Developing and Evaluating an Acceptance and Commitment Therapy (ACT) Curriculum in Schools

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Abstract

With statistics showing a decline in child mental health, and acceptance and commitment therapy (ACT) being evidenced as an effective therapeutic model, this PhD initially aimed to investigate the feasibility and effectiveness of an ACT wellbeing intervention within primary schools. After the implementation and evaluation of the wellbeing intervention, whole school attrition and challenges with intervention adherence led to the novel research question: is it feasible to situate universal mental health interventions, in general, within primary schools?

Firstly, a universal ACT curriculum was created to be integrated into the personal, social, health and economic (PSHE) subject of the national curriculum in England. Research and advice from experts in teaching and educational psychology led to the research output of a yearlong ACT curriculum. Study 1 refers to the developmental stage whereby the curriculum and measures were piloted.

Correlational results found significant relationships between wellbeing and psychological flexibility, pro-social behaviour and close friend nominations, anti-social behaviour and close friend nominations and popular nominations. Training was conducted with teachers and in Study 2, its effectiveness was tested, and results showed a significant increase in ACT knowledge but no significant change in psychological flexibility of participants. Informal feedback was received in both studies which informed developments to the ACT curriculum and measures.

Study 3 evaluated the effectiveness of the ACT curriculum across the year of implementation. Few significant effects were identified; however, in a sub-group of below average wellbeing students, a significant increase in wellbeing and psychological

flexibility was found. This suggests the ACT curriculum had a positive effect on participants that needed the wellbeing support most.

Studies 4 and 5 focus on the qualitative analysis of student and teacher experiences of the curriculum through interviews. Key findings suggested the curriculum to be acceptable to the students and gave insight into future improvements. Additionally, teachers identified time pressures as a barrier to adhering to the lessons. A large challenge of this study was adherence to lessons and retention of schools due to the high attrition rates. Therefore, study 6 analysed primary school teachers in England (separate from Study 3) experiences of mental health education, which identified challenges of mental health education, barriers, facilitators and further requirements for success.

This thesis details an initial framework of creating and delivering one of the first solely ACT PSHE curriculums within primary schools, with the aim of universally supporting their wellbeing. This research contributes to ACT literature as it shows the acceptability of ACT processes with children and its benefits to children with lower wellbeing. Finally, it updates the knowledge of mental health education feasibility within primary schools in England, providing guidance for future research and policy, specifically supporting the process of co-creation.

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Chapter 1: Introduction and Background

With growing apprehension surrounding the wellbeing and mental health of children and its development into adulthood, it is pragmatic to analyse suitable approaches to support general wellbeing and mental health at an early age.

Acceptance and Commitment Therapy (ACT) has been identified as a suitable approach that can be utilised in a multitude of ways to benefit mental health and wellbeing.

Broadly, this review will cover the acceptance and commitment therapy approach, specific terminology, the importance of mental health in early development and the effectiveness of current interventions. This will lead into a discussion on appropriate ways to implement support for young children – focusing on the use of a child friendly development of ACT called 'DNA-V'.

1.1 Acceptance and Commitment Therapy as an Approach

The ACT approach was initially formalised by Hayes in the 1980's and has since undergone significant research and clinical development, but before delving into ACT as part of the third wave of psychotherapies it is important to highlight the background from which ACT was established. The creation of ACT emerged through the evolution of psychotherapies, which can be described through three distinctive waves. Understanding the development of ACT sets the context for the development of the wellbeing curriculum.

1.2 The Three Waves of Psychotherapy

The first wave of psychotherapies commences with the behaviour therapy of the 1950's. Through experimental psychological methods Watson relied on objective

analysis of covert human behaviour, often shunning methods of subjective analysis and introspection, which caused his work and theoretical perspectives to be heavily criticised (Hart & Kritsonis, 2006). Based on early behaviourist work that placed importance on external behaviour and human reaction to stimuli (Watson, 1913), the 'Little Albert' experiment (Watson & Rayner, 1920) led to greater understandings of human behaviour. In this study a nine-month-old boy was conditioned to fear a white rat due to the association created with a loud noise from striking metal objects whenever he made contact with the rat. This association caused a conditioned response of fear and distress whenever Albert was presented with a white rat with no other stimuli, demonstrating the importance of understanding associations within evaluating human behaviour. Whilst this study's ethical considerations for the young child have been heavily questioned (Powell et al., 2014), the results led to the suggestion that principles of classical conditioning can explain behavioural responses. Therefore, 're-learning' or 'unlearning' these unhelpful associations becomes a priority for clinicians.

To advance this, Jones, another behaviour therapy pioneer, was the first to implement a desensitization experiment named 'The Case of Peter' (Jones, 1924).

Peter was 2 years and 10 months old at the start of this experiment, he had exhibited a fear of rabbits and other comparable items (such as feathers, cotton and a fur coat). By using food that Peter enjoyed, they managed to reduce his fear of the rabbit by steadily moving it closer to him as long as he was still comfortable eating the food.

Jones used classical conditioning, by pairing the rabbit with food, and social learning, by having children as role models, to counter-condition Peter's fear of the rabbit. Even though extended periods between desensitization sessions and the use of two techniques led to questions over what caused the result, over the years many

researchers have replicated the counter-conditioning technique effectively (de Jong et al., 2000; Watson, 2016; Newall et al., 2017). However, this method gained more traction when Wolpe (1973) used elements of classical conditioning to develop systematic desensitisation whereby a person practices relaxation whilst slowly being exposed to feared stimuli. Whilst beneficial for some psychological disorders, the use of social reinforcement furthered its success. The reinforcement element being added due to Skinner's experimental analysis of human behaviour, resulting in the notion of operant conditioning (Skinner, 1938). The endeavours of these distinguished psychologists guided the evolution of behaviour therapy, which was a leading approach within the discipline of psychotherapy. However, due to behaviourism overlooking the acquisition of language and cognition in human behaviour, cognitive science, and cognitive therapy in particular, became dominant in the treatment of psychological disorders. Leading to the growing body of evidence and development of cognitive therapies.

Cognitive therapies are known as the second wave and is often described as the cognitive revolution, whereby psychologists were still using environmental and behavioural factors to form understanding, but were also including human cognition (Ruggiero et al., 2018). One of the first branching into the cognitive wave in 1955 was Ellis who developed rational emotive behaviour therapy (REBT). REBT focuses on a person's present time negative perceptions of a situation, which can lead to irrational/unhelpful thoughts and behaviours and encourages them to challenge these to avoid harmful outcomes (Ellis & Ellis, 2011). However, this cognitive based approach was not fully welcomed by the community until the 1970's when Beck focussed his efforts into cognitive research. Through this he developed cognitive therapy (CT) which aimed to assist clients in recognising their negative thoughts and errors in rational

cognition that led them to being depressed (Beck, 1967). Through challenging, adapting or reducing these individual cognitive thought processes, CT had been found effective in treating depression (Hollon & Beck, 1994) and anxiety (Beck & Steer, 1993). Due to the evidenced success of this approach eventually cognitive therapists and behaviourists blended their approaches to bring us cognitive behavioural therapy (CBT) (Zettle, 2005).

CBT has been a dominating approach in psychotherapy for the past four decades, focussing on the interactions between thoughts, behaviours and feelings as well as using techniques such as cognitive restructuring which helps the individual to question maladaptive cognitions (Beck, 2011). Then through identification of these dysfunctional cognitions the individual can learn alternative ways of thinking that are more representative of their experience – resulting in an improvement of their psychological disorder. The continuing evidence surrounding CBT suggests it to be the most effective psychotherapy, and multiple reviews of CBT note its superiority treating individuals for a variety of psychological disorders in comparison to treatments such as antidepressants, other psychotherapies and psycho-social therapies (Butler et al., 2006; Hofmann et al., 2012; David et al., 2018). In addition to this, CBT is a recommended and provided therapy through the National Health Service within the UK (NHS, 2022), this demonstrates the legitimacy of CBT as the NHS is a reputable service.

The wealth of support for CBT stands for itself; however, there are still some critiques of this approach. Firstly, it is hard to distinguish whether a persons' negative thought process causes a psychological disorder to develop or if the thoughts are a consequence of the disorder. This has been supported by Lewinsohn et al. (1981) who found participants that developed depression were no more disposed to negative

thoughts prior to diagnosis than participants that did not develop depression, suggesting that 'faulty' cognition may be an outcome from depression as opposed to the cause. Therefore, suggesting CBT approaches are mechanistic due to promoting the idea that there is a directly causal relationship between internal mental cognitions and behaviour (Hayes et al., 1999). Another limitation is that numerous component analysis studies showed that the cognitive element of CBT made no difference to the results when compared to just the behavioural elements, for example Jacobson et al. (1996) when researching depression and Borkovec et al. (2002) when analysing generalised anxiety disorder. In addition to this, a large critique of CBT is that it assumes that our thinking should be rational, it aims to resolve an individuals' dysfunctional thinking using CBT's own ideologies (Pilgrim, 2011), thus ignoring the diversity of views in society, and promoting westernised modernity. Due to the questioning of CBT's true effectiveness and theoretical approach, psychologists began to compose innovative approaches to psychotherapy leading to the third wave.

The third wave is suggested to umbrella a range of emerging therapeutic approaches, such as mindfulness based cognitive therapy (MBCT), dialectical behavioural therapy (DBT) and ACT (Hayes, 2004; Hayes & Hofmann, 2017) to name a few, and can occasionally be referred to as acceptance-based therapies (Carona, 2023). Whilst third wave therapies continue to utilise behavioural techniques they aim to focus on processes, context and function of how an individual relates to their experiences. Rather than changing negative thoughts, as is frequent practice in CBT, these third wave processes intend to alter the function of them, primarily through mindfulness and acceptance (Hayes, 2004; Baer, 2005).

It has been argued that third wave therapies have questionable roots relative to CBT and often exclude the most well-known and effective elements of CBT (Carona,

2023). Additionally, some reviews have found third wave approaches to be no more effective than traditional CBT and suggest they do not meet the criteria to be empirically supported (Ost, 2008; Linardon et al., 2017). However, since these reviews further empirical research has been conducted to show the efficacy of third wave therapies like ACT and DBT, in treating anxiety, depression, pain and aggression (Bai et al., 2020; Gloster et al., 2020; Cunha et al., 2024).

There is also an array of previous evidence in support of their success in treating psychopathologies. For example, a systematic review conducted by Hunot et al. (2013) found that third wave approaches, such as ACT, are sufficiently effective in treating depression. Albeit the review was of a low quality due to a small number of studies being included, it is important to note that at the time of this review the quantity and quality of third wave-based studies was minimal comparative to the more mainstream CBT, but it has continued to advance and gain popularity. Hayes et al. (2023) discuss how scientific approaches have allowed us to progress in alleviating human suffering and therefore, continual advancements are needed to foster the development of approaches aimed at supporting wellbeing. In particular, ACT is an area that has gathered recent attention, both negatively with published works critiquing the ACT model (e.g., Hofmann & Asmundson, 2008) but also positively with a growing wealth of evidence to support the approach. For example, a review of 20 meta-analyses found ACT to be effective in improving mental health across a variety of measures, including depression and anxiety (Gloster et al., 2020).

1.3 Understanding ACT: History and Theory

To preface, ACT is a contemporary psychotherapeutic approach that combines aspects of cognitive-behavioural therapy with mindfulness and acceptance strategies.

At its core, ACT seeks to help individuals develop psychological flexibility by encouraging the acceptance of thoughts and feelings rather than attempting to control or avoid them. It emphasizes the importance of clarifying one's values and committing to meaningful actions that align with those values (Hayes, 2004; Hooper & Larsson, 2015). By doing so, individuals can learn to manage their thoughts, emotions, and behaviours more effectively, leading to a more fulfilling and purpose-driven life. It is a holistic approach that aims to acknowledge the complexity of human experience and offer valuable tools for navigating life's challenges. It is suggested that ACT's development can be split into three distinct periods (Zettle, 2005): the initial formative period outlining the earliest work, the transitional period and relational frame theory (RFT) accounting for language, then finally the period whereby ACT has been circulated and continues to be investigated for its efficacy.

The formative period dates from the late 1970's-1985. In 1976, Hayes and Zettle agreed that language and rule governance significantly influenced the process of treating problematic human behaviour. In the absence of any existing theories to account for this, Hayes and Zettle formulated their own. They viewed cognitions, such as thinking, feeling, and believing, as behaviours themselves- whilst not observable outside of the individual, they were seen as having the ability to inflict behaviour-behaviour effects, not causing but controlling overt behaviours (Hayes & Brownstein, 1986). A simple example might be something like this: thoughts such as "I am bad at math" can invoke a behavioural shift into giving up easily on math-based tasks.

Treatment therefore aimed to reduce this control by seeing the thought as just another event at that time, thus causing the individual to be more passive of the thought and not seeing it as justification for giving up. This socio-verbal treatment model was seen to expand upon the distancing element of cognitive therapy proposed

by Beck (1979) and therefore was labelled 'comprehensive distancing'. The component of distancing allows a person to view their thoughts as a listener – at a distance – which is integral to the cognitive model. Psychologists propose that comprehensive distancing is the antecedent to ACT (Hooper & Larsson, 2015), to which they share multiple components; however, ACT places a greater emphasis on the consideration of values in the form of principles that guide our actions and committed action such as achievable goals in line with our values (Hayes et al., 2006), which were further developed within the subsequent period.

Within the transitional period (1985-1999) we see the evolution of RFT (this will be briefly discussed within the next sub-section) alongside the refinement of the therapeutic approach. During this period, the name of the model was replaced with the aim to differentiate it from cognitive therapy. This is where the terminology 'acceptance and commitment therapy' was first used in a paper presented at the Association for Behavioural Analysis conference (Wilson et al., 1991). Through the embedment of language and cognition, the understanding of RFT in ACT placed importance in value driven processes (Zettle, 2005), leading to a fully developed model.

The dissemination period (2000-present) looks at the efficacy of the ACT model in treating mental health disorders. Since the writing of Zettle's paper, ACT has flourished and continues to be investigated in many forms – widening its use past the scope of only treating psychopathology.

1.4 Underpinnings of ACT: Functional Contextualism and Relational Frame Theory

Functional contextualism is a philosophical approach rooted in behaviour analysis, whilst relevant to the understanding of ACT development, it does not specifically relate to young people in terms of this thesis. It emphasises the importance of understanding behaviour in context and seeks to explain the reason individuals act the way they do based on the functional relationships between the environment and behaviour (Hayes et al., 2006). That is, the function of a behaviour is more important than its form; however, the function of a behaviour is only known when the context is made clear. In clinical terms, our thoughts and feelings are not intrinsically problematic, it depends on the context. However, sometimes these thoughts can function in a harmful way – often when the context includes fusion and experiential avoidance. It has been determined that ACT's basis is grounded in functional contextualism (Hayes, 2004).

Additionally, it is explained that ACT is founded on the functional contextual framework RFT, that was developed to analyse human language and cognition (Hayes et al., 2001). In this post-Skinnerian approach, the development of RFT began when the phenomena 'stimulus equivalence', identified by Sidman (1971), became of interest to Hayes and Brownstein. Stimulus equivalence is where a person can form relationships between two or more stimuli without training. Sidman showed that an individual with developmental needs who was trained to match text (the word 'cat') to spoken words ("cat") and then spoken words to pictures (of a cat) was able to automatically and accurately link text to picture. Essentially suggesting that if A=B and B=C then we can also pair A=C without teaching the relationship. Hayes, Barnes-

Holmes and Roche (2001) expanded on Sidman's stimulus equivalence in two keys ways:

- 1. They suggested that human beings use many different relations. For example, whereas Sidman's research focused on A being *the same as* B, A could be *different* to B, *opposite* to B, *bigger than* B, etc.
- 2. They suggested that if you gave a function to one of the stimuli in a language network that it would impact the way that other stimuli in that network are viewed. For example, imagine I told you that A is bigger than B, and that B is bigger than C. And then imagine I presented C to you followed by a big bang that scared you. How do you think you might react if I present A to you? In this case, the functions of A have changed because of its relationship to C. This effect is called transformation of function, and these ideas heavily influenced the development of ACT because the approach became focused on using language to help change the function of overt and covert language.

Further critique of this topic is beyond the scope of this thesis; however, understanding RFT in relation to ACT is key for setting the context of its development. RFT has been criticised as being too complex, causing great debate within the community (Gross & Fox, 2009). Palmer (2004) argues that significant components of this principle are missing suggesting it is hard to evaluate. Further psychologists have stated that RFT is not a new theory, but one that is based off other theories and logic (Burgos, 2003; Osborne 2003). Despite the controversy, an analysis of RFT research found there to be significant empirical and theoretical literature contributions in a relatively brief period of time (Dymond et al., 2010). Therefore, the founders of ACT

would maintain that it has (1) led to a vibrant research program and (2) underpins the ACT model.

1.5 Perspective of ACT: Poor Mental Health

Hayes et al. (1999) state "suffering is a basic characteristic of human life" (p.1), suggesting that pain, grief, anxiety and sadness are unavoidable. However, it is the way in which we navigate these experiences that can lead to poor mental health. A frequent strategy to manage unwanted feelings involves attempting to avoid them through partaking in potentially risky or harmful behaviours, such as taking drugs, gambling or isolating oneself. In addition to these risky behaviours, avoidance of unwanted feelings was found to be associated with self-harm (Nielsen et al., 2016) and was also a predictor for risky drinking in young adults (Stewart et al., 2002). This is known as experiential avoidance (EA), which can be defined as the reluctance to be present with negative thoughts, feelings, and emotions, which often impacts upon behaviour in negative ways (Hooper, 2021). In other words, individuals may use EA to try to gain control over their feelings; however, it usually results in the opposite (Shi et al., 2016). Indeed, EA can lead to increased psychological distress. For example, if a person experiences anxiety over time, they may continue to repeatedly inhibit these feelings, or respond to them through behavioural avoidance, rather than accepting and addressing them, likely causing the feeling to gradually build and elicit more psychological harm. It is suggested that by developing psychological flexibility (which will be discussed in more detail in a subsequent section) through ACT, a person can develop a relationship with language such that they become able to avoid engaging in avoidance behaviours (Dindo et al., 2017).

1.6 What is ACT?

As briefly mentioned above, ACT's therapeutic goal is to increase psychological flexibility, that is, a persons' ability to be fully present in the moment whilst consciously moving in the direction of their values (Hayes et al., 2006). Often individuals avoid or suppress unwanted thoughts which can cause the individual to not behave in line with their values. Therefore, ACT seeks a way to encourage individuals to accept their unwanted thoughts and engage in valued actions. A well-known ACT model that aims to enhance psychological flexibility is the *Hexaflex*, it defines six core processes: cognitive defusion, acceptance, contact with the present moment, self as context, values and committed action (Hayes et al., 2006).

- 1. Acceptance. This process focuses on an individuals' capacity to accept their thoughts and feelings. The aim of treatment is to strengthen this skill within the individual to reduce the control the thoughts/feelings can have and lessen the possibility of experiential avoidance (Baer, 2010). Acceptance is not a means to an end, but helps to endorse valued behaviours (Hayes et al., 2006).
- 2. **Cognitive defusion.** This process aims to change the function of an unhelpful thought instead of changing the thought itself by lessening the language processes that cause fusion. An individual can become fused to an unhelpful thought and see it as absolute truth, for example if an individual has the thought "I am bad at math" they would accept it as fact. Cognitive defusion encourages the individual to see the thought as just that, a thought that does not need to hold control over their feelings or behaviours, making them become neutral observers (Baer, 2010).

- 3. Contact with the present moment. This process, comparable to mindfulness, focusses on awareness of psychological and environmental events with importance placed on doing this non-judgementally (Hayes et al., 2006). As humans we can become overwhelmed thinking of the past and future, often forgetting to live in the present moment. This process aims for individuals to engage with what is happening in the 'now', consciously connecting with the psychological and physical stimuli they are experiencing. Typically, mindfulness techniques are used to establish this skill. Within ACT, mindfulness techniques can be seen to reduce reactive behaviours (Goldin & Gross, 2010; Schuman-Olivier et al., 2020) which can lead to better emotional regulation and behaviours more consistent with our values.
- 4. **Self as context.** The purpose of this process is to separate what we believe to be our sense of self (the content of our thoughts and feelings) from what we observe and experience ourselves. From building awareness of our observing self, we can pay attention to our experiences without forming verbal attachments (Hayes et al., 2006), again relinquishing the control the unpleasant thoughts could have. We can make multiple statements about ourselves: "I am a student", "I am kind", "I am not good enough", which is a conceptualised self built from self-evaluations (Baer, 2010). But the true 'I' (observing self) is a constant, compared to self-evaluations that can fluctuate over time. Finding the ability to recognize this allows us to abandon any negative self-evaluations that could cause psychological harm (Baer, 2010).

- 5. Values. These are the principles that guide our behaviour in directions most important to us. Values are personal (although many people share core values such as family, friendships, intimate relationships etc) and purposeful (Hooper & Larsson, 2015). Not to be confused with goals (something that can be achieved and completed), values keep us on a continuous pathway through life, they are never 'completed' as we can always behave in ways complementary to our values. Psychological distress can often develop when we are not behaving in line with our values, for example, a student may value their education but due to social anxieties are unable to attend lectures and seminars, therefore impacting their education and potentially causing additional pressures. ACT ensures individuals understand their values and are honest about barriers that could hinder them from actioning valued behaviours (Baer, 2010).
- 6. **Committed action.** This means utilising our values to develop behaviours which will effectively improve our lives. This can be done by setting achievable goals that keep a person moving in line with their values, leading to a more meaningful and purposeful life (Hayes et al., 2006). Making these behaviour changes can help to alleviate psychological distress and are crucial to the success of the ACT process.

There is no definitive order when implementing these processes and there are plentiful exercises for each process, some of which include an amalgamation of these processes. These core processes of ACT do overlap and interlink, each support one another with the combined aim of increasing psychological flexibility. Understanding

these core processes is relevant to the creation of a school-based ACT intervention and highlights how ACT aims to increase psychological flexibility in order to support psychological wellbeing.

1.7 The Effectiveness of ACT: Psychological Flexibility

There is useful research that has been carried out to look at the effectiveness of ACT within the adult population. Firstly, a systematic review of 18 studies, including over 1000 participants, found ACT led to a significant reduction in depression compared to control groups (Bai et al., 2020). Within this review the researchers adopted the Cochrane Collaboration 'Risk of Bias' tool (Higgins & Green, 2011) and found that the studies overall had a low risk of bias and were thus rated as moderate to high quality and therefore represented reliable results. More specifically, the studies included within this review looked explicitly at depression as an outcome measure, they ranged from 2 weeks of ACT treatment to 24 weeks and included participants from 7-91 years of age. Bai et al. (2020) suggest that ACT should only be directed by professional psychologists, likely due to the efficacious studies included also being conducted by professionals. A further systematic review acknowledged the benefits of ACT across a spectrum of anxiety disorders such as general anxiety disorder, posttraumatic stress disorder, obsessive compulsive disorder and panic disorder (Swain et al., 2013). Thirty-five of the 38 studies reported significant improvements in their various anxiety outcome measures; however, the authors argue that consolidating the findings is hard due to the small number of studies with considerable heterogeneity in measures utilised and treatment modality. That being said, ACT has even been found effective when used in group therapy, Farhang et al. (2017) found that through just 8 ACT sessions spanning across one-month psychotic participants and participants with

mental health disorders demonstrated a significant increase in happiness and generalised wellbeing. Whilst initial findings are based on a limited number of studies, there is promise for the use of ACT as an effective intervention as well as noted areas for development, e.g., methodological rigor (Swain et al., 2013).

The body of research surrounding the efficacy of ACT when applied to children is ever growing. A meta-analysis of 14 studies found significant improvements in depression and anxiety in children when they were exposed to ACT therapy (Fang & Ding, 2020b). Whilst there were no significant differences between ACT and conventional CBT, the results still suggested ACT can positively impact a child's mental health – similar to other well-established therapies. Further support for ACT with children comes from two pilot studies conducted on a total of 98 adolescent children, which found ACT to be effective in reducing psychological inflexibility, stress and depressive symptoms (Livheim et al., 2015). Whilst the outcomes are encouraging, this study highlighted the need to complete full sized studies with larger numbers of participants. A systematic review with a total of 707 participants also supports these findings, with 21 studies reporting improvements in psychological symptoms, psychological flexibility and quality of life in children aged up to 18 years when ACT was used as an intervention (Swain et al., 2015). A recent systematic review by Morey, Samuel and Williams (2024) examined the efficacy of universal online self-help ACT interventions for young people (10-25 years old); 11 studies were eligible for inclusion and nine studies reported at least one significant result. Seven studies reported significant improvements in mental health measures and four studies found significant improvements in ACT process measures (e.g. psychological flexibility, value-directed behaviour, acceptance and experiential avoidance). As demonstrated, there is empirical support for ACT; however, there are limitations to this evidence base

including the limited control comparisons and heterogeneity of measures and treatment which makes comparisons challenging.

Increased psychological flexibility is the intended outcome of ACT and therefore the improvement of psychological flexibility, in addition to the outcome of interest in a particular study, is a demonstration of its' efficacy. Indeed, improvements in psychological flexibility should *mediate* improvements in other outcomes or be the pathway through which success happens therapeutically. According to Ciarrochi et al. (2010) ACT's mediational hypothesis is as follows: psychological inflexibility is predicted to cause human suffering, ACT is predicted to enhance psychological flexibility and such enhancements in psychological flexibility should improve wellbeing, lessen clinical symptoms, and increase value driven behaviours. Taking this into account, researchers have developed measures examining the extent to which an individual demonstrates psychological flexibility.

Firstly, most measures of psychological flexibility are self-report measures that employ a Likert style scale – such as the Acceptance and Action Questionnaire (AAQ) updated to the more reliable AAQ-II (Hayes et al., 2004; Bond et al., 2011). This became one of the most commonly used measures of psychological flexibility in adults, whilst other reliable measures exist for children e.g. the Avoidance and Fusion Questionnaire for Youth (AFQ-Y: Greco, Murrell & Coyne, 2005).

When using the AAQ-II, research has revealed correlations between psychological flexibility and psychological outcomes. That is, higher scores in psychological flexibility have correlated with lower scores of depression (Forsyth et al., 2003, Hayes et al., 2004; Plumb et al., 2004) and anxiety (Stewart et al., 2002; Tull et al., 2004). A wealth of research suggests that greater levels of psychological flexibility are associated with better psychological wellbeing, as well as quality of life in adults

(Hayes et al., 2006). In addition to these findings, psychological flexibility was also found to significantly correlate with emotional wellbeing and self-compassion within adults aged 17-60 years (Marshall & Brockman, 2016) — both beneficial to the mental health of a person. Aside from the identified correlations, in a mediation analysis review psychological flexibility was found to be a mechanism of change for mental health outcomes (Stockton et al., 2019). Mediation studies identify the underlying mechanisms by which interventions produce significant outcomes therefore, this provides evidence for psychological flexibility as an efficacious ACT process.

Although examining correlations within children is crucial to this thesis, there is currently limited evidence in this area. However, a study conducted on 8–10-year-old children found a positive relationship between psychological inflexibility and anxiety (Simon & Verboon, 2016), the researchers argued that ACT would be a beneficial early intervention to equip children with psychological flexibility to counteract the development of child anxiety. With that noted, it is important to clarify that ACT interventions have been found successful in improving psychological flexibility within children. As mentioned prior in the Livheim et al. (2015) pilot studies and the Swain et al. (2015) systematic review, they did see a reduction in psychological inflexibility and improvement in psychological flexibility when ACT was used with children. Therefore, it seems appropriate to continue investigating the effectiveness of ACT with children using psychological flexibility as an indicator of its success.

1.8 Understanding Mental Health

There is empirical support for ACT approaches in relation to supporting mental health in adult and children within clinical settings and more recently as a general approach, as a means to support mental health and wellbeing. Therefore, as a first

step, the terms mental health and wellbeing will be defined in order to provide clarity in later discussions.

The World Health Organisation (2018) characterizes *mental health* as a fundamental element of our health and states that mental health is not simply the nonappearance of mental health disorders. They define it as "a state of wellbeing in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community" (World Health Organisation, 2018, para 2). However, in more recent years this definition has come under critique. Specifically, it has been suggested that whilst the definition of mental health has improved over time, it is still heavily focused on mental health being primarily positive, omitting the fact that feelings of sadness, anger etc. are part of a normal, healthy life (Galderisi et al., 2015).

The American Psychological Association (n.d) interpret mental health as "a state of mind characterized by emotional wellbeing, good behavioural adjustment, relative freedom from anxiety and disabling symptoms, and a capacity to establish constructive relationships and cope with the ordinary demands and stresses of life" (Definition 1). This definition recognizes that mental health is not exclusively positive and that experiencing a degree of anxiety or disabling symptoms is a normal part of psychological functioning.

Wellbeing is another term that is widely used as a generic term for mental health, it has multiple conceptualisations and definitions and therefore, similar to mental health, the APA (American Psychological Association) definition for wellbeing will be utilised here. Wellbeing has been defined as "a state of happiness and contentment, with low levels of distress, overall good physical and mental health and outlook, or good quality of life" (American Psychological Association, n.d, Definition 1).

These definitions have been deemed adequate due to the American Psychological Association (APA) being the leading scientific organisation for psychology. Therefore, 'mental health' and 'wellbeing', will be referred to throughout this thesis in relation to their APA definitions above.

Like mental health, there is various terminology used to describe negative experiences of mental health. Terms such as psychological distress, poor (or other synonyms for 'poor') mental health and mental (health) disorders are sometimes used interchangeably, creating uncertainty to what each of these terms suggest. Therefore, to clarify, psychological distress can be defined as "a set of painful mental and physical symptoms that are associated with normal fluctuations of mood in most people" (American Psychological Association, n.d, Definition 1). Poor mental health is often viewed as someone having a clinically diagnosable mental health disorder (Roe & Aspinall, 2011). Where some define mental health as the absence of disorders, it is understandable that poor mental health can be seen as the presence of them. However, it can be argued that defining poor mental health in this way is reductionist. It is commonplace that a person may endure occasional poor mental health symptoms/psychological distress without a diagnosable mental health disorder. For example, a person may experience stress or anxiety due to their current life experiences but not enough to constitute a clinical diagnosis. A mental (health) disorder is defined as a psychological disorder that is classified within the Diagnostic and Statistics Manual of Mental Disorders (American Psychological Association, n.d). Therefore, it needs to be established that there is a clear difference between the phrase poor mental health and the term mental disorder, which is more clinically relevant. In terms of this thesis, the main focus is on supporting general wellbeing and mental health, as opposed to improving symptoms of a clinically diagnosed mental

disorder. Therefore, for transparency, 'mental/psychological distress' will refer to negative symptoms/experiences any person may have related to their mental health and the phrase 'poor mental health' will be used more generally to encompass all negative mental health terms. Now the terminology has been examined, it brings us to the importance of understanding the prevalence of poor mental health amongst the UK population.

With growing concern over poor mental health and a rise in mental health disorders, it is important to review these trends over time. Firstly, looking at adult mental health figures, statistics suggest that in a 2014 survey 1 in 6 adults (aged 16+) within England met the criteria for a common mental health disorder (McManus, Bebbington, Jenkins & Brugha, 2016), this is a 21% increase from their 1993 survey. It is suggested that an adult's mental health can be impacted by their mental health as a child (Public Health England, 2019) pressing the importance of mental health at an early age. Statistical reports on children's mental health showed in the year 2000 that 1 in 10 children had a diagnosable mental health disorder (Meltzer et al., 2003). In the year 2004, the Office for National Statistics (ONS) carried out a survey that also found 1 in 10 children aged 5-16 had a diagnosed mental health disorder (Green et al., 2005). However, in recent years there has been an upward shift in the numbers of children with a probable mental health disorder. In the years 2017 and 2020 a survey was funded by the Department of Health and Social Care and commissioned by the National Health Service (NHS) to explore mental health of children aged 5-16 within the UK. In 2017 it was found 1 in 8 children had a probable mental health disorder (Sadler et al., 2018) and then between 2020-2021 the numbers have yet again increased to 1 in 6 children (Newlove-Delgado et al., 2021). Whilst it might be argued that reduced stigma, better knowledge of mental health and better-quality routes to

diagnosis could be the reason for the rise in numbers, there are still 18% of the UK's 7–16-year-olds with a probable mental health disorder (Newlove-Delgado et al., 2022). These findings clearly indicate an alarming increase in poor mental health in the past 20+ years, which highlights a current issue within the UK that needs to be addressed. That is, young children's mental health is declining and supporting the general wellbeing and mental health of children is fundamental for stable growth and development.

1.9 Why Researching Mental Health Interventions for Children Matters

Birth to the age of 5 years is a crucial period in a child's development. Poverty, neglect, and absence of stimulation are just some of the factors that can lead to long-term effects on physical health, mental health, and wellbeing (Petersen et al., 2011). Some children have good wellbeing as they are surrounded by valuable support systems (such as: caregivers, friendship networks and authority figures – e.g. teachers), have low levels of stress in their lives and have the ability to be resilient through difficult life experiences. Additionally, there are a multitude of skills that a child can learn that will allow them to maintain their wellbeing; however, not all children have these support systems, lower levels of stress, know about nor know how to use these skills. When children lack these abilities, they are more at risk of being stressed and overwhelmed with emotions which can cause adverse effects both physically and psychologically – leading to poor mental health experiences.

Following on from this, children may experience adverse psychological effects due to a decline in their wellbeing. There is an array of psychological symptoms that children can experience; however, highlighting some of the most commonly experienced symptoms is of importance to this thesis. Some psychological effects that

children can experience when suffering with poor mental health are feelings of isolation and loneliness, research has found poor wellbeing and mental health have clear links to loneliness (Hards et al., 2021; Siva, 2020). Moreover, low self-esteem and high anxiety have been found to correlate with low life satisfaction in children (Huebner, 1991), it has also been suggested that low life satisfaction can be a predictor for the development of depression or other mental health disorders (Proctor et al., 2008). Not to mention, feelings of anxiety and depression tend to be amongst the most common psychological effects associated with poor mental health, remembering that being anxious and feeling depressed do not always constitute a clinical diagnosis. In regard to feelings of anxiety, it is significant to note that girls report higher levels of anxiety than boys, which has been a common finding within research over many years (Bender at al., 2012; Reynolds & Richmond, 1978), suggesting girls have a higher likelihood of experiencing feelings of anxiety when there is a decline in their wellbeing. Another adverse effect of poor mental health is lower educational success (Schlack et al., 2021), highlighting the importance of mental health in the ability to navigate through school comfortably. Often when discussing mental health people think more about the psychological effects, whereas the physiological effects can be just as detrimental, especially with children going through crucial stages of their development.

