviours fit well with my workplace responsibilities, so the opportunity to conduct research of this nature was supported at my workplace in terms of my being able to 'get on with it'. However, as I discovered, the challenges I encountered were, in the main, because of the limited resources I was able to utilise in my journey.

Providing opportunities for physical activities for people with serious mental illness is considered worthwhile and valuable according to the literature. Within the realm of a forensic mental health unit, the idea is also well supported, which is why my position exists. Nevertheless, engaging clients and encouraging them to make physical health improvements is seriously challenged by the clients' competing motives. Although the investigation of an approach that may improve the engagement of clients with physical activities may seem like something that would garner assistance from others, it appeared that the agreement to go ahead with this research came with a caveat: "as long as it does not detract from current resources". This became the main difficulty with carrying out the research and introduced an implicit idea from the start that the research would ultimately lack rigour because of my proximity, as the primary researcher, to the administration of the intervention and the collection and analysis of the data. This has always made the research feel slightly awkward, although it perhaps gave me an extra sense of awareness of potential bias.

Study days were extremely helpful with trouble-shooting issues and I found them a constant source of support during a time when I really felt that, despite all the effort required, I was working on something completely alone for which there was little acknowledgement or recognition of the possible benefits. My line manager was very supportive but left on maternity leave shortly after the process began and the challenges within the work environment gave the impression that people were always 'fighting fires' rather than thinking pro-actively about health promotion issues. Questions regarding how the data would be collected and analysed, in consideration of the work environment, were asked during the UWE study days at the time of my systematic review and were a cause for concern. Indeed, my critique of research from my review highlighted the ways in which the identified examinations of MI may have suffered from similar methodological issues. Nevertheless, I always believed I would find an effective way through these issues and this did not detract from my relatively clear idea of how the research would be carried out. I knew how I wanted to examine the intervention and how it might be possible to do that, although one of the main

issues was how to establish outcomes in order to more clearly demonstrate the propriety of MI for this group. The outcome of 'attendance' was a fairly obvious choice but because of the qualitative nature of the research, I felt I needed other outcomes to support this. I discussed this at length with my UWE supervisor, who helped me confirm some of my ideas for the outcomes I used, and my ideas about using the Profile of Mood States (POMs) questionnaires were kicked into touch simply by him asking me a little more about this. Subsequently I discovered a wealth of associations between MI and Self Determination Theory and the Intrinsic Motivation Inventory made good sense to use as an outcome measure. A presiding feature of this research was the under-representation of similar research in the literature, which suggested that whatever was 'discovered' would be in some way useful as a starting point for future research. Even so, I wanted the research to be credible and hoped it would illustrate how the intervention had, at least, made some kind of difference to the clients. I feel strongly about how the nature of consultations for exercise should be conducted and, ultimately, it would have been ideal to show how this intervention can be more beneficial in improving exercise uptake than, say, an intervention aligned with the Medical Model. However, because the nature of the research was influenced by the challenges faced in conducting it I was somewhat reconciled to show how the intervention had at least done no harm, although I still hoped to demonstrate its utility amongst this client group. The worst case scenario was that it had not been beneficial at all.

I became aware of how my belief in the utility of the approach may influence my findings when, during a study day at UWE, a tutor asked me 'What if you find it doesn't work?' Although I replied that the findings would still be useful, I realised that I needed to consider this more carefully. This proved to be a valuable consideration, not least because my proximity to the research meant that the outcomes could mean nothing if they were influenced by my need to show that MI 'works' with this group. This issue was also relevant to the second part of the research, exploring the views of staff toward the approach of MI. My beliefs were that many of the staff working in this environment would struggle to understand, and therefore adopt, the

principles of MI when working with clients with whom they often imposed severe restrictions. I was surprised and pleased to discover the outcomes did not wholly support my beliefs, although I was disappointed that I was not able to survey more of the staff from other areas of the Unit, within which I felt that the main challenge to MI would emanate. To this extent, my view is still the same especially since much of the data I was able to gather was from members of the MDT who work individually with clients, such as OT's, psychologists and doctors. Ultimately, despite my beliefs, I feel I have maintained a sense of open-mindedness about the research outcomes and have sought always to consider other possibilities.

Initially I felt confident about being able to recruit participants for this research; I had developed what I considered to be good relationships with both clients and staff. Although I was aware this may act against the quality of the research by introducing elements of demand characteristics, I was nonetheless surprised that not more clients agreed to participate and I was unprepared for their degree of wariness about the research. This emphasised the dangers of assumption, particularly where research is concerned, and highlighted the need for good quality research within this client group. It also served to illustrate to me an aspect of the clients I was unfamiliar with and showed me, once again, that I can learn more about people on a daily basis. Even so, I felt the nine I recruited was a good number to work with particularly in light of the fact that other research conducted in this environment had often involved only single case studies.

An aspect of the research that I only briefly mentioned in the write-up was the time of year I conducted it. This was in the period leading up to Christmas and I was aware that many of the clients often 'wind down' at this time leaving the health changes they might make until the New Year. In this respect, I was concerned the outcomes of attendance might reflect the nature of the season rather than the effectiveness of the approach and I considered postponing the research until the following year. However, I wanted to 'get cracking' with it and pressed on regardless, feeling that this would keep me ahead of the game in terms of progressing with the doctorate on the whole.

I'm glad I continued with this at the time and I feel the outcomes were even more supportive of the approach since there appeared not to be the 'seasonal dip' in attendance that I had anticipated. However, I was not certain of the reliability of the seasonal dip issue and was not fully aware of any literature confirming this even amongst general populations, so I did not highlight this too strongly in the write-up. I maintain, however, that the attendance outcomes throughout this period were illustrative of some measure of success of the intervention.

Carrying out the research was fairly straightforward, which I think was because I have conducted so many consultations in the past and because this had been the default approach used with the clients at the unit. I was very familiar with the structure of the sessions but I was mindful of making sure the 'spirit' of MI was maintained through active listening skills. Again, this was slightly more tricky with some of the participants I was less familiar in working with; one or two seemed even more wary of the interaction when I was 'reflecting' with them, perhaps because they were not used to this. Keeping track of the dates and times of each original session and the follow-ups was also relatively straightforward and I was pleased that participants attended each of the sessions, which meant I did not have any 'slippage' despite my anticipation that this might occur. This may have been because of the advanced requests I made for appointments with each participant. In each case, participants were generally good at maintaining appointments if they were given prior notice. Even so, there was some flexibility with this in that I managed appointments on an opportunistic basis too and conducted some of the follow-ups during activity sessions around the time they were due. Fortunately, I was able to enlist the aid of one of the other members of the OT team who had recently gained part-time employment with us and who was interested in pursuing studies in psychology. This was fortuitous since, not only was the aide interested in and willing to help with the research but she also had undergone the necessary background checks and training required to work in this environment. Despite this, her involvement was limited to fitting in the data collection around her own duties, since her own time commitments meant she could not do this outside of work time.

The second part of the research concerned the staff survey. Again, I was surprised and disappointed not to have recruited more people. However, there were one or two lessons learned in the design and dissemination of the questionnaire. I attributed much of the low response rate to the demands on the staff of the working environment, especially since the lowest returns were from Ward 1. This was unfortunate since it was Ward 1 in particular from which I had wanted to explore the attitudes of staff. I'm not confident that things done differently would have improved this return rate.

As enjoyable as conducting the research had been, the time following its completion was extremely difficult. I had the feeling that the 'hard part' had been done and can now say that I probably 'took my foot off the pedal' in terms of progressing with the write-up to completion. My thoughts were that all I had to do left was the write-up, as if this was easy. And yet it has been the most difficult and drawn out part of the whole process. This difficulty has continued even up to the point of final submission. I found this a terribly difficult time to try to focus on getting down to writing up the research and although the 'blame' for this is all mine, I can only say it was not helped by trying to maintain a semblance of balance in family and work life simultaneously. At times, the magnitude of the task of writing up was almost too much to consider. Putting this off each time was very easy in favour of almost anything else. There were, of course, legitimate reasons for this at times in terms of family commitments, but most often my procrastination concerned the coming to terms with how I would transfer my research experience into legible and credible writing. Eventually, the weight of the task hanging over me and the length of time it was taking for me to make any inroads with the write-up began to take a toll and I found myself becoming quite depressed. I developed an enduring sense of dread and felt an increasing sense of embarrassment about the time it was taking to conclude the research process. Speaking with study colleagues sometimes helped in knowing that I was not the only one feeling this way, and enquiries by my supervisor would prompt me into action on occasions. But it was not until a period of convalescence following an operation that I was able to engage substantially in the write-up process. I found I had longer periods of time to

dedicate quietly to writing up during the days. It was as if my required operation had conferred an extra benefit in terms of my being able to do this.