There are a range of physiological effects that can come from poor mental health. A study carried out on children aged 10-14 years old found poor mental health was associated with sleeping problems (Blok et al., 2022), lack of sleep within children can then lead to poor cognitive, physical, and emotional development (Gruber, 2013). When a child's mental health is suffering, they may struggle to cope with stressful situations, similar to adults, stress in children has been linked to imbalances in the

immune response, with associations to insulin problems also recorded (Carlsson et al., 2014). In addition to this, higher levels of stress can affect hormones and, especially within children and young adults, lead to an increase in acne (Bhaijamal & Nayak, 2023). In addition to these physiological effects, long term poor mental health has been linked to chronic illness (Di Benedetto et al., 2014), for example, diabetes and cardiovascular disease. As suggested above, there are many physiological effects that can stem from poor mental health – and even more that are not discussed. Which is why it is important to promote mental health in the early development of children.

In addition to long term physiological effects that can affect adulthood, there are long term effects of poor mental health on our mental health as adults. It has been consistently recorded that a child's poor mental health experiences may lead to adverse effects as an adult, as well as difficulty transitioning into adulthood (Copeland et al., 2015; Schlack et al., 2021). Research suggests over half of adult mental disorders begin in childhood or adolescence (Pine et al., 1998; Kim-Cohen et al., 2003; Copeland et al., 2009) – also, children or teenagers experiencing psychological distress (that do not fulfil the requirement for a clinical diagnosis) are at a heightened risk for developing a mental disorder in adulthood (Copeland et al., 2015) furthering the need for significantly effective early preventative measures.

1.10 Mental Health Interventions for Children

Now that we understand ACT as a method of treatment, the decline in child mental health and the need for children to have good mental health, it is pertinent to investigate ways in which mental health can be supported in children. One of these ways is through interventions, an intervention can be seen as an action designed to improve or stop a disorder (American Psychological Association, n.d.), which, in turn,

can help bring about a change in a person, perhaps behavioural or emotional. Due to psychological interventions often including several components, targeting a range of behaviours and expertise needed to deliver the intervention, they are frequently referred to as complex interventions (Skivington et al., 2021). Additionally, this Skivington et al. (2021) paper sets out a clear guidance from the Medical Research Council for developing effective interventions, showing the need to focus on theory development, context, refinement, implementation, feasibility and finally evaluation. These key elements are crucial to an efficacious outcome and therefore, interventions should aim to incorporate them to increase the probability of intervention success. There is a diverse assortment of psychological interventions that can be used to support a child's mental health, and years of research and evaluation has identified a multitude of effective methods e.g., CBT, interpersonal therapy (IPT), psychodynamic interventions and more, that have all undergone rigorous development in line with the Medical Research Council guidance. Despite differences between therapies in terms of formulation, there are two broad approaches via which all therapeutic interventions are delivered to children: targeted approaches and universal approaches.

Typically, targeted approaches are carefully planned for children that have a mental health disorder or have an increased risk of developing a mental health disorder (Muñoz et al., 2010). Targeted approaches are often seen as a reaction to a young person developing a mental health disorder or being deemed more at risk.

Therefore, a targeted approach is more focused as its' purpose is to improve specific symptoms or to help address the disorder. Opposingly, universal approaches tend to be on a larger scale, working with whole groups of children, regardless of risk of mental health disorders (Lowry-Webster et al., 2001). This approach can be seen as

preventative and can be used as more of a supportive measure for any poor mental health.

Targeted interventions have reported much success in reducing symptoms of different diagnosable mental health disorders in children, with cognitive and behavioural interventions performing best (Clarke et al., 1995; Durlak & Wells, 1998). A past review of psychotherapy from 1952-1983 revealed therapy with children has similar effectiveness to therapy with adults, with treated children achieving better outcomes than untreated children (Casey & Berman, 1985). A recent 2023 systematic review found that third wave therapies, such as acceptance and commitment therapy (ACT), mindfulness-based cognitive therapy (MBCT) and compassion focused therapy (CFT), had significant effects on emotional symptoms, behavioural difficulties, and wellbeing (to name just a few of the outcomes measured) within children and adolescents (Perkins et al., 2023), suggesting that psychological interventions do work for children. However, whether attempting to access these interventions via a school, via CAHMS or via a community initiative, there are often barriers that make things difficult. For example, most reviews note that timely access to mental health services is a barrier due to extensive waiting lists (Anderson et al., 2017; O'Brien et al., 2016). Other obstacles listed within systematic reviews of these barriers to mental health services include an insufficient knowledge of the services available, shortage of flexibility of the services, complicated processes, extensive regulations and policies, as well as financial restrictions and inadequate resources (Anderson et al., 2017; Gondek et al., 2016; Reardon et al., 2017). These barriers are important to note, as this can often be the reason children do not obtain sufficient treatment, especially at an early enough stage to avoid mental health issues continuing into adulthood (Woodward & Fergusson, 2001). Targeted interventions also rely on a teacher, guardian or

professional noticing symptoms of ill mental health, or risks, within a child and then reacting to this in order to treat them. Altogether, it seems worthwhile to look at other suitable options for children to gain mental health support. Specifically, the application of universal approaches delivered as a preventative intervention.

1.11 Interventions Within Schools

Preventative universal interventions focus on equipping young people with skills to cope with life experiences and emotions regardless of any clinical symptoms or risk of developing a mental health disorder. Universal programs have been found to be especially beneficial when delivered in school settings (Barrett & Pahl, 2006; Mackenzie & Williams, 2018) and, in this setting, universal programs minimise stigma, remove the need for screening and can capture those that may be at risk but have gone undiscovered (Werner-Seidler et al., 2017). Indeed, Offord et al. (1998) concluded that universal approaches should be the first step in reducing a child's psychiatric burden. Then if the universal approach is unsuccessful, a targeted approach should be the decisive step before clinical referral.

Universal interventions have led to effective improvements in disordered eating (McVey et al., 2007), aggressive behaviour (Flannery et al., 2003), disruptive behaviour (Bradshaw et al., 2008) and anxiety (Barrett et al., 2006; Lowry-Webster et al., 2001). These studies employed different psychological frameworks for the structure of their programs. In other words, the success of these interventions suggests that universal approaches, despite their theoretical background, can be impactful. A few systematic reviews have also been conducted on universal interventions delivered in Schools. For example, Sklad et al. (2012) carried out a metanalysis of 75 recent studies and found that universal school-based interventions

improved antisocial behaviour, pro-social behaviour, social skills, and positive selfimage. However, several of the studies included involved community and family-based elements which could affect the outcome of the interventions. Additionally, Corrieri et al. (2014) and Werner-Seidler et al. (2017) found that school-based universal interventions positively impacted mental health. Corrieri et al. (2014) carried out a systematic review of 28 reliable studies researching universal school programs which found the interventions were 65% effective in reducing symptoms of depression and 73% effective in reducing symptoms of anxiety, giving us compelling evidence of the benefit of school-based programs. Whilst useful to see the effects on anxiety and depression, it would be beneficial to also look at other wellbeing effects rather than focussing on just the prevention of anxiety and depression. Werner-Seidler et al. (2017) carried out a systematic review of 81 studies and found small effect sizes of 0.23 and 0.20 for reductions in depression and anxiety, respectively. The quality of the studies reviewed by Werner-Seidler was assessed using the Cochrane Collaboration 'Risk of Bias' tool (Higgins & Green, 2011) which found most studies did not provide sufficient details to assess quality, classifying them as having a high risk of bias and therefore poor in quality. Nevertheless, the researchers still concluded that universal programs have the potential to improve mental health within young people.

There are a variety of other reasons that a school makes a suitable environment for preventative interventions. Firstly, in the UK all children must go through education (privately, institutionally, or home-schooled). In the academic year 2019/2020 8.89 million children attended public or private schools (Office for National Statistics Regulation, 2020) and the most recent academic year (2022/2023) had 9.01 million children within the UK schooling system (Office for National Statistics Regulation, 2023). With 12.7 million under 16-year-olds in the UK within 2019 (Office

for National Statistics Regulation, 2020), we can determine that aside from children under school age, most of that population are in school – meaning that the school setting can be used as a vehicle to reach a lot of young people.

Secondly, to avoid complicated funding issues, the school environment already has classrooms, teachers and is a suitable place for students to learn. It can be argued that it is the optimal location as it is already seen by children as a learning environment so they may be more likely to absorb the information/skills taught. Due to the UK governments strict policy on absences, attendance within schools should be good meaning consistency in intervention implementation to achieve the most advantageous results. Finally, a significant benefit of implementing a universal approach into schools is the longevity of the intervention. It can be continued throughout each year of primary school and even cross over into secondary school for more relevant and topical wellbeing help and skills guidance. These reasons alone are compelling, suggesting that universal wellbeing approaches within schools would reach the largest amount of the child population with benefits such as lower costs, ease of implementation and clear accessibility to all.

Therefore, a literature review was conducted on some of the school-based interventions that have been empirically evaluated to gain a better understanding of (1) who should deliver the curriculum and whether they need training, (2) how long a curriculum should be, (3) what measures have been used, (4) what designs have been used, (5) what timepoints were used for measurement and (6) the type of psychological approach used.

1.12 Universal Wellbeing Intervention Studies in Schools

Given that there appear to be few universal wellbeing interventions situated within PSHE curriculum in the UK and given that many of these approaches lack empirical support, it seems important to conduct a deep dive into the effectiveness and implementation of universal wellbeing interventions from across the world, in order to examine which approaches are most favourable to support mental health. This section presents a synthesis of studies where wellbeing interventions were implemented within a school setting with no preference to studies country of origin. The aim was to look at the effectiveness of interventions as well as their means of implementation. Whilst there are systematic reviews that review interventions within schools, at the time of this review, there were minimal examples of reviews on universal wellbeing interventions in a school setting with the specific inclusion criteria listed below.

Initially, the aim was to examine year long, schoolteacher led wellbeing intervention in order to be able to use such interventions within school classrooms under the banner of a "PSHE Curriculum"; however, these criteria were too narrow to generate adequate results, and therefore the criteria was broadened such that there were no requirements for who carried out the intervention or for the length of the intervention. Although this limits any conclusions that can be made about whether a respective intervention could be used as a PSHE curriculum, it may give practitioners a starting place from which to broaden some of the interventions that do exist to fit the requirements of a PSHE curriculum.

1.12.1 Inclusion Criteria for Studies

Type of Participants – For inclusion, participants were limited to being school children between the ages 4 and 13 years old (primary and early secondary school ages in accordance with UK schooling). Studies were excluded if participants attended a special educational needs (SEN) school, or if their target group was specified e.g., children with experience of violence or on the autistic spectrum.

Type of Intervention - All interventions included had to be underpinned by psychological theory (types of intervention that were eligible to be included could be based on: CBT, CBT combined with another discipline, mindfulness, interpersonal psychology etc.). Interventions needed to be universal and school-based (this refers to a program that is offered to all children in the class and delivered on school premises). Other than the exclusion criteria above, no children were to be specifically selected or denied access to the program due to previously known data about their wellbeing. There were no requirements as to who carried out the intervention (teachers, researchers or health professionals could lead it, for example). Additionally, there were no requirements for the length of the intervention. Studies were included if the effects of the school-based program were compared to a no intervention or treatment as usual (TAU) group (meaning a class that continued with their regular practise).

Types of Outcomes - Studies were included if they measured children's wellbeing in the following forms: depression, anxiety, general mental health, social skills, wellbeing, resilience, and pro-sociality. The criterion was chosen to allow many outcomes that related to wellbeing rather than focusing specifically on just improving one aspect of mental health e.g., depression. All outcome measures needed to be quantitatively measured to allow statistical comparisons, they had to employ reliable

measures with good psychometric properties, and they had to be suitable for the age of the participants.

Types of Studies - All studies were eligible to be included in this systematic review regardless of whether they had a long-term follow-up or not. Additionally, studies were eligible for inclusion if they were quantitatively analysed (all qualitative only studies were excluded) and if their design was a randomised controlled trial (RCT). The studies also had to be in English language and be published between the years 1999 and 2019.

1.12.2 Search Strategy

The database MEDLINE was systematically searched using the following databases: British Education Index, Child Development & Adolescent Studies, Education Abstracts, Education Research Complete, Educational Administration Abstracts, PsychARTICLES, PsychBOOKS and PsychINFO. The terms listed in Appendix A were selected by using appropriate words from the aims of the systematic review and using MeSH (Medical Subject Headings) as a vocabulary thesaurus for further varied search terms to ensure all possible papers were discovered for screening.

A follow up search was carried out using Science Direct and by looking at related systematic reviews. The reference lists of these papers were reviewed for titles that fit in with the inclusion criteria. These were then added to the search process and screened appropriately. The characteristics of the study and its outcomes were extracted using the Cochrane Collaboration data collection form (Higgins & Green, 2011). The following information was obtained from the studies: author, year of publication, type of study (e.g., randomised controlled trial - RCT), intervention type

(e.g., CBT, mindfulness), outcome measures (e.g. depression, anxiety), age range, setting (e.g. school, classroom), duration of study, mode of delivery (e.g. school staff, mental health professional). Other information recorded was intervention group details and outcome data, only for measures that were relevant (e.g., depression, wellbeing).

Risk of bias was assessed using the Cochrane Collaboration 'Risk of Bias" tool (Higgins & Green, 2011). This tool gives the ability to assess studies for possible sources of bias. In this review studies were assessed against criteria that appeared most relevant to school-based randomised control trials. All studies were assessed for bias in relation to: A – random sequence generation, B – allocation concealment, C – blinding of participants and personnel, D – blinding of outcome assessment, E – incomplete outcome data (attrition). The results of this are presented in Table 1.1.

1.12.3 Results/Studies Selection

From the search 72 studies were identified, titles and abstracts were screened to see their relevance and, of these, 10 were remaining. Full articles were reviewed and those that did not meet the inclusion criteria were removed. Articles that focused on targeting specific outcomes rather than psychological wellbeing (e.g., reducing obesity, preventing smoking behaviours and substance abuse) and articles that had targeted participant groups (e.g., diagnosed children, war-effected children, refugees) were not included. Following the exclusion of these studies, 6 studies were available for inclusion in this review.

1.12.4 Study Intervention, Content & Mode of Delivery

Overall, half of the studies used elements of CBT (cognitive behavioural therapy) in their intervention program (e.g., Pophillat et al. 2016; Rooney et al. 2013; Stallard et al. 2014), one focused solely on mindfulness (Schonert-Reichl et al. 2015), one on affective behavioural cognitive development (ABCD; Humphrey et al., 2016) and one was a psychosocial focused intervention (Li et al., 2012). Further characteristics can be seen in Table 1.1.

1.12.5 Outcome Measures

Whilst all studies had a measure that related to wellbeing (see Table 1.1 for full overview), five of the six studies focused on measuring depression. Depression was measured using the following scales: Children's Depression Inventory (Kovacs, 1992) the Revised Child Anxiety and Depression Scale (RCADS; Chorpita et al., 2005), Centre for Epidemiologic Studies: Depression Scale for Children (CES-DC: Radloff, 1977) and the 11-item depressive symptoms subscale from the Seattle Personality Questionnaire for Children (SPQC; Kusché et al., 1988).

Humphrey et al. (2016) made use of the Strengths and Difficulties

Questionnaire (SDQ) that evaluates emotional symptoms, conduct problems,
hyperactivity, peer relationships and pro-social behaviour (Goodman, 1997). This study
also used the Social Skills Improvement System (SSIS), which measures
communication, cooperation, assertion, empathy, responsibility, engagement, and
self-control (Gresham & Elliot, 2008) and the Social and Emotional Competence
Change Index (SECCI). Pophillat et al. (2016) and Rooney et al. (2013) both used the
Spence Child Anxiety Scale (SCAS; Spence, 1998) to measure for symptoms of anxiety,
whilst Pophillat et al. (2016) also used the Assessment of Children's Emotional Skills
(ACES; Schultz et al., 2004). The final measure, used by Schonert-Reichl et al. (2012),

was the Interpersonal Reactivity Index (IRI; Davis, 1980), which demonstrates a child's empathy and perspective taking abilities. Because of this broad range of measures, no formal meta-analysis could be carried out.

Table 1.1

Study details, wellbeing outcomes and quality ratings using the Cochrane Collaboration 'Risk of Bias" tool (Higgins & Green, 2011).

Study	Intervention Type	Delivery	Training	Age Range & Sample	Outcome	Quality Ratings					Results		
				Size	Measure	A E	В)	E S	Gummary	Post Intervention	Follow-up
2016.	,	Forty 30-40- minute sessions.	Teachers received one full day's training with one ½ day follow-up four months later.	7–9-year- olds n=4516	SECCI, SSIS & SDQ	+ Mediu		risk	+	e fo A b fo	A significant increase in social and emotional competence was found for the IG compared to CG. A significant increase in pro-social pehaviour and engagement was found in the IG for the subgroup abelled 'at risk'.	Significant increase in social and emotional competence compared to CG (<i>d</i> = 0.47). No significant difference found with SDQ & SSIS.	N/A
et al. 2016.	Optimism Program:	Ten modules across 10 weeks.	provided to	6–9-year- olds <i>n</i> =206	CDI, SCAS & ACES	+ High r		? ?		fo e a H g	emotional skills, depression, or anxiety. However, it was found that both groups had a significant increase in	A significant increase in emotional skills for both IG and CG, but when compared the IG had a larger increase (<i>d</i> = 0.57). No significant effect found with depression or anxiety.	N/A
et al. 2013.	Optimism Program:	Ten weekly sessions of 60 minutes each.	Led by a trained research assistant.	9–10-year- olds <i>n</i> =910	CDI & SCAS	+ High r		? -		ir 6- h si sy H e	nowever only the IG showed a significant reduction in depressive	depressive symptoms at post-test (<i>d</i> = -0.22). No significant difference found with the SCAS.	At both the 6-month and 18-month follow-up there were significant reductions of depressive symptoms with an effect size of -0.46 from pretest to 18-month follow-up.
-Reichl et	based on mindfulness principles.	Twelve 40-50 minutes sessions delivered weekly alongside daily	No specific mention of training, but teachers also had to take part	9–11-year- olds <i>n</i> =99	IRI & SPQC	? High r	? risk	- +		e sl d	There was a significant increase in empathy and perspective-taking skills and a significant reduction in depressive symptoms compared to the CG.	Significant increase found in perspective taking (d= 0.40) and empathy (d= 0.42) when compared to CG. Also, a significant reduction in	

		3-minute mindfulness tasks.	in mindfulness activities.									depressive symptoms was found (<i>d</i> =-0.45).	
Stallard et al. 2014.	A CBT based program called FRIENDS (Barrett, 2004).	Nine 60-minute sessions delivered weekly.	One intervention group was led by a health professional, the other group was led by a trained teacher (training details were not specified).	9–10-year- olds <i>n</i> =1448	RCADS	+ Low r	+ risk	-	+		n the teacher led IG there was a reduction in symptoms on the scale, nowever they did not have a significant effect. The health professional led IG had a significant reduction in symptoms compared to the CG.	teacher-led IG.	N/A
Li et al. 2012.	Adventure based training program based on psychosocial principles.	Five 75-minute sessions and one whole day adventure-based training camp.	Led by health care professionals.	10–12- year-olds <i>n</i> =120	CES-DC, CSAS-C, RSES & PedsQL™	+ Very			k	i 	All pupils had a significant increase in self-esteem and significant reductions of the symptoms of depression and anxiety. However, the IG had statistically significant nigher increase in self-esteem and statistically significant larger reductions in depression and anxiety symptoms.	A significant increase in self- esteem was found (d= 0.22) Also, significant reductions in anxiety (d = -0.35) and depression (d = -0.53).	up the results still

Note: **Intervention Type –** CBT = Cognitive Behavioural Therapy, ABCD = Affective Behavioural Cognitive Development.

Outcome Measure – CDI = Child Depression Inventory, SDQ = Strengths and Difficulties Questionnaire, SSIS = Social Skills Improvement System, SE CCI = Social and Emotional Competence Change Index, IRI = Interpersonal Reactivity Index, SPQC = Seattle Personality Questionnaire for Children, RCADS = Revised Child Anxiety and Depression Scale, CES-DC = Centre for Epidemiologic Studies Depression Scale for Children, CSAS-S = State Anxiety Scale for Children, RSES = Rosenberg's Self Esteem Scale, PedsQLTM = Paediatric Quality of Life Inventory, SCAS = Spence Children's Anxiety Scale, ACES = Assessment of Children's Emotional Skills.

Quality Ratings – A = random sequence generation, B = allocation concealment, C = blinding of participants and personnel, D = blinding of outcome assessment, E = Incomplete outcome data. + = Low risk identified (study covered information that protected it against bias), - = high risk identified (did not protect against bias), ? = unclear if there was a risk of bias.

d= Effect Size, IG = Intervention Group, CG = Control Group, CDI = Child Depression Inventory, SDQ = Strengths and Difficulties Questionnaire, SSIS = Social Skills Improvement System, SECCI = Social and Emotional Competence Change Index, BDI = Beck Depression Inventory, Adolescent Depression Scale, IRI = Interpersonal Reactivity Index, SPQC = Seattle Personality Questionnaire for Children, RCADS = Revised Child Anxiety and Depression Scale, SCAS = Spence Children's Anxiety Scale.

1.12.6 Study Findings – Post Intervention & Long-Term Follow-up

I. Post Intervention Findings

Table 1.1 presents an overview of the studies and the effects of the interventions. Additionally, out of the six studies included in this review all of them showed a significant effect in favour of the intervention. Only three of the six studies were of moderate to very good strength and these three studies (Humphrey et al., 2016; Li et al., 2012; Stallard et al., 2014) did show significant findings in support of their programs, which were ABCD, psychosocial and CBT-based.

Four studies, all of which had low risk of bias, had moderate effect sizes pre to post intervention on some of their measured outcomes, but not all studies found a significant effect in all of their outcomes. For example, there was one group that had no significant effect; this was the teacher-led intervention group in Stallard et al. (2014). In this study, the third intervention group was run by a health professional and this health-led intervention did show a significant decrease in depressive symptoms. Interestingly, Humphrey et al. (2016) also found that their teacher led program failed to find a significant effect with the SDQ, they only found a significant increase in social and emotional competence. And finally, Li et al. (2012) was run by health professionals and found significant effects across all their outcomes. Therefore, these studies suggest that health professional led program fare better than teacher delivered programs when it comes to improving wellbeing.

Medium effect sizes were found and ranged from -0.53 to 0.47. Also, these three studies (Humphrey et al., 2016; Li et al., 2012; Stallard et al., 2014) have large sample sizes ranging from 120 to 4516, giving more statistical power. However, even though Rooney et al. (2013), Pophillat et al. (2016) and Schonert-Reichl et al. (2015)

had higher risks of bias, they still had medium effect sizes ranging from -0.45 to 0.57, suggesting that their study was moderately effective.

When exploring differences in findings based on psychological theory underpinning the program, it was found that there were no obvious differences across effect sizes. The only major difference within studies to note is the significant effect a health professional led program had compared to a teacher led program in Stallard et al. (2014). Overall, it is important to note that the three studies with a low risk of bias positively impacted children's wellbeing. Specifically, improvements were seen in depressive symptoms, anxiety, self-esteem, and social and emotional competence.

II. Long-Term Follow-up Findings

Two of the studies conducted follow-up tests with Rooney et al. (2013) carrying out a 6-month and 18-month follow-up and Li et al. (2012) carrying out a 12-month follow-up. Both studies found significant decreases in depression at follow-up and Li et al. (2012) found a significant increase in self-esteem and reduction in anxiety at follow-up. However, due to Rooney et al. (2013) being at higher risk of bias, we should examine these findings with caution. From examining the follow-up study with a low risk of bias (Li et al., 2012) we can conclude that a school based psychological intervention can have continuous significant effects. Nevertheless, more studies need to conduct long-term follow-up tests to measure the continued impact of such programs.

1.12.7 Synthesis Discussion

This review has examined the effectiveness of universal school-based interventions and their implementation techniques as well as what interventions exist and their methods of application. The results of this synthesis suggest that

psychological programs for schools can improve wellbeing in children, with all the strong studies showing a significant improvement in at least one of their outcomes. However, in line with previous findings (Werner-Seidler et al., 2017), the one study that compared teacher-led versus professional-led intervention (Stallard et al., 2014) found that only the health professionals had significant effects on the children's wellbeing, suggesting that trained professionals had more of an impact compared to schoolteachers. The universal program used in Li et al. (2012) was also carried out by health professionals and found a significant improvement in wellbeing measures, suggesting a higher quality training is needed to ensure program leaders are of a similar standard to health professionals. Additionally, considering previous worries of long-term effectiveness (e.g. Sklad et al., 2012) and reliability of studies, only one strong study managed to measure the long-term impact of the intervention and they did find results in favour of the program. However, due to only having one study this does not allow us to make any vast conclusions as to the effectiveness of such programs and their effectiveness across time.

These results have a few implications. Firstly, it is evident that health professionals should be favoured over teachers in the implementation of programs. However, considering the financial restrictions in schools, more research is needed to investigate how best to train teachers to implement a universal psychological wellbeing intervention to the same standard as a health professional. Secondly, all universal intervention research in schools needs to employ long-term tests to determine if the interventions have any lasting impact. Thirdly, other studies should consider measuring a range of outcomes, rather than those that investigate specific symptoms that are often equated to clinical problems (Sawyer et al., 2010). This is positive because a single classroom contains a variety of needs that should be catered

for rather than just focusing on, for example, depression per se. Fourthly, at the time of this review, there were a small number of universal RCTs that were eligible for inclusion, meaning the results have limited generalisability. However, it is useful to note the difficulties researchers encounter running RCTs within schools due to monitoring intervention fidelity, decline in enthusiasm over time and higher attrition rates (Wheatley et al., 2020). Therefore, including a large number of studies for review was not feasible at this time, suggesting further efforts need to be put into effectively implementing RCT within schools. Finally, the results of this synthesis suggest that universal programs can work in effectively improving children's wellbeing. Given that mental health varies across young people in accordance with their family life, family history, gender (females are more at risk to develop eating disorders), experiences and development (Meltzer et al., 2003), the fact that universal school-based programs can improve wellbeing means that support for such interventions should be intensified. More efficient programs can be created as well as thorough teacher training, or already existing programs can be modified to make them as beneficial as possible to children.

1.13 Universal Wellbeing Interventions in English Primary Schools

It is understood that the promotion of mental health in early childhood is of importance within England, one of the reasons being that children are required to be enrolled in primary education which allows for healthy mental development and socialisation. Presently, many English schools teach a personal, social and health education (PSHE) curriculum, which aims to teach children the knowledge and skills to develop as individuals within society. This subject provides the perfect teaching vehicle for a wellbeing approach to be implemented – and is currently utilised for this purpose

by English schools. Over the past decade, the government has made PSHE non-statutory, allowing teachers flexibility in what their PSHE curriculum looks like (initially, only sexual education was statutory for secondary school students). In other words, schools could create and focus on their own PSHE schemes to suit their pupils (Department for Education, 2013) or follow readily available ones such as 'SEAL' and 'Jigsaw'. Due to growing public concern that not all children were receiving the same amount of PSHE curricula it was suggested that amendments would come into place to make PSHE statutory (Department for Education, 2017). In 2019 the Government introduced health education, which includes mental wellbeing as a statutory element in both primary and secondary schools. With this modification, PSHE has become more fixed and universal – but still allowing for flexibility in what approach is taken. All of this is to suggest that PSHE is now, more than ever, the right place to house a wellbeing intervention. Some evaluation efforts of established PSHE curricula have already begun in this area.

Firstly, SEAL (Social Emotional Aspects of Learning) is a program that focuses on self-awareness, managing feelings, motivation, empathy, and social skills (Department for Education, 2005). The aim of SEAL is to teach children skills that will be beneficial to their life experiences i.e., skills that they would not learn from generic subjects like Mathematics and English. 90% of schools claim to engage in some elements of SEAL (Humphrey et al., 2010) and while some evidence suggests that SEAL does not impact general mental health, pro-social behaviour, emotional skills, social skills, and behavioural problems (Humphrey et al., 2010), other evidence suggests that SEAL positively impacts school ethos, social experiences, and attainment (Banerjee, Weare, and Farr, 2014; Humphrey et al., 2008). Overall, however, the fact that some research studies have found little evidence in favour of SEAL combined with the fact that little

research exists that evaluates SEAL, it seems that more needs to be done to better track how well SEAL holds up in controlled studies.

Secondly, Jigsaw is a mindfulness based PSHE curriculum for primary school students that focuses on emotional literacy, mental health, spiritual, moral, social, and cultural development, with the aim of helping children know and value who they really are. It has been used widely (especially in the Bristol area) yet there is only one piece of empirical evidence to support its efficacy, which found a positive impact on pupils' emotional literacy (Wolstenholme et al., 2016). Of note, in this study the researchers use the wording "above expectations" to describe the effects of the intervention even though they do not compare their findings to a control group or to pupils scores prior to the Jigsaw implementation. Nonetheless, the qualitative responses gained from the study carried out by Wolstenholme et al. (2016) show that teachers support the Jigsaw framework. 78% of respondents felt that time spent on PSHE was increased, 80% answered that Jigsaw positively impacted school ethos and 92% of teachers agreed that the curriculum was easy to implement. Once again, however, the evidence supporting this curriculum is underwhelming. Thus far, it seems that both SEAL and Jigsaw are in need of further evaluation, not only because there are very few studies investigating them but because they also do not make enough effort to measure the impact of the curriculum on important indices they claim to effect: wellbeing, academic achievement and behavioural incidents (Humphrey et al., 2010).

These two wellbeing focussed PSHE curriculums are just two of many but are more widely known and applied within England and other areas in the UK. There are curriculums such as SCARF by Coram Life Education with elements of resilience, that are used across multiple UK primary schools. However, there is no empirical evidence to support its efficacy, their website only suggests their program is underpinned by

evidence-based practice (Coram Life Education, n.d). Therefore, it is difficult to analyse this program without any published research or data to see its effects – which can be said for other PSHE programs. It is worth noting that there are a multitude of resources available from the Government that contain guidance on wellbeing and PSHE support (Department for Education 2015); however, empirical evidence should be relied upon to implement the most beneficial approaches.

1.14 Feasibility of Housing an Intervention in Schools

It is essential to discuss the feasibility of establishing a comprehensive wellbeing intervention in schools. Firstly, the positives, as mentioned previously the National Curriculum in England requires health education within PSHE lessons in primary schools. Therefore, schools need to be partaking in some form of wellbeing education, opening the door for mental health focused curriculums. Accessibility is another benefit, due to the requirement of education, most children within England are in the school system for education (as opposed to home schooled). Therefore meaning, more children will have the opportunity to be involved in wellbeing support, hopefully helping to aid them in strong mental health development.

However, there are many challenges that may halt the progress of such curriculums. Firstly, the current National Curriculum has a large focus on educational needs, therefore, the issue of time poses a big threat to successful implementation. Schools and teachers have plentiful of education to fit into their academic year, including school events, exams as well as their subjects, the wellbeing intervention needs to easily slot into this already busy schedule. Additionally, as highlighted in the review, teacher training needs to be of a high quality to ensure the wellbeing curriculum can be taught at a standard similar to a health professional. Finding the

time and funding to complete training could be difficult, as well as adding another pressure to the teachers. Finally, there is a lack of focus on specific wellbeing schemes, there is no one Government sanctioned scheme. There are plenty of viable options and guidance for schools to create their own approach if they wish; however, there is no focus on the 'best' wellbeing approach or curriculum for schools. This wishy-washy approach given to schools may lead to a wishy-washy approach delivered to the students. Therefore, trying to account for these challenges is of paramount importance to ensure effective implementation.

1.15 Summary

With the growing evidence base aforementioned in support of the use of ACT, particularly in terms of its ability to promote psychological flexibility which can aid in supporting mental health, it seems sensible to utilise this approach within a universal intervention, given that no other approach seems to be thriving in this space. And despite the fact it makes theoretical sense to put a wellbeing curriculum under the umbrella of PSHE, we do not know how feasible (or effective) this would be. Therefore, this thesis will examine the feasibility of implementing an ACT-informed universal school-based curriculum with young children with the aim of supporting their wellbeing and mental health development.

Chapter 2: Formulation of the Curriculum

This chapter will outline the initial development of the school-based intervention, directing attention to the DNA-V model as it heavily informs the lesson plans created. The construction of the LPs will be reported with focus on both PSHE standards, in accordance with English PSHE Association guidance, and psychological theory (DNA-V content). Lesson plan structure, layout, content and resources will be outlined with examples included in-text and the full intervention listed within the appendices.

2.1 Project Context

This PhD was based in part on continuing the ideas and work of Dr Nic Hooper and Dr Duncan Gillard. Due to the growing base of empirical evidence of ACT in support of its use for mental health with children (Swain et al. 2015), the project aimed to utilise ACT to underpin a wellbeing style curriculum. Therefore, development of the curriculum became the crucial first steps to this PhD.

I was able to review lesson plans (LPs) and approaches to primary school lessons with primary school teachers, whilst this was not a formal focus group, it gave valuable insight into constructing the curriculum. It became clear that each lesson required a main activity, the focus of which should be ACT. However, due to English schooling regulations, lessons also had to cover personal, social, health and economic education (PSHE), therefore, not all LPs would follow a specific ACT activity but would be enmeshed with ACT principles.

Establishing the suitability of the ACT content was fundamental to this developmental process, there are a multitude of ACT resources adapted for children

that would accommodate the age of the target participants (9 to 10 years old).

However, Hayes and Ciarrochi (2015) developed a model of ACT and positive psychology that aimed to improve children's flexible strength. This model is called DNA-V and experts in ACT developed this brand new, adapted for children model.

Although not a lot of empirical research had been done to evaluate the efficacy of DNA-V at the time of this developmental process (2017/2018), the model targets psychological flexibility through ACTs evidence-based processes, which are evidence-based processes (Livheim et al., 2015; Simon & Verboon, 2016; Swain et al., 2015). In addition to this, the language used within the model is less complex and therefore more accessible for both teachers and children, making the DNA-V model an appropriate framework to underpin the curriculum.

2.2 ACT to DNA-V

DNA-V is outlined in significant detail within Hayes and Ciarrochi's (2015) book, this work combines both evidence-based knowledge and practical experience to formulate this new model. DNA stands for three separate skills we can utilise: the discoverer, the noticer and the advisor, which will be detailed later. It is important to note that these terms are metaphorical and named as such for ease of use with young people, rather than being specific mechanisms. The V stands for values or vitality. The primary aim of DNA-V is to build young peoples' ability to move flexibly between the skills of discoverer, noticer and advisor, in order to help them behave in line with their values to live a life with vitality. Omitted from the acronym, but important to the model (as seen below in **Figure 1**), is the notion of 'self view and social view' which entwines with the key skills of DNA-V. The concepts of discoverer, noticer, advisor, values and self view and social view will be discussed in depth below.



Figure 2.1. DNA-V visualisation image (Hayes & Ciarrochi, 2015).