As I transcribed the research experience and results, I developed a sense of satisfaction with having completed the practical aspects of this but realised that much of my procrastination may have been a result of a lack of confidence that my research was worth anything. The experience had been extremely lonely in many respects: I lacked practical support at work and felt my research had gone on un-noticed by those for whom I thought it may serve some use; when talking about this away from the workplace, I felt that others could not connect with value of the research because of the nature of the environment. Allied with this was the concern about the qualitative nature of the work and my proximity to it as a researcher. Ultimately, however, there was nothing I could do about the research limitations and I had to constantly remind myself that research of this kind had not been conducted before and that it was valuable in light of this. I also knew that it would serve as a platform for further research in the future. It would almost certainly highlight some of the difficulties with conducting research in this environment. I finished my period of convalescence and had completed most of the write-up. However, there was more to do and I continued to struggle with finishing this off completely. I would try to motivate myself by taking inspiration from others who had qualified and I actively sought them out on the internet. I didn't dare to imagine myself in their positions because qualifying still seemed so far away, but it helped to stir myself into doing more of the work towards this. The completion was attained painfully slowly, piece by piece as I found the time to do this and my examiners and viva date was eventually booked.

As much as this research has served as preparation for further work, the challenges faced in conducting it have given me cause for concern. Such are the difficulties in organising good quality research in a security-focussed environment I am left feeling it is a wonder that any research is ever undertaken. Perhaps this was the reason for the relative dearth in relevant research from my review. I have, for some time, subscribed to 'feeds' for new research generated in response to certain key words such as 'forensic',

'mental health', 'psychiatric' and 'physical activity' and by far the fewer returns are in the area of forensic mental/psychiatric health. My review and subsequent research have increased my knowledge of this particular client group and, as a health psychologist working in this environment, this has been invaluable. However, there is still so much to learn about how to deal most effectively with health concerns for this group, although I remain convinced that MI is an approach that has much to offer practitioners who believe that recovery is possible for this with a forensic mental health history.

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Appendices

Appendix 1 – The PAR-Q

PHYSICAL ACTIVITY READINESS QUESTIONNAIRE (PAR-Q)

Before taking part in any physical activities, please answer the following questions by circling 'Y' (Yes) or 'N' (No).

1. Has a doctor ever said you have a heart condition **and** that you should only do physical activity recommended by a doctor? Y N
2. Do you feel pain in your chest when you do physical activity? Y N
3. In the past month have you had chest pain when you were not doing physical activity? Y N
4. Do you lose balance because of dizziness or do you ever lose consciousness? Y N
5. Is your doctor currently prescribing drugs (for example water pills) for your blood pressure? Y N
6. Is your doctor currently prescribing you drugs for a heart condition? Y N
7. Do you have diabetes mellitus? Y N
8. Do you suffer shortness of breath at rest or with **mild** exertion? Y N
9. Do you suffer from **unusual** fatigue with **usual** activities? Y N
10. Do you **regularly** get a sharp pain in your lower leg when walking uphill or upstairs which disappears within 1-2 minutes of stopping? Y N
11. Do you have a bone or joint problem **that could be made worse** by a change in your physical activity? Y N
12. Are you, or is there any possibility that you are pregnant? Y N
13. Do you know of **any other reason** why you should not do physical activity? Y N

Questions 1-13: If the answer to any of these questions is **YES**, you must provide written consent from your doctor prior to your participation in any type of exercise at Marlborough House.

1. Do you smoke tobacco or have you given up within the past 6 months? Y N
2. Have you been told by your doctor that your blood pressure is high? Y N
3. Have you been told by your doctor that your cholesterol is high? Y N
4. Have your parents or siblings ever suffered from heart disease (mother/female <65 years or father/male <55 years)? Y N
5. Are you physically inactive in both your work and leisure time? Y N
6. Is your waist circumference above: male 40in/102cm - female 34in/88cm? Y N

Questions 14-19: If you have answered 'YES' to **2 or more** of these questions, you are advised to limit your activities to a '**moderate**' intensity. Moderate physical activity is described as an intensity well within your current capacity and sustainable for a prolonged period of time i.e. 60 minutes, slow progression and generally non-competitive, which may include brisk walking, slow cycling, gentle swimming and doubles tennis.

Males over 45 and females over 55 are recommended to limit their activities to a moderate intensity in the absence of their doctor's consent to exercise at a higher level.

CONDITIONS

In consideration of my being given access to the facilities and equipment at Marlborough House I acknowledge that:

I have read, understood and accurately completed this questionnaire to the best of my knowledge. I confirm that I am taking exercise at Marlborough House voluntarily and understand participation involves a potential risk of injury, for which I accept full responsibility. I agree to abide by all verbal and written notices regarding safety and to use only equipment and exercises I have been inducted on and/or am fully conversant with. I have had the opportunity to ask questions regarding my exercise and related issues and these have been answered to my satisfaction. I have read and agree to comply with these conditions.

Name..... Date.....

Signature.....

The Following Section Refers To Patients Only

RMO/SHO: Please tick the appropriate section, adding comments/advice you feel are relevant for this person.

I know of no reason to advise this person against engaging in physical activities of either a 'moderate'* or 'vigorous'* nature whilst at Marlborough House.

In my opinion, this person should be restricted to physical activities of a 'moderate'* nature whilst at Marlborough House.

In my opinion, this person is not of a suitable medical condition to participate in any physical activities of either a 'moderate' or 'vigorous' nature whilst at Marlborough House.

Comments _____

'Moderate' physical activity is described as an intensity well within the individual's capacity and can be comfortably sustained for a prolonged period of time i.e. 60 minutes, slow progression and generally non-competitive. Moderate activities may include brisk walking, slow cycling, gentle swimming, doubles tennis and any activity of a similar intensity (40-60% VO2max).

'Vigorous' physical activity includes activities of sufficient intensity to represent a substantial challenge and that would ordinarily result in fatigue within 20 minutes. Examples of vigorous activities may include jogging, running, cycling, aerobics classes, singles tennis, swimming lengths at a brisk pace and any activity of similar intensity (>60% VO2max).

_____(Signed)_____ (Date)

_____(Name)

Appendix 2 - Patient Participant Information Sheet

Is Motivational Interviewing effective or appropriate for addressing the improvement of health behaviours in adult, forensic psychiatric inpatients?

Rob Lyon – Project Lead

INFORMATION ABOUT THIS PROJECT

Background: The OBMH NHS Foundation Trust is committed to improving the mental and physical health of its' service users. We provide physical activity sessions to support this aim, with the understanding that physical activity can benefit both physical and mental health.

All service users who express an interest in physical activities must complete a health screening and induction process designed to ensure physical activity sessions are safe and effective. Induction programmes such as these are often carried out by fitness instructors who assess the health risks of clients, list the benefits of exercise, and 'prescribe' a programme of activity. The involvement of the client is often minimal and the challenges involved with beginning a programme of activity are seldom addressed. This can be a problem, particularly if the client is unsure about their motivation. Research indicates that the degree to which a person is involved with their induction, through client-centred discussion and negotiation, can make the difference between success or failure to begin or continue with a plan of activity.

What is the purpose of the project?

The physical activity induction is designed to encourage the involvement of the individual in decisions made about their physical activities, including when, how and why they do these and whether they do them at all. This research is designed to assess the value of a Motivational Interviewing induction to physical activity for patients at Marlborough House.

Why have I been chosen?

Your health and the way in which we provide health-related services are important to us. You are an adult, male, inpatient at Marlborough House for whom, it is hoped, this project will help improve the way in which services are offered at the unit.

Who is responsible for the project?