D – Discoverer. The discoverer covers our behaviours that are associated with exploring and trying out new things in the world. Young children will naturally seek out new things to try, and by trying these new things children start to learn the world around them. For example, a young child might go down a slide at a park for the first time and experience that butterfly like stomach feeling and enjoy the sensation, this child has then learnt that trying new things at the park can be fun. Young people can utilise their discoverer skills to trial the world, assess how things work, develop strengths and, importantly, establish values.

People often find it easy to continue with what appears safe and comfortable, but this is not always beneficial and may not add value to our lives. Discovery can be seen as "an adaptive form of risk taking" (Hayes & Ciarrochi, 2015, p.92) because we are exploring the unknown with no guarantee on the outcome. However, by trying something new we could find more helpful ways of living in the world. One way we can explore our discoverer in a safe setting is by carrying out imagination tasks, by closing

our eyes and imagining trying something new, like jumping off a high diving board, then discussing the feelings that come with it. For example, trying something new can be daunting at first invoking negative feelings and sensations "this is scary", but once a new activity/behaviour is tried it can result in pleasant feelings "that was thrilling".

Discovery is thought to be best when it is value driven and values are intrinsic to the three main skills promoted through DNA-V. Therefore, it is important to teach young people to understand the importance of trying new behaviours to analyse what is most effective, to build new values and develop new strengths.

N – Noticer. The noticer is a process that is similar to mindfulness, in that it aims to help children connect with their thoughts, feelings and bodily sensations. During infancy we tend to be in tune with our noticing skills, monopolizing our senses to guide us as that is all we know. However, as we get older, we can lose this skill because we rely more on what we think we know about ourselves and a situation rather than being present in the moment. Noticing helps us to pause, recognise what we are feeling and choose how to act. For example, we can pause, notice we are feeling stressed/anxious and choose not to engage in avoidance behaviours. The more we draw on our noticer skills, the better we become at noticing and understanding our feelings/sensations in the moment, in turn leading us to act appropriately.

Additionally, noticer skills can assist someone when they are feeling 'stuck'.

Often humans can feel overwhelmed by difficult thoughts or decisions; by using their noticer skills to tune into their feelings and bodily sensations it can help them to act mindfully and step away from the control of the advisor. For example, a young person may have to decide whether they want to go to a classmate's birthday party but chooses not to go as soon as physical sensations of nervousness appear. By tuning into

their feelings and bodily sensations, they might be able to notice these experiences and still choose to act in a way that is personally meaningful.

The noticer utilises various mindfulness skills such as identifying and labelling feelings and observing inner body experiences. However, getting young people to partake in lengthy mindful activities could be challenging, with research suggesting barriers such as external or internal distraction and embarrassment (Hutchinson et al., 2018), therefore, the aim of the noticer is to equip young people with skills that do not require structured practice, but can be used as and when needed. One young people friendly way we can enhance noticer skills is by teaching the three steps 'normalise, AND, allow'. 'Normalise' helps teach young people that all feelings we experience are normal, they do not need to be changed or eliminated, we just have to be aware that feelings can pass and therefore, we should be aware of them but not see them as controlling. 'AND' stands for 'Aware, Name and Describe', 'Aware' gets the young person to become conscious of the physical sensations within their body. 'Name' encourages the young person to name the physical sensations within their body and finally, 'Describe' is where the young person can then label these inner experiences with specific emotions. Lastly, 'Allow' is where the young person is taught to allow their feelings in the moment regardless of what they are, they must allow judgement of these feelings without reacting. Altogether these three steps can help a young person to practice their noticer skills.

A – Advisor. The advisor we refer to as our 'inner voice', it is described as "a metaphor for how humans use language and cognition – how we use relating (the operant) to make sense of the world without needing physical contact or experience with things" (Hayes & Ciarrochi, 2015, p.16). Simply put, our 'inner voice' uses information we have

collected through experiences to form connections, allowing us to make sense of the world without having to experience everything. For example, when first experiencing the world, a toddler may jump off the side of the sofa and hurt themselves. When they go to the park and have a large climbing frame they could jump off, their 'inner voice' will associate high heights and jumping off with pain. This is likely to stop them from making the decision to jump from a high height again – helping them to avoid harmful behaviours.

However, one of the pertinent things to remember is that our advisor is just that, an 'inner voice', we can listen to it, but we do not have to follow its advice. Often people can become controlled by their advisor, listening to it as if it is truth. For example, a child at school may fail a math test just once (it could have just been a bad day or distractions that led to this) and their 'inner voice' labels themselves as 'not good at math'. The next time this child has some math homework to do they may hear their inner voice saying "I am not good at math" which may result in them giving up on the homework. This simple association of failing one test to "not being good at math" can influence their behaviour throughout their lives. In other words, the things our advisor can say can be negative and incorrect given the experiences we have had. Take young people and their appearance, findings suggest that when a child experiences comments about their weight, they become more aware of their body image with most people reporting these as negative experiences (Eli et al., 2014), and often these negative body image associations can lead to disordered eating in adulthood (Eisenberg et al., 2012). For example, a parent could innocently say their young child has "chubby cheeks" as a term of endearment, but then the child overhears their parent say that someone looks "chubby and ugly". Hearing this conversation can lead a child to associate chubby with ugly and because they have been called chubby, they

may start to identify themselves as ugly. This can lead to thoughts/behaviours such as covering up with clothes "I am chubby so I must cover my body to hide my ugliness", disordered eating "I must not eat all my food at dinner time as I am chubby which makes me ugly and I should avoid this by losing weight" and more, all because of the association that child's advisor made and reinforced in their thoughts/behaviours. This is where proper understanding of the advisor becomes important when teaching these skills to young people, to help them realise their advisor is not always useful in helping them to do important things, and that whilst we should always acknowledge the advice that our advisor is giving us, we do not need to always follow its advice.

V – Values. Our values we often refer to being like a compass that guides us to meaningful behaviours and outcomes, they are seen as central to DNA-V. Values are not goals or outcomes, they are more like a continuous path we can always walk on. For example, a goal might be to spend time with friends which, once completed, can be ticked off. But the value underneath the goal may be the importance of *sustaining friendships*, which is never complete. By utilising the discoverer, noticer and advisor appropriately a person can partake in behaviours that are in line with their values. By routinely sustaining value driven behaviours it is suggested that we can have more vitality, which is defined as "the capacity to live, grow, and develop" (Hayes & Ciarrochi, 2015, p.16).

As an adult, it is easy to become trapped in the mundanities of life, for example, going to the same grocery shop, working a steady job that pays the bills even though you do not enjoy it, and sticking with the same friendships from childhood even though you have outgrown them. Acting in this way, a way that is counter to personal values and vitality, will not see the same benefits as acting on values can,

such as improved happiness (Sheldon & Krieger, 2014). Research suggests that engaging in valued actions and behaviours will lead to a reduction in suffering (Gloster et al., 2017). Not behaving in line with our values can be present during childhood, for example, attending the afterschool hobby you do not find fun, because your parents want you to or spending time with your cousins even though you do not like being in their company. We can become accustomed to doing things we are not particularly fond of, for the sake of an easy life. However, we want children to see the norm as partaking in value driven behaviours. Therefore, DNA-V aims to get young people to recognise what is important to them (their values) and to act in ways that reinforce this.

Self View and Social View. Self view and social view are the outer ring of the model and are not processes but the ability to recognise how DNA-V shapes ourselves and others. Our self and social view encompasses our personal contexts and how we may interact with our DNA-V skills, such as our physical environment, history and values we have learned from others. Self view is our ability to see ourselves within the world and in different contexts, for example, being able to look at your past self to see how you have changed. It references the capability of a person to see their own strengths and qualities which can then guide our discoverer and advisor, and help us to develop new values. Social view refers to how we see ourselves with others, our ability to build connections and have empathy for others. It focuses on understanding the influence our past social experiences have on our DNA-V skills and how that effects the relationships we currently have. Additionally, social view notes one's ability to utilise DNA-V skills in recognizing others' behaviours, enabling them to gain a better understanding of those around them.

The skills developed through DNA-V can all interact with each other, sometimes negatively and sometimes positively, to improve psychological flexibility. Therefore, by teaching young people to understand how to utilise these skills, they can live a more value consistent life – in the hopes it will promote mental wellbeing.

2.3 Curriculum Construction

In the construction of this curriculum, five key aspects underpinned the approach to developing the LPs:

- Firstly, lessons needed to be able to replace the classrooms PSHE content. This
 was to avoid extra workload to keep participation and engagement levels high.
- Secondly, the lesson content was required to be straight forward for teachers
 to follow and understand. This is to ensure teachers are happy to continue
 through the year-long process.
- 3. Thirdly, the lessons created had to be enjoyable as well as educational, evidence suggests that playful content can lead to meaningful learning and a readiness to learn (Masran & Ismail, 2016). Other researchers have suggested the element of fun is essential to learning and can inspire lifelong learning (Francis, 2013).
- 4. Fourthly, language and terminology used throughout the LPs needed to remain simplistic and easy to understand by the target participant group and teachers, meaning some of the language included is less scientific than expected.
- 5. Finally, the theoretical underpinning of the intervention needed to be present in each lesson to allow consistent practice of DNA-V skills.

The construction of the curriculum was a collaborative process with input from ACT experts, DNA-V experts as well as qualified teachers with relevant experience in PSHE requirements.

2.4 Ensuring the Curriculum is Personal, Social, Health and Economic Education Friendly

Schools in England are required to provide PSHE within their school commitments due to governmental guidelines and PSHE seemed like the most appropriate place to situate a wellbeing intervention. However, to embed a wellbeing intervention into a PSHE curriculum, it was necessary to include content which governmental guidance suggest being included in the provision of PSHE. Thus, from reviewing other PSHE style curriculums and taking guidance from the PSHE Association website, it became evident that physical health, mental health, growing and changing, relationships, media, personal safety, money, bullying and discrimination, as well as community and responsibility, were topics which needed to be implemented within primary schools PSHE curriculum (PSHE Association, n.d.). Listed on the PSHE Association website are three core themes: 1 – health and wellbeing (H), 2 – relationships (R) and 3 – living in the wider world(L) (PSHE Association, n.d.). Associated with each of these core themes are numbers that represent subcategories such as "H1. How to make informed decisions about health" and "R10. About the importance of friendship; strategies for building positive friendships; how positive friendships support wellbeing". These core themes are referenced in each of the LPs to highlight the PSHE content that is fulfilled. The inclusion of these areas was not the

paramount focus, however, helped to guide the themes and many LP activities to include PSHE in some form whilst also training children in the DNA-V model.

2.5 Number of Lessons and Duration

Two essential elements to consider were the number of lessons to be delivered and the duration of the lessons. To distinguish a suitable frequency of lessons, experienced teachers gave informal feedback to discover how often they would teach PSHE style lessons in order to 1) coincide with their regular teach schedules and 2) ensure it would be frequent enough to implement the wellbeing intervention.

Additionally, it was useful to look at other school-based interventions to see how frequently the students engaged with the intervention.

Firstly, teachers often only managed to fit in one session per week for 50-60 minutes. The resources they had available to use were based around one-hour in length, Stallard et al. (2014) who implemented nine 60-minute weekly sessions of FRIENDS in UK schools (a CBT focused intervention) and Humphrey et al. (2016) was able to achieve forty 30-40-minute sessions of PATHS twice a week within Manchester schools, which equates to at least one hour per week. Therefore, for convenience of teachers and to allow for sufficient intervention time, it was decided that the DNA-V curriculum would be taught for a one-hour session per week across the course of the year.

The aim of this project was to assess the utility of a wellbeing focused PSHE curriculum across an entire academic year. Therefore, the number sessions across the academic year needed to be finalised. English primary schools have three official terms lasting roughly 12 weeks that are each split in half by a half-term holiday, meaning there are six distinct segments to the school year each lasting six weeks. Therefore, six

themed topics were developed in our curriculum to match these half-terms (note: for ease we called each of these separate segments of the year 'terms'). The first term theme would be an introduction to DNA-V, which would require six lessons and therefore take up an entire segment. However, to avoid overwhelm and high pressure being placed on teachers to adhere to one lesson per week, it was determined that the following five terms would have five sessions (in each six-week period), to allow teacher flexibility, accounting for school events, inset days etc. This meant the total number of lessons developed was 31.

2.6 The Lesson Plans

2.6.1 Lesson Plan Layout

From reviewing generic LP examples from a primary school teacher, a suitable structure for the LPs emerged. Specifically, firstly the lesson objectives are set out, next the teacher will introduce the lesson (the talking/explanation element) and lastly, the main activity takes place (where most learning is done).

With this in mind, DNA-V LPs initially included: lesson objectives, the teacher's introduction to the session, the main activity and time at the end to fill in a diary based on their lesson. With expert guidance from an experienced PSHE teacher, this layout progressed further to include a more teacher friendly structure that highlighted the core themes suggested by the PSHE Association, as well as aligning with teacher requirements for LPs. This led to the newer LPs layouts showing: the term theme, which DNA-V skill was the main focus for that lesson, resources required, success criteria, learning objectives, PSHE association objectives, teacher's introduction to the lesson, main activity, and diary time. The layout of the LP is demonstrated in Table 2.2 and all LPs are listed in Appendix B.

Due to possible awkwardness from students when covering sensitive topics, each lesson plan incorporated a 'starter task' that enabled the students to engage with each other in a fun and carefree way. This was to help ease them into the lesson early on to allow more open discussions later. Six starter tasks were created to be used flexibly, allowing teachers autonomy in which task to use on that day. Starter tasks are listed in Appendix C and Table 2.1 shows one example of a starter task which demonstrates how beneficial a physical and fun activity can be to help connect the children. This was added to the LP structure after PSHE association objectives.

Table 2.1Example of a starter task outlining its function within the classroom.

not This encourages the
not This encourages the
nis game. children to communicate in
e task of other ways than just
eight order speaking. It gets them to
ney are be comfortable with using
eck the hand gestures and eye
contact.
rs such as o darkest), k brown to t, to dark

2.6.2 Lesson Plan Creation

With the LP themes and structure decided the LPs creation process could begin, with due attention being paid to making engaging, educational lessons. 31 LPs needed to be constructed, they would be completed one term at a time within a word document, once one term was completed, the LPs would be reviewed altogether. The lesson plan creation process underwent a two-stage review process, firstly, one of my supervisors (DG) would ensure the LPs included enough DNA-V content as well as proof-reading the material. Secondly, the PSHE and school lesson expert, would do the final check to ensure that the lessons were 1) suitable for the age of the students, 2) easy for the teachers to understand, 3) followed PSHE criteria suitably and 4) free from errors. Final edits would be made by myself after receiving the final form of feedback. The first term of lessons, the introduction to DNA-V, were sent to Dr Louise Hayes and Dr Joseph Ciarrochi (the creators of DNA-V) who also gave constructive comments regarding the DNA-V content. This helped us to understand the potency of DNA-V within our lessons and how to alter our language to foster a clear DNA-V approach. It was suggested that the DNA-V element we were adding was a 'light touch', which was expected as this was not solely a DNA-V curriculum, but a PSHE curriculum with DNA-V laced through it.

Table 2.2

Example of a final version LP as given to participating teachers.

DNA-V - PSHE

FRIENDSHIPS – TERM THREE– LESSON TWO

Term Theme

Giving to Others

Focus DNA-V Skill

Social View

Lesson Resources

A4 paper

A2 paper/SMART board

Animal pairing cards

Success Criteria	Learning Objective	PSHE Association Curriculum Objectives
 Understand that there are many people in our lives who we are close to for different reasons. Understand what attributes to look for in a healthy relationship. 	I know who is important to me in my life. I understand the value of kindness and generosity-of-spirit in building social connections in my life	Core Theme 2: Relationships. R2, R3

Starter Task.

Time	10-15 minutes.
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Use the Seating Sticks to create a seating plan for that lesson.

Pick one of the starter tasks to complete with the students.

Teacher's introduction to the lesson.

Time 15-20 minutes	
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Discussion about friendships.

- Have each child take it in turns to stand up and say one word they feel is linked to friendship, e.g. love, kindness, fun, honesty etc.
- Explain that absolutely anyone can be your friend, it does not matter what their age, religion, gender etc. is. Even your family members can be your closest friends as long as it is healthy and makes us feel happy rather than sad. Stress the importance to children that if a relationship does not make them feel happy then they should talk to a trusted adult about what to do. As human beings we are born to want/need social connections. Imagine there

are 2 separate groups stuck on an island. 1 group are very sociable, like to work within teams and help each other. The other group are unsociable, do not like to communicate with each other and only do things for themselves.

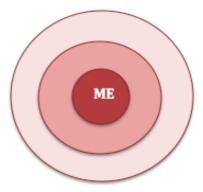
- Paired discussion, with feedback: Which group are more likely to survive and why?
 (Allow several children to give their answers and reasons they think that)
- Answer: The sociable group as they would be able to work together to hunt, build shelter, protect each other and more. Whereas the unsociable group would not help each other and only focus on their own interests.

How we apply DNA-V to friendships.

- On the board/paper have four statements written and ask the children which part of DNA-V they belong to.
 - D Having different friendships with different groups of people introduces me to new things, such as games, religions, traditions etc.
 - N I notice that my mood can be different depending upon which people I am with
 - A If I have thoughts like "I am feeling lonely", I might go and enjoy a game with a friend in order to connect with others
 - V Being kind to others helps me build social connection in my life

Activity: Circles Of Connection

Give all the children an A4 sheet of paper each then ask the children to draw a small circle in the centre of the page and write 'me' in it. Then they need to draw a bigger circle around this leaving three fingers between their small circle and their second circle, then after that they must draw a third circle 3 fingers apart from the second circle.



(The children should end up with a dartboard looking diagram with 'me', an 'inner circle' closest to 'me' and an 'outer circle').

Step 1.

Ask the children to write some names of people who play an important role in their life on their diagram. The children must put people near or far from the centre depending on how close they feel to that particular person, reserving the area closest to 'me' for those they feel closest to (i.e., those they trust, they like and can turn to for support). This could be any combination of family, friends, professionals (e.g., class teacher) or other. Encourage the children to write at least ten names of people with whom they connect and who they feel fulfil a an important/valued role in their life

<u>Step 2.</u>

Use the animal pairing cards to get children into random sets of pairs.

Next, we want to engage the children in conversations to help them understand their connections more.

Ask these questions and allow the children to tell their partner their answers before moving on to the next question.

- 1. Who is important to you? Pick one person on your diagram and explain what makes that person important.
- 2. Who on your list can you seek help from in times of need and what is it about them that makes them so helpful?
- 3. Was there anybody you left out of the diagram, if so, why?
- 4. Choose one person on this diagram you wish you were closer to. What one small thing could you do today to show this person you care about them and want to be closer to them?

Take feedback from the whole group at the end, picking out a couple of example-responses for each question.

Get the children to fill in their diaries (5 minutes).

2.6.3 Resources

As well as each LP created, a multitude of resources were developed for the classes taking part. Each LP had a corresponding PowerPoint to allow for visual learners and children to follow the lesson. Starter tasks, as mentioned previously, were produced as well as seating/grouping games to encourage children to sit with other members of the class when pairs or small groups were needed for activities. For the seating/grouping activities seating sticks were allocated per classroom, a matching pairs game using cards was constructed and finally, six pizza grouping cards were created per class. The aim of these seating/grouping tasks were to avoid best friends grouping, people feeling left out and for more connections to be made.

In addition to these resources, charts, posters, and certificates were composed to become additional elements of the curriculum. Such as the discoverer chart, where if children vocalised trying something new and how this made them feel to the class, they would receive a sticker on the chart. Ten stickers across the year would lead to a certificate as an 'Ultimate Discoverer', this was a way to encourage the use of the

Discoverer outside of the prescribed lessons and reinforce using DNA-V skills. As previously mentioned, each child received a diary to be completed at the end of each lesson, these diaries would have two purposes. 1) to give children a reflective opportunity to look at what they learnt in the lesson by responding to the prompts "write down one thing you learned in the lesson today", "write down how you might apply what you have learned to your life" and finally "draw a picture that relates to your lesson today". 2) to evaluate the teachers' adherence to the lesson plans and provide qualitative experiences of the curriculum intervention. All curriculum resources can be found in Appendices B and C.

2.7 Lesson Content

V elements that build up the content which aims to support wellbeing. Outlined are the ways in which PSHE and DNA-V were integrated into the lessons with several selected examples for context.

2.7.1 PSHE Content

Aforementioned, it was decided there would be six topic themes across the course of the year. In Table 2.3 you can see the six different term themes, lesson names, their DNA-V skill focus and the PSHE core themes associated to each lesson. The term theme names were modified over the course of the research to use a term that best encompassed the contents of the lessons, the final theme names are included within the table. As mentioned previously, the first theme would be an introduction to the DNA-V model. This was to allow the children to become familiar and comfortable with the language being used, as well as to ensure they gained a good

understanding of the skills they would be able to exhibit through the year. The second theme covered is health, this theme aimed to cover physical health as well as growing and changing (in terms of puberty). The third theme was focused on relationships, as well as allowing teachers to cover sex education which is a statutory requirement in year 5. The fourth theme was named 'connect with others' which allowed teachers to cover a vast array of suggested PSHE topics, such as bullying, diversity and the media. The fifth theme was named 'challenge yourself' which was wellbeing focused and therefore fulfils the mental health aspects of PSHE. Finally, the sixth term did not have an overarching theme as everything else so far was easily categorised, but the final lessons did not fit under an umbrella term. Therefore, the final term covers money, personal safety, and mental health, still aligning with PSHE guidance.

Table 2.3

An outline of term themes, lesson names, DNA-V skills focus and PSHE core themes.

TERM THEME	LESSON NAME	DNA-V FOCUS	PSHE CORE	
			THEME	
	1. Introduction to DNA-V	D, N, A, V, SeV, SoV	NA	
INTRODUCTION TO	2. Discoverer	D	NA	
DNA-V	3. Noticer	N	NA	
	4. Advisor	А	NA	
	5. Values	V	NA	
	6. Self & social view	SeV, SoV	NA	
	1. Personal hygiene	А	H12, H20	
HEALTH	2. Nutrition	N	H2, H3	
	3. Keeping fit	D	H2, H20	
	4. Puberty	N	H18, H19	
	5. Substances	А	H13, H17	

	1. Family	N	R2, R3
GIVING TO OTHERS	2. Friendships	SoV	R2, R3
(RELATIONSHIPS)	3. Relationship with ourselves	SeV	R10, H5
	4. Making babies	V	H19
	5. The danger of strangers	Α	R8, R9
	1. Bullying	V	R14, R18, L6
CONNECT WITH	2. Ethnicity	D	L4, L11, L12
OTHERS	3. Religion	N	L11, L12
	4. Disability	SoV	R10, R13, R16
	5. The media	SeV	H4, H13
	1. Challenges	А	H5
CHALLENGE	2. Past challenges	V	H1, H2, H5
YOURSELF	3. Physical challenges	D	H1
	4. Intellectual challenges	SeV	H1
	5. Exam challenges	N, V	Additional LO
	1. Embracing fears and worries	А	H7
FINAL TERM	2. Financial self-care	D	L13, L14
	3. Getting help	Α	H14, H23
	4. Seeing the bigger picture	V	H2
	5. Showing gratitude	SeV, SoV	R1, R7

Note: DNA-V focus -D = discoverer, N = noticer, A = advisor, V = values, SeV = self view, SoV = social view.

PSHE core themes – drawn from PSHE Association (n.d.) program of study where H = health and wellbeing, R = relationships, L = living in the wider world and each number is associated with a specific sub-category outlined in the key stage 2 listings. LO = learning objective

2.7.2 DNA-V Content

A number of the lessons contained DNA-V activities drawn from 'The Thriving Adolescent' book (Hayes and Ciarrochi 2015), in addition to this, exercises were adapted from resources developed by Harris (2009), Ciarrochi et al. (2012) and Sedley (2015). However, many the LPs DNA-V content was developed between the team utilising the key processes. Listed in Table 2.4 are seven examples of exercises for the

six difference DNA-V processes as well as an all-encompassing DNA-V exercise, including both recognised activities and developed activities.

Table 2.4

Examples of main activities that focus on each of the different DNA-V processes.

PROCESS FOCUS	S ASSOCIATED MAIN ACTIVITY			
DISCOVERER	"Explain to the children that we are about to engage in a Discoverer activity, which means that each of us will identify a new or relatively unfamiliar activity that is physically challenging, plan how we are going to do it, carry it out and then track and describe its effects on us.			
	In their groups, the children undertake the following:			
	 Ten minutes designing a physical challenge exercise or activity they can do together either inside or outside of the classroom, as a group. The children write this challenge down, outlining what the activity is (assigning roles and planning it, if needed) 			
	II. Ten minutes in their groups completing the challenge.			
	III. Five minutes writing in bullet points of what they noticed as they engaged in the challenge (it can help to have prompt questions either on handouts or on the white board, such as a) Did you enjoy it? b) Did you find it easy/hard? c) How do you feel now? d) How did you find jointly planning the challenge? And e) Would you do anything differently next time?			
	Use the remaining time taking feedback from each group to the whole class on what their challenge was and their experiences of carrying it out. Teacher using			
NOTICER	"Balloon Breathing.			
	 Firstly, we want to do a mindfulness exercise to help the children focus on just themselves. 			
	II. Get the children to move their seat away from the table slightly, sit with both feet flat on the floor, both hands in their lap and close their eyes. Then play this clip:			
	http://thrivingadolescent.com/wp-content/uploads/2015/10/Balloon-breathing-for-thriving.m4a"			
ADVISOR	"The children are going to work in pairs and pretend to be each other's advisors.			

Use the pair's animal cards, once they are in their pairs get them to stand up and then explain part 1.

Part 1 – One of the pairs is going to take the role as the advisor, they will tell the other person what to do (within reason). Demonstrate with a pupil; you are their advisor, tell them to sit down, tell them to stand back up, tell them to go and high five another pupil or draw a picture. Advise the children to be imaginative and have fun with it but do not be mean. After the demonstration give them a couple minutes to get on with the activity.

At the end of this part ask the children what they think about the advisor? What did you think about having to do everything your advisor asked?

Prompt with: when an advisor is too controlling how would it make you feel?

Part 2 – this time swap around and the other person can advise. However, this time the other person can decide whether to do what the advisor says. Demonstrate with a pupil. They become your advisor; when they tell you what to do at first, do it but the second thing they tell you to do just say no. After this demonstration allow a couple minutes for the children to carry out this part.

Advise the children to be imaginative and have fun with it but do not be mean.

At the end of this ask the children which task they preferred and why? Why is it good to say no sometimes?"

VALUES

"From the list of values provided (e.g., imagining, connecting, being truthful), ask the children to select the top three values they would want to show in their actions when faced with challenging learning situations. Once selected, ask the children to write them down. From those three, pick just one that feels like the single most important value to show in challenging learning situations. Turn to your partner and tell them which values you have chosen. Suggest that the children might be able to identify in their conversation a person (in their actual life or a fictional character) who they feel is good at showing this value in their actions."

SELF VIEW

"Stepping from a Fixed Self View to a Flexible Self View.

Think about something that is important to you, but you often find hard to do. Choose an activity that you believe you are not good enough at—math, English, science, a certain sport, being a friend, dancing, or whatever fits for you.

Getting to Know Your Fixed Self View

Using the activity you identified above, complete the following sentence:

I believe I am not good enough at:

When you attempt this activity, and the going gets tough, what do you tell yourself about it? Let your advisor come up with criticisms, such as "not smart enough," "too slow," "too unskilled," "not interesting enough," "too weak," or "too undisciplined." Let the advisor hit you with its best shot: "useless," "lazy," "stupid," or other name-calling.

Exploring A Discoverers Way

Now imagine that you have great discoverer skills and can easily shift to using them—which you can step into and out of your advisor space easily. How might you approach this activity now if anything was possible? What new things might you try to become better at your valued activity?"

SOCIAL VIEW

"Ask the children to draw a small circle in the centre of the page and write 'me' in it. Then they need to draw a bigger circle around this leaving three fingers between their small circle and their second circle, then after that they must draw a third circle 3 fingers apart from the second circle. (The children should end up with a dartboard looking diagram with 'me', an 'inner circle' closest to 'me' and an 'outer circle').

Step 1.

Ask the children to write some names of people who play an important role in their life on their diagram. The children must put people near or far from the centre depending on how close they feel to that particular person, reserving the area closest to 'me' for those they feel closest to (i.e., those they trust, they like and can turn to for support). This could be any combination of family, friends, professionals (e.g., class teacher) or other. Encourage the children to write at least ten names of people with whom they connect and who they feel fulfil a an important/valued role in their life

Step 2.

Use the animal pairing cards to get children into random sets of pairs.

Next, we want to engage the children in conversations to help them understand their connections more.

Ask these questions and allow the children to tell their partner their answers before moving on to the next question.

- I. Who is important to you? Pick one person on your diagram and explain what makes that person important.
- II. Who on your list can you seek help from in times of need and what is it about them that makes them so helpful?
- III. Was there anybody you left out of the diagram, if so, why?

Choose one person on this diagram you wish you were closer to. What one small thing could you do today to show this person you care about them and want to be closer to them?"

DNA-V COMBINED "Writing a Letter.

- I. For the final activity tell the children they need to write a letter to someone in their family or a friend outside of the class. In this letter they need to tell the person why keeping fit is important and include:
- II. 1 new exercise they want to discover
- III. 1 way they notice how keeping fit makes them feel
- IV. 1 thing their advisor tells them when they are keeping fit

V. What they value most about keeping fit

They can give their letter to that person or keep it for themselves; it is up to them to decide."

Within each of the lessons there were questions and thinking time that allowed DNA-V skills to be discussed and used. The aim was to continue covering important PSHE content when needed whilst enabling DNA-V language across topics that are not inherently mental health focused, to allow children to continue building upon their skills, hopefully making the skills more transferable to real life situations. This is demonstrated in Table 2.5 below, outlining one example of using DNA-V whilst focusing on PSHE content.

Table 2.5

An example of DNA-V being utilised to explain behaviours related to PSHE topics.

ACTIVITY EXAMPLE

"How we apply DNA – V to personal hygiene

On the board/paper have four statements written and ask the children to decide which part of DNA-V they belong to:

- I. I want to see what that new hand soap smells like
- II. I think my nails look a bit dirty
- III. It does not matter if I do not brush my teeth today because I did it last night.
- IV. It is important to me that I look good.

Discuss whether children can think of any more examples of the different parts of DNA-V relating to personal hygiene and collate them on the board/paper."

The DNA-V and PSHE content outlined highlights the core components of the LPs which can be referred to as the main intervention content. These intervention aspects of the LPs have been created and adapted for the purpose of supporting wellbeing. Thus, being the most principal elements of the curriculum when discussing the implementation of the curriculum and the intervention details.

The lesson plans were created with expectations that during initial investigative stages amendments would be needed to make the intervention suitable to the age group and more feasible for teachers. Therefore, the next step was to pilot the lessons as well as the various measures selected to examine the suitability of the intervention and research design. In addition to this, thorough training and evaluation of the training was needed to ensure teachers were given suitable knowledge in order to deliver the DNA-V specific lessons.

Chapter 3: Piloting the Curriculum and Measures with Children, and Evaluating the Teacher Training

After the initial development of the lesson plans based on the literature reviewed and adopting the DNA-V approach, studies were conducted to evaluate both the effectiveness and the feasibility of the DNA-V curriculum. This research was conducted in 6 stages: piloting the study (Study 1), training the teachers (Study 2), implementing the main study (Study 3), teacher feedback (Study 4), student feedback (5) and additional investigative teacher interviews (Study 6). Ethical approval for Studies 1-5 was obtained from the UWE (University of the West of England) Research Ethics Committee on the 17/05/2018, an additional amendment for Study 6 was approved on the 17/08/2019.

In this empirical chapter, study 1 of this research will be covered. This was a pilot study where the lesson plans (LP's) and chosen measures were trialled within six year 5 classrooms. This stage was conducted to understand how suitable the lesson plans and measures would be for children aged 9-10 years. Observational and verbal feedback were used to check the feasibility of the curriculum and measures. Then responses to measures were analysed to examine their acceptability for use with this age of children, in addition to this, relationships between the chosen measures were analysed.

This chapter also reports on study 2, focusing on training teachers in DNA-V, to ensure the training supplied was sufficient in educating the teachers that would be leading the main intervention. This experimental study examined the effectiveness of the teacher training by analysing their psychological flexibility and DNA-V knowledge pre- and post-training.

3.1 Stage 1 – Piloting the Curriculum and Measures Within

Year 5 Classrooms

3.1.1 Aims and Hypotheses

The main aim of this pilot study was to observe if the content of the lessons and the measures chosen for the main study were acceptable for the students and teachers. That is, are they able to engage with the content of the lessons and complete the measures appropriately? An additional aim was to gain verbal feedback from both the students and teachers regarding the lessons and measures. The goal of this stage of research was to utilise the feedback from both students and teachers to enhance the content of the lessons and make suitable amendments to the measures.

All chosen measures are discussed in thorough detail within the methods section but are highlighted here to give clear understanding to the hypotheses below. To evaluate the impact of the ACT components of DNA-V within the lessons a measure of psychological flexibility was required, therefore the self-report Avoidance and Fusion Questionnaire for Youth (Greco, Murell & Coyne, 2005) was selected. To examine the impact of the lessons on the students' wellbeing the self-report Sterling Children's Wellbeing Scale (Liddle & Carter 2015) was chosen. Two further behavioural measures were created by drawing elements from other studies using sociometric measures (Ladd, 1983; Pulkkinen, Kaprio & Rose, 1999). The two measures developed were peer nomincations of pro-social behaviours and friendship networks, these were included to gain peer observations of behavioural outcomes. Furthermore, the data collected from the completion of measures gives the opportunity to look at correlations between wellbeing, psychological inflexibility, pro-social and friendship measures.

Firstly, it was hypothesized that there would be a significant negative correlation found between wellbeing and psychological inflexibility scores, as this has been shown in past research (Livheim et al., 2015; Simon & Verboon, 2016; Swain et al., 2013). Secondly, it was hypothesized that there would be significant correlations between wellbeing and prosocial behaviour, wellbeing and close friend nominations, wellbeing and popular nominations. Thirdly, it was hypothesized that there would be significant correlations identified between pro-social behaviour and close friend nominations and pro-social behaviour and popular nominations, as it is documented that higher wellbeing scores are associated with pro-social behaviours (Weinstein & Ryan, 2010) and pro-social behaviours are linked to higher quality friendship networks (Caputi et al., 2012). Finally, no hypothesis was made for the relationships between psychological flexibility and pro-social behaviour, psychological flexibility and close friend nominations, psychological flexibility and popular nominations given the lack of research in the area but theoretically speaking, it would be expected that those scoring higher in psychological flexibility would be more likely to engage in pro-social behaviour and more likely to have a larger friendship network.

3.2 Method

3.2.1 Study Design

The pilot study involved delivering a single prototype lesson and subsequently students were required to complete measures of psychological flexibility, wellbeing, pro-social behaviour, and friendship networks. As the teachers were not yet trained in DNA-V, I facilitated the hour-long lesson. Following the lesson, the students completed their questionnaires. Once the lesson was finished and measures completed informal

verbal feedback was obtained on both the lessons and measures through conversations with teachers and students.

3.2.2 Participant Details

Participants were recruited on a class basis; schools were emailed about the opportunity for their schools to take part in the study, including the main study. These schools were all based in the Southwest of England. Those interested were accepted with the understanding that the pilot study would start with their current year 5 group and the main study would continue with their next year 5 group. There were no exclusionary criteria (for example, excluding students with special educational needs and disabilities) to ensure all students could participate as they would in a regular PSHE class. Also, the curriculum is intended to support all students within a class and therefore results from students and teachers may inform future developments to support students with varying abilities.

Initially, 6 primary schools agreed to take part, all year 5 students (aged 9-10) were eligible to take part, there were no exclusionary criteria. This age group was selected for the main study due to the intention of follow-up data collection. In the English primary school system, children may attend different secondary schools making follow-up with Year 6 children difficult. All details of the study and measures were sent to the schools with an information sheet and 'opt out' consent form for parents. Once the schools distributed these, parents/guardians of the children had the option to not give consent for their child to participate, 3 forms were returned to 'opt out' their children.

A total of 100 participants were able to complete both the AFQ-Y and SCWBS measures, with 76 of those participants completing the pro-social and friendship

networks measures as well. In terms of participant characteristics, 46 participants identified as female, and 54 participants identified as male with no participants identifying as other. The representativeness of the sample regarding ethnicity was aligned to the most recent census that found 81.7% of the British population identify as white (Office for National Statistics, 2022). Whereby 85% of participants classed themselves as white, 8% of participants classed themselves as mixed race, 4% classed themselves as Asian and just 1% classed themselves as Black or African American. Only 2 participants left this selection blank.

3.2.3 Attrition

All measures and ethical approval had been shared with the schools; however, two schools that originally agreed to take part withdrew all their data after completion, based on concerns with the sociometric measures. The teachers expressed concern that scoring fellow classmates was not appropriate and possibly damaging, instead of beneficial to research. One of these schools withdrew from the study entirely; however, the other school decided to withdraw data from the pilot study only and agreed to continue taking part in the main study without the sociometric measures. Another school also agreed that they did not want to partake in the sociometric measures, but still completed other measures as part of the pilot study. Therefore, four schools' responses were obtained for the pilot study, with one of these schools not completing the sociometric measures. Across those participants only two had incomplete AFQ-Y scores and just one participant had an incomplete SCWBS score.

3.2.4 Materials

Lesson Plan

The lesson plan selected was: The Introduction to the Advisor (for details, see Appendix B). This lesson's aim was to teach the class what the advisor is, and how our advisors can sometimes be helpful and unhelpful. The talking part of this lesson contained simplified information about the advisor as well as a video clip from 'Inside Out', a Disney Pixar movie which demonstrates what the advisor can be like. The main activity was adapted from the 'Role Play the Survival Game' within 'The Thriving Adolescent' book (Hayes & Ciarrochi, 2015). The game within the book was too complex for the age of the participants, therefore, the main premise of the activity (role play) was used but in a straightforward manner of paired children role playing as each other's advisors under two different conditions. In condition one, the advisor was controlling, and the person could not say no to what their advisor asked. Condition two, the person had the choice to say yes or no to what the advisor suggested. This demonstrated to the children that things can be more enjoyable when we exercise choice instead of reacting instantaneously to our 'inner voice'. To coincide with the lesson, PowerPoint slides were used as a visual aide to the learning.

Measures

Each student completed the two self-report measures for psychological flexibility and wellbeing as well as two sociometric peer nomination measures based off their observations of fellow students' pro-social behaviours and friendships.

Avoidance and Fusion Questionnaire for Youth. The Avoidance and Fusion

Questionnaire for Youth (AFQ-Y) was selected given its use in numerous studies

examining psychological flexibility and avoidance behaviours (Valdivia-Salas et al.,

2017; Venta et al., 2012) and its high level of internal reliability α = 0.90 (Greco, Murrell & Coyne, 2005). The AFQ-Y is a 17-item self-report questionnaire that uses a 5-point Likert style scale to examine the truthfulness of statements (e.g., "My thoughts and feelings mess up my life" and "I am afraid of my feelings"), where 0 = not true at all and 4 = very true, no items were reverse coded. A lower score indicates a higher level of psychological flexibility and therefore a higher score indicates higher psychological inflexibility. This scale has been used widely within ACT research with young people as it has been effective in measuring the core processes of ACT (Greco et al., 2008) and has been labelled as a reliable measure (Muris et al., 2017). The highest a person can score on this measure is 68 and the lowest 0.

Sterling Children's Wellbeing Scale. The Stirling Children's Wellbeing Scale (SCWBS) was selected to measure the psychological wellbeing of the participants as this scale was created with the aim to measure the impact of interventions created to promote wellbeing and has a high internal reliability $\alpha = 0.82$ (Liddle & Carter 2015). This scale has been widely used within child wellbeing research (Devchich et al., 2017; Hinshaw et al., 2015), was suggested to be appropriate and reliable for purpose (Bernay et al., 2016) and has been adapted for use in other countries (Haque & Imran, 2016; Wahyuningsih et al., 2022). This is a 15 item self-report questionnaire that uses a 5-point Likert style scale to examine the frequency of various statements (e.g., "I think lots of people care about me" and "I've been cheerful about things"), where 1 = never and 5 = all the time. A lower score indicates low levels of psychological wellbeing. The highest a person can score on this measure is 75 and the lowest 15.

Pro-social Peer Nominations. A pro-social measure was developed with guidance from Ciarrochi with the aim of encouraging participants to nominate classmates within six distinct categories. Items were drawn from a developed and reliable peer-rating measure from Pulkkinen and colleagues (Pulkkinen, Kaprio & Rose, 1999), which have also been successfully used by Ciarrochi and Heaven (2009). These were split into three pro-social items ("who are kind to others", "who cooperate with others" and "who you get along with well") and three anti-social items ("who fights with others", "who makes fun of others" and "who you get along with less well"). Each participant had a list of their classmates and could nominate as many or as little as they wanted per item, for example, participant A could nominate all their classmates as "kind to others" and no one for "fights with others". This measure led to two final scores, a prosocial score (total of nominations for the three pro-social items divided by the number of participants) and an anti-social score (total of nominations for the three anti-social items divided by the number of participants). The highest score per sub-scale is 3 (which would require all classmates to nominate the child for each of the items within that sub-scale). A higher pro-social score indicates that a child has been rated by their peers as pro-social, and a higher anti-social score indicates more anti-social behaviours as rated by peers.

Friendship Networks Peer Nominations. A friendship networks measure was developed to examine the connections made within the classroom due to a possible increase in sociableness. This measure was split into two items 'who do you consider to be your close friends' and 'who are popular in your class'. Each participant had a list of their classmates and could nominate as many or as little as they wanted per item. The nominations were totalled and divided by the number of participants eligible to

nominating, this led to two individual scores for close friends and popularity. Each score can be translated to a percentage e.g., a 0.27 score suggests 27% of peers nominated that person for the item, therefore the higher the score the more nominations they received from their peers. Previous research has used sociometric measures that require peer ratings to successfully examine friendship networks and pro-social behaviours within a school setting (Ladd, 1983).

3.2.4 Analytic Strategy and Data Protocols

As participants were young of age, there were occasional mistakes within the self-report measures. Therefore, if a participant ticked two boxes for one item on their self-report questionnaire, the median score was selected. Additionally, when a student missed one item, an average was created to replace the blank score. If a participants' data set was missing two or more items on one measure the data was rendered incomplete and no score was included for that measure.

Data was statistically analysed using SPSS 29.0 software. Data was tested for normality using the Kolmogorov-Smirnov test, normality was violated by the SCWBS, anti-social behaviour and poplar nomination data. To examine the relationships between variables a correlational analysis was required, as only half the data assumed normality a decision was made to continue with the Pearson's correlation as published work suggests the data does not need to be normally distributed (Nefzger & Drasgow, 1957). However, a Spearman's correlation was conducted to compare results and the same significant relationships were identified. Correlations were labelled statistically significant if the *p* values were less than 0.05.

3.3 Results

3.3.1 Statistical Analysis

Table 3.1 below shows the means and standard deviations of each of the measures. In addition to this the bottom and top end of the scores have been included to show the range across participants. The participant sample ranges from 76-99 across the measures, the standard deviations for the self-report measures are larger than the peer nomination measures due to the highest achievable scores being larger.

Table 3.1Number of participants, means and standard deviations

Measure	N Participants	Mean	Std.	Lowest	Highest
			Deviation	Score	Score
AFQ-Y	98	22.82	9.18	5	50
SCWBS	99	48.85	8.44	21.5	74
Pro-social	76	1.46	.36	0.77	2.06
Anti-social	76	.52	.37	0.05	1.27
Close friend	76	.31	.12	0.13	0.53
Popular	76	.29	.21	0	0.81

Note: AFQ-Y = Avoidance and Fusion Questionnaire for Youth, SCWBS = Sterling Children's Wellbeing Scale.

To examine the relationships between the measures, correlational analyses were conducted. A Pearson's correlation was conducted between both psychological flexibility and wellbeing measures, and pro-social and anti-social measures. Firstly, there was a statistically significant negative correlation between AFQ-Y and SCWBS ($r = \frac{1}{2}$)

-.49, N = 97, p < 0.00, one-tailed). This is a moderate correlation that suggests a linear relationship between higher scores of wellbeing and lower scores of psychological inflexibility. This moderate relationship can be seen in the scattergram in Figure 3.1.

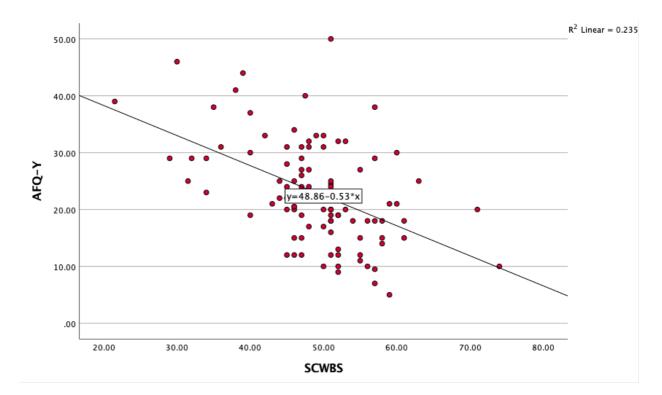


Figure 3.1. Scattergram showing the relationship between psychological flexibility and wellbeing scores.

Note: AFQ-Y = Avoidance and Fusion Questionnaire for Youth, SCWBS = Sterling Children's Wellbeing Scale.

Further two-tailed correlational analyses were completed between each of the measures, shown in Table 3.2. No significant relationships were found between self-report measures (psychological flexibility and wellbeing) and peer nominated measures (pro-social and friendship networks). However, there were further significant relationships found within those peer nominated measures.

Table 3.2

Measures		1.	2.	3.	4.	5.
1.AFQ-Y	Pearson Correlation					
	Sig. (2-tailed)					
	N					
2.SCWBS	Pearson Correlation	49**				
	Sig. (2-tailed)	<.01				
	N	97				
3.Pro-social	Pearson Correlation	12	00			
	Sig. (2-tailed)	.327	.99			
	N	75	76			
4.Anti-social	Pearson Correlation	.18	11	64**		
	Sig. (2-tailed)	.13	.34	<.01		
	N	75	76	76		
5.Close friend	Pearson Correlation	06	.05	.55**	36**	
	Sig. (2-tailed)	.63	.69	<.01	<.01	
	N	75	76	76	76	
6.Popular	Pearson Correlation	03	.08	.11	.11	.40**
	Sig. (2-tailed)	.77	.47	.35	.36	<.01
	N	75	76	76	76	76

Note: 1. Psychological flexibility score, 2. Wellbeing score, 3. Pro-social score, 4. Anti-social score, 5. Close friend peer nominations, 6. Popular peer nominations.

AFQ-Y = Avoidance and Fusion Questionnaire for Youth, SCWBS = Sterling Children's Wellbeing Scale.

A statistically significant positive correlation was identified between pro-social scores and the number of close friend peer nominations (r = .55, p < 0.00, two-tailed), this is a moderate correlation showing a linear relationship between high pro-social

^{**} Correlation is significant at the 0.01 level

scores and higher peer nominations for close friends. This is supported through a statistically significant negative correlation, of moderate strength, found between antisocial scores and close friend nominations (r = -.36, p < 0.00, two-tailed), suggesting a linear relationship between high levels of anti-social behaviour and low nominations of close friends. This finding partially supports the third hypothesis that there would be a significant correlation found between pro-social scores and close friend / popularity nominations; however, no significant relationship was found between popularity nominations and pro-social behaviours.

In addition to these findings relating to the hypotheses, a statistically significant negative correlation was found between pro-social and anti-social scores (r = -.64, p < 0.00, two-tailed), suggesting a linear relationship of moderate strength between high pro-social scores and low anti-social scores. Finally, there was also a statistically significant positive correlation discovered between close friend nominations and popularity nominations (r = .40, p < 0.00, two-tailed), demonstrating a moderate linear relationship between higher numbers of close friend nominations and higher numbers of popularity nominations.

3.4 Discussion

Whilst the main aim of this study was to assess the feasibility of the lessons and measures, an additional outcome was the opportunity to examine the relationships between the variables being measured. Several significant relationships were identified, the relationship between psychological flexibility and wellbeing confirmed the first hypothesis, and the relationship between pro-social behaviour and close friend nominations partially confirmed the third hypothesis. There were no

relationships found between wellbeing and pro-social / friendship network measures, thus the hypothesis was not supported.

Firstly, the relationship found between psychological flexibility and wellbeing supports previous literature reviewed that suggested higher psychological flexibility was associated with better psychological wellbeing outcomes (Forsyth et al., 2003, Hayes et al., 2004; Plumb et al., 2004; Hayes et al., 2006). Whilst this study is correlational, and therefore it is difficult to make causal inferences, between psychological flexibility and wellbeing, previous research has found that improvements in psychological flexibility mediate improvements in wellbeing outcome (Livheim et al., 2015; Swain et al., 2015). This relationship is beneficial to this research as the main aim of ACT (and DNA-V by association) is to improve psychological flexibility, therefore if the intervention can have the desired effect on the participants, there is a likelihood that it could also have a positive impact on wellbeing.

Secondly, the relationship identified between pro-social behaviours and close friend nominations was expected; however, as this is a correlational relationship, we cannot determine causation, i.e. does having more close friends increase pro-social behaviours or does being pro-social increase the number of close friends you have? Idealistically, within the main study there will be improvement in pro-social behaviours pre to post intervention, as suggested by previous research (Sklad et al., 2012), therefore it will be interesting to examine the close friend nominations pre to post intervention to understand the significance of this relationship. Finally, there was a relationship found between pro-social and anti-social behaviours, this was an expected relationship.

One of the aims of the pilot study was to examine the acceptability of the measures, the mean AFQ-Y score of 22.82 is similar to Greco et al. (2008) who found

mean AFQ-Y scores of 23.55 in girls and 20.51 in boys, suggesting students were able to complete the questionnaire to the same ability as others previously. The mean SCWBS of 48.85 is slightly elevated compared to the 43.51 found by the creators of the scale (Liddle & Carter, 2015), demonstrating higher levels of psychological wellbeing. Due to the peer nomination measures being developed for this study, comparisons are unable to be made. However, due to students engaging in the peer nomination measures and 3/100 students having incomplete AFQ-Y or SCWBS measures, it can be proposed that the measures are acceptable for use in this study.

3.5 Observed and Verbal Feedback

3.5.1 Observations from the Lesson.

Firstly, there were several positive observations made during the piloting of the lesson. Across all classes, students did not question any of the language or terminology used when teaching the lesson or needed further explanation of DNA-V material, demonstrating that the content had been simplified suitably for the age group. In addition to this, the students engaged well with the main task as evidenced by observations of whole class activity participation as well as laughter and smiles from multiple pairs, showing the fun element of learning which has been demonstrated as beneficial in education – something that needs to be maintained throughout all LPs. During the main task, the interactions observed in the classroom showed the participants following the directions correctly and participating in a beneficial manner, which led to overhearing advisor focussed discussions between classmates. Finally, an additional positive was the use of PowerPoint slides, the extra visual aid was regularly being watched by the participants and referred to during the main task.

However, there were some areas for improvement. From the expression of the participants faces, they did not enjoy the talking parts of the lesson much, that being the sections of the lessons that give context to the wellbeing/DNA-V focus of the lesson that are teacher led. Moving forward, the description parts of the lessons need to be kept short and open to discussions to keep engagement with the content high. An additional challenge faced was the timings listed on the LPs, the main activity time allowance was underestimated. This led to the lessons overrunning, therefore, moving forwards LPs need to be checked thoroughly and more thought given to time allocations. Lastly, when the participants were completing the measures, some were trying to look at the answers of the person next to them. They were frequently reminded to do it by themselves and that no one in the class, even the teacher, would see their results. To avoid possible social desirability moving forward, the class teachers will hopefully be able to monitor the class to ensure they only focus on their own questionnaires.

3.5.2 Lesson Content Verbal Feedback.

At the end of the lesson, the class teacher and the children were asked for their thoughts on the lessons as a group and if there were any improvements that could be done. No improvements were suggested; however, there were some positive comments to note. The students mostly said how the lessons were "fun", "enjoyable" and even some commented on how it was nice to learn something completely new. They also said that their favourite part of the lesson was the main activity because they got to stand up and move around the classroom.

The teachers made similar comments with the majority expressing their interest in the advisor and how they can see it to be beneficial. Some teachers even

suggested that it made them think about their own behaviours and how they could use their advisor skills more efficiently. These affirmative comments on the lesson helped to strengthen the relationships that were being established with the schools and their motivation to take part in the main study.

3.5.3 AFQ-Y and SCWBS Feedback.

There was minimal feedback for both these measures. All schools were happy with each of the items and the wording of the items too. Teachers expressed that explaining the scoring of each item may take a while the first time, but as the time points move on, they will easily get used to the directions. This was beneficial to be told, as these measures can confidently be used within the main study.

3.5.4 Sociometric Measure Feedback.

Concerns were expressed for the sociometric measures, and some schools were not comfortable using them, as mentioned within the participants section above. Some schools did not approve of classmates nominating each other for the anti-social items as it could be deemed as "bullying". They also did not want classmates to feel left out of being nominated for the pro-social and friendship network measures. We communicated with the teachers and head-teachers at these schools to explain ethical approval, the use of sociometric measures in education and the confidential nature of the data. However, their concerns laid with playground gossip which would be completely out of the researcher's control — an understandable apprehension.

Therefore, based on this feedback, these measures were not used in some of the schools. One school removed themselves from the research entirely due to issues with this measure as well as uncertainty of their ability to commit to the full study. Another

school withdrew all their data for the pilot study but wanted to continue without the sociometric measures for the main study and another school withdrew their data for just the sociometric measures.

Schools that used the sociometric measures provided feedback regarding the terminology used for specific items. The items they suggested to be amended for better comprehension from students were: 'who cooperate with others' as they may not know the meaning of cooperate, 'who fights with others' as they may take this literally and 'who makes fun of others' as they might see it as a positive comment. This feedback was valuable in informing the slight wording changes needed that were made for better participant comprehension for the main study, these amendments are outlined in the next chapter.

3.6 Conclusion

The pilot of the lesson and measures was constructive in multiple ways to enable amendments to both the measures and the LPs. In particular, the LP feedback and observations gave clear insight into beneficial developments to enhance the content of the lessons, improve student engagement and teacher acceptability. Due to the fragile nature of building and maintaining relationships with schools after the experience from the pilot study, implementing their feedback was essential. The feedback was given to the team behind the LP development and referred to through the reviewing and final checks of the other LPs. The feasibility and acceptability process for the intervention (the LPs) was informal with verbal feedback given in a group setting. Time constraints prior to the main intervention implementation meant thorough processes were not followed, which allowed the main intervention to start promptly. As outlined in a feasibility and acceptability protocol for an ACT intervention,

formal interviews regarding the intervention could have been conducted and analysed using thematic analysis (Saracutu et al., 2018). This additional step would have been more beneficial to the development of the DNA-V curriculum instead of the informal group feedback after the pilot lesson and should be considered for future amendments. In addition to the curriculum improvements, the sociometric measures were adjusted to accommodate for the age of the participants and their understanding of the queried items. Moving forward, as a future suggestion to improve school participation in measures based off the experiences in this research, it would be beneficial to collaborate with schools earlier on in the development to ensure schools contentment with all aspects of the study.

Another limitation to this study is that only one lesson was piloted with children to ensure consistency across schools; however, perhaps piloting a random assortment of lessons would have been beneficial for a larger range of feedback. The introduction to the advisor lesson was selected to gently introduce one element of the DNA-V model as later lessons would have been confusing, as the students would not have known about the DNA-V skills. In future, it might be beneficial to potentially pilot more than one lesson with each class to 1) introduce them to the advisor and 2) run a lesson that combines the advisor with a PSHE topic.

Finally, important to discuss, the lessons were not piloted by the teachers at this stage, therefore, it was difficult to know if the success of the LPs at this stage would be replicated when being delivered by the teachers. The success of the LPs at the pilot stage could be due to multiple reasons such as: 1) the lesson was clear and well structured, 2) the lesson was enjoyable and 3) the delivery of the lesson was by an individual who had full comprehension of the DNA-V model and LP. Two of those reasons can be duplicated in the main study consequentially; however, lesson delivery

cannot, therefore, thorough training of the teachers is required to ensure a good standard of delivery.

3.7 Stage 2 – Training the Teachers

3.7.1 Aims and Hypotheses

The aim of this study was to implement training of DNA-V with the teachers involved in the main study. Literature suggests universal mental health interventions in schools gain more significant outcomes when led externally (e.g., health professionals) compared to school staff (Stallard et al., 2014; Werner-Seidler et al., 2017); indicating the need for thorough teacher training for beneficial outcomes. The training program was evaluated by an DNA-V knowledge test pre- and post- training. In addition to this, the psychological flexibility of the teachers was tested before and after training to detect if the training had any additional effects on their flexibility. Finally, the training allowed for feedback from teachers for final amendments to the curriculum.

Firstly, it was hypothesized that there would be a significant increase in ACT and DNA-V knowledge post training. Secondly, it was hypothesized that the training itself would significantly increase the participants psychological flexibility scores as a side effect to the main purpose of the training, as research suggests ACT can significantly improve adult's psychological flexibility (Fledderus et al., 2013). The training was not aimed at teachers personally; therefore, this was a measurement to see what could happen without any real expectations.

3.8 Method

3.8.1 Study Design

Stage 2 of the research was the training of teachers and other school staff. The training was offered to all school staff interested in attending (not just the teachers leading the lessons) to ensure interschool support systems were available. The training sessions were designed and run by Dr Nic Hooper, Dr Duncan Gillard and I, details of which are outlined below. The training lasted for one day and was a group training session completed in person. After the training, verbal feedback on example lessons was given to gain additional teacher consultation on the LPs. One week prior to training and one-week post training psychological flexibility and DNA-V knowledge measures were taken to assess the effectiveness of the training.

3.8.2 Participant Details

Participants were recruited on a school basis; schools were emailed about the opportunity to take part and those interested were accepted with the understanding that the current year 5 teachers would undertake the training alongside any other staff that wished to take part.

After the pilot classes in stage 1, five primary schools continued taking part in the main study and were invited to the training. Of the five schools, two schools had two year 5 classes, therefore, a total of seven class teachers attended the training as well as five additional staff members across the schools. Within the participant group there were year 5 teachers, PSHE leads, a deputy head and a parent learning support assistant (LSA). Seven out of the 12 participants identified as male and 5 identified as female. Not all 12 participants completed the measures pre- and post-training. Whilst all staff members were asked to complete the measures, there is pre- and post- data for 7 participants with one person doing pre training only and one person doing post training only.

3.8.3 Materials

Training Content

The training content comprised of three primary areas: an introduction to ACT, the DNA-V model, and the curriculum. The team delivered sections of the content that best suited their expertise which lasted one day, from 9am until 4.30pm. The training was created by two ACT and DNA-V experts (two of my supervisors) and myself, being the expert in the curriculum. The training day PowerPoint slides can be found in Appendix D.

Introduction to ACT. The first section of the training gave a brief introduction of ACT to support the participants' understanding of the DNA-V model and where it developed from. Within this section of training the participants were informed about ACT, including an introduction to what ACT is, a discussion on the hexaflex model (Hayes et al., 2006) as well as an examining some of the evidence base for ACT. There was also focus on ACT being a transdiagnostic model that has supporting evidence for its success with children and young people for various mental health disorders (Swain et al., 2015).

DNA-V. The second section of the training included a clear description of the model and the components that form DNA-V, including the participants taking part in several DNA-V specific activities. It was explained that ACT was created for adults and therefore DNA-V aims to adapt the processes into a more suitable model for young people. Each time a key skill was taught, a coinciding activity from 'The Thriving Adolescent' book (Hayes & Ciarrochi, 2015) was carried out (activities are included in

the PowerPoint slides listed in Appendix D). For discoverer, the skill that wants us to explore the world, there was an imagination task. For noticer, the skill that helps us connect with our inner thoughts/feelings, there was a mindful breathing exercise. For advisor, which we refer to as our 'inner voice,' they took part in the 'give your mind the microphone' activity. For values, viewed as our compass that guides us, they used conversation cards. For self view, our ability to see ourselves within the world, participants completed a questionnaire and for social view, how we see ourselves with others, participants were taught the acronym 'WISH' to encourage empathy for others (What happened and who was affected? Is there a chance that someone was hurt? So how do we put things right? How can we do things differently next time?).

The Curriculum. Within this concluding section of the training, the structure for the curriculum was shown to the participants as well as an introduction to some of the lessons. Firstly, the six themes for the year were introduced, explaining the reasoning behind each choice and then the lesson layout was presented. The resources available and required to be used in the classrooms were discussed before splitting participants into smaller groups to review some example LPs. After the lessons had been examined, the participants were reminded of how the research would run within their schools.

Measures

Participants completed an online self-report measure to examine their psychological flexibility and a knowledge multiple-choice questionnaire (MCQ) that was designed to test their DNA-V knowledge.

Acceptance and Action Questionnaire – Version 2. Firstly, the self-report measure is the most widely used measure of psychological flexibility with adults (as seen in Meyer et al., 2013; Reneman et al., 2014; Ruiz et al., 2013). Within the Acceptance and Action Questionnaire – version 2 (AAQ-II, mean a= .84) higher scores indicate higher psychological inflexibility (Bond et al., 2011). This measure has been found to have good predictive validity due to higher levels of psychological inflexibility being associated with psychological distress symptoms as measured by the Beck Depression Inventory and Beck Anxiety Inventory (Bond et al., 2011). The AAQ-II is a 7-item Likert scale with items such as "I'm afraid of my feelings" and "worries get in the way of my success". The measure uses a 7-point scale where 1 = never true and 7 = always true, none of the items were reverse coded. The highest a person can score is 49 and the lowest 7.

Knowledge Multiple Choice Questionnaire. The second measure, the knowledge MCQ, was created to test the knowledge obtained of DNA-V post training. The questions were developed by the training team using information presented within the training to understand how effective the training was at helping the participants to learn the DNA-V model as well as core principles of ACT that are integral to DNA-V. The knowledge MCQ consisted of 27 questions (outlined in Appendix E). Higher scores indicate greater knowledge and comprehension of DNA-V, a higher score post intervention suggests adequate learning of the training content delivered.

3.8.4 Analytic Strategy

Data was statistically analysed using SPSS 29.0 software. Data was tested for normality using the Kolmogorov-Smirnov test which showed both the AAQ-II and MCQ

preliminary data to be normally distributed. To identify significant changes post training paired t-tests were conducted on both variables. Differences were labelled statistically significant if the *p* values were less than 0.05.

3.9 Results

3.9.1 Statistical Analysis

Table 3.3 below shows the means and standard deviations of both measures across both pre- and post-training. As the MCQ was a made for purpose knowledge questionnaire there are no comparisons that can be made to the numbers below. However, the mean for the pre-AAQ-II is what was expected based off the research from Bond et al. (2011) who found a mean score of 18. To identify if there were any significant changes pre- to post- training paired t-test analyses were conducted. Table 3.3 also shows the results of the paired *t*-tests, no significant difference was found between the pre- and post-psychological flexibility scores, therefore the second hypothesis that there will be an increase in psychological flexibility post training was not supported.

However, there was a significant difference found between the knowledge MCQ scores pre- and post-training. The means show an increase in DNA-V knowledge post-training, with a paired t-test showing the scores to be statistically significant (t = -4.87, df = 6, p < 0.001, one tailed) with a large effect size of Cohens d = 2.80. This result accepts the first hypothesis demonstrating the training of the teachers to be effective in increasing their knowledge of the model.

Table 3.3

Means, standard deviations and paired t-test results.

	Pre-		Post-		Paired	1
Measures	trainin	g	trainin	g	differen	ces
-	М	SD	M	SD	t	p
MCQ	12.13	2.90	19.63	2.45	-4.87	.001
AAQ-II	17.50	9.29	14.13	8.10	1.53	.177

Note: MCQ = Multiple Choice Questionnaire, AAQ-II = Acceptance and Action Questionnaire – Version 2.

3.10 Discussion

These results show an increase in teachers DNA-V knowledge from pre- to post-tests, suggesting the training was effective. The significant increase in knowledge one-week post training suggests the delivery and content included was sufficient in educating the teachers on the important facets of ACT and DNA-V that will underpin the curriculum. However, it is important to note that a one-week follow-up is not a long-term follow-up, and long-term follow-ups have the benefit of validating the continued effectiveness of the intervention, in this case training (von Allmen et al., 2015). To ensure the effectiveness of the training, further testing of DNA-V knowledge could have been conducted at later time points to ensure sustained knowledge especially during the intervention.

Results indicated no significant increase in psychological flexibility, there are three possible explanations for this. Firstly, Kashdan and Rottenberg (2010) highlight that psychological flexibility is a skill that is adapted over time when an individual is presented with specific challenges/experiences whereby they can improve and hone their psychological flexibility. Therefore, with the training lasting one day and the testing commencing one-week post training, it is improbable adequate time has

unfolded to allow for an increase in psychological flexibility. Secondly, the aim of the training was not to facilitate an increase in psychological flexibility, but to instruct the participants how to teach it. Thus, an improvement in psychological flexibility scores would have been a favourable consequence of the training, rather than an integral aim. Finally, the mean psychological flexibility score is what is expected of a group with no suspected psychological distress, therefore a significant change is not expected within this group.

3.11 Teacher Feedback

Part of the training included teachers separating into small groups to review the first term of LPs one by one, this only included the paper versions and not the additional resources such as videos and PowerPoint presentations. They were directed to create spider diagrams, which help to display information in a visual way (see Figure 3.2 for an example), with any feedback that would assist in the development of the lesson plans. Teachers were asked to consider clarity, amount of information, further requirements and any other arising thoughts. When creating these diagrams, no names or identifiers were required therefore all feedback was anonymous.

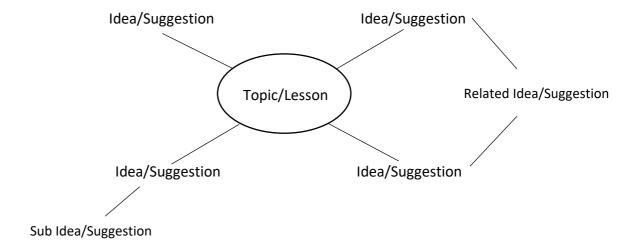


Figure 3.2. An example of a spider diagram for context.

This information was collated into a table, repeated feedback and feedback that was answered through other lesson plans were removed. Below in Table 3.4 the amendments and solutions decided upon are outlined, including examples where teachers' concerns could not be accounted for. This additional feedback helped to shape the LPs in a more teacher friendly way, which increased the chances of student comprehension and engagement.

Table 3.4

List of teacher feedback for each of the Term 1 lessons reviewed, including the amendment/solution decided.

Lesson	Feedback	Amendment/Solution
Introduction to DNA-V	"Can't assume children's knowledge on what anger/nervousness/sadness can feel like"	Additional explanations included for physiological sensations one might feel with these specific emotions.
	"Success criteria"	This comment suggested including 'success criteria' to fit with teaching standards. This was implemented.
	"Fill diary is an activity not an objective"	This element was removed from learning objectives.
	"Individual activities good but bitty"	Ensuring future individual tasks are more cohesive and have a one narrative focus.
	"Guidance on diaries"	When starting the intervention in schools each class were given diaries and it was clearly explained how to fill them in.
	"Is there a child friendly pictorial version of DNA-V that is colourful and engaging"	At the time there were not alternatives; however, PowerPoints were created with use of colour, images, and symbols to make it more engaging.

	"Should it talk about how all parts link"	Additional information was included to guide discussion around how the different DNA-V skills link.
Discoverer	"What does class discussion look like? More structure please. Add stimulus to reduce teacher talk"	More guidance was included on how to structure discussions in the class and videos/activities were added where appropriate.
	"Example needs to be more relevant to age range"	Examples were reviewed and edited to be more suitable to the participants' age.
	"The chart is another amongst many"	Concerns were heard, but the Discoverer chart was still encouraged to be used.
Noticer	"Starter tasks too long"	Additional starter tasks were added to the original tasks that were deemed to take less time allowing longer and shorter tasks to be used.
	"Teacher confidence in dealing with psychological consequence of mindfulness"	Ensured that the child friendly mindfulness tasks included are unlikely to elicit harmful consequences but encouraged to deal with the situation according to school protocols.
	"Alternative to chocolate"	Teachers were told any food could be eaten mindfully and the script would only need minor adjustments.
Advisor	"Activity could be chaotic, a card guide or drawing task could be used"	This concern was noted; however, the importance of this task was to allow freedom to the children to make it more realistic to real life where your 'inner voice' can guide you with anything.
	"After the activity could the questions be more explicitly linked to the Advisor?"	Questions were framed in a more appropriate way to link it to the Advisor.
	"Explain the role of the Advisor then show the video clip"	The structure of this LP was amended to follow this suggestion.
	"Other examples than broccoli"	An additional example was given for guidance and a chance for teachers to share a personal example too.

	"Could the children be asked to discuss an example (similar to broccoli) that is personal to them"	An additional discussion prompt was added to get students to come up with their own personal examples of their Advisors.
Values	"Children may need some scaffolding in order to create a longer list of values relevant to them"	Additional prompts were included to help children recognise areas in life they value, also, the task was amended to reduce need for long lists.
	"Four corners instead of discussion, could activity be contextualised more?"	This suggestion was utilised and made a part of the task, using prompt values to add more context to the activity.
	"Definition of values does not correlate with Christian values/British values – what we are asking the children about is qualities? Values could be changed for qualities"	This concern was understood; however, due to wanting consistency in the model and language used by the children the terminology was kept the same. Especially as values are a core principle.
Self and Social	"Need more structure in the introduction"	This feedback was helpful in improving the start of this lesson.
Context	"Visual prompts?"	Teachers were ensured visual PowerPoints would be attached with each LP.
	"Carefully targeted outcomes for discussions with teacher scaffolding to enable impactful talk"	This comment was helpful in instructing more detailed discussion prompts to guide teachers.
	"Like part one, part two needs more focus"	This showed us what works better for teachers and helped us develop part two to have a clearer narrative.