This project is being lead by Rob Lyon, the health and fitness instructor at Marlborough House, who is responsible for the research.

What will happen to me if I take part?

If you decide to take part, you will be invited to a series of three interviews to discuss your health and wellbeing. There will be no attempts to force or persuade you to do things you do not wish to do but we will be interested in your ideas about how physical activity might benefit you and what a plan of activity might involve should you decide to do this.

The first interview will last up to one hour. The second will be a 15 minute interview two weeks later. The third will be four weeks later lasting no longer than one hour. These timings are a rough guide and they can actually finish whenever you wish. If you decide to begin a plan of physical activity, support and guidance concerning the activities in question will be available if you feel you need it. The research will last for three months, although support and guidance for your physical activity plans will continue after this.

Are there any disadvantages in taking part?

It is not anticipated there are any disadvantages to taking part in this research. However, any plan of activity you may decide on could represent a change in your daily habits which could be quite challenging to maintain initially.

What are the possible risks of taking part?

It is not anticipated there are any risks involved within the interview parts of the induction. However, as with all forms of physical activity, there are certain potential risks to taking part. These will be assessed through the use of the health screen form and you will be advised of a level of activity that is right for you after this has been discussed with your mental health doctor. A qualified health and fitness instructor will explain the use of equipment and activities, where it may be required, to ensure you are able to use them safely and effectively.

What are the possible benefits of taking part?

People who increase their physical activity levels in a sensible way almost always find at least some kind of benefit in doing so. Taking regular physical activity can help to lower bodyweight, blood pressure, and cholesterol levels, and help with the management of conditions such as diabetes. Physical activity is also now known to benefit mental health too, helping improve mood and increasing feelings of wellbeing and confidence. However, people do physical activity for a variety of reasons and the benefits you believe you will get are what I would be most interested in talking to you about.

Confidentiality - who will know I am taking part?

All information which is collected about you during the course of the research will be kept strictly confidential unless you disclose information that could be potentially harmful to either yourself or other people. You would be given a code to hide your identity and no personally identifiable information would be required in relation to this project.

Who has approved the project?

This project has been approved by The University of the West of England and the Oxford and Buckinghamshire Mental Health Trust research and development departments.

What will happen to the results of the project?

The results will serve at least two purposes; the first will be to help with the professional doctorate I am studying. The second will be to provide useful information for the care teams at Marlborough House in relation to the ways in which services are provided here.

Contact for Further Information

Please feel free to contact Rob Lyon for any further information or queries in person at Marlborough House, via email – robert.lyon@obmh.nhs.uk – or by telephone – 01908 243496

Thank you for reading this information sheet.

Appendix 3 - Patient Participant Consent Form

Informed Consent to Participate in Service Evaluation

Title of Project: Is Motivational Interviewing effective or appropriate for addressing the improvement of health behaviours in adult, forensic psychiatric inpatients?

Project Lead: Rob Lyon

Thank you for agreeing to take part in this research. In agreeing to participate you have the following rights and protections as described in the British Psychological Society's ethical guidelines.

- You are under no obligation or pressure to participate and your participation is entirely voluntary.
- Under no circumstances will your real name or identifying information be included in the reporting of this research.
- You may withdraw your participation and any information already given at any point within the 3 months this research continues without the concern of any adverse reprisals as a result of this.
- If you choose to withdraw your participation, you may still use the facilities or take part in any activity sessions
- Nobody, except the Project Lead and his university supervisor will have access to this anonymised material in its entirety.

Also, in agreeing to the terms of this consent form, participants should be aware that any anonymised material is solely for use in the current research and any information exchanged, as part of this research, will not be recorded in patients' notes.

However, you should also be aware that, whilst your confidentiality is assured, the disclosure of information that may be potentially harmful to either yourself or others will be communicated to other relevant care-providers and this will be recorded in patient notes files.

Please initial

"I confirm that I have read and understood this information sheet and have had the opportunity to ask questions about it".

"I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason".

"I give permission for the Project Lead to audio tape-record all interviews that I give related to the research".

"I agree to take part in this research".

Name of Participant

Date

Signature

Researcher

Date

Signature

Appendix 4 - First Consultation Record Booklet

Is Motivational Interviewing effective or appropriate for addressing the improvement of health behaviours in adult, forensic psychiatric inpatients?

Pre-activity Consultation Record

<i>Client's code:</i>	
<i>PAR-Q info</i>	
<i>PAR-Q Completed?</i>	
<i>Sports hall access?</i>	
<i>Recommended type and level of activity</i>	
<i>Comments – restrictions, considerations etc</i>	

Pre-activity Consultation

Date.....

1 Getting Started

“There are a number of purposes to this discussion today. Firstly, it will enable me to explain all the available options for physical activity and exercise there are for you at Marlborough House. Second, it will help me to understand exactly how you feel these options might help you. Third, if you’d like to get involved with the sessions, it’s an opportunity for you and I to work together on a plan that will help you get the most out of the sessions. What I don’t want is for you to feel I’m trying to persuade or force you to do things you don’t want to do. How does that sound?”

2 A Typical Day

“It would help me to understand a little more about your routine on the ward, so I wonder if we could spend some time talking about how a typical day on the ward goes for you/how you see a typical day going for you. When and how does your day usually start? And what do you do after that?” etc.

“Are weekends any different from this?”

BRIEF SUMMARY OF TYPICAL DAY

3 Exploring Motivation

“I’d like to ask you a few questions now concerned with your motivation. Firstly, on a scale of 0 - 10 how important is the idea of regular physical activity to you right now, where 0 is not at all important and 10 is very important?”

Number	
--------	--

“Using the same kind of scale, if you did decide to become more active now how confident are you that you could stay active on a regular basis over the next few months, where 0 is not at all confident and 10 is very confident?”

Number	
--------	--

“Now, with the same scale in mind, how ready do you feel at this point in your life to become more active?”

Number	
--------	--

“If we can just go back to the first scale, what would need to be different in order for you to have given a higher number and for physical activity to be even more important to you?”
 Alt: “Why did you rate this at (5 or below) and not a lower number?”

“And for the second scale, what would need to be different in order for you to have given a higher rating and be even more confident about keeping active in the future?”
 Alt: “Why did you rate this at (5 or below) and not a lower number?”

“And finally, what would have to be different in order for you to have given a higher number of readiness? What would need to change in order for you to be more ready to be more active?”
 Alt: “Why did you rate this at (5 or below) and not a lower number?”

4 Good things & Less Good things

- 4a “Can we spend a little time now talking about the pros and cons of being active: what are some of the good things that come to mind about how *you* might benefit from being more physically active?”
 “How do you think doing regular exercise might benefit you?”
 “If you decided to become more active, what might some of your reasons be for this?”

- 4b “What do you think might not be so good about exercising on a regular basis?”
 “What might you not enjoy about exercise?”
 “What might you not like about working out?”

- 4c “In order to do more physical activity what kinds of things might you have to do at another time in order to fit this in?”
 “What are some of the changes you might need to make in your existing lifestyle to be able to exercise regularly?”
 “What are some of the sacrifices you might need to make to fit more exercise in?”

- 4d “If you didn’t find a way of becoming more active, for whatever reason, what might concern you about that?”/“What might things be like for you in about 6 months if you stayed with your current level of activity and didn’t increase this at all?”/“What do you think will happen, say in 6 or 12 months time, if you don’t find a way of increasing your current level of exercise?”

Summary of Motives for Change

Questions 3, 4a & 4d

Summary of Barriers for Change

Questions 3, 4b & 4c

“OK, now we need to decide which way to go from here; perhaps I can list some options and you can choose which makes most sense to you”

a) Increase physical activity	
b) Decrease physical activity	
c) Stay the same	
d) Think about it some more	

For options b), c), & d), provide support and opportunity to talk about change at any time. Ask if OK to schedule next appointment in two weeks at this point. If a), continue with consultation format questions below

5 *Enquire about Anticipated Behaviour Change*

“So, thinking about the benefits you have just discussed, which of these available sessions do you think you might like to attend in order to achieve them?” Present current programme of activities.