3.12 Discussion

A range of experienced and advantageous feedback was received from teachers that attended the training which helped shape the final developments to the curriculum. Most of the feedback related to lesson plan amendments such as extra guidance, more examples and visual prompts that could be easily addressed. However, two unexpected concerns were raised in relation to mental health outcomes and uncertainty with the term 'values' which were more challenging to address.

Firstly, one piece of feedback highlighted their anticipation of dealing with psychological consequences of mindfulness. Whilst a study into meditation and mindfulness found 25.4% of participants experience unwanted effects such as anxiety symptoms, pain, exaggerated changes in mood and depressive symptoms (Cebolla et al., 2017), this study was conducted with adults who took part in a range of mindfulness activities in comparison to the gentle inclusion of mindfulness for children in this curriculum. It is also important to acknowledge that unwanted effects were more commonly experienced by participants that took part in individual practice as opposed to group practice, within this curriculum all activities are group/class based. Therefore, this is a concern to be prepared for to support teachers and students, but the likelihood of a negative outcome is reduced due to the manner in which the mindfulness intervention is applied.

Secondly, a teacher fed back that the term 'values' should be changed as it is not in line with Christian values or British values. Upon research, schools are required to endorse British values as set out in Governmental guidelines (Department for Education, 2014), therefore, the confusion in terminology is comprehendible. The British values are listed to help promote the spiritual, moral, social, and cultural (SMSC) advancement of students. Regarding Christian values, this is dependent on whether the school is affiliated as a faith school with providers such as the Church of England or the Catholic Education Service. Schools in England are not required to classify as a faith school, as of January 2023 faith schools accounted for 37% of primary schools in England (Office for National Statistics Regulation, 2023). Whilst it is recognised that the term values may cause confusion with British and religious value definitions; values are integral to the ACT processes and the DNA-V model. Therefore, changing the term to 'qualities' was not accepted as an amendment as this could have

caused further confusion and stopped the curriculum from maintaining consistency with other ACT/DNA-V research. However, it was ensured thorough definitions and explanations of values were given to reduce the potential for confusion.

3.13 Conclusion

To summarise the contents of stage 2, the training of the teachers implementing the curriculum, the goal at this stage was to train teachers in the processes that will be used within the curriculum, as well as gaining feedback to make final amendments to the LPs. This process placed importance on the teachers' involvement in the intervention and helped to evolve the curriculum further. Firstly, the training showed a statistically significant improvement in DNA-V knowledge oneweek post training, suggesting the training achieved what it intended to do. Therefore, teachers were able to teach the curriculum comfortably and accurately with a thorough understanding of DNA-V. Secondly, the feedback from the LPs as part of the training process gave valuable insight into teachers' constructive opinions of the curriculum and how to progress it further. This shows elements of co-creation through the conduction of the intervention by prototyping the lesson plan, up-skilling the teachers via training and involving both teachers and students in the iteration and refinement of the curriculum (Leask et al., 2019).

One limitation of the stage 2 study is that the sample size is small. Not only that but out of the 12-school staff that attended the training only 7 completed both preand post- measures, showing that uptake of the online questionnaires was poor.

Stronger adherence to the study procedures would have allowed for a larger sample of participant data. In future, secondary options such as printed questionnaires should be

available alongside online options for completion. In addition to this, it would have been beneficial to include a long-term follow-up of the measures to identify if the training was efficient months after training rather than just one week. The outcome of the follow-up could have led to further training required to update the teachers before curriculum implementation.

Another limitation to this study is the process by which feedback was given; the teacher feedback was returned as written suggestions/concerns/ideas on spider diagrams. Therefore, any uncertainty of the written responses could not be clarified or expanded upon, so feedback was reviewed as it was written. Whilst this anonymous process of feedback through spider diagrams allowed school staff to give feedback openly, perhaps the addition of semi-structured interviews would have allowed the researcher to uncover even more detail to suggestions and amendments.

At the end of stage 2 the research has hit two vital developmental targets 1) the LPs and measures have been piloted with target aged participants gaining valuable insights into improvements to both the LPs and measures and 2) the teachers have been trained to deliver the curriculum and have also given thorough suggestions to enhance the LPs. Therefore, the next stage in this research (stage 3) is to conduct the main study whereby the year-long curriculum will be delivered by teachers in the volunteer schools with data collected pre-, mid-, post- and 6-month follow-up. From this stage the curriculum can be analysed to examine its effectiveness of supporting student wellbeing and the feasibility of implementation.

Chapter 4: Implementing and Evaluating the Effectiveness of the DNA-V PSHE Curriculum with Students

Within this empirical chapter the importance of the research is highlighted before the main study (study 3) is discussed. The developed DNA-V curriculum was implemented for one school year and data was collected across three time points, including a fourth follow up timepoint. The intervention was examined to understand its effectiveness in supporting child wellbeing and psychological flexibility. This study statistically analyses both responses from the children who participated in the intervention as well as teacher reported measures.

4.1 Introduction

With growing concern over the increase of mental health disorders within children and adults (McManus et al., 2016; Sadler et al., 2018; Newlove-Delgado et al., 2021), more importance is being placed on the mental wellbeing of people throughout their lifespan. An individual's mental wellbeing as a child can impact upon their adult wellbeing leading to mental health concerns (Public Health England, 2019), thus suggesting the need for provisions to promote mental wellbeing within children. An array of empirically supported therapeutic approaches can be utilised; however, as recommended in Chapter 1, a universal approach would facilitate the aim of promoting wellbeing, as they are a preventative measure that can work for whole groups of children (Lowry-Webster et al., 2001).

Universal approaches (e.g., psychological programs delivered in a school setting – typically to a whole class) have been found to positively impact a child's pro-social behaviours, sociability, self-image, anxiety, and depression (Corrieri et al., 2014; Sklad

et al., 2012; Werner-Seidler et al., 2017). With schools favoured as a suitable environment for a universal approach and ACT chosen as an appropriate theory to underpin the intervention (explained within Chapter 1), the development, piloting and training of the intervention were critical stages before testing the overall feasibility. Firstly, in the development of the intervention, the formulation of the lessons led to a PSHE style curriculum with DNA-V (Hayes & Ciarrochi, 2015) guiding the lesson plans (LPs) and wellbeing focus (outlined in chapter 2). Secondly, in the piloting stage, further developments to the LPs and adaptations to the measures ensured full comprehension of the intervention (discussed in chapter 3). Finally, in the training of the teachers running the intervention, teachers developed an increase in DNA-V knowledge and became familiar with the curriculum prior to main study implementation (explained in chapter 3). With these stages complete, the curriculum was ready to be implemented and analysed.

4.2 Aims and Hypotheses

The aim of this main study was to evaluate the effectiveness of the DNA-V curriculum developed in previous stages, as well as the feasibility of situating a wellbeing intervention in a PSHE curriculum taught by teachers. The quantitative measures analysed the effects of the intervention on the children's wellbeing, psychological flexibility, pro-social behaviours, anti-social behaviours, friendship networks, helping behaviours and direct/indirect aggressive behaviours. The qualitative elements of this research create a clear understanding of the children's experiences and interactions with the intervention as well as the teachers' views. The qualitative elements are outlined separately in Chapter 5. Based on the aims of

evaluating the effectiveness of the curriculum on various wellbeing outcomes, as well as previous research findings four hypotheses were made:

- 1) It was hypothesised that there would be a significant increase in psychological flexibility and wellbeing from pre- to post- intervention, as research suggests ACT based approaches increase psychological flexibility (Livheim et al., 2015; Swain et al., 2015). Concurrently positive wellbeing outcomes would increase (Forsyth et al., 2003, Hayes et al., 2004; Marshall & Brockman, 2016; Plumb et al., 2004; Simon & Verboon, 2016).
- 2) It was hypothesised that there would be an increase in pro-social behaviours and a decrease in anti-social behaviours from pre- to post- intervention based on previous research that found universal based whole school approaches increase pro-sociality and improve anti-social behaviours (Sklad et al., 2012). Additionally, the DNA-V principles would likely impact on pro-social behaviours, specifically when implementing valued actions and using the advisor correctly.
- 3) Due to the hypothesis two, it was also hypothesized that there would be an increase in close friend and popularity peer nominations pre- to post-intervention because of a predicted increase in pro-social behaviours (Caputi et al., 2012).
- 4) It was hypothesised that there would be a decrease in direct and indirect aggressive behaviours as well as an increase in helping behaviours, as research indicates that universal school approaches have a significant increase in social and emotional competence in addition to pro-social behaviours (Humphrey et al., 2016). Similar to above, the intervention itself is likely to have a positive impact on these outcomes if DNA-V is taught and applied correctly.

4.3 Method

4.3.1 Study Design

This was an experimental study that took place across four public primary schools in the southwest of England. The class teachers that were trained in stage two of the research were responsible for the delivering of the curriculum with access to the research team for advice, guidance, and support throughout the duration of the school year long intervention. This study used a repeated measures design whereby all participants took part in the intervention curriculum and data was collected at four timepoints (pre intervention, midway, post intervention and 6-month follow-up). There was no control group for comparisons due to the difficulty in recruiting schools. That is, all the school would only take part if they received the active intervention. Nevertheless, as this intervention is new, preliminary investigations into its effectiveness and feasibility will establish foundations for future, more complex research. After the first set of data was collected teachers started to conduct the lessons - curriculum content and units of delivery are detailed later.

Ethical approval of this study was obtained from the UWE Research Ethics

Committee on the 17/05/2018. All parent/guardians of students were given information sheets and 'opt out' consent forms.

4.3.2 Participants

Schools were originally recruited from those engaging in the pilot study. Those expressing interest were accepted with the understanding that the lessons would be taught to the year five classes from the start of the academic year until the end of the academic year, and then that a 6-month follow-up data collection point would subsequently take place. Initially, four primary schools agreed to take part in the main

study with a total of six available classes. All year five students (aged 9-10) were eligible to take part and there were no exclusion criteria. Fourteen children were withdrawn due to parental non-consent and therefore data was not collected from these students. Across the year-long study, a total of 155 students took part in the intervention; however, not all students took part in each timepoint of data collection due to illness, days off and whole school attrition (displayed in Figure 4.1).

An a priori power analysis was carried out using G*Power version 3.1.9.4 to establish the minimum sample size necessary to test the study hypotheses. Results suggested the required sample size to achieve an 80% power for detecting a medium effect, at a significance criterion of α =0.05, was N=24 for a repeated measures design. Therefore, the sample size of N=155 is satisfactory to test the study hypotheses.

Participant characteristics can be found in Table 4.1, the gender balance of the sample was strong with 74 participants identifying as female (47.7 %), 78 participants identifying as male (50.3%), 1 participant identifying as other (0.6%) and 2 participants leaving this blank (1.3%). However, the representativeness of the sample regarding race was weak with 136 of participants classifying themselves as white (87.7%), 16 participants as either Black or African American, Asian, mixed, or other (10.3%) and 3 participants left this selection blank (1.9%). The most recent census revealed that 81.7% of the population identify themselves as white (Office for National Statistics, 2022), suggesting the sample was not as diverse as the UK population.

Table 4.1Participant characteristics.

Characteristic	n	%
Gender		_

Male	78	50.3
Female	74	47.7
Other	1	0.6
Missing	2	1.3
Ethnic Group		
White	136	87.7
Black	4	2.6
Asian	3	1.9
Mixed	8	5.2
Other	1	0.6
Missing	3	1.9
Religion		
Christian	27	17.4
Buddhist	1	0.6
Hindu	1	0.6
Jewish	2	1.3
Muslim	3	1.9
Sikh	1	0.6
None	109	70.3
Other	2	1.3
Missing	9	5.8
Disability		
Yes	15	9.7
No	135	87.1
Missing	5	3.2

4.3.3 Attrition

This study started with four participating schools and 155 participants. As noted in Figure 4.1, the attrition was high with schools dropping out at each data collection point bar one that completed the follow-up. One school did not have the time to implement the lesson plans as frequently as required, they felt they could no longer continue with the study due to other school and national curriculum commitments. One school had a leadership change and decided to not continue

participating, and a third declined to participate in the follow-up collection point for unknown reasons. At the individual student level, one participant left their school after the pre-intervention data collection and a total of 25 participant absences were recorded across the four time points due to illness. Due to whole school dropouts, illness, incomplete data files and schools opting out of the peer nomination measures, the number of data collected at each time point varies. Participant flow is outlined in Figure 4.1 below, highlighting the participant number changes per school across the time points, accounting for participant absences and incomplete data.

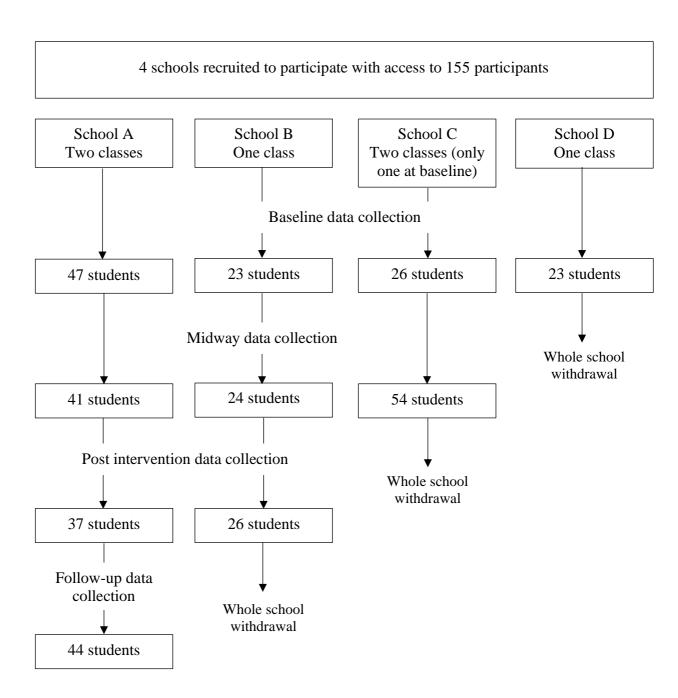


Figure 4.1. Participant flow over four data collection time points.

4.3.4 Intervention Details - Curriculum Content and Materials

The intervention for this study was created as a PSHE style curriculum with the model of DNA-V guiding the wellbeing focus. Elements of PSHE were incorporated into the intervention with each lesson having a specific focus as well as being linked to DNA-V (see Chapter Two for curriculum details and Chapter Three for intervention amendments). Tables 2.1, 2.2, 2.3, 2.4 and 2.5 (found in Chapter 2) outline the

curriculum structure, show example lessons and activities, additionally, complete LPs and resources can be found within Appendix B and C.

All teachers were provided folders with printed LPs. In addition to the core materials, each class folder contained printed versions of the starter tasks and were supplied with seating plan, grouping game resources (explained in Chapter Two and listed in Appendix C) as well 'DNA-V Diaries' per student (shown in Appendix F). All participating teachers were given online access to a folder holding all materials required for successful delivery such as online versions of the LPs, coinciding PowerPoint slides, educational example videos, games/activities, printable certificates, and charts (as discussed in Chapter Two and listed in Appendix C).

4.3.5 Units of Delivery

The DNA-V curriculum consisted of six terms of lessons, with the first term containing six separate lessons and the subsequent terms five lessons per term with 31 lessons overall spanning the school year (with an English school year surmounting to 10 months excluding school holidays). Each lesson was created to last approximately one hour amounting to 31 hours of intervention exposure across the school year.

Teachers were given freedom to teach the lesson when it most suited their class timetables, therefore, there were no requirements as to which day or what time of the day participants engaged in the intervention.

4.3.6 Measures

Students were asked to complete four measures: two self-report measures and two sociometric peer nomination measures. In addition to this the class teachers completed an observational behavioural measure for each student. The final measure

was a diary each student had to complete at the end of each lesson. This measure was used as a metric of fidelity (i.e. did the student complete a sizeable number of sessions and did the sessions allow them to record DNA-V consistent responses in their diary?), and a measure of acceptability or enjoyment of content. Each of the measures tested in the piloting are briefly re-introduced below with the more detailed descriptions and reasoning outlined in Chapter 3.

Avoidance and Fusion Questionnaire for Youth (AFQ-Y). This measure is used to ascertain levels of psychological flexibility and avoidance behaviours and has a high level of internal reliability α = 0.90 (Greco, Murrell & Coyne, 2005). The AFQ-Y is a 17-item self-report questionnaire that uses a 5-point Likert style scale to examine the truthfulness of statements (e.g. "My thoughts and feelings mess up my life" and "I am afraid of my feelings"), where 0 = not true at all and 4 = very true. A lower score indicates a higher level of psychological flexibility, and a higher score indicates higher psychological inflexibility. None of the items were reverse coded. The highest a person can score on this measure is 68 and the lowest 0, with the average scores of 23.55 in girls and 20.51 in boys being reported (Greco et al., 2008).

Stirling Children's Wellbeing Scale (SCWBS). This scale was used to measure the psychological wellbeing of the participants and has a high level of internal reliability α = 0.82 (Liddle & Carter 2015). This is a 15-item self-report questionnaire that uses a 5-point Likert style scale to examine the frequency of various statements (e.g. "I think lots of people care about me" and "I've been cheerful about things"), where 1 = never and 5 = all the time. A lower score indicates low levels of psychological wellbeing. None of the items were reverse coded. The highest a person can score on this measure

is 75 and the lowest 15, with the average score being reported as 43.51 (Liddle & Carter, 2015).

Pro-social Peer Nominations. This measure was based on a measure developed by Pulkkinen, Kaprio and Rose (1999) and used by Ciarrochi and Heaven (2009). It was created with the aim of participants nominating their classmates within six different items. As explained in chapter 3, these were split into three pro-social items ("who are kind to others", "who cooperate with others" and "who you get along with well") and three anti-social items ("who fights with others", "who makes fun of others" and "who you get along with less well"). However, after piloting the measures, two items were adjusted for clarity, the "who cooperate with others" and "who makes fun of others" items were modified to "who works well with others" and "who makes fun of others in a mean way" for continued clarity. Additionally, teachers noted an issue with the wording of the "who fights with others" as students viewed this as a physical behaviour, therefore it was edited to "who disagrees with others" to encompass verbal 'fighting' which was deemed more relevant by the classroom teachers. Each participant had a list of their classmates and could nominate as many or as little as they wanted per item, for example, participant A could nominate all their classmates as "kind to others" and no one for "fights with others". This measure led to two final scores, a pro-social score (total of nominations for the three pro-social items divided by the number of participants that could nominate the individual) and an anti-social score (total of nominations for the three anti-social items divided by the number of participants). The highest score per sub-scale is 3 (which would require all classmates to nominate the child for each of the items within that sub-scale). A higher pro-social

score indicates that a child has been rated by their peers as pro-social, and a higher anti-social score indicates more anti-social behaviours as rated by peers.

Friendship Networks Peer Nominations. This measure was developed for purpose to examine the connections made within the classroom due to a possible increase in sociableness from the use of DNA-V. This measure is broadly based off previously used measures of peer nominations like Berndt & Keefe (1995) and Card et al. (2005); however, this measure allows for unlimited nominations similar to research by Kwon & Lease (2014). This measure was split into two items 'who do you consider to be your close friends' and 'who is popular in your class'. Each participant had a list of their classmates and could nominate as many or as little as they wanted per item. The nominations were totalled and divided by the number of participants eligible to nominating, this led to two individual scores for close friends and popularity. Each score can be translated to a percentage (e.g., a 0.27 score suggests 27% of peers nominated that person for the item), therefore the higher the score the more nominations they received from their peers. Previous research has used sociometric measures that require peer ratings to successfully examine friendship networks and pro-social behaviours within a school setting (Ladd, 1983).

Multidimensional Peer Nomination Inventory for Teachers (MPNI). This was used as an observational measure of behaviour, to be completed by class teachers with a high level of averaged internal reliability α = 0.81 (Pulkkinen, Kaprio, & Rose, 1999). Eight items of this measure were selected to measure behavioural outcomes, focusing on direct aggression, indirect aggression, and pro-social helping behaviour. This 8-item measure used a 4-point Likert style scale to track possible observed characteristic

changes (e.g. "teases smaller and weaker students" and "helps students who need it"), where 0 = I have not observed this at all in this child and 3 = the characteristic fits the child very well/it is clearly observable in the child. Of the 8 items, four related to direct aggression, two to indirect aggression and two to helping behaviours. The items that related to each other were combined to create three different scores for direct aggression (DA), indirect aggression (IA) and helping behaviours (HB). Higher scores for DA, IA and HB suggest the teacher has observed the behaviours more within the individual students. This measure has been used successfully in previous research where teachers have observed mental health symptoms of a child (Whipp et al., 2022), additionally, coefficients alpha revealed teacher observations ($\alpha = 0.81$) to be more reliable than parental assessments ($\alpha = 0.66$) when items scores were averaged (Pulkkinen, Kaprio and Rose, 1999).

Diary Entries. The diary entries to be completed at the end of each lesson encouraged the students to record one thing they learned in the lesson that day, how they might apply what they learned to their lives and then an opportunity to draw a picture that relates to the lesson (see Appendix F). The aim of this measure was to check intervention adherence as well as gather qualitative data to be analysed in a suitable manner dependent on the participants compliance with this measure. Whilst teachers kept in regular communication with the researchers regarding their ability to implement the lessons, additional measures were added to monitor this. To keep track of intervention fidelity each participant was asked to complete a diary entry at the end of each taught lesson, where they would need to write in which term and lesson, they were including a new entry for.

4.3.7 Intervention Fidelity

Diary entries were tallied to create a statistical representation of lessons diary entries completed by the classes which are outlined in Table 4.2. All schools confirmed they did not have time to implement the final term of lessons and one school skipped a term due to school commitments; however, they still completed pre, midway and post data collections. Important to note, teachers informally fed back they did not see diaries as a priority when short of time and therefore were not always completed. Three classes returned diaries which totalled 61 diaries with varying numbers of entries each. The schools will be referred to as school A, school B and school C.

Table 4.2Statistical representation of lessons entered in diary entries.

School	Number of lessons entered	Term specific lesson entries					
		T1	T2	T3	T4	T5	T6
Α	16 (51.61%)	5	3	3	3	2	0
В	14 (45.16%)	6	3	1	4	0	0
С	8 (25.81%)	5	1	1	4	0	0

Notes: T1 – term 1, T2 – term 2, T3 – term 3, T4 – term 4,

T5 – term 5, T6 – term 6

31 = total number of possible entries

T1 = 6 possible entries, T2, T3, T4, T5 & T6 = 5 possible entries

This data shows lesson entries to be consistent at the start of the intervention with an average of 88.89% of term one lessons being covered by all teachers, this consistency declines over the terms with term two dropping to an average of 46.67% lesson coverage by all teachers as seen through diary entries. Term three also shows a decline where an average of 33.33% of lessons were covered by all teachers, term four shows an increase to an average of 53.33% of lessons covered by all teachers and then

finally term five with an average of 6.67% fidelity to the lessons by all teachers. These results suggest that lesson implementation was highest at the start of the intervention, showing the fidelity of implementation decreasing across the terms with term six not included by any schools.

4.3.8 Data Collection

Data was collected at four time points across the school year: pre intervention, midway, post intervention and a six-month follow-up. Questionnaires were completed individually by the participants in their classroom; the research team were present to assist with any questions or confusion that arose from the participants. Observational measures completed by teachers were collected pre- and post- intervention only, there was no follow-up as teachers no longer taught the students in their classes and therefore did not have regular contact with them to observe their behaviours. Figure 4.2 below details the number of data collected per measure at each time point. Due to attrition and absences the participant numbers reduce over time, the sample sizes also vary due to two schools opting out of the sociometric measures and all bar one school, with two classes, opting out of the MPNI measures.

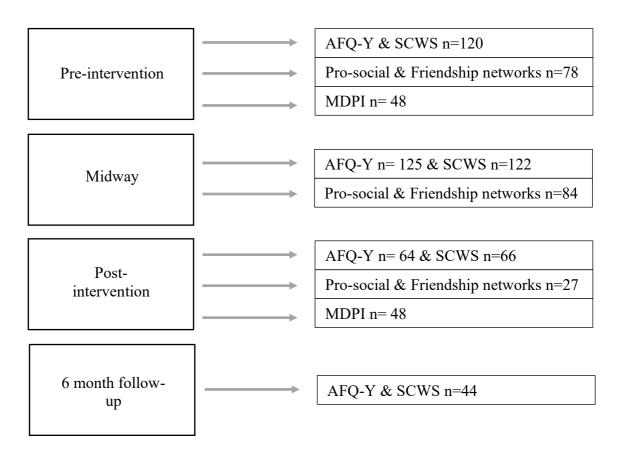


Figure 4.2. Flow of completed measures across all timepoints.

4.3.9 Analytic Strategy and Data Protocols

There were several types of errors found in the data that were accounted for. When a participant had ticked two boxes for one item on their self-report questionnaire, the median score was selected. When a participant missed rating or ticking one item, an average was created to replace the blank score. Finally, when a participant was missing two or more items on one scale the data for that scale was rendered incomplete and no score was included.

Data was statistically analysed using SPSS 29.0. Data was tested for normality using the Kolmogorov-Smirnov test, normality was violated by anti-social, popularity and all MPNI data, parametric (e.g., Pearsons's correlation, repeated measures ANOVA and paired *t*-test) and non-parametric (e.g., Wilcoxon Signed Rank test) statistical tests were conducted when applicable. To examine the relationships between variables

Pearsons's correlations were conducted. Not all data assumed normality but similar to the pilot study, published work suggests the data does not need to be normally distributed to use a Pearsons correlation (Nefzger & Drasgow, 1957). Whilst the pre-intervention anti-social and popular nomination scores violate the assumption of normality, previous research suggests ANOVAs are not affected as much by this violation (Glass et al., 1972; Lix et al., 1996). Therefore, analysis of variance was continued as usual for main comparisons with post-hoc tests using the Bonferroni correction. Paired *t*-tests and Wilcoxon Signed Rank Tests were used to examine differences between variables with two time points of collection. Differences were labelled statistically significant if the *p* values were less than 0.05. To account for attrition, exploratory intent-to-treat analysis was completed following previous research strategies to reduce follow-up bias (e.g. Campbell et al., 2008). A mean of all scores after baseline was created per participant to produce an average post-intervention score to make comparisons to baseline.

4.4 Results

4.4.1 Initial Analysis and Descriptive Statistics

Table 4.3 shows the means, average change score and standard deviations of each of the measures across each data collection time point. The average change scores included show the average difference (increase or decrease) calculated between the pre-intervention score and the subsequent time point of data collection.

Table 4.3

Number of participants means and standard deviations.

Measure	Timepoint	N Participants	Mean	Avg. Change Score	Std. Deviation
AFQ-Y	Pre-intervention	121	23.67		11.44
	Midway	125	24.62	+2.02	11.68
	Post-intervention	64	21.95	-1.57	10.45
	Follow-up	44	21.69	-2.43	11.45
SCWBS	Pre-intervention	120	52.17		10.72
	Midway	121	51.59	-0.93	11.30
	Post-intervention	66	52.43	-0.61	8.96
	Follow-up	44	50.59	-3.45	7.88
Pro-social	Pre-intervention	78	1.30		0.56
	Midway	84	1.23	-0.10	0.31
	Post-intervention	27	1.06	+0.01	0.82
Anti-social	Pre-intervention	78	0.38		0.66
	Midway	84	0.38	+0.05	0.96
	Post-intervention	27	0.62	+0.30	0.79
Close Friend	Pre-intervention	78	0.39		0.37
Nominations	Midway	84	0.37	0.00	0.30
	Post-intervention	27	0.21	-0.05	0.43
Popularity	Pre-intervention	78	0.27		0.27
Nominations	Midway	84	0.27	+0.04	0.27
	Post-intervention	27	0.21	-0.03	0.38
Helping Behaviours	Pre-intervention	48	5.75		0.15
	Post-intervention	48	5.90	+0.15	0.13
Indirect Aggression	Pre-intervention	48	0.46		0.09
	Post-intervention	48	0.33	-0.13	0.16
Direct Aggression	Pre-intervention	48	0.27		0.19
	Post-intervention	48	0.19	-0.08	0.12

Note: AFQ-Y = Avoidance and Fusion Questionnaire for Youth, SCWBS = Sterling Children's Wellbeing Scale.

Table 4.4 shows the descriptive statistics of the pre- and post- matched data only to account for participants that completed the whole intervention, the helping behaviours, indirect aggression and direct aggression scores are not included as pre- and post- alone are already recorded in Table 4.4.

Table 4.4Number of participants means and standard deviations of pre- and post- completers only.

Measure	Timepoint	N Participants	Mean	Avg. Change Score	Std. Deviation
AFQ-Y	Pre-intervention	62	23.65		11.84
	Post-intervention	62	22.07	-1.57	10.47
SCWBS	Pre-intervention	62	53.40		8.63
	Post-intervention	62	52.79	-0.61	9.00
Pro-social	Pre-intervention	26	1.09		0.37
	Post-intervention	26	1.11	+0.01	0.39
Anti-social	Pre-intervention	26	0.34		0.27
	Post-intervention	26	0.64	+0.30*	0.36
Close Friend	Pre-intervention	26	0.27		0.10
Nominations	Post-intervention	26	0.22	-0.05*	0.08
Popularity	Pre-intervention	26	0.25		0.10
Nominations	Post-intervention	26	0.22	-0.03*	0.11

Note: AFQ-Y = Avoidance and Fusion Questionnaire for Youth, SCWBS = Sterling Children's Wellbeing Scale.

4.4.2 Correlations

To examine the relationships between all measures a Pearson's correlational analysis was conducted between each of the measures at pre-intervention to examine relationships between additional measures that were not in the pilot study. As an assumption check there is a significant negative correlation between AFQ-Y and SCWBS (r = -.37, N = 117, p < 0.01, two-tailed). This is a moderate correlation (r = -0.37) that shows a linear relationship between higher scores of wellbeing and lower scores of psychological inflexibility. Additionally, there is a statistically significant negative correlation between pro-social and anti-social scores (r = -.58, N = 78, p < 0.01, two-tailed). This is also a moderate correlation that demonstrates a linear relationship

^{*} Difference is significant, refer to Table 4.8 for statistical analyses.

between higher levels of pro-social behaviours and lower levels of anti-social behaviours, which is relatively similar to the pilot study findings (r = -.64, N = 76, p < 0.01, one-tailed). Further significant relationships are highlighted in Table 4.5.

Table 4.5Bivariate correlations between pre-intervention study measures.

	Measures		1.	2.	3.	4.	5.	6.	7.	8.
1.	AFQ-Y	PC								
		Sig.								
2.	SCWBS	PC	37*							
		Sig.	<.01							
3.	Pro-social	PC	14	.09						
		Sig.	.22	.46						
4.	Anti-social	PC	.13	17	58*					
		Sig.	.28	.17	<.01					
5.	Close Friend	PC	13	.06	.80*	29*				
	Nominations	Sig.	.26	.61	<.01	.01				
6.	Popularity	PC	10	11	.02	.25*	05			
	Nominations	Sig.	.42	.37	.88	.03	.66			
7.	Helping	PC	07	.05	NA	NA	NA	NA		
	Behaviours	Sig.	.65	.73						
8.	Indirect	PC	05	.15	NA	NA	NA	NA	.11	
	Aggression	Sig.	.75	.31					.44	
9.	Direct	PC	17	.06	NA	NA	NA	NA	42*	.32*
	Aggression	Sig.	.27	.69					.00	.03

Note: The classes that did not complete sociometric measures were the classes in which teachers completed the MPNI (helping behaviours, indirect aggression, and direct aggression) therefore, no correlations can be drawn between these measures. AFQ-Y = Avoidance and Fusion Questionnaire for Youth, SCWBS = Sterling Children's Wellbeing Scale.

4.4.3 Repeated Measure ANOVAs

^{*} Correlation is significant at the 0.05 level (2-tailed).

PC. Pearson correlation.

To examine hypotheses one, two and three multiple repeated measure

ANOVAs were conducted to compare the effects of the intervention on the variables

measured across more than two time points (see Table 4.6).

Psychological Inflexibility and Wellbeing. There were no statistically significant differences between psychological inflexibility means as determined by a repeated measures ANOVA with Greenhouse-Geisser corrections (F (2.11, 71.65) = .63, p = .54), whilst the mean score did decrease from 22.53 pre-intervention to 21.07 follow-up, statistical analyses suggest there was no significant effect. In addition to this, there are no statistically significant differences between wellbeing scores across four timepoints as discovered by a repeated measures ANOVA with sphericity assumed (F (3, 105) = 1.93, p = .13), indicating the intervention had no effect on participant wellbeing.

Pro-social and Anti-social Behaviour. A repeated measures ANOVA with Greenhouse-Geisser corrections found statistically significant differences between pro-social scores (F(1.69, 43.90) = 8.86, p = .00) with a large effect size $(\eta^2 = 0.25)$. Post hoc tests using the Bonferroni correction showed a significant increase in peer observed pro-social behaviour by an average of 0.16 between pre-intervention and midway (p = 0.01) and then a significant decrease by an average of 0.17 between midway and post-intervention (p < 0.01). These results show an initial increase in peer observed pro-social behaviours then a decrease at post-intervention. A further repeated measures ANOVA with sphericity assumed determined a statistically significant difference of anti-social scores between the three time points (F(2, 52) = 20.06, p < .00) with a large effect size $(\eta^2 = 0.44)$. Post hoc tests using the Bonferroni correction demonstrated significant increases of peer observed anti-social behaviours between each time point,

pre-intervention to midway increasing by an average of 0.16 (p =0.00), midway to post-intervention increasing by an average of 0.11 (p = 0.01). With the mean scores increasing overtime, it shows an increase in anti-social behaviours observed by peers over the intervention.

Close Friend and Popular Peer Nominations. A further repeated measure ANOVA with Greenhouse-Geisser corrections showed a statistically significant difference between close friend nominations at three time points (F (1.88, 48.88) = 13.08, p < .00) with a large effect size ($\eta^2 = 0.34$). Post hoc tests using the Bonferroni correction showed a significant decrease in average close friend nominations of 0.103 from midway to postintervention (p < 0.01). The mean score does increase non-significantly from preintervention to midway and significantly decreases midway to post-intervention, suggesting a decrease in received close friend nominations post-intervention. Additionally, a repeated measures ANOVA with a Greenhouse-Geisser correction found a statistically significant difference between popular nominations across three time points (F(1.88, 48.87) = 10.70, p < .01) with a large effect size ($\eta^2 = 0.29$). Post hoc tests using Bonferroni corrections demonstrated a significant decrease in average popular peer nominations of 0.07 from midway to post-intervention (p < 0.01). Whilst the mean score increases from pre-intervention to midway, this is not a statistically significant difference. These results suggest a decrease in received popular nominations post-intervention.