Time	Mon	Tues	Wed	Thurs	Fri
10 – 11					
11 – 12					
1 – 2					
2 – 3					
3 – 4					

“In each of your sessions, how long do you think you will spend exercising?” Enter into grid above.

“What kinds of exercises would you like to avoid?”

Avoidances	
-------------------	--

6 *Enquire About Outcome Expectations*

“When you start to exercise at the level we’ve just discussed, how long do you think it will be before you start to see any changes and what kind of changes do you think you will see first?”

Exchange information neutrally if client is unsure or has unrealistic expectations.

7 Explore Short Term Obstacles to Implementing Programme

“Thinking about the next few weeks, what things may interfere with your plans to stay more active ... AND ... what might you be able to do about it?”

8 Summarise consultation and schedule next appointment

“So, can we agree to meet again in two weeks to see how things are going? Perhaps I can chat with you again during one of these activity sessions. Or, I could catch up with you on the ward at that time, would that be OK?”

Next date for meeting.....

“Now, is there anything I can help you with as far as the use of the equipment goes?”

How much do you feel the consultation encouraged you to make your own decisions about your physical activity plans?

0 1 2 3 4 5
Not at all Very much

Comments:

.....
.....

How much do you value this?

0 1 2 3 4 5
Not at all Very much

Comments:

.....
.....

During your consultation, how much did you feel the instructor tried to push or coerce you into doing things you didn't want to do?

0 1 2 3 4 5
Not at all All the time

Comments:

.....
.....

How much do you like being in control of your own decisions?

0 1 2 3 4 5
Not at all Extremely

Comments:

.....
.....

How much did you feel your responses were being judged by the instructor?

0 1 2 3 4 5
Not at all I felt judged a lot

Comments:

.....
.....

How much did you feel the instructor was genuinely interested in the way you see things?

0 1 2 3 4 5
Not at all Very interested

Comments:

.....
.....

How important is this for you?

0 1 2 3 4 5
Not at all important Extremely important

Comments:

.....
.....

Did the consultation encourage you to think more about changing your activity levels, either at the time or after the consultation? (Please tick either yes or no)

Yes No

Comments:

.....
.....

Do you feel this is a good thing for you to be able to do?

0 1 2 3 4 5
Not at all Extremely

Comments:

.....
.....

Finally, can you suggest anything else that you think would have made the consultation more effective or helpful for you?

.....
.....

Appendix 6 - Intrinsic Motivation Inventory (IMI)

Is Motivational Interviewing effective or appropriate for addressing the improvement of health behaviours in adult, forensic psychiatric inpatients?

PHYSICAL ACTIVITY MOTIVATIONS QUESTIONNAIRE

Please think about the following statements in relation to your experience of the physical activity you have done at the unit in the past month OR the last time you did any kind of physical activity.

For each of the statements, please indicate how true it is for you by circling a number according to the scale below:

	1	2	3	4	5	6	7
	not at all		somewhat true				very true
I enjoyed doing the physical activity very much	1	2	3	4	5	6	7
I think I am pretty good at doing physical activity.	1	2	3	4	5	6	7
I put a lot of effort into the physical activity sessions.	1	2	3	4	5	6	7
I did not feel nervous at all while doing physical activity. (R)	1	2	3	4	5	6	7
I believe I had some choice about doing the physical activity	1	2	3	4	5	6	7
I believe physical activity could be of some value to me.	1	2	3	4	5	6	7
I felt really distant to the Health & Fitness Instructor. (R)	1	2	3	4	5	6	7
The physical activity sessions were fun to do.	1	2	3	4	5	6	7
I think I did pretty well at the physical activity, compared to other patients.	1	2	3	4	5	6	7
I didn't try very hard to do well at the physical activity. (R)	1	2	3	4	5	6	7
I felt very tense whilst doing the physical activity sessions.	1	2	3	4	5	6	7
I felt like it was not my own choice to do physical activity. (R)	1	2	3	4	5	6	7
I think that doing physical activity is useful for my physical and mental health	1	2	3	4	5	6	7
I really doubt that the Health and Fitness Instructor and I would ever be friends. (R)	1	2	3	4	5	6	7
I thought it was boring doing physical activity. (R)	1	2	3	4	5	6	7
After doing physical activity for awhile, I felt pretty competent.	1	2	3	4	5	6	7
I tried very hard during the physical activity sessions.	1	2	3	4	5	6	7
I was very relaxed in the physical activity sessions. (R)	1	2	3	4	5	6	7
I didn't really have a choice about doing the physical activity sessions. (R)	1	2	3	4	5	6	7
I think physical activity is important to do because it can help my physical health	1	2	3	4	5	6	7

I felt like I could really trust the Health and Fitness Instructor	1	2	3	4	5	6	7
The physical activity sessions did not hold my attention at all. (R)	1	2	3	4	5	6	7
I am satisfied with my performance during the physical activity sessions.	1	2	3	4	5	6	7
It was important to me to do well at the physical activity.	1	2	3	4	5	6	7
I was anxious whilst doing the physical activity sessions.	1	2	3	4	5	6	7
I felt like I had to do the physical activity. (R)	1	2	3	4	5	6	7
I would be willing to do physical activity again because it has some value to me.	1	2	3	4	5	6	7
I'd like a chance to interact with the Health and Fitness Instructor more often.	1	2	3	4	5	6	7
I would describe the physical activity as very interesting.	1	2	3	4	5	6	7
I was pretty skilled at the physical activity.	1	2	3	4	5	6	7
I didn't put much energy into the physical activity. (R)	1	2	3	4	5	6	7
I felt pressured whilst doing the physical activity	1	2	3	4	5	6	7
I did the physical activity because I had no choice. (R)	1	2	3	4	5	6	7
I think doing physical activity could help me to stay healthy	1	2	3	4	5	6	7
I'd really prefer not to interact with the Health and Fitness Instructor in the future. (R)	1	2	3	4	5	6	7
I thought the physical activity was quite enjoyable.	1	2	3	4	5	6	7
The physical activity was something I couldn't do very well. (R)	1	2	3	4	5	6	7
I did the physical activity because I wanted to.	1	2	3	4	5	6	7
I believe doing physical activity could be beneficial to me.	1	2	3	4	5	6	7
I don't feel I could trust the Health and Fitness Instructor. (R)	1	2	3	4	5	6	7
While I was doing the physical activity, I was thinking about how much I enjoyed it.	1	2	3	4	5	6	7
I did the physical activity because I had to. (R)	1	2	3	4	5	6	7
It is likely that the Health and Fitness Instructor and I could become friends if we interacted a lot.	1	2	3	4	5	6	7
I think physical activity sessions are important.	1	2	3	4	5	6	7
I feel close to the Health and Fitness Instructor.	1	2	3	4	5	6	7

Appendix 7 - First Follow-up Consultation Record

1st Follow-up Consultation

Date.....

1 **Frequency of Visits**

"Can you describe how your physical activity has changed since your initial consultation"?

REVIEW MOTIVES & BARRIERS IF CLIENT HAS BEEN STRUGGLING

2 **Short-term Effects of Exercise**

"What are some of the things you've noticed that have changed since you've been exercising, starting with the good things?" (Enjoyable things or those that are considered helping towards goals)"

"And what are some of the things that you haven't liked or have found difficult?"

SUMMARISE BY LINKING CHANGE IN EXERCISE TO BENEFITS

3 **Observe Exercise Technique (if required)**

Provide positive reinforcement where necessary

"A lot of people normally struggle with XXX, but you have picked it up very well"

Provide corrective coaching where necessary

1. Ask for permission to offer advice
2. Provide information in a neutral manner
3. Ask client for feedback

4 **Schedule next appointment**

Next date for meeting.....

Appendix 8 - Second Follow-up Consultation Record

2nd Follow-up Consultation

Date.....

1 **A Typical Day**

“How has your physical activity changed since we first met?”

BRIEF SUMMARY OF PHYSICAL ACTIVITY

➔ No changes made – repeat 1st Session again

“So, you’ve experienced some difficulties over the last few weeks that have hindered your plan – how motivated would you say you are...?” (Move back to 1st Session format – Exploring Motivation, Confidence & Readiness, etc)

2 **Exploring Good Things and Less Good Things**

2a “What do you think some of the good things have been about being more regularly active?”