Table 4.6

Repeated measure analysis of variance comparing psychological flexibility, wellbeing, pro-social behaviour, anti-social behaviour, close friend, and popular peer nomination scores across four time points.

Measure Pre		Midway	Post	Follow-up	N	р	Partial
	M(SD)	M(SD)	M(SD)	M(SD)			eta squared
AFQ-Y	22.53(12.23)	23.23(11.29)	21.19(9.55)	21.07(12.15)	35	0.54	0.02
SCWBS	53.47(9.55)	53.65(9.24)	52.92(8.71)	50.31(8.40)	36	0.13	0.05
Pro-social	1.07(0.37)	1.24(0.39)	1.06(0.43)	-	27	0.00	0.25
Anti-social	0.35(0.27)	0.51(0.36)	0.62(0.38)	-	27	<0.01	0.44
Close friend	0.26(0.10)	0.32(0.10)	0.21(0.09)	-	27	<0.01	0.34
Popular	0.24(0.11)	0.28(0.13)	0.21(0.12)	-	27	<0.01	0.29

Note: AFQ-Y = Avoidance and Fusion Questionnaire for Youth, SCWBS = Sterling Children's Wellbeing Scale.

4.4.4 Helping Behaviours, Indirect and Direct Aggression.

To examine the effects of the intervention on the teacher observed behaviours pre- to post- intervention Wilcoxon Signed Rank Tests were carried out. As displayed in Table 4.7, whilst mean scores show an increase in helping behaviours and a decrease in both indirect and direct aggression, the scores were not all statistically significant. There was a statistically significant increase in observed helping behaviours following the intervention (z = -2.65, n = 48, p = 0.01) with a small effect size (r = 0.27).

Table 4.7

Wilcoxon Signed Rank Tests comparing teacher observed multidimension peer nomination inventory (MPNI) scores across both time points.

	Pairs	Means	Std. Dev	N	Z	р
1.	Pre helping behaviours	5.75	0.56	48	-2.65	0.01*
	Post helping behaviours	5.90	0.31			
2.	Pre indirect aggression	0.46	0.82	48	-1.30	0.19
	Post indirect aggression	0.33	0.66			
3.	Pre direct aggression	0.27	0.96	48	-1.27	0.21
	Post direct aggression	0.19	0.79			

Note: * Comparison is significant at the 0.05 level (1-tailed).

4.4.5 Pre-intervention and Post-intervention Analyses

To account for individuals that completed the whole intervention, pre- and post- matched data was analysed using paired t-tests (all data was tested for normality using the Kolmogorov-Smirnov test and found to be normally distributed). Table 4.8 shows the results from the *t*-tests which show no significant differences for psychological inflexibility, wellbeing, or pro-social scores pre- to post-intervention. These is a significant difference between pre- and post-intervention anti-social scores (t = -7.72, df = 25, p < 0.01, one tailed) with a large effect size of Cohen's d = -1.52. As the mean scores increase from 0.34 to 0.64 this suggests an increase in peer observed anti-social behaviours post-intervention. Additionally, a significant difference was found between the pre- and post-intervention close friend nominations (t = 2.35, df = 25, p = 0.01, one tailed) with a small to medium effect size of Cohen's d = 0.46. Due to the mean scores decreasing from 0.27 to 0.22 this indicates a decrease in received close friend nominations post-intervention. Finally, a significant difference was identified between the pre- and post-intervention popular nominations (t = 2.27, df = 25, p = 0.02, one tailed) with a small to medium effect size of Cohen's d = 0.45. The mean scores decrease from 0.25 to 0.22 suggesting a decrease in received popular nominations post-intervention.

Table 4.8

Paired t-tests comparing AFQ-Y, SCWBS, pro-social, anti-social, peer nominated close friend and popularity nominations across pre- and post- scores.

	Pairs	N	Means	Std.	t	df	р	Cohen's
				Dev				d
1.	Pre AFQ-Y	62	23.65	12.46	1.00	61	0.16	0.13
	Post AFQ-Y	62	22.07					
2.	Pre SCWBS	62	53.40	10.38	0.47	61	0.32	0.06
	Post SCWBS	62	52.79					
3.	Pre-pro-social	27	1.09	0.24	-0.24	25	0.40	-0.05
	Post pro-social	27	1.11					
4.	Pre-anti-social	27	0.34	0.20	-7.72	25	<0.01*	-1.52
	Post anti-social	27	0.64					
5.	Pre close friend	27	0.27	0.10	2.35	25	0.01*	0.46
	nominations							
	Post close friend	27	0.22					
	nominations							
6.	Pre popular nominations	27	0.25	0.08	2.27	25	0.02 *	0.45
	Post popular nominations	27	0.22					

Note: AFQ-Y = Avoidance and Fusion Questionnaire for Youth, SCWBS = Sterling Children's Wellbeing Scale.

4.4.6 Exploratory Analyses

Due to prominent levels of withdrawal and missing data points due to illness/incomplete measures, further intent-to-treat analyses were completed to account for attrition, whereby an average score was created for each participant that had completed at least one of the midway, post or follow-up measures. This was only

^{*} Comparison is significant at the 0.05 level (1-tailed).

done for psychological inflexibility, wellbeing and peer nominated measures as the teacher observed measures were only completed at pre- and post. Therefore, any participant scores after pre intervention were averaged to create a new score accounting for any changes experienced after the implementation of the intervention. Participants that only completed the pre-intervention measures or did not complete the pre-intervention measure could not be included in this analysis. However, by using this intent-to-treat style analysis the participant numbers included increased by double compared to the repeated measures ANOVAs. As there are now two scores, paired *t*-tests were carried out to compare scores pre- and post-intervention.

Table 4.9

Paired t-tests comparing AFQ-Y, SCWBS, pro-social, anti-social, peer nominated close friend and popularity nominations across pre and averaged post scores. Including means and averaged change scores.

	Pairs	N	Means	Avg.	Std.	t	df	р	Cohen's
				Change	Dev				d
				Score					
1.	Pre AFQ-Y	97	23.62		11.90	-0.64	96	.26	07
	Post AFQ-Y	97	24.39	+0.78					
2.	Pre SCWBS	95	52.91		10.49	1.26	94	.11	0.13
	Post SCWBS	95	51.56	-1.36					
3.	Pre-pro-social	54	1.37		0.31	3.31	53	<.01*	0.45
	Post pro-social	54	1.23	-0.14					
4.	Pre-anti-social	54	0.36		0.27	-2.13	53	.02*	-0.29
	Post anti-social	54	0.44	+0.08					
5.	Pre close friend	54	0.41		0.11	1.89	53	.03*	0.26
	nominations								
		54	0.38	-0.03					

	Post close friend								
	nominations								
6.	Pre popular	54	0.25		0.07	-2.73	53	.00*	-0.37
	nominations								
	Post popular	54	0.28	+0.03					
	nominations								

Note: AFQ-Y = Avoidance and Fusion Questionnaire for Youth, SCWBS = Sterling Children's Wellbeing Scale.

Table 4.9 shows no significant differences for psychological inflexibility or wellbeing scores between pre- and post- intervention time points. There is a statistically significant difference between the pre-intervention and post-intervention pro-social scores (t = 3.31, df = 53, p < 0.01, one tailed) with a medium effect size of Cohen's d = 0.45. Due to the mean scores decreasing from 1.37 to 1.23, this suggests a decline in peer observed pro-social behaviours after the intervention. In addition to this, results show a statistically significant difference between pre- and postintervention anti-social scores (t = -2.13, df = 53, p = 0.02, one tailed) with a small effect size of Cohen's d = -0.29. Next, there is a statistically significant differences between pre- and post- intervention close friend nominations (t = 1.89, df = 53, p =0.03, one tailed) with a small effect size of Cohen's d = 0.26, means show a decrease in close friend peer nominations. Finally, there is a statistically significant difference between pre- and post- intervention popular nominations (t = -2.73, df = 53, p = 0.00, one tailed) with a small to medium effect size of Cohen's d = -0.37, the means suggest an increase in peer rated popular nominations.

Due to one of the aims of the DNA-V curriculum being to promote wellbeing, no significant wellbeing differences being found and the mean wellbeing score already

^{*} Comparison is significant at the 0.05 level (1-tailed).

being higher than average, the data was split into select cases that grouped participants that scored below the reported SCWBS average of 43.51 (Liddle & Carter, 2015). This group of participants were regarded as below average with their wellbeing, suggesting they may have had different experiences in wellbeing and psychological flexibility scores compared to those that did not need additional wellbeing support.

Whilst there were 24 participants in this sub-group, the majority had not completed all time points of data collection leading to an underpowered study due to low participant numbers. When looking at all four time points, the sample size (N = 3) was too low to see if the assumption of sphericity was violated. Therefore, the followup data point was excluded to increase the sample size (N=5), assumption of sphericity was assumed therefore repeated measure ANOVAs were conducted, as shown in Table 4.10. This sample size is small and therefore the results are underpowered and should be interpreted with caution. However, they were included here as an exploratory analysis. Results found significant differences between psychological inflexibility scores at three time points (F(2, 8) = 4.87, p = .04) with a large effect size ($\eta^2 = 0.55$). Post hoc tests using the Bonferroni correction indicated a significant decrease in psychological inflexibility by an average of 9.00 from pre-intervention to post-intervention (p < 0.05). Additionally, results found significant differences between wellbeing scores at three time points (F(2, 8) = 7.780, p = .01). This is a large effect size ($\eta^2 = 0.66$), post hoc tests using the Bonferroni correction showed a significant increase by an average of 14.60 from pre-intervention to midway (p = 0.02). This shows an increase in wellbeing to a score over the average of 43.51 from pre- to midway with the post-intervention mean score consistently staying above average.

Repeated measure analysis of variance comparing below average wellbeing subgroup wellbeing scores across three time points.

Measure	Pre	Midway	Post	N	р	Partial eta squared
	M(SD)	M(SD)	M(SD)			
AFQ-Y	32.8(15.75)	30.70(13.15)	23.80(13.48)	5	0.04	0.55
SCWBS	38.40(3.36)	53.00(7.18)	54.60(8.91)	5	0.03	0.66

Notes: SCWBS = Sterling Children's Wellbeing Scale

The same intent-to-treat analysis was completed on the below average wellbeing subgroup to account for attrition and incomplete data sets, this increased the sample number to 15. In Table 4.11, the results of a paired *t*-test show the comparisons between pre- and post-intervention wellbeing and psychological inflexibility scores.

Table 4.11Paired t-test comparing below average wellbeing sub-group intent-to-treat wellbeing scores from pre- to post- intervention.

	Pair	Means	Avg.	Std.	N	t	df	р	Cohen's
			change	Dev					d
			score						
1.	Pre AFQ-Y	30.90		14.93	15	-0.12	14	0.45	-0.03
	Post AFQ-Y	31.36	+0.46						
2.	Pre SCWBS	35.87		11.39	15	-3.56	14	.00	-0.92
	Post SCWBS	46.33	+10.46						

Note: SCWBS = Sterling Children's Wellbeing Scale.

Findings show no significant difference for psychological inflexibility scores; however, there is a statistically significant difference between pre- and post-

intervention wellbeing scores (t = -3.56, df = 14, p = .00, one tailed) with a large effect size (Cohens d = -0.92). With the mean score increasing by an average of 10.46, it suggests that participants who started the intervention with a below average wellbeing score had an increase in wellbeing over the duration of the intervention.

To determine if there were any significant differences in scores due to class differences or gender relevant analyses were conducted. Firstly, data was split by class to compare the effects of different teachers delivering the intervention for different sub-groups of participants; however no significant findings were found. In addition to this, the data was split for gender (pre AFQ/SCWBS female N = 61/62, male N = 60/58) which revealed no significant differences (refer to Appendix G for gender analysis details). No other comparisons were required for the aims of this analysis.

4.5 Discussion

The aim of this study is to examine whether an ACT underpinned intervention (using DNA-V as a child friendly model to frame the PSHE style curriculum) would increase wellbeing scores, pro-social behaviour, helping behaviour and friendship networks as well as decreasing psychological inflexibility, anti-social behaviour, indirect aggression, and direct aggression. The results show an increase in helping behaviours; however, no other changes were found to be significant. Therefore hypotheses 1 (an increase in psychological flexibility and wellbeing scores), 2 (an increase in pro-social behaviour and decrease in anti-social behaviour) and 3 (an increase in both close friend and popular nominations) were not supported, with hypothesis 4 (an increase in helping behaviours and a decrease in both indirect and direct aggression) being partially supported in relation to helping behaviours.

This was unexpected based on previous findings that suggest school-based wellbeing interventions have a positive effect on wellbeing outcomes (Li et al., 2012; Rooney et al., 2013) and that ACT based interventions yield improved wellbeing outcomes with children (Fang & Ding, 2020b). In addition to this, there is evidence to suggest ACT interventions increase psychological flexibility (Livheim et al., 2015 & Swain et al., 2015) which was not significantly exhibited in this study. ACT theory suggests that to increase psychological flexibility the six core processes of the hexaflex model should be utilised: acceptance, cognitive defusion, contact with the present moment, self as context, values and committed action (Hayes et al., 2006). The DNA-V model used in the curriculum targets psychological flexibility via ACT processes (Hayes & Ciarrochi, 2015), elements of the six core processes can be found across the 31 lesson plans, which suggests the intervention should have an impact on psychological flexibility. Which leads to the question, is the lack of effectiveness in this study due to the intervention or the delivery of the intervention?

Firstly, looking at the intervention, it is important to note that the developed intervention was potentially not suitable for increasing wellbeing and psychological flexibility. Interventions take time to build robust procedures and ensure confident application, with some interventions taking up to two decades to work out feasibility, safety, and effectiveness as well as collating reliable evidence for its efficacy (Gitlin, 2013). A new framework for developing interventions was introduced by the Medical Research Council and National Institute for Health research outlining critical phases for the creation of new interventions (Skivington et al., 2021). It guides researchers to consider the context of their intervention before evaluation, assessing the feasibility and enhancing the implementation to further develop the intervention. In terms of this intervention's context, there was a clear focus on ACT theory; however, the

refinement of the intervention could have undergone more formal processes such as thematic analysis of pilot lesson feedback (Saracutu et al., 2018), as suggested in Chapter 3. This intervention prioritised the application of PSHE criteria as well as DNA-V modelling, it could be argued this dual focus might have impacted the strength of the ACT processes in comparison to other successful ACT interventions. However, a systematic review of single session ACT interventions with adults found positive impacts on mental health outcomes (Dochat et al., 2021). More relevant studies with children have been conducted, with one study of diabetic children taking part in four ACT sessions finding lower stress levels, increased psychological flexibility and greater acceptance of their diabetes diagnosis (Stefanescu et al., 2024). Therefore suggesting, across the 31 lessons of this intervention, enough ACT training was included to lead to an efficacious result. An additional factor relevant to the interventions' context, is considering the possibility that the DNA-V model is not suitable for this age group. The model was originally developed for adolescents as opposed to 9-10-year-olds; perhaps the terminology, concepts and processes used throughout the curriculum were not comprehended well enough by 9–10-year-olds. Currently, there is minimal empirical evidence regarding DNA-V with younger children, therefore the success rate of the model and terminology with this population is unknown. The diary entries (analysed in Chapter 5) will investigate the acceptability of the DNA-V model and terminology with the 9-10-year-old participants.

Secondly, as highlighted in Skivington et al. (2021), examining the implementation and feasibility of the intervention is required, especially due to the high attrition rates which are indicative of the challenges faced with implementing the curriculum. Therefore, the delivery must be considered as a confounding variable.

Research does suggest that professional led school-based interventions are more

successful than teacher led interventions (e.g., Stallard et al., 2014; Werner-Seidler et al., 2017); however, the assumption was made in this research that effective training would reduce these differences. To make a universal school-based curriculum feasible and financially stable, it is sensible to continue evaluating teacher-led interventions to determine how to make them more successful. A recommendation for future research is to implement more of the co-creation processes in the creation and development of the intervention to give schools a voice from the outset of the research and potentially reduce attrition rates. With the classroom teachers as intervention leaders' researchers had little control over the implementation of the intervention relying on lessons being taught consistently. If exposure to the intervention was not consistent both in time and with ACT processes, it could have had an effect of the outcomes of the study. Whilst most teachers were transparent about their fidelity to the intervention, it does not negate the variability of the quality of teaching. The lessons were designed for easy implementation; however, interpretations of the lessons could differ across teachers causing various versions of the lessons to be taught. Due to the scope of this study and teacher time constraints, it was not possible to assess consistency through alternative means, such as training for each individual lesson plan for consistency across all classes, or through observation. It is evident that regular and consistent implementation of the lessons was challenging, especially with one school missing an entire term of lessons due to school commitments. Future research could measure fidelity more explicitly, ensuring teachers kept detailed logs of each lesson taught and occasional researcher sit ins to ensure the teachers are appropriately using the language of the intervention. By monitoring this closely, it can give clear insight into possible confounding variables and reasons behind the results.

The sociometric measures showed a decrease in close friend nominations, popular nominations, and pro-social behaviours as well as an increase in anti-social behaviours. This is not consistent with prior research that shows school-based interventions increase pro-social behaviours, decrease anti-social behaviours, and improve social skills (Banerjee et al., 2014; Humphrey et al., 2016; Sklad et al., 2012). It is important to review this unexpected finding, there is potential that the result was impacted by attrition or the intervention itself does not change social behaviours. Although, the second explanation seems less likely due to previous findings. Additionally, it is plausible that the measure was insufficient in accurately measuring social behaviours. Especially considering the teacher rated MPNI measures show an increase in helping behaviours after exposure to the intervention, which is consistent with the literature. With results contrasting previous literature, it is important to query the reliability of the measures. The AFQ-Y, SCWBS and MPNI are commonly used measures evidenced as reliable and therefore not included in the first part of this discussion. There are three possible arguments for the unexpectedness of the sociometric outcomes, which will be outlined in more detail: 1. the completion of the measures by the children was not done accurately, 2. the measure was not fit for purpose or 3. the results may be true. Firstly, looking at the completion of the measures over the time points, it could be suggested they became more familiar with the measure over time and therefore were more likely to nominate peers at later time points due to better understanding. Additionally, at the start of the year the nominations for observed behaviours may have been lower as the participants would have had a six-week summer holiday away from classmates and not have enough recent knowledge about their behaviours, therefore as the year progresses the classmates get reacquainted with each other's attributes for more accurate

nominations. Secondly, it is possible that the sociometric measures were not sufficient for accurately measuring social behaviours; however, research shows the unlimited nominations option to be a more reliable and valid measure than the opposing approach of limiting nominations (Terry, 2000). Therefore, these made for purpose sociometric measures are likely to be reliable. It is possible that more robust ACT measures could have been in place to examine the potency of the intervention, for example, a more values consistent measure like the valued living questionnaire (Wilson & Murrell, 2004) adapted for children. This would allow further investigations into the effects of the ACT processes. Thirdly, it is feasible that the outcomes are just that, there may be no further explanation, it may just have been the dynamics of the classrooms.

Moreover, it is essential to discuss the possibility of the ceiling effect when measuring wellbeing. The average scores were higher than previous research averages 43.51 (Liddle & Carter, 2015) and the average of the pilot study 48.85. It is plausible the heightened wellbeing levels could account for no increases in wellbeing across the intervention as there was minimal room for improvement. When examining below average wellbeing participants, significant increases in wellbeing were found such that wellbeing scores went from being below average to above average and psychological inflexibility decreased. These findings are supported by research conducted on children with mental health difficulties (e.g., anxiety, depression etc.) that found ACT intervention improved mental health symptoms and increased psychological flexibility (Harris & Samuel, 2020). This is a significant finding considering the DNA-V curriculum's aim was to improve psychological flexibility and promote wellbeing, therefore showing the DNA-V curriculum could achieve this for students that potentially need it most. Whilst this finding is positive in terms of intervention outcomes, the sample size of this

sub-group is small and opens the results to bias. Therefore, these results should be interpreted cautiously.

Opposingly, more research has been analysing the adverse effects of promoting wellbeing (Foulkes & Andrews, 2023), with research suggesting even in youth-based studies, mental health focused interventions can lead to negative outcomes such as regularly identifying negative thoughts lowering an individuals' mood (Garmy et al., 2015; Lindholm & Nelson, 2015). These variables are worth considering when discussing the implications of this research. But crucially, it is notable to recognise the fact that ACT does not aim to reduce symptomology, any reductions are seen as a byproduct (Dindo et al., 2017), value consistent behaviours and improvements in psychological flexibility are the focus. Therefore, changes in wellbeing are not a concern provided there are other beneficial outcomes for the children.

Teacher observed outcomes noted a significant improvement in pro-social helping behaviours from pre- to post- interventions, but peer observations did not. In addition to this finding, there was a significant increase in peer observed anti-social behaviour, which is inconsistent with previous findings (Sklad et al., 2012) and the teacher observed behaviours where no increases in indirect or direct aggression were found. This may suggest that teachers recognise these behaviours better and can therefore rate each participant more accurately. Alternatively, social desirability may be more present in the teachers who understand the premise of the study. Within the pro-social peer nominated results an increase from pre-intervention to midway was found, when looking at fidelity measures this heightened pro-social score comes after a large percentage of the lessons were covered. Therefore, the adherence to the lesson plans being stronger at the start of the intervention, may have led to improvements at midway (as evidenced by the pro-social measure) and decreases

from midway to post-intervention (as shown by the close friend and popular peer nominations). Suggesting long term adherence to the intervention is essential to its success.

An unforeseen positive correlation was found between anti-social behaviour and popularity, suggesting a relationship between higher amounts of observed anti-social behaviour and higher nominations of popularity. Some evidence suggests more anti-social behaviours such as bullying are not deemed popular until adolescence (Pouwels et al., 2018). However, it has been found that aggression (an item accounted for within the sociometric measure 'who fights with others') can predict social prominence (Cillessen & Mayeux, 2004) therefore supporting the notion that anti-social behaviours are related to popularity.

Positively, there were no differences found in the data across class groups suggesting teachers were consistent in their delivery of the curriculum. There were also no differences across gender which supports previous literature that found no significant gender differences in self-reported measures of wellbeing in primary and secondary school aged children (Løhre et al., 2014). Data was also grouped for below average wellbeing scores which found differences as discussed, future research could use additional identifiers for poor mental health (such as parental or teacher observations) to include all students with higher wellbeing concerns for additional analyses.

Finally, essential to discuss relative to school-based interventions is the difficulty in conducting the research. Research in education comes with multiple challenges, notably for this study, attrition. Firstly, initial interest to the study was low, there were no financial incentives and an increase in teacher workload leading to low volunteer numbers. Because of this, it was not feasible to complete a randomised

controlled trial, therefore reducing the reliability and validity of the results. Due to reasons outlined previously, whole schools withdrew from the intervention, future research should focus on improved, financially aware processes for retaining schools without causing additional pressure. However, attrition in school-based research is inevitable and is difficult to control for. In addition to this, when looking at the fidelity outcomes (diary entries), it shows a steady decline in the number of lessons being included within the participants diaries. This could be due to the fact the curriculum is just not feasible to be implemented in primary schools, perhaps there are too many barriers' teachers need to overcome before focussing on a wellbeing lesson that is not part of exams or strictly enforced by the national curriculum. Or potentially, when teachers gave reasons for withdrawal, they could have said them to be nice; instead, their dropping out may signal dissatisfaction with the curriculum.

4.6 Limitations

There are several limitations of this study that need to be considered, firstly, due to this being an experimental study of a new intervention, there was no control group therefore increasing the risk of type 1 errors. Without a control group, findings cannot be solely attributed to the intervention as other variables may have influence. For example, the structure of the school year may have had an impact on data collected, particularly at the end of the year where children are experiencing burnout, tiredness, and irritability before the summer holidays. A further example, the burnout of teachers during the year may have led to lower quality implementation of the intervention, it is well documented that primary school teachers experience burnout (Kokkinos, 2007; Whitehead et al., 2000).

In addition to this, without a control group it cannot be determined whether the duration of a possibly stressful or challenging school year could have had a negative impact on the children's wellbeing or psychological flexibility, therefore rendering our results of consistency a success. The feasibility of a control group was considered; however, only six schools initially volunteered for the study therefore it would not have been constructive to split the schools and have lower numbers of participants actively in the intervention condition and all schools wanted to actively participate in the intervention. Retrospectively, this was the correct decision due to the considerable amounts of attrition with schools receiving the intervention.

The biggest limitation of this study is the attrition experienced at each time point of data collection. This led to smaller numbers of participants being included in the statistical analysis potentially effecting the external and validity of longitudinal research (Hansen et al., 1985). Previous research has suggested that attrition from longitudinal studies is expected, and procedures have been suggested to reduce the problem (Eerola et al., 2005; Ellikson et al., 1988); however, whole school attrition is an unfortunate circumstance that cannot be accounted for. The G*Power analysis showed that there was a sufficient sample size of over 24 for most measures; however, the below average wellbeing measures were underpowered. Due to the attrition and small sample size for this exploratory analysis, results should be interpreted with caution.

Another limitation of this study concerns the measures. For example, with the MPNI measure, social desirability could lead the teachers to falsify their observations to make it appear they have taught their lessons sufficiently. In addition to this, the wellbeing and psychological flexibility measures were self-report measures completed by the children, with the heightened mean scores in comparison to evidenced findings,

we can question the accuracy of the children's self-reporting skills. Parental observations would be a useful addition or alternative to counter the possible inaccuracies of children; however, compliance from parents may add more challenges to the research process.

Finally, to examine the adherence of teachers to the lessons there needed to be stricter fidelity measures. Whilst difficult to control and would still have its' limitations, thorough log reporting and researcher check in appointments may help to improve adherence as well as giving a clear understanding of how frequently the lessons were taught.

4.7 Conclusion

Despite methodological implications and few significant results, the findings of this study do show some positive outcomes. Specifically noting the increase in both wellbeing and psychological flexibility of those identified as below average wellbeing at pre-intervention. Implying that this DNA-V PSHE style curriculum had a positive impact on a potentially 'at risk' sub-groups' wellbeing, therefore, perhaps this type of intervention would be best suited for people that fall into the 'below average wellbeing' category. Additionally, this research has led to necessary questions regarding the feasibility of implementing a wellbeing curriculum within an English school setting. Therefore, gaining qualitative feedback is crucial to a deeper understanding of the challenges faced with this intervention.

Chapter 5: Qualitative Analysis of Student Diaries, Student Experiences and Teacher Interviews

After completing the statistical analysis, a complimentary qualitative analysis was utilised to provide a rich picture of the participants' experiences. By analysing diaries, and interviewing both participants and teachers, it may be possible to investigate the deeper meanings and reasons for the previous findings, which help to inform future quantitative investigations in this area (Sutton & Austin, 2015). Within this empirical chapter there are three separate analyses with different aims:

- the diaries were analysed using a deductive content analysis method looking for codes based off identified themes to understand the student's comprehension of the DNA-V model
- the student interviews post-intervention were analysed thematically to gain a clearer understanding of the impact of the intervention
- the teacher interviews post-intervention were also analysed thematically to determine the applicability and feasibility of the intervention.

5.1 Participant Diary Analysis Introduction

Whilst there were no significant quantitative findings in relation to increases in psychological flexibility and wellbeing, it is important to explore this qualitatively to understand the experiences of participants. Notably, the DNA-V intervention did not move levels of psychological flexibility and perhaps, one reason for this could be that DNA-V itself is not a suitable model for the specific age of children that participated. Whilst the development of the curriculum was reviewed by an educational

psychologist and primary school teacher ensuring the suitability for children aged 9-10 years, the completion of diaries gave the ability to examine whether the children were able to comprehend the model and fill in the diaries using the correct terminology. That is, if the children can manage this, the DNA-V model is suitable and if they cannot comprehensively utilise the terminology perhaps the model is too difficult for them to understand. Therefore, this analysis took on a deductive approach, specifically searching for correct uses of the main terminology of DNA-V. Because a deductive reasoning approach has been adopted, it was hypothesised, due to a thorough development and review process, that the children would be able to correctly use the model language in their diary entries.

5.2 Method

5.2.1 Research Design Overview

This study had a qualitative deductive approach using content analysis of diaries written by the children at the end of each lesson they completed. This design approach was selected due to prior knowledge gained from the quantitative measures. Researchers suggest deductive reasoning is a useful approach when prior knowledge can be used to create and test a hypothesis (Shin, 2019). Other diary-based studies have used content analysis (Lundgren et al., 2018; Pelto-Piri et al., 2012; Tov et al., 2013), with one study selecting content analysis because the data collected was not rich or sufficient for deeper interpretative approaches (Egerod et al., 2017). As the diary entries within this study are shorter entries from 9-10-year-olds rich responses are not expected, therefore content analysis has been selected for this study.

5.2.2 Researcher Description / Reflexivity

have had an influence on this analysis. As this research has been conducted as part of my doctoral research, whereby I have created the lessons that the children were being taught, there are ways my experiences could impact the analysis such as investment in the curriculum's success meaning that I am more likely to draw on positive feedback. This intervention was created through many hours of work and the passion for the topic lead to aspirations for success; however, researcher integrity encourages thorough and rigorous analysis to add truthful knowledge to this area of psychology. Additionally, due to my thorough knowledge of the DNA-V model, it is likely for bias interpretations of the writing to surface. That is why this deductive content analysis approach was chosen, to reduce the effects of bias in the analysis by focusing on specific codes and avoiding interpretation of the writing.

It is important to acknowledge that my prior experiences and values that may

5.2.3 Participants

Diaries were returned from the two schools that completed the intervention, one of which had two separate classes. The participants in this study were 62 of the students from the intervention study. Participants were 10 years old with 59.68% of respondents identifying as male and 40.32% identifying as female. All returned diaries were included in the analysis regardless of completeness of diaries and spelling/grammatical mistakes.

5.2.4 Data Collection

Throughout the course of the intervention participants were required to fill out diary entries at the end of each lesson. The diary asked two open ended questions: 'write down one thing that you learned in the lesson today' and 'write down how you

might apply what you have learned to your life' (see Appendix F). From the intervention fidelity measures and conversations with the teachers it was made clear the diaries were not always completed at the end of every lesson due to time pressures. Diary entries were concentrated around the introduction of the intervention with an average of 88.89% of Term 1 lessons being delivered which gradually decreased to an average of 6.67% of Term 5 lessons being delivered with no Term 6 lessons being delivered. However, a total of 465 entries were recorded across 62 participants, with most completing entries on the introductory intervention lessons where the DNA-V model was outlined.

The diaries were hand-written and therefore all manually computed into a document to allow for ease of code searching. Incorrect spellings were amended but incorrect grammar and non-sensical sentences were input exactly as they were written to avoid interpretation bias.

5.2.5 Data Analysis

The specific aim of this analysis was to test whether the participants could comprehensively use the DNA-V model terminology in their responses to demonstrate the suitability of the intervention. That is, prior knowledge led to one assumed theme that could be searched in the data, that theme being 'accurate and comprehensive understanding of DNA-V terminology'. Thus, a deductive approach was taken whereby specific codes were searched to find complete and accurate sentences.

The codes selected to search in the data were the main DNA-V model terms: discoverer, noticer, advisor, values, self view and social view. The search terms used on the data were: 'discover/discoverer', 'notice/noticer', 'advise/advice/advisor', 'value/values' and 'self/social/view'. Multiple versions of the words were included to

account for the ways in which a participant might utilise the word in their explanations. From this, the sentences including these words were manually read and then extrapolated if they followed two rules. Rule one, the sentence must be coherent, any sentences that did not make sense were not interpreted to avoid bias. Rule two, the content of the sentence must be accurate to the term being used. That is, if the participant is using the word 'advisor', their writing must be relevant to the advisor principle. In essence, the themes of this data are the understandings of the separate DNA-V principles. These analytic claims are illustrated with data extracts from the diaries.

5.3 Findings

5.3.1 Description of the Diaries

Most entries were present tense and in first person, with many entries including short responses of 4-10 words. The first term worth of entries included relevant terms being used, later terms included entries that focused on the PSHE element without use of DNA-V language. Therefore, the majority of extrapolated data examples come from the first six weeks of intervention where the DNA-V model was introduced to the participants. The theme of accurate and comprehensive understanding of DNA-V terminology was evidenced throughout; however, there were no examples of self view or social view in any of the diary entries.

5.3.2 Content Analysis

Table 5.1 shows the search strategy findings of the data content. Whilst the terms were used frequently, not every usage of the term resulted in an accurate or comprehensive sentence about that part of the model. Occasionally the terms were

used incorrectly or were illogical; the explanation of the different DNA-V skills was either mislabelled with another or lacked correct context. For clarity these are some examples of incorrect descriptions: "Today I have learnt about the discoverer and that your discoverer pushes you to do things even if you are scared you still do it no matter what. A discoverer is part of your brain that pushes you to do things." (participant 14) this interpretation of the Discoverer is incorrect and "Noticer I would work on because it is when your brain noticed if like you crash it's going to tell you not to do it again like try not to crash or it tells you not to drive again." (participant 29) this explanation has been labelled incorrectly; the description fits the Advisor principle. Examples for each accurate and comprehensive code were extrapolated, they are outlined below with numbers of shown examples being relevant to the number of accurate and comprehensive codes found within the text. That is, the higher the number of codes, a larger number of examples will be included.

Table 5.1

Coding frequency table. This table shows the number of times codes appeared in text and the number of accurate comprehensive examples.

Code	Frequency in text	Number of accurate
		comprehensive codes
Discoverer	138	23
Noticer	138	10
Advisor	125	35
Values	75	12
Self and Social View	0*	0*

Note: * for context, many diaries were completed after the introduction of these terms, but no content was recorded in the diaries.

The codes used for searching have led to sub-themes, whereby each sub-theme is an understanding of the specific principle within DNA-V. Therefore, listed below are examples of each sub-theme.

5.3.3 Understanding the Discoverer

As the discoverer is seen as a core skill within DNA-V, accurate descriptions of what the discoverer is or how the participant has used/plans to use their discoverer were included. There are clear examples where participants acknowledge what the discoverer is in a simplistic way "The discoverer discovers new things and does new things." (participant 45) and in a more detailed way showing clear understanding "I learned that you discover new things probably every day and it is good to discover because then you know if you want to do something again. I want to discover new ways to find things out. I want to discover a new friend this year. I want to discover what it is like to go on a roller coaster." (participant 15). There are also examples that demonstrate understanding of the principle and how to use the discoverer skill "Your discoverer is good because you should listen to discover new things, or you could miss out on lots of fun." (participant 9) and "Discoverer is for when you learn stuff for yourself. So, you can become a mindful warrior. I can solve a problem when I'm in a new place and don't have a map. I should explore and find great places." (participant 43). There were also some distinct examples where participants discussed the benefits of using the discoverer skill "I learned that it's good to try something new because you might enjoy it and if I hate it, I just won't do it again. I want to discover a new skill" (participant 4), "Always discover stuff don't be afraid to do stuff that you don't want to do just use your discoverer. I've learnt to not be scared." (participant 17) and "Discovering things is good because it might help you to learn about tricky things. You

might find things that you like e.g. chicken wings." (participant 21). The ability to explain how the individuals would utilise the skill moving forward due to its benefits was also made evident "I will learn more about my D for discoverer, so I discover new things and challenge myself and try new things, so I learn more about stuff" (participant 29).

5.3.4 Understanding the Noticer

The noticer is another core skill within DNA-V, there were less accurate descriptions of this skill found within the data in comparison to the discoverer and advisor; however, there were some clear examples of children understanding this principle. Most examples highlight that the noticer is focused on how you feel and your emotions "Today I learnt about the noticer and that there are lots of different emotions going through your head." (participant 36) and "I learnt that the noticer will notice your emotions." (participant 46). However, more nuanced examples explain what the noticer does and how they can utilise it "I have learnt that different people feel different emotions and if we notice a bad emotion, I can notice it and let it be there and not react." (participant 43), "I will always notice my emotions now and with that I can stop myself from doing bad things in the future." (participant 50) and "I have learnt that noticer tells you things like "I have a feeling here, I'm excited" or "I have a feeling here, I'm scared". Next time I am angry I will just breathe, calm myself down and then say sorry." (participant 54).

5.3.5 Understanding the Advisor

The advisor is another of the key skills that make up DNA-V, and this term was accurately mentioned more frequently than any other DNA-V terms. Firstly, there was

evidence of children understanding the idea that the advisor is like an 'inner voice' that guides us "The advisor is like little voices in your head that tell you to do something or not to do something. I will only listen to the good choices that advisor says." (participant 58) and "So advisor is like a little voice in your head." (participant 13). With students even identifying that the advisor stores information from past experiences to help guide you "An advisor is when you might do something and hurt yourself, next time you think about doing it your advisor tells you not to." (participant 26), "The advisor uses maps and knows where they're going." (participant 45) and "I learnt that you don't always have to listen to your advisor, and you could try something new. Also, I learnt that you remember things from when you were little and that makes you know what you like/dislike." (participant 54). Multiple participants discussed an important part of learning about the advisor and how we do not always have to follow what it says "I learnt that the advisor is very useful. You need to listen to your advisor but sometimes it is best to ignore your advisor." (participant 38), "I have learned that we have different advisor voice, and you don't always have to listen to them. If I have not tried something for a while my advisor voice might say "yuk last time you ate that it was yuky" or "go on it might taste better". I can listen if I want to but its best to listen to "it might taste better"." (participant 43) and "Today we learnt that you don't have to listen to your advisor. Like when you're in P.E you might think you should do a run, but your advisor says not to do it because you'll find it hard." (participant 51). With other participants also noting how they can apply advisor skills moving forward "I learnt that sometimes it is good to listen to your advisor, but not always. I might apply it in my life if I don't know what to do, I'll listen to my advisors and choose which option I think is right." (participant 4), "We talked about the advisor and how you don't need to listen to it. I will use this by listening to its good opinions." (participant 6) and "I learned that

when an advisor is telling me what to do and I can choose to do the right thing." (participant 56).

5.3.6 Understanding Values

The final part of DNA-V to cover that was included by participants is values. Similar to the noticer there were fewer accurate descriptions of values, and the frequency of the code in the text was less in comparison to the other processes. Some examples show children understanding that values are important "I learnt that values are really special, and everyone has them which is really cool. I might apply it later in life because I can try and figure out some of my values." (participant 4) and "I learnt that values are things that we treasure. I will apply this by thinking about my values family, fun, kindness." (participant 6). With some participants noting how individualistic values can be "Values make you who you are, and everybody is different they're not all like you." (participant 45) and "I learned that values make me who I am." (participant 60). And finally, a clear exemplar of a student identifying the application of values "That you use different values in different situations like using honesty when a math test is on." (participant 50).

5.3.7 Understanding Self View and Social View

There were no inclusions of self view or social view in any of the diary entries returned. The terms should have been introduced in the first term as an introduction to the DNA-V model. After this introduction to the terms there were diary entries included within term 2, 3, 4 and 5 but no reference to self view and social view was made. Leading to three possibilities: 1) the introduction to these terms was missed which impacted future lessons, 2) students struggled to comprehend the principles so

chose to omit them or 3) the teachers struggled to understand them themselves, and therefore did not teach them.

5.4 Discussion

This content analysis demonstrated that children can coherently use the DNA-V model language in their diary entries to correctly describe the principles, except for self view and social view. It evidenced that the DNA-V model is suitable for the age category due to multiple exhibits of clear understanding of the DNA-V skills and applications of them. However, it is evident that the noticer and values elements of DNA-V did not have as many comprehensive examples compared to the discoverer and the advisor principles, which leads us to question why. It is not possible to decipher the exact reason as to why fewer comprehensive examples of the *noticer* and *values* were entered into the children's diaries but there are three possibilities. Firstly, it is important to consider the delivery of the lessons as a factor, it is possible that during the intervention teachers did not have enough time to deliver all of a particular lesson. This could have led to a condensed version of the lesson being taught which would decrease the clarity of the principles for the students. In addition to time constraints, the teachers may not have delivered those specific principles in the way they were intended which led to incorrect uses of the terminology. Secondly, it is feasible that the LPs (lesson plans) themselves were not suitable for precisely outlining and teaching the noticer and values principles. Perhaps these particular lessons required fine-tuning to be as successful as the discoverer and advisor lessons. Thirdly, is the factor that the noticer and values principles are more challenging for children aged 9-10 to grasp and put into writing. As suggested by Piaget (1962), at the age of 9/10 a child should be

situated in the concrete operational stage of development whereby they are better with using logic but may struggle with abstract or hypothetical thinking. There is potential that the *noticer* and *values* elements of the model are slightly too advanced a concept for the age group. Both the *discoverer* and *advisor* use relatable metaphors to help children understand their process, it is not easy to do this with the other principles. Research suggests that around the age of 3 years children are able to comprehend metaphors (Epstein & Gamlin, 1994), therefore 9–10-year-olds will be able to relate to metaphors for better comprehension. However, theory of mind theorists would argue that during the latter years of primary education children have the ability to think about themselves in a mental state and others (Ensink & Mayes, 2010), therefore should be able to understand mental terms. It is also worthwhile to note that the ability to write about one of these principles accurately does not coincide with the students' ability to utilise the skill in real life.

It is also necessary to discuss the exclusion of the self view and social view principles. As they are not mentioned once, it is conceivable that the teachers did not include the introductory lesson for these principles and therefore the participants did not complete an entry on them. Similar to an aforementioned point regarding less values and noticer examples, there is potential that the self view and social view principles were not comprehended well by students leading to their inability to put the concept into words. In addition to this, the teachers understanding of these principles may not have been clear, therefore they may not have been comfortable with teaching them at all, helping to explain the lack of these principles within the diaries. The adherence to the LPs was important for this intervention, it is plausible that missing the introduction to self- and social- view led to effects in later LPs where self or social view were the main focus and less impact of the DNA-V model overall.

When comparing these findings to the quantitative results, it is unusual how most of the terminology was understood by the participants, but no significant change in psychological flexibility was found. This leads to questioning whether the diaries were simply verbatim straight after the lesson finished, which is why there was no impact on the participants. Or the psychological flexibility measure was not sufficient in capturing accurate results. Or finally, the lesson plans may have needed more DNA-V content to yield a change in psychological flexibility, as it seems clear that the principles were understood.

A noteworthy finding is that most of the diary entries were from the first term of lesson plans where the DNA-V model was introduced. Therefore, much of the data is focussed on the first six lessons. There are two conclusions we can draw from this, firstly, it shows how just one term is sufficient in enabling DNA-V language. Secondly, it can be concluded that we do not know how consistently the DNA-V principles were used and maintained throughout the course of the intervention. We would have expected later entries to show a deeper understanding of DNA-V; however, due to time constraints, teachers said the diaries were left out of the lessons. More frequent student face-to-face interviews across the year would have ensured regular feedback for a richer understanding across the year of intervention.

There are some limitations to this analysis, being qualitative in nature means that researcher bias is possible, with respect to personal interpretations of the data. Reflexivity has been included to account for researcher assumptions, beliefs and how this may influence the findings, which is highlighted as an integral process for rigorous qualitative analysis (Jamieson et al., 2023). However, this does not negate the bias, only shows where the bias might situate itself in the findings. Deductive content analysis was chosen to reduce the chance of bias; however, researcher's decision of

accuracy in the children's entries could be a potential place for bias. Therefore, interpretations of data were not made and were analysed as written to ensure consistency. Future research should employ a second coder to compare results and reduce bias, this was just not feasible as part of this PhD.

Another limitation to this research is that by choosing a deductive approach and focusing on content analysis it is plausible that insightful data was ignored when searching for codes only. By approaching the analysis with a predisposed theory, it has limited scope as it may miss experiences from the participants that could add to the understanding of the intervention's efficacy. Deductive content analysis is a rigid approach that can be seen as reductionist (Pandey, 2019) as it does not examine the phenomena. However, after transcribing and completing the code searches it became evident that the responses from the 9–10-year-olds were not sufficient enough to undergo a more complex analysis.

An additional drawback to this analysis is that these diaries were returned from the two schools that completed the intervention, it would have been insightful to evaluate the diaries of the schools that withdrew from the intervention. With a larger number of schools included in the analysis, comparisons could have been drawn. This was an unavoidable circumstance as other schools did not respond when asked for the return of the diaries. Future studies within schools should employ regular collection of qualitative material, like diaries, in order to avoid data being unreturned due to attrition.

Whilst the limitations do have an impact on the strength of the findings, there were several processes in place to reduce the effects. Therefore, it is sufficient to conclude that the DNA-V model was comprehended by the participants as evidenced

through multiple samples explaining the *discoverer*, the *noticer*, the *advisor* and *values*.

In the last chapter, no improvements were found in either psychological flexibility or wellbeing. Two possible reasons suggested for this concerned whether students were able to comprehend the data and whether lessons were delivered with fidelity. The analysis described in this section suggest that neither of those reasons are true, as children understood the model as delivered by the teachers. There must be other reasons for the lack of movement in those measures: possibly there was not enough intervention delivered consistently over the course of the year (e.g., poor adherence), or perhaps baseline levels of psychological flexibility and wellbeing were too high that meaningful change was not possible. However, it is shown to be possible given the results of children with lower wellbeing at baseline seeing significant improvements in both wellbeing and psychological flexibility.

5.5 Student Interview Analysis Introduction

Participant responses post-intervention are important in understanding the acceptability of an intervention. That is, from a participant's perspective, is the process of participating in the intervention, the intervention content and perceived effectiveness of the intervention deemed acceptable (Sekhon et al., 2017)? The study reported in Chapter 4 showed few significant findings; however, qualitative analysis can reveal experiential phenomena that may demonstrate additional effects not measured quantitatively and can give insight into the quantitative results.

Interviewing children is not commonly used due to issues with reliability (Reed, 1996). Numerous studies use parental interviews to gain understanding of children's experiences; however, it is suggested that examining children's experiences from their

perspective can be beneficial in gaining clearer insight into their experiences (Kortesluoma et al., 2003). Therefore, recommended methodological approaches were utilised to improve reliability, such as using open-ended questions to allow freedom of expression in responses (Lofland & Lofland, 1984). The DNA-V intervention aimed to support wellbeing and therefore, the aim of this study is to analyse the participants experiences of the intervention, focusing on the views of the intervention as a whole and potential wellbeing effects.

5.6 Methods

5.6.1 Research Design Overview

This qualitative study used a semi-structed interview to gain insight into participants experiences of the DNA-V curriculum. This research took an inductive thematic approach of interview transcripts of participants post-intervention. This approach was chosen due to other similar studies using thematic analysis as a suitable analytic process when analysing interview data investigating experiences of an intervention (Cody et al., 2022; Hambraeus et al., 2020). There is also evidence to suggest the appropriateness of thematic analysis when analysing young peoples' perspectives of psychological interventions (Michel et al., 2020).

5.6.2 Researcher Description/Reflexivity

It is useful to acknowledge my prior experiences and values that may have had an influence on this research process. As this research has been conducted as part of my doctoral research, whereby I have created the lessons that the children were being interviewed about, it is possible that researcher bias may lead to more positively skewed findings. That is, due to investment and passion in the DNA-V curriculum,

there is a chance that during the coding process, positive responses may stand out more. Due to the risk of this, specific questions were included in the semi-structured interview to highlight possible negative experiences.

5.6.3 Participants

Students were randomly selected through an online generator to take part in the interview process. Across the three different classes that completed the intervention, fifteen participants were selected, with seven females and eight males. All participants were 10 years old and accepted the random selection to be interviewed.

5.6.4 Data Collection

The semi-structured interview was designed with input from the team behind the curriculum and included 11 open ended questions (see Appendix H). The focus of the questions was to initiate conversations with the participants about various aspects of the curriculum. For example, what they learnt, what they enjoyed, what they did not enjoy, if they have used DNA-V outside of the classroom etc. These prompting questions gave the students a starting place to discuss their experiences, students had varying levels of responses with some giving brief responses even with follow up prompts.

The interviews took place post-intervention on the same day their quantitative measures were completed. Each student joined the researcher in a quiet room with a supervising school staff member where an audio device recorded the interview.

Participants were reminded to take their time and ask questions if they were unsure of what the question was asking. Participant interviews lasted between 2 minutes 14

seconds and 7 minutes 5 seconds with an accumulated time of 63 minutes 39 seconds. After all audio recordings were taken, they were transcribed manually using DSS Player (version 7). If the participant mumbled and therefore were not understood during the transcribing process, interpretations were not made to understand the sentence to avoid incorrect inclusions of data. Once all participant data was transcribed a total of 649 lines of text were ready to be coded.

5.6.5 Data Analysis

The aim of this study was to understand students' experiences of the DNA-V curriculum intervention; therefore, a phenomenological approach was taken with a realist framework (following Braun & Clarke, 2013). Thematic analysis was conducted following the guidance and phasing outlined in Braun and Clarke (2006). Coding was completed semantically, after this phase the codes were searched for patterns to identity themes across the data. A mind map was used to group codes together before defining and naming the emerging themes.

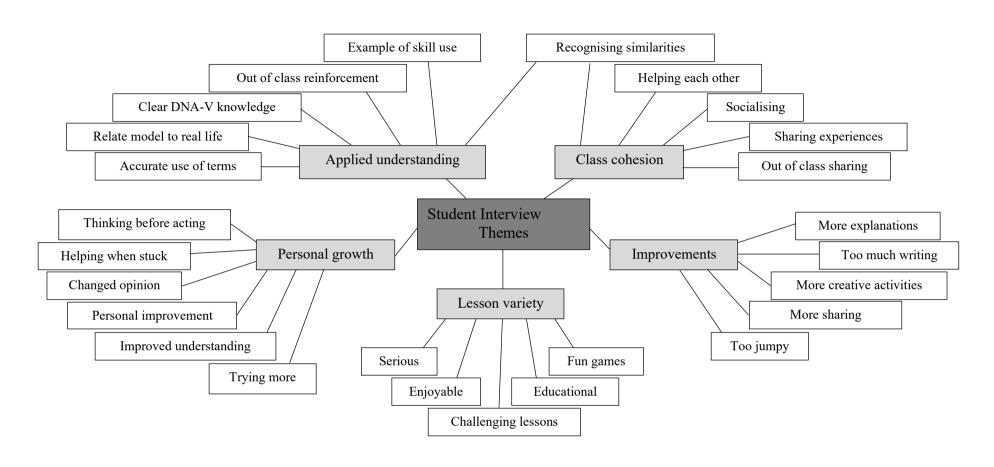


Figure 5.1. *Mind map of emerging themes and sub-themes*

5.7 Findings

A variety of responses were collected from the participants, with a range of codes to group into meaningful themes regarding their experiences of the intervention, as shown in Figure 5.1. The main themes were categorised as follows: lesson variety, class cohesion, applied understanding of DNA-V, personal growth, and room for improvement. Each theme is defined below with analytic claims being supported by data extracts.

5.7.1 Lesson Variety

Participants discussed the lessons frequently throughout the interviews, with emphasis on the enjoyability of lessons and that the lessons were educational as well as challenging. Firstly, focusing on this sub-theme of enjoyment that was expressed in the responses: "I enjoyed like, learning like, how it's like, different to how you thought it was and then like all the activities that we had to do I found them really fun as well." (participant 2), "Cause sometimes the lessons can be quite fun, I like doing the lessons that yeah are quite fun basically." (participant 9) and "Yeah, because I really enjoy it. I'm really enjoying it and I wanna learn a bit more about the advisor to tell you what to do to help you." (participant 10). From these excerpts it is evident that the lessons were received well by these participants, enjoyment and fun is a fundamental process in learning (Masran & Ismail, 2016), therefore, this is a positive response.

In addition to enjoyment, it was recognised that some lessons were more serious in nature: "Some of the lessons were fun, funny, the quizzes were amazing, and some lessons weren't so fun but more serious as such." (participant 7), suggesting a possible balance between educational/serious content and fun to keep students engaged. Further examples demonstrated the educational sub-theme that surfaced in

the analysis as students were able to acknowledge the learned information they accumulated through the intervention: "Yes, they are fun and relaxed. I learned quite a lot when I'm doing DNA-V." (participant 12), "I've learned like when, people can have disabilities even though that they don't like kind of look like they do, like um, all different religions and what it is to be in a religion." (participant 2) and "I enjoyed about, like learning about your advisor and what they say is in your brain." (participant 5). As these samples of data show, the educational content of the intervention was not focused only on the DNA-V model, but the PSHE material as well.

The final sub-theme within this overarching lesson variety theme is 'challenging'. Across some of the data it was clear participants found some of the intervention difficult to understand or harder to work on: "I find it like quite interesting how they talk about stuff that's like complicated, but you get to learn it more, so you get to have more to write about." (participant 5), "Sometimes you have to do harder work on it, that's the bit I don't really like." (participant 9) and "I think there was one when we were doing about the values, I found that one quite hard cause like I was just a bit not sure on it." (participant 13). Whilst some students plainly stated they did not like the challenging work, this indicates that the lessons contained enough variety in terms of straightforward/easy and challenging education to push the limits of learning. This theme is grounded within the illustrations of data above, highlighting the lesson plans included in the intervention had suitable variety to cater for students.

5.7.2 Class Cohesion

A pattern that materialized in the data set was that students enjoyed working with others, sharing their opinions and that discussing experiences with each other helped them to know they are not alone. Not only did the intervention seem to create

socialization within the classroom setting, but several respondents suggested they had discussions with friends about DNA-V outside of school. Firstly, a sub-theme that emerged was sharing experiences, with respondents simply sharing that they have discussed DNA-V outside of school: "We were talking about DNA-V and what the lessons in school were like." (participant 15) and other students highlighting more nuanced shared experiences that led to better self-understanding: "Before they like, told us which one's which, and the voice in your head was the advisor. Um, like, before I used to just think it was a voice in my head, I thought I was just like, strange, but then I talked to my friends, and they had it too." (participant 7).

Another sub-theme within this 'class cohesion' theme is socialization. With students recognising and enjoying the social elements of the intervention: "I enjoyed it when we were all like working together as a class and reading through the PowerPoints." (participant 1) as well as improvements in socialising with increased communication: "Um, they make us communicate more and um I understand more about DNA-V." (participant 8). Finally, there was a sense of class unity that transpired through the data, with students highlighting positive changes in their classmates: "It makes us work better together and like help each other more." (participant 3) and "Um, some people have uh, since we've been doing it have been nicer to other people." (participant 8). This theme that is apparent in the responses shows the usefulness of the intervention in improving social aspects of the class and the benefits of sharing experiences, bringing the class together through a communal experience.

5.7.3 Applied Understanding of DNA-V

This theme was evident in almost all participant interviews, where the student evidenced their knowledge of DNA-V and sometimes applied it to real life situations. It

was not them just simply relaying lesson content, but they were using the terminology to explain their own experiences. First, it is useful to look at the sub-theme uses of terminology, many participants were able to accurately use DNA-V terms as well as other model language in their responses to questions: "I've learned to use like the DNA values at the right time. And when you use them at the right time and take action you like, do what's right and do the right things." (participant 4) showing clear understanding of valued action and "They've helped me because when I've had thoughts in my head, I'll think that that's the advisor." (participant 11) demonstrating their knowledge of the advisor. An additional example that shows correct usage of DNA-V language is: "From all my friends that are kind of like, going out more and going all different places so, I think that they're kind of like using the D in the DNA as well. So, it's kind of just like, their kind of like discovering more things and their like, advisors telling them like go do this and then their noticer is like, noticing that they are changing and they're like, trying new things as well." (participant 2) which demonstrates their knowledge of the model as well as their ability to apply it to other people. These examples show coherent uses of DNA-V terminology, showing the acceptability of the model for this age group.

Secondly, the application of DNA-V to real-life situations was evident in the data with examples often highlighting the specific DNA-V skill they utilised in their experience: "I use A, well advisor quite a lot and I have used the discoverer. More the discoverer cause um parks you got a massive climbing frame, I used to hate it cause of, well I broke my collar bone doing it once, fell off right at the top, but like since these lessons I've always, I've had like the confidence to like, try and do it again." (participant 7) and "Because, uh, when I didn't wanna do something uh the advisor in my head said to do it and then I had a go at doing it." (participant 10). With another example not

mentioning specific DNA-V skills but responding to the question 'how have you applied DNA-V outside of the lessons?' they described the application: "I went climbing once and I, um, jumped off like a really high bit and I hit my head really hard to I knew not to climb that high when I went the next time." (participant one). A further respondent recognised DNA-V as a model rather than the individual skills in their response: "when I took my sister to swimming, I had the option to go in the pool and I wouldn't know if I wanted to and um, I was thinking about um the DNA-V and what different choices I had and I actually decided to go in the pool and play with my sister." (participant 8). This showed the participants knowledge of DNA-V, specifically the advisor and how it encourages understanding you have choices you can make aside from the ones your 'inner voice' might push onto you. These samples from the participants highlight the applied understanding of DNA-V theme as the children were able to coherently discuss and explain their experiences in terms of their DNA-V knowledge, suggesting the use of DNA-V language is plausible for their age group and that the DNA-V skills resonated with them well to be applied to situations outside of the classroom.

5.7.4 Personal Growth

There were multiple examples of students explaining how they had improved or new things they now understood, for example, improved confidence, more likely to try new things and understanding how their brain works. Within this theme there were two distinct sub-themes: better understanding and noticeable changes. Both sub-themes were individually recognized improvements. Leading with the sub-theme of better understanding, multiple participants demonstrated they now had clearer knowledge of how their brains work and how to behave more positively moving forward to benefit themselves: "It's helped me like notice more of like, um, what your,

like, brain, how your brain works." (participant 3), "They make me know what to do if you're in a situation like if you're stuck with a decision or then... Peer pressure was one of my favourites because you don't have to do what other people say what you can. Because you can decide your own decisions." and "I've learned that it's ok to feel sad but it's not ok to feel sad all the time, so you have to speak out and speak to someone." (participant 6). With some more personal examples showing that understanding DNA-V has led to better acceptance of themselves: "Yeah, because I used to have really bad separation anxiety from my mum but because of the lessons it like teaches me its ok." (participant 6), "Why like, I didn't really ever think like that cause it's like there are those voices but now I know what they are because I was always like I just like always wondered what they were." (participant 13) and "I feel like I'm happier as such in general and personally cause now I know, now I don't feel like a freak when I hear a voice in my head for a start." (participant 7). Whilst these participants demonstrate the benefits of understanding their brains and behaviours better, the final participant here also acknowledges noticeable changes in themselves.

The second sub-theme emerged from multiple respondents discussing changes and improvements to themselves. Some participants actively noted the shift from what they did previously to what they now do: "I used to like do things without thinking and like not notice if I've done it before or pay attention to that stuff but now, I've learnt about it I do." (participant 1) and "I didn't want to like, do stuff but now I've been doing it a lot more, like taking risks." (participant 12). With other participants highlighting the benefits from taking part in the intervention lessons: "They have helped me by like; they've taught me how to be a better person in general and helped me with little things as well." (participant 7), "They've helped me make better choices, um, when I'm doing stuff." (participant 8), "I think they have helped me stay calm and

think more." (participant 1) and "I can't really tell what's different about me, but I can tell there's something." (participant 12). This shows authentic insights into the perceived changes the participants felt from taking part in the intervention, but there was no theme to the changes, as they were tailored to the individual. These extracts support this theme, that the intervention had an impact on participants perceived personal growth demonstrating that the lessons can have a positive and recognized influence on children.

5.7.5 Room for Improvement

Due to the questions included in the interview, a theme of areas for improvements emerged where participants discussed elements they did not enjoy and what could improve the lessons. There were three sub-themes that surfaced from this: more variety in activities, clearer explanations and miscellaneous (covering improvements that did not group together into a suitably named category). Several participants mentioned that to improve the lessons there could be different/more of specific activities, for example one participant when asked what could improve the lessons said "If we, like, if we had to do a bit more writing." (participant 3), where other students said "I didn't enjoy when it was like, when you had to write loads and loads." (participant 5). Showing that it is difficult to cater to all learning needs as students will prefer different types of activities. In addition to this, there was a request for more enjoyable activities: "More fun things to do like the um, that you enjoy more like colouring for um, like say the DNA-V you could do colouring to show something." (participant 9). Therefore, there were suggestions for amendments to activities.

The next sub-theme, clearer explanations, materialised from students that found certain aspects of the intervention difficult to understand: "I'll choose one of the

topics, like disabilities. I think that's one that we done if there was just like a little bit more explanation on what like some things like meant." (participant 2), "Some of them were more, quite difficult to understand cause, well yeah, they were difficult to understand and some of them didn't really make sense as such and one of the final ones we had to write down something that was hard." (participant 7), "When Mrs BLANK like did them on the board, so she like explained it and everything and then most people got it but some people just on certain lessons didn't really get it." (participant 13) and "I was like, if there was like the advisor and stuff, I liked that but the discoverer I didn't really like because it was more confusing." (participant 5). These selections of data show a lack of understanding in certain areas of the intervention, suggesting clearer explanations could be included to ensure information is coherent to all taking part.

Finally, the miscellaneous suggestions for improvements were included as they were deemed relevant to the growth and development of the intervention. One participant noted they wanted to share information with classmates more regularly: "If there was a way of doing it all together and like sharing it like what you've written with each other." (participant 6). Another student had an intellectual insight into the lesson plans, indication the structure of the curriculum itself jumped from topic to topic too frequently without concluding on what they had learnt altogether: "I didn't really enjoy like, how we learnt about one lesson one day and how... we didn't, we learnt about another one another day but we didn't come back to it at the end, so we didn't, so we learnt D (discoverer) one day and then the next the next day but when we finished um, we haven't done one- a writing of over all of it, what we have learnt altogether."

(participant 15). This response is difficult to comprehend, it is evident the spoken response jumped through ideas, but the context is there. The examples shown within

this section uphold the theme 'room for improvement', as no participants explicitly said they did not like any of the intervention, only mentioned improvements that would matter to them as individuals – which is beneficial in the progression of this intervention.

5.8 Discussion

Through thematic analysis of the participants experiences of the intervention clear themes emerged to demonstrate the benefits, the acceptability and the ways the intervention could be developed further. Although statistical analysis did not show significant improvements in wellbeing outcomes and psychological flexibility across all participants, the theme personal growth highlights personal experiences outlined by participants showing noticeable benefits to their mental health. Students were randomly selected which means the findings give a fair representation. Whilst we cannot generalise this with the study looking at just 15 of the students taking part, we can say that the intervention did have perceived mental health benefits for some students taking part. To clarify, this does not mean a decrease in mental health symptoms, but an improvement in understanding their mental health with clear demonstrations of healthy mental wellbeing.

The theme 'lesson variety' emerged from the data due to students mentioning the enjoyment, seriousness and challengingness of the lessons as well as the mention of different types of activities, quizzes, class discussions, writing etc. This is a positive outcome, research strongly suggests that a variety of teaching/learning styles are most appropriate in both challenging and encouraging students' capabilities (Romanelli et al., 2009). Additionally, it is suggested that individuals that are exposed to a wide variety of educational sources can improve learning performance (Cattani & Kim,

2021). This element of the findings is key for informing future educational interventions in ensuring variety to increase learning outcomes.

Within the quantitative data, peer nominated scores indicated a significant increase in pro-social behaviour from pre-intervention to midway, then a significant decrease between midway and post-intervention. From this qualitative analysis, prosocial behaviours were seen within the socialisation theme found in the experiences of the participants post-intervention, which supports the initial increase found, but does not account for the later decline in pro-social scores. Therefore, leading to questions regarding the validity of the quantitative pro-social measure and potential feeling of pressure to respond positively. Nonetheless, the results of these interviews suggest that better socialisation was experienced by the students from the intervention, which is integral to human development and important for building social skills and making relationship connections (Grusec & Hastings, 2015). More specifically, relations between peers as opposed to adults are more promotive of cognitive development (Corsaro & Fingerson, 2003). This demonstrates that interventions that can improve socialisation, such as this one, are likely to have long lasting benefits on individuals, therefore, positively impacting wellbeing.

A crucial factor to consider in this study is that the participants were all aged 10 at the time of the interview, therefore, their responses in comparison to older children and adults often lacked nuance and depth. This meant the opportunity for insightful interpretations of data was reduced and therefore a more surface level analysis was applied. However, the participants are not the only factor effecting this outcome, my personal experience in child interviews was minimal prior to this study, therefore, it is plausible my lack of experience interviewing young children led to limited rich responses. Greenspan and Greenspan (2003) highlight the importance of how the

researcher approaches qualitative research, with a focal point on the researcher's ability to recognise the child's pace to allow their own words whilst also knowing when to step in to assist the child in what they are attempting to communicate. In this study, more experience in child interviews could have been beneficial in producing richer responses.

However, a strength of this study is that participants were randomly selected. Whilst a common process in conducting research, this highlighted an important finding. Teachers could have selected more academic students, students that engaged best with the model or students that had stronger communication skills to be interviewed. However, due to random selection, a variety of students were interviewed whereby the length of the interviews ranged from 2 minutes 14 seconds to 7 minutes 5 seconds due to confidence and communication abilities. Nevertheless, there were still positive findings across the range of abilities showing the intervention to be impactful for all.

There are a few other areas for discussion. Firstly, the theme 'applied understanding' helps to confirm the suitability and acceptability of the DNA-V curriculum. Like the diary entries, the students' ability to accurately describe the DNA-V terms and apply them to real life situations shows that the terminology is appropriate for the age of the participants and was absorbed well by them. It is important to note that this use of terminology was clearly not verbatim as this was not following a set lesson and participants were able to coherently explain personal examples with correct use of language. It is clear the intervention had lasting influence on the students as they were able to use the concepts properly post-intervention even though diary fidelity measures suggested adherence to lessons lessened nearer the end of the intervention. Additionally, the 'advisor' principle resonated best with the

students, as can be seen in their responses. Perhaps different stages of cognitive development suit learning different skills within the DNA-V model, as suggested earlier in relation to Piaget (1962), the 'noticer' and 'values' principles may be too abstract at this age.

Secondly, the disparity between quantitative and qualitative wellbeing findings leads to questions of the quantitative wellbeing measures. The SCWBS (Sterling Children's Wellbeing Scale) is a commonly used reliable measure of child wellbeing (Liddle & Carter 2015); however, perhaps the issue is not in the measure or completion of the measure but the choices of wellbeing outcome measures. That is, due to the core principles of ACT, perhaps a valued action measure or quality of life measure that situates itself more in the psychological flexibility principle may have been more appropriately suited to the aims of the intervention.

Finally, the inclusion of areas for improvement gave participant insight into future amendments that could be utilised to improve this intervention as well as giving guidance to other educational based interventions. Participants noted some difficulty in understanding some of the concepts/lessons, whilst it is not definitive as to why, it is plausible that the reduced adherence to the lesson plans and/or teachers struggling to explain them clearly could have constituted to this. Highlighting the need for good adherence to lessons and thorough teacher training.

There are limitations to this study worthy of discussion. Firstly, in the interview process a school staff member had to be present in the interview due to school policy, this may have affected the genuineness and openness of the participants as they may have wanted to please the teacher/researcher. Additionally, a power imbalance has been identified as a factor that could affect child interviews if the researcher is not sensitive to this (Gubrium & Holstein, 2003); the power dynamics between adults and

children mean that children have a lower status whereby they recognise the impact of adults around them and the power they hold. Therefore, this can have the implication of influencing the child's responses to interviews, possibly leading to less honest opinions being shared. It is relevant to note that delivery of the lessons was by teachers only, therefore there is less desire to please the researcher. Future qualitative responses should be gathered through multiple methods, such as focus groups as well as interviews, this would increase the number of children in the room and potentially reduce the power imbalance allowing for more genuine responses whilst also allowing individual personal responses that would not be impacted by peers being present. In addition to this, it is suggested to utilise the children as 'co-researchers' and involve them in some processes and discussions, this will help to build rapport and make the project feel more like a collaboration reducing the power imbalance (Harcourt & Sargeant, 2011). This work did include students in the piloting stage; however, the students that took part in the main study were the next cohort of year 5 students therefore did not have prior involvement in the co-creation processes. Co-creation is being more commonly used in research to tailor solutions and collaborate with professionals when developing initiatives, with a focus on planning, conducting, evaluating and reporting (Leask et al., 2019). All these processes should be considered for future research, by involving students and teachers in studies it can give incentive and ownership to these volunteers, increasing adherence.

Another limitation to this study is that there was no triangulation through the analytic processes, as the data was analysed by the researcher alone. By having additional researchers as part of the coding process and creation of themes it could have led to different findings. Triangulation is beneficial in moving the findings closer to the 'truth' (Braun & Clarke, 2013) and therefore reducing researcher bias. Whilst

researcher bias is partly accounted for within the reflexivity section, due to the lack of triangulation, the findings of this analysis should be interpreted with caution due to the potential of subjectivity emerging.

5.9 Teacher Interview Analysis Introduction

Like the participant interviews, it is beneficial to investigate the experiences of the teachers running the intervention to understand their observations of the participants as well as their opinions of the intervention. Interviewing the implementers of a new intervention is important in recognising both what was successful and what amendments may be needed, with previous research highlighting the importance of teacher input into the development and analysis of interventions (Neill et al., 2021).

Statistical analysis of the teacher rated behavioural measures showed a significant increase in observed helping behaviours post-intervention, therefore, it is expected that benefits of the intervention will be discussed. In addition to this, due to high attrition rates it is expected that other themes will emerge from the teachers' experiences. The aim of this study is to analyse the teachers' experiences of implementing the intervention with a focus on both their observations of the children and the intervention itself.