“In what ways do you think you have benefited from your activity plan?”

2b “What hasn’t been so good about being more active?” “What haven’t you enjoyed about this?”
“What haven’t you liked about working out?” etc

2c “What are some of the changes that you needed to make in order to become more active?”
“What are some of the sacrifices you needed to make to fit more exercise in?”

Summarise Actual Benefits & Difficulties

If the client has exercised at the agreed level:

“So as a result of exercising at the level you committed to, you have found that you(list the benefits) and in order to achieve these benefits you’ve had to tolerate ...(list less good things about exercise such as boredom etc) and had to sacrifice... (List changes made to other aspects of their lifestyle).”

If the client has made some changes but not as many as they’d hoped for:

“Even though you haven’t exercised as much as you’d have hoped, the amount you have done has still led to(list the benefits) and in order to achieve these benefits you’ve had to tolerate ...(list less good things about exercise such as boredom etc) and had to sacrifice... (List changes made to other aspects of their lifestyle).”

3 Enquire about Next Step

“So how would you like things to progress from here?”

“Why don’t we just list the options and then you can see which one sounds the right one for you?”

a) Increase physical activity	
b) Decrease physical activity	
c) Stay the same	
d) Think about it some more	

For options b) & d), provide support & offer chance to talk about issues further. Discuss how reduced plan might look. If a) & c) continue with consultation format questions below

“Perhaps we can look at the available sessions and adapt your current plan accordingly”
(Provide weekly activity schedule & compare with patient’s)

Time	Mon	Tues	Wed	Thurs	Fri
10 – 11					
11 – 12					
1 – 2					
2 - 3					
3 – 4					

“What changes would you like to make to your current plan?”

4 Explore good things and less good things in context of new (same) level

4a “So what do think would happen if you did add another session per week to your workouts?”

“If you do decide to carry on at the same level what further changes would you hope to see?”

4b “And what might be/have you found less appealing about exercising that many times/at that level? (And what might you not like etc?)”

4c “What are some of the changes that you’d need to make in order to continue with/make this new plan work?” “What are some of the sacrifices you might need to make to fit more in?”

4d “How would things be for you in, say 3-6 months, if you didn’t manage to find a way of changing your activity levels now?”

Summarise Motives and Barriers for Change

6 Enquire About Outcome Expectations

“When you start to exercise at the level we’ve just discussed, how long do you think it will be before you start to see any changes and what kind of changes do you think you will see first?”

7 Explore Short Term Obstacles to Implementing Programme

“Thinking about the next few weeks, what things may interfere with your exercise plans ... AND ... what might you be able to do about it?”

8 Schedule Follow-up appointment if required.

Appendix 9 - Multi-disciplinary Team Survey

Is Motivational Interviewing effective or appropriate for addressing the improvement of health behaviours with adult, forensic psychiatric inpatients.

Multi-disciplinary Team opinion survey

Thank-you for agreeing to help with this project.

Please answer the following questions regarding change and health risk behaviours by circling 'true' or 'false':

Overweight or unfit people must accept their 'problem' before they can get help	True	False
'Denial' is a characteristic of the disease of addiction	True	False
A carer's beliefs about their client's ability to change have no effect on whether change actually occurs in their client	True	False
Research has failed to support the existence of an 'addictive personality'	True	False
Substance users need to 'hit rock bottom' before they can change	True	False
When clients are resistant to making healthy changes, persuasion and/or challenging clients are required to help the person change	True	False
Resistance to talk about change is an indication of a client in denial	True	False
When trying to help clients, carers should emphasise the issue of personal choice even if this means the client chooses not to change	True	False
People with mental illnesses/conditions <i>and</i> mental capacity are nonetheless generally incapable of making sound decisions about their physical health	True	False
A client's resistance to change is a product of the interpersonal context within which it is encountered	True	False
Drug and alcohol users with mental health conditions are not capable of exerting control over their behaviour	True	False
Readiness to change is the client's responsibility – no-one can help them until they decide they are ready	True	False
The best way to motivate people is to help them resolve their ambivalence about change	True	False
External pressure and warning of consequences are effective means of promoting healthy change in others	True	False

Please respond accordingly to the statements by ticking a box:

	Yes	No	Unsure
I have heard of Motivational Interviewing (MI)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I understand what MI is about	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I believe in and support the ideas underpinning MI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I believe I already do MI when dealing with patients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I practise reflective listening with patients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think MI does not work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel 'client centred' approaches do not work in a forensic psychiatric setting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think patients need to be told what to do for their own good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would value further information about MI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would value training in MI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would value further non-MI training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please indicate what kinds of training.....

Please order the following principles according to how important you consider them to be for 'healthy' change (1 being most important, 15 being least):

- Breakdown denial
- Express empathy
- Educate about risks
- Use subtle coercion
- Give direct advice
- Require abstinence as only acceptable goal
- Encourage submission to disease
- Develop discrepancies
- Acceptance of label e.g. "alcoholic", "addict", "lazy"
- Maximize external pressure
- Support self-efficacy
- Give clear consequences
- Avoid argumentation
- Confront resistance
- Roll with resistance

Appendix 10 - Multi-disciplinary Team Consent Form

Is Motivational Interviewing effective or appropriate for addressing the improvement of health behaviours with adult, forensic psychiatric inpatients?

MDT Consent Form

I have received an information sheet which I have read. Yes No

I understand the information I give will be treated as confidential and anonymous. Yes No

I may withdraw or withhold any answers without giving a reason and without consequence. Yes No

I am aware that my answers will be used as data for a research project intended to improve the provision of a physical activity induction at Marlborough House. Yes No

I agree to take part in this research. Yes No

Participant Name.....

Signature.....Date.....

Researcher Name.....

Signature.....Date.....

Appendix 11 – Multi-disciplinary Team Information Sheet

Is Motivational Interviewing effective or appropriate for addressing the improvement of health behaviours with adult, forensic psychiatric inpatients.

Rob Lyon – Project Lead

INFORMATION ABOUT THIS RESEARCH PROJECT

Background: The Oxford Health NHS Foundation Trust is committed to improving the mental and physical health of its' service users. We provide physical activity sessions to support this aim, with the understanding that physical activity can benefit both physical and mental health.

All service users who express an interest in physical activities must complete a health screening and induction process, designed to ensure physical activity sessions are safe and effective. Induction programmes such as these are often carried out by fitness instructors who assess the health risks of clients, list the benefits of exercise, and 'prescribe' a programme of activity. The 'prescriptive' nature of this type of induction does not often consider the ambivalence many people feel about changing their health behaviour, which can be a barrier to change if the client is unsure about their motivation. Research indicates that the degree to which a person is involved with their induction and, through client-centred discussion, is able to discuss their ambivalence, can make the difference between their success or failure with the programme.

What is the purpose of the project?

This research project is designed to assess the value of a Motivational Interviewing induction to physical activity for patients at Marlborough House. This induction is designed to encourage the involvement of the individual in decisions made about their physical activities, including when, how and why they do these and also whether they do them at all. The project includes enquiring about the thoughts of all MDT staff toward the propriety of client-centred methods in a forensic mental health setting.

Why have I been chosen?

Although Motivational Interviewing has been evaluated in a variety of settings in general populations, very little is known about how appropriate or effective this is with service users of forensic psychiatric units, even though their health concerns are just as important. You are a member of the multi-disciplinary team working directly with forensic inpatients at Marlborough House and your views are an important part of this project.

Who is responsible for the project?

This project is being lead by Rob Lyon, the health and fitness instructor at Marlborough House, who is responsible for the research.

What will happen to me if I take part?

If you decide to take part, you will be asked to complete a questionnaire regarding how you feel about the value of client-centred methods in a forensic mental health setting.

Are there any disadvantages in taking part?

It is not anticipated there are any disadvantages to taking part in this research. Your identity need not be known and completing the questionnaire does not commit you to any further course of action or judgment.

What are the possible risks of taking part?

It is not anticipated there are any risks involved with the completion of the questionnaire.

What are the possible benefits of taking part?

Your participation in this project and your completion of the questionnaire will provide valuable information for the research as a whole. It is hoped the information you provide will help to develop and promote more effective methods for working with the forensic mental health client group toward improving their health behaviours, especially in the realms of physical activity.

Confidentiality - who will know I am taking part?

Your participation in this research will be confidential and knowledge of your identity is not required. Questionnaires do not require you to enter any personally identifiable information and these may be returned anonymously.

Who has approved the project?

This project has been approved by The University of the West of England and the Oxford and Buckinghamshire Mental Health Trust research and development departments.

What will happen to the results of the project?

The results will serve at least two purposes; the first will be to help with the professional doctorate I am studying. The second will be to provide useful information for the care teams at Marlborough House in relation to the ways in which services are provided here.

Contact for Further Information

Please feel free to contact Rob Lyon for any further information or queries in person at Marlborough House, via email – robert.lyon@obmh.nhs.uk – or by telephone – 01908 243496. Alternatively you may contact my supervisor, Dr James Byron-Daniel, for any questions or queries at UWE James.Byron-Daniel@uwe.ac.uk

Thank you for reading this information sheet.

Appendix 12 – Physical Health Audit



Physical Health Needs of inpatients in the Forensic Service

Leads: Harriet Jordan – Audit Assistant,
Dr Vivek Khosla – Consultant

Key contributors

- Sophie Dewar, Audit Assistant
- Ben Jack, Audit Assistant
- Members of the nursing team across the inpatient wards
- Dr Lisa Gardiner, SPR
- Dr Sophia Anwar, SHO
- Dr Chris Chopdar, SHO
- Dr Anu Yadav, SHO
- Dr Ranjeev Jaswal, SHO
- Dr Orlando Trujillo, Staff Grade
- Dr Samiullah Mohammed, Staff Grade
- Dr Latifi, Staff Grade
- Angela Bird, Practice Development Nurse
- Dr Jonathan Bickford, GP
- Sandra Parker
- Dr Michael Rajendram, SHO

Background:

Previous research findings have established increased physical health needs of psychiatric patients. Psychiatric patients are thought to be at increased risk of diabetes, cardio-vascular disease and obesity. This aspect of our patients' care is often overlooked with the focus being on their mental health. Additionally, access to health promotion, screening programmes and ability to lead a healthy lifestyle for inpatients in a secure service can be limited by their legal status and the secure environment.

Aims:

- To gather information on the physical health needs of inpatients in the forensic service.
- Baseline assessment of current practice in relation to physical health needs within the forensic service and compare it to accepted guidelines.
- Identify areas of good practice and areas where practice needs to be improved.

Standards and/or Targets:

- OBMH Trust Policy: “The Physical Assessment and Examination of Service Users”.
- NICE Schizophrenia Guideline (2002) Criterion 12- Individuals have a physical health check at regular intervals.
- OBMH Psychotropic Drug Monitoring Guidelines.
- Maudsley Prescribing Guidelines.

Methodology:

- All 123 current inpatients in the forensic service were included. Information on the patients was obtained from the case notes.
- If inpatient for >12 months, physical health over the last 12 months was reviewed.
- For patients admitted within the last 12 months their physical health at admission and subsequently was reviewed.
- Two data collection tools, one for medical staff and the other for nursing staff, were used.
- Data was analysed using Microsoft Excel.

Summary of key outcomes:**Demographics:**

- 123 inpatients in total were reviewed (26% female, 74% male).
- 76% (93/123) patients had their ethnicity listed as White British.
- The remaining 24% (30/123) had a different heritage; Mixed British were 5% (6/123) and Black Caribbean 6% (7/123).
- The average age for female inpatients was 41 compared to 37 for male inpatients.

Smoking:

- Data was collected for 59/123 patients by the nursing staff.
- A substantial proportion of patients smoke - 76% patients were recorded as smokers of which 30% smoke between 10-20 cigarettes per day.

Weight and Diabetes:

- Data available on 59 patients.
- 15% of patients were recorded as having diabetes.
- 42% (52/123) were recorded as being overweight.
- On a positive note 95% of patients were recorded as taking part in some form of exercise, and 63% attended sports or fitness groups.
- BMI was available for only a small proportion of patients (16% - 20/123).

Issues surrounding screening, dental care and sexual health:

- 36% (21/59) of inpatients had a record of a visit to the dentist in the last year.
- Patients who had a record of being given written info on sexual health in the last 6 months - 7% (4/59).
- 22% (27/123) of patients had no clear documentation on past medical history in the medical notes.

Female Health:

- 57% of all female patients did not have the date of their last smear test recorded in their notes. (It should be noted that at the time of data collection the women's unit at Thames House had opened recently).

Physical examination

Patients admitted within the last 12 months:

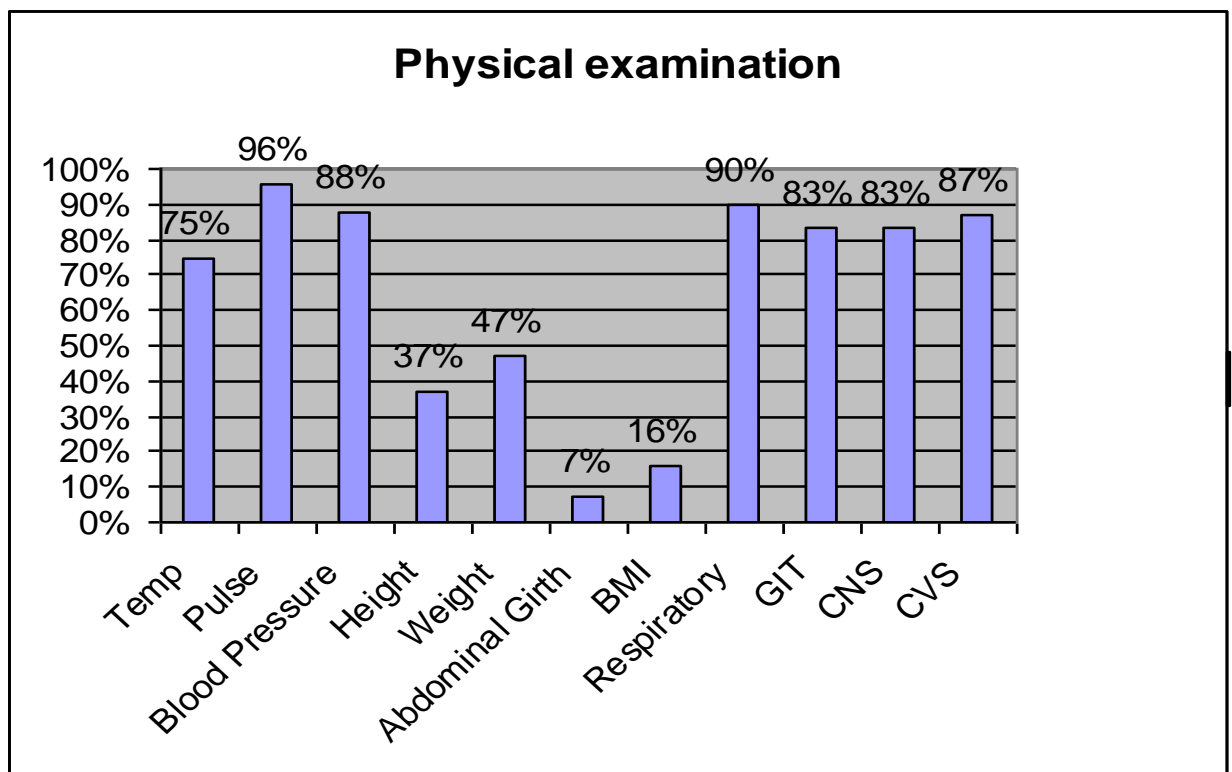
- 52% (64/123) patients were admitted within the last 12 months.
- 92% of patients had a physical exam within 2 weeks of their admission.
- 67% (43/64) of these patients had a physical health examination carried out on admission.

For 21 patients who did not have a physical health examination on admission:

- 62% (13/21) had their physical examination within 2 weeks.
- 10% (2/21) had their physical examination outside of the 2 weeks.
- 24% (5/21) of patients had **NO** record of having had a physical examination carried out on admission or subsequently

In patients of more than 12 months duration:

- Inpatients of more than 12 months duration represented 48% (59/123) of patients from whom data was collected.
- 71% (42/59) of these patients had a physical examination in the previous 12 months.
- 29% (17/59) had no record of physical examination in the last 12 months.
- Of those who had a physical exam recorded compliance with 7 of the 13 measures was over 75% including (temp, pulse, BP).



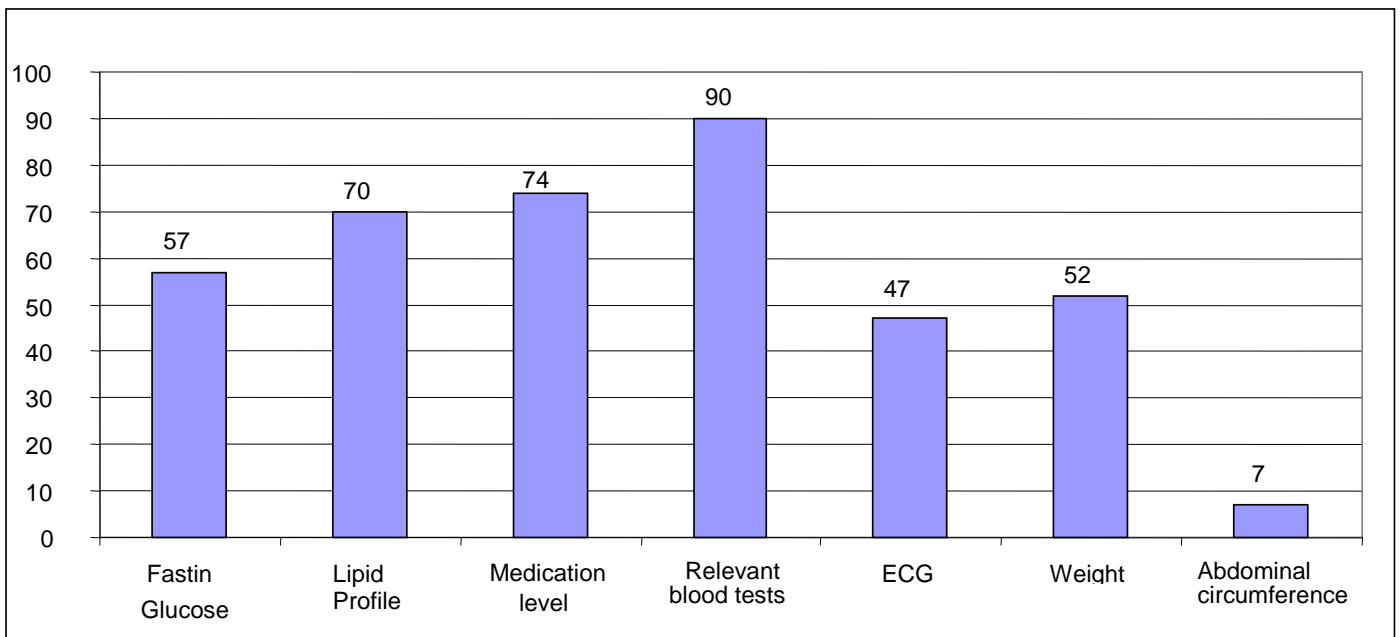
Baseline investigations

- Overall, baseline blood tests were done in 90% of inpatients.
- Full blood count (FBC) 100%.
- Compliance ranging from 75-96% for U+E's, LFT's, TFT's, Glucose and full lipid profile.
- HIV, Hep B, Hep C tests were done in between 7-9% of patients thought to require them.
- 44% of patients had a urine drug screen as part of the monitoring of their physical health on admission.
- 100% of patients with an abnormal test result (n=51) were followed up.

Psychotropic Drug Monitoring

- Compliance ranged from 7-90%
- Compliance with all indicators was above 50% (except abdominal circumference and ECG).

Percentage Compliance with Psychotropic Drug Monitoring



Key Findings

- A substantial proportion of patients smoke.
- More than 40% are overweight but weight was monitored in <50% of patients. BMI was available for only a small proportion of patients.
- 95% were taking part in some form of exercise and 63% in a fitness group.

- Medical history was not clearly documented in 22% of case notes.
- Issues surrounding screening, dental care and sexual health.
- 92% of patients had a physical exam within 2 weeks of their admission (67% on admission).
- 72% of inpatients (inpatients>12 months) had a physical exam in the previous 12 months.
- Of those who had a physical exam recorded, compliance with 7 of the 13 measures was over 75% including (temp, pulse, BP).
- 100% of patients with an abnormal test result were followed up.
- Variable compliance with psychotropic drug monitoring.

Next steps	Who leading	By when
1. All inpatients should have a systematic physical examination on admission and a yearly systematic physical examination thereafter. It should be recorded on the standard Trust form.	RCs and Junior Doctors	December 2009
2. Where a patient refuses to have a physical examination or investigation, this should be clearly recorded in the patient's notes. The reason for refusal should be clearly recorded.	RCs and Junior Doctors	December 2009
3. All inpatients on psychotropic medications should be monitored as per OBMH Psychotropic Monitoring Guidelines.	RCs and Junior Doctors	December 2009
4. Physical health related issues should be reviewed at the minimum (more frequently if indicated) during CPA meetings and included in the Care Plan.	RCs, Junior Doctors and Care-Coordinators	December 2009
5. Monitoring of some health indicators - weight, BMI, BP, pulse and abdominal circumference, should be carried out at least monthly. A standardised chart needs to be designed for this purpose. Refusal by patients should be documented in the clinical notes.	Ward Managers/ Care-Coordinators/ Practice Development Nurse (Angela Bird)	December 2009
6. All at risk female patients should be offered Cervical/Breast Screening as per national guidance.	RCs, Junior Doctors and Care-Coordinators	December 2009
7. Dissemination of results to staff of this project (through email to Doctors, nursing and other clinical staff, CG meeting, audit meetings, academic meetings)	Audit Assistant/Dr V Khosla	December 2009
8. Develop an action plan for Health Promotion programmes in the Forensic Service.	Head of OT Dept (Rebecca Kelly)/ Dr Trujillo/ Robert Lyon	January 2010
9. To ensure that all wards have the necessary equipment to monitor physical health effectively.	Ward managers/ Infection Control & Medical Device Manager (Sue Baldwin)/ Practice Development Nurse (Angela Bird)	December 2009
10. Re-audit to be planned	Audit Assistant/ Dr Khosla	Early 2010

Appendix 13 - Health Promotion Report

Promoting Good Health at Marlborough House

It is clear that the people we care for at Marlborough House are here primarily for concerns regarding their mental health. However, it is undoubtedly a concern to all of us that, whilst visiting Marlborough House, many of these people develop other health concerns the manifestations of which are somewhat more 'visible'. Controlling the increase in weight and development of cardiovascular and metabolic conditions such as heart disease and diabetes in mental health populations is 'tricky' to say the least. As Devlin et al (2000) point out, obesity is among the most easy to recognise and the most difficult to treat of medical conditions. The literature illustrates the legitimacy of this concern:

- Serious mental illness increases sedentary behaviour (Farnham et al, 1999)
- Psychiatric patients - higher rates of physical ill-health than general populations, much of which goes undetected (Koran et al 1989, Makikyro, 1998, Lawrence et al 2001)
- Mental health service users (esp. bipolar & schizophrenia diagnosis) 2x more likely to die of coronary heart disease, 4x more likely to die of respiratory disease compared to general populations (Harris & Barraclough 1998, Barr 2001, Phelan et al 2001)
- Overall premature mortality is 2.4 times higher for those with mental illness than in general populations (Berren et al, 1994).

But it's a thorny issue; whilst wanting to respect their right to choose, and understanding that the motivation to become more active amongst many people with mental illness is often quite low, we are nonetheless gripped with concern for our duty of care towards our patients.

So how can we best address the issue?

Physical activity

Some people feel our patients should be more active, and to some extent they may be right. After all, the energy equation for losing weight points to expending more calories than are taken in and physical activity is an excellent way of achieving this. However, whilst many mental illnesses are treated with medication as part of a care plan, which may legitimately be enforced by depot in some extreme cases, trying to enforce improvements in physical health behaviour can run aground on some obvious limitations; never has the proverb

'You can take a horse to water...' been so apt when we think about taking people to the gym.

Nevertheless, the benefits to mental health gained by being more active are now supported by a wealth of quality literature and experts have outlined at least five good reasons why physical activity should play a greater part in the promotion of good mental health;

- Relatively low cost (compared with medication)
- Relatively few side effects (compared with medication)
- No end points, as such (compared with medication taken for a finite period)
- A more agreeable option to patients who dislike medication & less likely to 'run short'
- Alongside any mental health benefits, a clear physical health benefit also

(Biddle, Fox, Boutcher, & Faulkner, 2000)

It certainly seems that, for mental health professionals concerned about the physical health of patients, promoting physical activity as an intervention is a win-win option for all their needs.

But is physical activity/exercise really the sticking point here?

A glance at the physical activity attendance records will show that, at the time of writing (18.3.10) all but one of the current patients at Marlborough House have attended exercise and activity sessions at some time in the recent past and most of them still attend quite regularly. Whilst it may be that we'd like to see more people attend more regularly, the implication here is we are not dealing with people who are completely unmotivated to become more active. In fact, another glance at attendance records illustrate that most patients are doing at least the necessary amount of physical activity required for good health according to Government guidelines. Coincidentally, this amount of 'moderate' physical activity is supported by the literature as being that which most benefits mental health. Nevertheless, waistlines still seem to be increasing and we need to consider some important questions.

Are patients doing enough physical activity to make a significant impact on their weight? The answer for most is probably 'No'. The American College of Sports Medicine (ACSM 2006) say that significant weight loss will not occur until a weekly calorie deficit of at least 1000 calories is achieved, and more realistically 2000+ calories.

Would patients benefit from doing more activity? For physical health, the answer for most is almost certainly 'Yes'; they'd certainly burn more calories

and exercise tends to increase levels of HDL (good) cholesterol, which is not possible through dietary intervention. However, for mental health, the literature is less clear and so the answer here is 'Probably not'. 'Doing more' also implies they either do more sessions or work harder at it and both of these options run up against the motivation issues again. Besides, it is far harder to engage people in vigorous intensity physical activity and, whilst they'd burn more calories, this level of physical activity carries a greater risk of drop-out *and* risk of a medical event.

Is it reasonable to expect our patients to achieve a target calorie deficit sufficient for weight loss from physical activity alone? Realistically, the answer is 'Probably not'. Currently 75% of people in the UK don't reach the recommended targets of activity for good health (Hillsdon et al 2001). This isn't excusing our patients for not doing enough physical activity, rather it is putting into perspective the reality of hoping they will lose weight and become more healthy from physical activity alone. Besides, we can only guess at the adverse consequences of 'pushing this envelope' with patients already engaged in some physical activity.

Does this mean there is no hope for our patients? The good news is 'Certainly not!'

Diet – 'reasonable eating, reasonable weight'

There are, of course, two main factors to consider in the development of overweight and obesity; physical activity and eating. Generally, there are no 'good' or 'bad' foods; just food with more or less calories. Unfortunately for our patients, the food that tastes the best usually has the most calories. But this is a moot issue in the sense that over-eating any type of food can lead to increases in weight; one might have the most nutritiously perfect diet, but if calorie intake exceeds calorie expenditure, weight will be gained. This issue is only compounded by the fact that the effects of some types of medication are to induce weight gain. For those people who do find the motivation to engage in physical activity sessions, this effectively threatens to 'cancel out' the effort they've made to be more active.

Can a negative energy balance sufficient for weight loss be achieved by reducing food intake and being more physically active? The answer to this is an emphatic 'Yes'! And there are at least two great success stories to be found on the wards to back this up.

Recently, at least two patients have managed to lose significant weight, in terms of stones rather than pounds, over the past few months despite one of these

being prescribed weight-inducing medication. This has been achieved through a regular pattern of attendance to physical activity sessions, conducting moderate-intensity activity, and by paying attention to food intake – not in a particularly detailed way, but by simply limiting the overall amount of food eaten. However, the clinical team at Marlborough House have expressed concerns over several areas that make controlling calorie extremely challenging: portion size, second-helpings, take-away foods and 10-o'clock suppers.

Portion Size & Second Helpings

Around two years ago, a formal complaint was made by the patients to the Trust, that they did not feel the portion size was adequate for an all male population. An investigation was undertaken, and it was felt that an increase in the amount of food obtained would be necessary. Thus, portion size has increased.

Patients are also observed to frequently return for second helpings. After exploring this further with the Healthcare Assistants on the ward, it seems that the vast majority of patients do return for second helpings of their main meal and pudding, and sometimes even thirds.

Ten o'clock Snack

Patients have, for some time, been offered a 'snack' at ten o'clock at Marlborough House. This is mainly slices of toast and, on occasions, sandwiches of some kind. It appears that over some years, the ten o'clock snack has increased in size significantly. Hotdogs with fried onions, pizza, beans on toast, scrambled egg on toast spaghetti on toast, cakes (are always provided), have become part of what patients expect.

Take Away Meals

In addition to the two meals provided by cook chill, and the ten o'clock supper, the patients are frequently ordering take away meals of an evening. This appears to consist mainly of kebab-type take-aways and chicken & chips. Some patients order this regularly throughout the week and these are often ordered quite late into the evening. It is not unknown for these to arrive at the ward as late as 12-midnight.

At the time of writing, a brief audit was completed on the caloric content of the daily meals, focusing on main lunch and evening meals provided by cook chill. A sample based on **ONE** standard portion was accounted for. The daily amount of calories provided by these two meals (not including second helpings), was in line with the WHO (2004) recommendations of daily calorie intake for a healthy

male. The average daily amount of calories ranged from 1835, to 2000, but never exceeded this. Clearly, the extra food patients receive on top of this would make balancing the energy equation through exercise alone extremely difficult.

Causing an effect

At Marlborough House, we have clear, first-hand evidence that it is possible for patients to manage their weight and attenuate the onset of poor physical health conditions in the face of challenging conditions. What is less clear is how we might encourage others to do the same.

Seymour (2003) points out that mental health professionals might find it difficult to promote physical health care amongst their patient groups despite their having a vocational motivation to “make a difference in the lives of vulnerable people”. Dean (2001) suggests there is a possible skill deficit for physical healthcare and lack of clarity over whose responsibility this should be within mental health professionals. Nevertheless, whilst arguments may persist over who cares for what in which professional domain, the solution need not necessarily be a complex one. As Phelan (2001) points out, the physical health of people with severe mental illness can be improved if primary care and mental health professionals pay attention to it.

What does this mean in practice?

It should be clear to all that the responsibility for improving the situation can not fall just to one or two people. That said, there is a new policy for the physical health care for mental health patients in process, which calls for someone to oversee and coordinate the efforts made to improve and promote physical health amongst patients at each unit within the Trust. Nevertheless, it is important to gather as much feedback from everyone within the MDT about what kinds of actions or initiatives we put into practise. At a recent meeting concerning this issue two initial suggestions were made:

- that everyone within the MDT be consulted and asked for suggestions that may help
- that the patients themselves be informed openly about staff concerns for their health, perhaps through ‘health meetings’ where the risks inherent in poor health behaviours are explained. It was thought that a ‘plea’ could be made for them to think more carefully about this situation and to help themselves by, for example, limiting the days of the week they have ‘fast foods’ as meals.
- further to this there may be one or two simple, practical steps we might consider:

- limiting the prompting for second helpings made to patients at mealtimes
- limiting the days of the week that patients are able to have take-away food delivered to the wards
- limiting the time in the evening when take-away food can be delivered to the wards
- ceasing the practise of having supper-times, or at least limit the type of food offered at this time

Interestingly, upon speaking with a patient who had been moved from Marlborough House to Woodlands low secure unit in Aylesbury, the first thing he noticed – and appreciated from his own health perspective, as he said – was that ‘seconds’ were not provided and take-aways could only be ordered on certain days of the week. Even though patients on pass may still avail themselves of high calorie foods, at least it can be said the practices on the wards in respect of food consumption were moderated by a concern that it can be very easy to inadvertently support a rise in patients’ bodyweights unless we pay attention to how this happens.

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