5.10 Method

5.10.1 Research Design Overview

This study is qualitative, where all teachers that completed the intervention were invited to take part in a semi-structured interview in relation to their teaching of

the DNA-V curriculum. This research adopted an inductive thematic approach of the participants responses post-intervention. Thematic analysis was deemed the most appropriate analysis, with other school-based intervention studies also using thematic analysis to analyse staff experiences (Day, Sahota & Christian, 2019; Neill et al., 2021). In addition to this, the sample size for this study is small and thematic analysis guidelines show sample sizes range from 2 upwards (Fugard & Potts, 2015), which is suitable for this study; however, less power in sample size can reduce the sufficiency of emerging themes. Researcher description / reflexivity for this study is the same as the previous study as there is no reason for bias difference between students and teachers, please refer to section 5.6.2. To avoid potential bias emerging, specific questions were included to highlight potential areas for concern and improvement.

5.10.2 Participants

Teachers that completed the intervention were invited to take part in the interview. Two out of three teachers were available to take part in the interview post-intervention, both these teachers identified as female and fit in the age category 35-45 years old.

5.10.3 Data Collection

This semi-structured interview was designed with input from the team behind the curriculum with 15 open ended questions (see Appendix I). The main focus of the questions was to initiate conversations regarding various aspects of the intervention such as the implementation, the impact on children and improvements that could be made. These questions gave the teachers a starting place for discussion, but flexibility was allowed to follow up with further questions for richer responses.

Both teachers joined the researcher in a quiet room alone where an audio device recorded the interview. Participants were reminded to take their time when responding and to ask questions if needed. Participant one's interview lasted 6 minutes 28 seconds and participant two's interview was 14 minutes 25 seconds long. After all audio recordings were taken, they were transcribed using the Microsoft Word version transcription software and then manually checked for accuracy. Once all participant data was transcribed a total of 260 lines of text were ready to be coded.

5.10.4 Data Analysis

Due to the aim of this study being to understand teachers experiences of the DNA-V curriculum intervention, similar to above, a phenomenological approach was taken with a realist framework (following Braun & Clarke, 2013). Braun and Clarke (2006) thematic analysis guidance were followed for rigorous analysis, whereby coding was completed semantically before searching for patterns across the data. Due to small sample sizes, patterns across participants were at times challenging to find; however, patterns within individual responses emerged across the various questions. Additionally, because of the smaller participant number, sub-themes were difficult to identify for this analysis. However, thematic analysis was nonetheless an appropriate approach to allow for flexibility when analysing such a small sample size. For the final stages, a mind map was created to group codes together and identify themes across the data, these were then named appropriately.

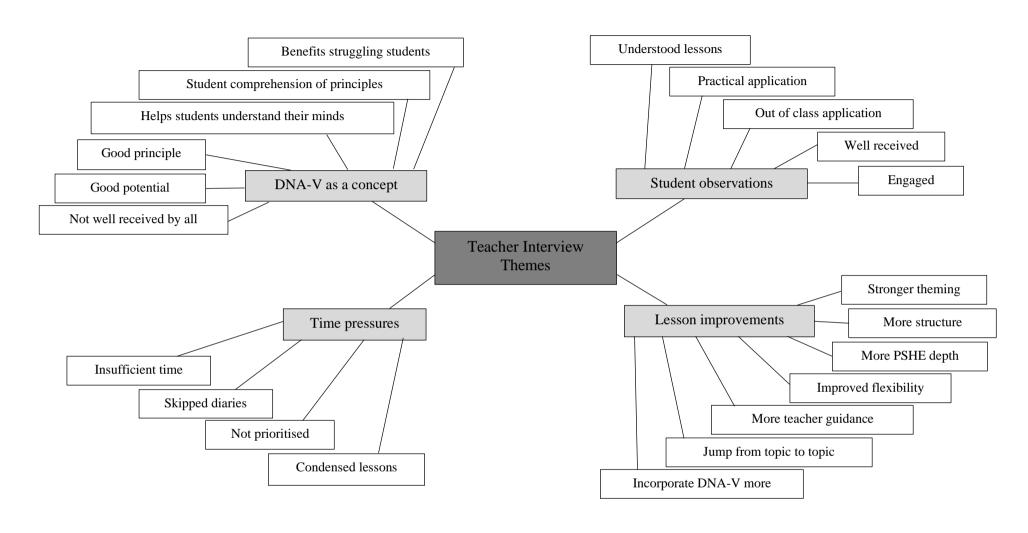


Figure 5.2. *Mind map of emerging themes and sub-themes.*

5.11 Findings

A range of useful responses were recorded from the teachers, the codes found within the data lead to the emergence of four key themes, as shown in Figure 5.2.

They have been categorised as: DNA-V as a concept, observed student understanding, lesson plan improvements and time pressures. Each of the themes listed are supported by data extracts from both participants to ensure strength of the theme. All themes are defined below with examples of data to justify the analytic claims.

5.11.1 DNA-V as a Concept

This theme emerged from the data due to teachers discussing the DNA-V principle as a stand-alone element of the curriculum. It was spoken about multiple times within both interviews as the underpinning theoretical principle to the intervention. Firstly, teachers noted how they believed in the DNA-V principle and liked it as a concept: "I like the whole principle of DNA-V. I like the idea that it's making children realise that they are in control of what they do and how to recognise when they can make those changes." (participant 1) and "I think it's been hugely helpful, and I think that's great to have that sort of as a program coming through school." (Participant 2). Additionally, students comprehended the concept well: "I think that that those first few lessons on the DNA-V model were really, the, received well by the children." (participant 1). However, it was noted that the concept was not well received by all students: "I think there's an element of it that's a little bit complicated for some of them to unpick. I think those who are cognitively more able definitely managed it. Yeah. So those, those who, who are cognitively less able really struggled with the concept cause it's very abstract. Children who are more like, the sort of children who will be on spectrum. You could see were struggling to pull it apart as

well." (participant 2). This distinction is crucial to include, especially with previous discussions in the first qualitative analysis surrounding acceptability and suitability to children, as it appears that children with higher learning needs have difficulties in understanding the DNA-V concept. Although, this is common in schools to have a variety of understandings in one topic.

Another element found within this theme is the potential of DNA-V as identified by the teachers. Firstly, when discussing another curriculum, the teacher identified how the curriculum helped students connect with their emotions but there was an element missing which DNA-V had the capability of filling: "They were totally, you know, connected with their emotions and that they could say, yes, I was really angry. That's why I hit him. Rather than actually being able to say I've got a mechanism by which I could stop myself and to change those actions, and that's where the DNA-V has the potential for doing that." (participant 1). It was also suggested by a teacher that the DNA-V concept could establish itself within a more targeted intervention approach: "There's the few children who really struggled and here really did benefit from it. So even if I wasn't to use something as a an off the peg hole class lesson and use it as an intervention, so you know an intervention-based learning might be way forward." (participant 2). This proposal shows that the teacher can recognize the benefits DNA-V has, it is just the application of the principle that needs amending. Finally, within the data for this theme, it was clear the DNA-V concept was viewed as sufficient enough by the teachers as when asked if they would like to continue with these lessons participant two noted the importance of a framework and said: "To have the DNA-V as a, a basis underlying basis, you can refer things back to make some sense." and "I think having some sort of framework for the children is very important. I think having that theme running throughout the PSHE is really good.". This extract

shows the participants support for the DNA-V concept underpinning the lessons. The excerpts included within this section support the theme of DNA-V as a concept, demonstrating the teachers' acceptance of the DNA-V principle.

5.11.2 Observed Student Understanding

Throughout the data set it was evident that there were several examples of students understanding the DNA-V lessons, not just the core principles but the other ACT elements included. Firstly, teachers described multiple examples of students comprehending the lessons: "I think the lessons were well received by all of the class really, I think some of them, it was a realisation "oh I hadn't thought of it that way" or "oh I could make those changes". I think the personal challenge ones were good people recognising that they might not be good at maths, but they're really good runners and that's a good thing." (participant 1) and "It's very interesting that I had a couple of children with quite high levels of emotional need who really seemed to enjoy it, and it really seemed to help them. If you like, sort the head out, they, that's how they described it." (participant 2). As well as how they were then able to apply their learning in verbal contexts: "Some of them were very able to very clearly verbalize what they learned and what they can do" (participant 2). In addition to the comprehension of the lessons, it was noted that teachers observed children understanding their mental health and the improvements that were in conjunction with that: "That children actually realized one, that they are unique, they are in control of their own emotions and subsequent actions. And that it can be quite empowering, especially when you've got things like the personal challenges, recognising that you are good at things and recognising that it's OK to not be so good at something so empowering." (participant 1) and "For some children it was the first time they've ever had a conversation really

about what goes on in their head, and so to, to be able to express that was really good for them." (participant 2).

A sub-theme to this overarching theme of understanding, is the teachers' observations of the children's abilities to apply DNA-V in contexts outside of the lessons. Participant two recalled two distinct occasions where students had utilized the DNA-V principles outside of the prescribed lessons: "We do gym run with a coach who comes in and teaches and he does like positive mental attitude with gym run things, some put their hand up and said "oh yeah, that's my advisor talking"." and "When they were making their Viking Longboats we had bit of trouble, and a little bit of trouble with sorting things out, and you know, so "I'm gonna have to, going to use my discover and how I need to go and find a new way to do this" you know, and it just didn't work before. So, they they've managed to sort of relate some of it to practical terms, which is nice.". These two examples show how in different situations the children had the capabilities of applying their DNA-V knowledge to other situations to help explain their behaviour and even utilize the skills in a situation where something was not going well for them. The theme 'observed student understanding' is grounded within these data samples.

5.11.3 Lesson Plan Improvements

A large theme that surfaced in this analysis was lesson plan improvements. Whilst plenty of likable attributes were noted: "Lesson plans were absolutely fine, straightforward to deliver." (participant 2), "The personal hygiene, the exercise and nutrition was great, so there were some really good sessions." (participant 1) and "I liked it. I think with a few tweaks it would be a really effective program to roll out in

primary schools." (participant 1), it was evident that teachers felt there could be amendments to improve the effectiveness of the curriculum.

First, teachers discussed the need for more guidance in the lesson plans due to vagueness and insufficient structure: "I think the middle of the term, the plans were brilliant. They were really, really good. And then towards the end of the terms, they got a bit vague and you kind of had to make up your own stuff." (participant 1) and "As a whole, I think PSHE for me is often more structured in terms of the work we expect afterwards. So, in terms of recording and evidence that's been quite hard sometimes actually as I'm lead. So, you know, trying to evidence what we've done is quite hard from those diaries." (participant 2). The second extract also highlights a need for evidence. Within the English schooling system, each school will have its own regulations to follow to prove they have been keeping up with teaching standards and producing work. Therefore, outcomes of evidence would be preferred across lessons, such as written work.

Participant one noted across their responses that the DNA-V concept needed to be incorporated into the PSHE topics better: "I felt it was a little disjointed to what we covered. It wasn't actually incorporated within, so it was a case of here's DNA then we'll go off and do the PSHE lesson. Then we'll come back and try and link it together.

And I don't think the children always could make that link." and when asked about what improvements could be made suggested: "Actually incorporating the DNA model throughout the whole thing, so rather than it just being something discussed at the beginning and something discussed at the end actually have, make it more interactive". This was an element focused on between the developers of the intervention; however, it is possible more could be done to create a more interactive DNA-V element to engage the students. Participant two contrastingly suggested more depth in the PSHE

topics, they felt that the lessons jumped from topic to topic rapidly with not enough focus in one area: "The actual lessons in terms of like the health and the, the other aspects of the PSHE jumped around and jump on, jumped on very quickly. Maybe one on this and one on that. And so, I would want to go into more depth." and "There's sort of 1 puberty lesson and we spend a whole week doing it, so going into more depth in some areas I think would be necessary.".

Finally, an important improvement that materialized was the need for flexibility in the lesson plans. Whilst structure and guidance are required, due to individual differences and situational factors, adapting lessons to suit the need is required: "I think having a sort of script of a lesson for me is something I'm not used to. I'm used to very much sort of planning. Basically, what I need and then going with the flow. Adapting the lesson, if I need to, especially with PSHE, cause things come up, so I have done an element of that, so I'm going to say that I haven't 100 percent followed it." (participant 2) and "The characters in the classes are so different that it makes a huge difference, and you sort of need to tailor that. Especially in small school we know the children quite well." (participant 2). These extracts show how teachers need flexibility and adjustability in their lesson plans to allow for unforeseen circumstances. Within this section, the examples of data show the various improvements teachers have suggested which solidifies this analytic theme.

5.11.4 Time Pressures

The final theme that arose from the data was that of time pressures, both teachers noted that there was not enough time to be able to complete mental health focussed activities sufficiently. Firstly, just noting the inadequacies of time allowances in schools: "Time is a hugely, huge, huge issue." (participant 2) and "As the terms went

on, DNA-V became something that you thought about at the end if you had time, and we didn't always have time. So, I think we kind of lost that concept, which was a shame." (participant 1). These extracts show that teachers find time as a barrier to implementing beneficial mental health focused lessons. When discussing the issues of time participant two said: "You could see how it would be very easy for a teacher just to let it fall off the end. It goes on the end, though. PSHE, music and French are the ones that drop off the edge if you're not careful, because the time pressure is huge and I think it's really important, mental health, I think is really important.", whereby mental health is recognized as integral in education but is seen as the subject that gets left out.

Participant one also noted how there is need for mental health education due to a decline in child mental health, but they had to try and condense the hour-long DNA-V lessons into shorter time allowances: "I don't think there's enough time. I think I was trying to deliver an hour long in a half hour to 45-minute slot, which is difficult, but I guess PSHE is not a 'necessible' subject, so although we're seeing more damage to children's mental health, there's still, you know, the government is still driving for academic results as a form of children's achievements.". An interesting factor of participant one's response here is that they mention the government's need for academic results, leading to mental health education falling lower on the list of priorities. Not only does this influence the amount of mental health education a child gets, but it also suggests that mental health is not important and can cause this framing for a child who sees maths being prioritised over wellbeing. Both teachers emphasize the issue of time constraints within education and the excerpts of data ground the analytic claims for this theme of time pressures.

5.12 Discussion

Through thematic analysis of the teachers experiences clear themes emerged that showed the acceptability of the concept, the observed applications of the concept, possible amendments to the curriculum and the barrier of time. However, due to the low power of this analysis with just two participants taking part, the themes and their content are less nuanced. Additionally, these findings are more open to bias and therefore should be considered cautiously.

When examining each theme closer, each have their benefits to understanding the efficacy of the DNA-V curriculum. Firstly, DNA-V as a concept showed how positively the theme was regarded by teachers and understood by children, demonstrating its' potential moving forward with mental health education. Also justifying the reasoning behind using the DNA-V model for the intervention, as it has now proven to be beneficial and well received. Secondly, like both the diary and student interview analysis, the children's understanding of the lessons and ability to apply their learning to different contexts helps to determine its acceptability and suitability. Thirdly, the effectiveness of the curriculum could be enhanced with minor changes to facilitate a more structured and DNA-V focused approach. As mentioned previously in Chapter 4, there were concerns over the lesson content being too split between PSHE and DNA-V. The findings from this analysis confirm those queries, it is possible that DNA-V being incorporated into statutory requirements is an unusual fit and shows that further developments of the curriculum are required. In addition to these developments, the lesson plans could be less prescriptive and more flexible to be more appealing to teachers to allow for individual class needs. The co-creation approach could be beneficial in this instance as teachers would be included in the initial creative process as well as the further developments and could ensure flexibility

of the intervention. Finally, with the discussion of inadequate time, it showed there are barriers to implementing mental health focused curriculums. This may help to explain the high rates of attrition from whole schools, with timing issues reported, this is not a surprise and is an issue to be investigated. For example, a systematic review researching the barriers to school-based mental health interventions found insufficient time to be a common barrier to sustaining an intervention (Moore et al., 2022). Within this review other barriers were discussed that did not appear in this analysis, which has led to further questions about the feasibility of implementing any mental health focused intervention, not just a DNA-V focused one. With these factors considered as well as some of the comments from the teachers, it is plausible that the DNA-V model would be more beneficial if implemented as a targeted intervention. Even though it was well received and understood, perhaps it does not hold enough value at a whole class level. Nonetheless, this was only the initial stages of the DNA-V curriculum with developments and amendments that could improve its efficacy. Future research should continue in this area, but with focus on reducing barriers faced by teachers to improve adherence for more accurate analysis.

There are several limitations to explore, firstly, the small sample size reduced the power and likely the sufficiency of the themes (Fugard & Potts, 2015). There was a small amount of data to analyse and therefore themes were less nuanced and detailed. Guidelines suggest small interview projects to have between 6-10 participants when using thematic analysis as to not overwhelm the researcher with data but be enough to see patterns (Braun & Clarke, 2013). When searching for similar published studies with extremely low participant numbers for comparisons nothing was found; however, in this study there was nothing more that could be done due to the high attrition rates and therefore only these teachers to participate. In addition to

this, both participants were female, therefore creating a biased sample and possible biased outcomes. That is, women have been found to be more emotionally expressive than men (Fischer & LaFrance, 2015) which could affect the findings in two ways: the responses to the interview questions and the experience of teaching an emotion and wellbeing focused curriculum. Although, within the English primary school workforce just 14% of teachers are male (Office for Statistics Regulations, 2024), the gender imbalance in teaching is prevalent therefore this does not impact the findings. There was one male teacher that completed the intervention, but unfortunately, did not want to take part in the interview process. Finally, comparable to the previous qualitative analysis of the children's interviews, there was no triangulation process within this thematic analysis increasing the likelihood of researcher bias (Braun & Clarke, 2013).

5.13 Conclusion

The findings of these three qualitative analyses demonstrate the positive aspects of the DNA-V principle underpinning the curriculum and give scope to where developments could enhance both the student and teacher experiences. It is relevant to acknowledge the acceptability of the curriculum to the children is different to the acceptability to the school. Children responded well to the DNA-V intervention, but the whole school dropouts show the feasibility for the school is still not clear. With just two teacher interviewees post-intervention, not enough rich data was collected to gain clarity on why it was difficult to maintain schools' participation. Aside from the barrier of time, there is more research that can be done to unveil deeper reasoning behind the difficulties teachers face when implementing mental health education.

Chapter 6: Understanding the Feasibility of Mental Health Education: A Qualitative Analysis of Teacher Experiences

This final empirical chapter aims to investigate teachers experiences outside of the main study to gain a richer understanding of mental health education within English schools. Interviews were conducted with teachers and teaching assistants from different schools in the Southwest of England. Responses were analysed and highlighted various barriers and facilitators to mental health education.

6.1 Introduction

The qualitative interviews gave further information about the possible reasons why there was no movement on the quantitative measures. Specifically, it seems like the approach is acceptable to the students, and the teachers can deliver the model with fidelity to the material, but adherence to the lessons combined with whole school attrition might suggest that there is something broader happening that is worthy of exploration. Whilst there is research to suggest the benefits of universal mental health education (as outlined in Chapters 1 and 2), there is also evidence to show the barriers to implementing interventions efficiently, which will be considered below.

Firstly, before looking at school-based wellbeing intervention barriers, there are barriers to interventions across all domains. Reported barriers to a range of psychological interventions are: lack of resources, inadequate staffing, poor access to funding and insufficient training (e.g., Bach-Mortensen et al., 2018; Cowie et al., 2020; Parsons et al., 2022; Peters-Corbett et al., 2023). Successful implementation is linked to intervention efficacy (Bach-Mortensen et al., 2018), therefore, understanding the

barriers that impact an intervention being implemented successfully can lead to further developments and support.

The barriers mentioned above are also present and common within educational settings. A systematic review of health interventions within schools and child-care highlighted multiple barriers across 29 different school-based studies, such as: minimal financial support, time constraints, insufficient training and curriculum demands (Shoesmith et al., 2021). This review lists barriers identified across multiple studies, but they focus on the prevalence of these barriers rather than understanding them in detail with the purpose of knowing how to improve the issues. In addition to this, only three of the studies included were conducted within the UK and the interventions were physical health focused (diet and exercise), therefore, with the sensitivity of mental health education there are potentially more barriers to consider.

Understanding the barriers within schools is vital to the success of a universal intervention. A systematic review analysing barriers and facilitators of school-based mental health interventions identified a key barrier to the sustainability of interventions as resources (Moore et al., 2022). The term 'resources' was an umbrella term to encompass further barriers such as: staff turnover, staff capacity, funding, and external support. This review focused on external barriers, further understanding of internal barriers faced by teachers would help guide support for variables that are in teachers' control. Additionally, within the systematic review only one of the ten studies were based in England, and with such varying education systems and policies worldwide further understanding of the barriers experienced within English schooling systems is required, as a country with a specific national curriculum.

There is minimal research surrounding teachers' opinions on barriers to mental health education within England and surrounding areas in the UK. A study conducted

within the UK to understand the barriers to a school-based anxiety intervention identified barriers such as: a lack of understanding of the intervention aims, poor understanding between parents and schools, limited amount of time and difficulty accessing additional services (Brown et al., 2023). This is beneficial to build our understanding of what can hinder successful implementation; however, this was a targeted intervention rather than a universal intervention. Therefore, potential barriers to whole class teaching of mental health and wellbeing curriculums may differ. Understanding the barriers to English universal mental health curriculums is crucial to intervention development, as teacher adherence to interventions has been found to positively impact behavioural outcomes (Meza et al., 2020).

To try and understand barriers of whole school approaches to mental health education in England and how this impacts feasibility and attrition of interventions, teacher experiences and views were gathered through interviews. The aim of this study was to gain a deeper understanding of teachers (teaching in England) experiences and the feasibility of implementing a wellbeing curriculum. The findings can then inform future wellbeing curriculums to ensure strong adherence and acceptability.

6.2 Method

6.2.1 Research Design Overview

This study is qualitative, where teachers and teaching assistants (TAs), separate from the main study, were invited to take part in a semi-structured interview in relation to their experiences of mental health focussed education. This analysis adopted an inductive thematic approach of the participants responses. Thematic analysis was deemed the most appropriate analysis, with similar studies examining

teachers' perceptions on the promotion/support of student wellbeing using thematic analysis (Byrne & McCarthy, 2021; Kenwright, McLaughlin & Hansen, 2021). These interviews were originally planned to take place after the main study; however, due to the COVID-19 pandemic the interviews were put on hold to favour in person data collection over online interviews.

6.2.2 Researcher Description / Reflexivity

It is important to acknowledge my subjective experiences and values that may have influenced the methodological processes and analysis of this study. This research has been conducted as part of my doctoral thesis and follows from my previous studies which already identified barriers to intervention implementation, it is plausible that this could impact patterns and themes identified. To reduce this possibility, the aim was to ensure a wider understanding of teachers experiences by including questions that could encompass a range of experiences in addition to barriers. Additionally, as an associate lecturer that is involved in pastoral care of academic personal tutees, I understand some of the difficulties of balancing academic work and mental health support/guidance. However, due to the age differences and academic processes it is unlikely this will have much impact on the analysis; however, should be acknowledged regardless.

6.2.3 Participants

Based on TAs taking up around one quarter of the school workforce within

England and Wales (Webster et al., 2011), evidence showing children value the help

from TAs (Fraser & Meadows, 2008) and reports from TAs believing themselves to be a

clear support for students' mental health (Conboy, 2021), TAs were included in addition to teachers.

Participants were recruited online through social media, the request for participants was available to contacts of the researcher and made shareable to others who were unknown, resulting in all bar two of the participants being known to the researcher. Each participant was required to have experience teaching/assisting in key stage 2 (years 3-6 in English primary schools), to be similar to the main study for possible comparisons. Eight people volunteered, of these participants all were female and each were from different primary schools in the Southwest of England. The teachers ages ranged from 22-63 years with an average age of 33.88. Within the group of participants there were teachers, one deputy head teacher, one assistant head teacher (recently retired) and one TA. Their classroom experience ranged from 3 years to 37 years with an average experience of 13.75 years (experience was calculated to include any experience in a classroom setting i.e., teacher training and TA work before becoming qualified).

All participants were given information sheets to keep regarding the study and researcher contact details in case they wanted to withdraw their interview. They all gave informed consent and understood their responses would be used within this doctoral research, kept confidential and analysed appropriately.

6.2.4 Data Collection

This semi-structured interview was designed with input from the team behind the curriculum with eight open ended questions (listed in Appendix J). The aim of the questions was to initiate conversations regarding various aspects of mental health

education. The questions gave the teachers a starting place for discussion; however, flexibility was encouraged to allow follow up questions for deeper responses.

The researcher went to individual participants' houses and the interviews took place in a quiet room with minimal distractions where an audio device was used to record the interview. Participants were reminded to ask questions if needed and to take their time with responses. The interviews ranged from 4 minutes 50 seconds long to 30 minutes 20 seconds long with an average duration of 12 minutes 46 seconds.

Once all audio recordings were completed, they were transcribed using the Microsoft Word transcription software and then manually checked for accuracy. After all participant responses were transcribed a total of 1123 lines of data was ready to be coded.

6.2.5 Data Analysis

As the aim of this study was to understand teachers experiences of mental health education, a phenomenological approach was taken with a realist framework. The Braun and Clarke (2006) thematic analysis guidance were followed for analysis. Firstly, coding was completed semantically and then patterns were searched for across the codes. Codes were then collated into a mind-map for organisation of ideas (as shown in Figure 6.1) and finally from this, themes were constructed across the data and were named accordingly.

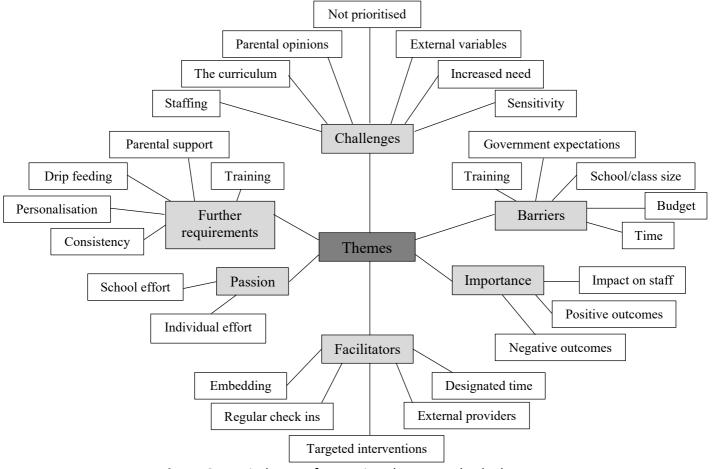


Figure 6.1. Mind map of emerging themes and sub-themes.

Note: this mind-map has been condensed due to a larger number of codes within the data set, therefore key items included have been categorised from the analytic coding.

6.3 Findings

The responses from participants were insightful to the variety of methods used to support mental health in primary schools. Due to participants being from different schools with a variety of approaches and valuable experiences, clear key themes were identified with each having multiple sub-themes. The key themes have been identified as: facilitators, mental health passion, challenges of mental health education, external barriers, importance of mental health education and further requirements for success.

Each of the themes, and sub-themes, are detailed below and supported by data extracts from multiple participants to justify analytic claims. It is important to note that multiple participants referred to mental health education as PSHE, due to the common occurrence within England that PSHE encompasses mental health education. Every participant discussed PSHE as their main form of mental health education, which was expected and therefore not included within the themes. Each theme is included as a sub-heading with sub-themes underlined for clarity.

6.3.1 Facilitators

Participants discussed the efficacious mental health elements that they themselves, and their schools, implemented with the pupils, which can be seen as facilitators to successful mental health education. Within this theme various subthemes emerged to show specific strategies that were effective. Firstly, an element participants' spoke positively about was the use of individual mental health support which has been categorised as the subtheme - targeted interventions. This was typically in the form of ELSAs (emotional literacy support assistant) who have specific training from educational psychologists and designate time to work with children identified with higher needs for wellbeing support. One participant notes how lucky they are to have two trained ELSA staff members to support specific individuals "We have two ELSAs, we're quite lucky as well, we've got two ELSAs in our school and they work 5 afternoons a week, but that obviously only targets generally individuals." (participant 2). As well as ELSA support, other targeted support was mentioned in terms of an external provider "We also have the ELSA, who has a nurture room and she'll take children out. And then we also have MHST (mental health support team) come in for specific children. There's some children who obviously need more than

others, and they'll have, like, dedicated time." (participant 3). This recognizes the need for individual support within mental health education, suggesting that targeted intervention is still required within education for children that continue to struggle even with whole class mental health support: "The children that we've picked up from that, that are finding it difficult to explain their feelings we've put on to ELSA support." (participant 5). This shows that the use of universal interventions helps to identify struggling students which leads to extra support, ensuring all students get the mental health support they need.

As mentioned, when discussing targeted interventions, the use of **external** providers for mental health support and education was a common occurrence across the participants and therefore became a sub-theme as a facilitator to mental health education. Within England it is not mandatory to prescribe to a specific curriculum, the school itself can create its own mental health provisions which are typically incorporated into PSHE curriculums. However, numerous participants spoke about their prescriptions to specific mental health focused PSHE curriculums "We follow Jigsaw program, which is a whole school program." (participant 7), "Across the whole of our school, we do, we follow the PSHE jigsaw scheme." (participant 8) and "Our school follows the Jigsaw curriculum, and this teaches PSHE as a whole. So, it goes through lots of different, lots of different topics and mental health is a big focus in one of those." (participant 5). With other participants also highlighting what they like about the specific curriculums "Across our school, we follow the Jigsaw PSHE scheme, and one of the reasons we do that is because it has something in it called calm me time and it's literally just a segment of your lesson. It takes about 5-7 minutes where you ding a chime and the children have to breathe in, breathe out and you read them a script." (participant 4) and when discussing minimal mental health training participant 5 noted

the benefits of the curriculum "I think through the Jigsaw curriculum, I don't think teachers feel like they need it [training] as much often because the Jigsaw is very, very structured and you literally go off what you get given and then you feel quite empowered with that because you haven't got to think of a lesson.". From these examples it is clear schools opting into a ready-made mental health curriculum has recognized benefits and are valued enough to be mentioned. All participants did highlight the positive outcomes of mental health education (in regard to these PSHE provisions) which will be discussed in the importance for mental health education theme. In addition to the external PSHE curriculums, there was also various external support from charities and organizations whereby they came in to give assemblies and sessions: "we have the mental health support team, we're assigned to those, they come in and do talks for the school." (participant 3), "We had PSHE workshops provided by BLANK and BLANK [wellbeing and PSHE providers] who came in and my class, they did a session all about how to like self-regulate." (participant 4), "We've had visitors in from like young somerset speaking to the children about their feelings and emotions." (participant 5) and "We also have 'KOOTH' which is like a children's mental wellbeing support charity which come in and do assemblies and offer like chat support and anonymous counselling for any children." (participant 8). These additional forms of mental health education help to facilitate the continuation of wellbeing support within schools.

A further sub-theme that emerged was <u>designated time</u>, this is where participants noted specific days, weeks and times they dedicated to mental health education and skill development (e.g. mindfulness). Multiple participants mentioned their schools' commitment to mental health focused weeks to facilitate the promotion of student wellbeing: "In February and springtime we had a PSHE and arts mental

health week." And "In summer term, we've got health and wellbeing week, which is more focused on like the physical ways you can support your mental health."

(participant 4), "We have a mental health and wellbeing week in the school. So, all classes come off of timetable and our lead for PSHE puts in different activities."

(participant 5) and "In our school, every year we have a mental health week, which usually focuses on a theme. So, for example, this year it was 'let's connect' so talking about relationships and friendships within home and at school." (participant 8).

In addition to these extracts, there were examples of consistent and regular use of mental health activities at specific times: "We have got a mental lead practitioner in our school who's a foundation stage teacher who trained last year, and she started bringing in different initiatives like wellbeing Wednesday where you just have half an hour that you are focusing on the children's wellbeing and that can be things like stilling, that can be things like bit of meditation, that can be mindfulness colouring, all of those, that can be listening to music, all of those types of things." (participant 2), "In PE, when we, when we do, we'll always start with like a 5 minute in class and think of why is 'you know', good and they'll think of mental health benefits so they can really see the, you know, how exercise fits into that." (participant 3) and "At the beginning of every session there's time for mindfulness, which when we first started it at the school, we didn't really give much time towards mindfulness, and now it's just, we roll it out every day, so every day the children come in at some point in the day, the teacher has to make the conscious effort to do some mindfulness in their classroom." (participant 5). These excerpts of data show how designating specific time to mental health education can facilitate regular and consistent wellbeing support for students.

In addition to these sub-themes, a further one was identified as **embedding**whereby participants discussed inserting mental health education into areas outside of

prescribed PSHE lessons and mental health weeks. Some participants discussed how mental health would be incorporated into more creative subjects: "I'm art lead so I try to push for art being a mental health lesson as well. So, I've spoken a lot to class teachers about now, it's the summer term, get the children outside for their art lessons and make that an opportunity to kind of take in the fresh air and talk about how that helps mental health." (participant 4) and "We do lots of artwork around mental health and wellbeing, but also through music." (participant 5). These examples of data show how promotion of mental health does not need to fit into just one subject category but can be embedded throughout subjects to facilitate continuous mental health learning.

There was also this idea of a school ethos around mental health, where schools embedded principles into as many areas of school that they could: "We do something called a growth mindset at school, which is about perseverance and resilience, and all of those things and children can talk the talk about having that growth mindset. So those things we embed that we give a priority to, they're definitely benefiting from." (participant 2) and "It [mental health education] was very much wrapped into everything that we did." (participant 6). Research places importance on fostering a school ethos amongst staff and students regarding wellbeing promotion (Hornby & Atkinson, 2003) as well as embedding and linking mental health education to academic learning (Weare & Nind, 2011). This supports the strategies utilized by these participants to facilitate mental health education; however, not all participants mentioned doing this even though evidence exists showing its benefits, therefore questioning the feasibility of embedding mental health education and creating a school ethos around it.

A final facilitator sub-theme collates <u>additional strategies</u> that have been mentioned as beneficial and of value to the participants. One of these areas are daily check ins, these are ways schools regularly check in with pupils' feelings to have consistency in recognizing and labelling emotions: "We have weekly, daily check in pots so the children come in and they've all got a lollipop stick and you put it in the pot that you're feeling." (participant 5), "I have emotional regulation check in pops, and they all get a lollipop, a lollipop stick and that's now been employed school wide as well by our PFSA [parent and family support advisor] they really liked it. So, we do that. The children check in in the mornings and I've got someone who's in charge of going around making sure everyone's done it." (participant 4) and "So, we have this new thing that's been brought in called the zones of regulation. So, each, we have a colour, and each colour relates to different feelings. And in the morning when the children come in, we ask them what zone they're in. So, if they've had maybe a bad night's sleep, they might be feeling a bit in the Blue Zone, so a bit tired. And if they've had a good night's sleep, they might come in and say "ohh I'm in the yellow zone. I'm feeling quite happy" and it just helps them to understand their own emotions so they can relate it to a particular colour." (participant 1). In addition to this, the creation of a 'safe space' seemed beneficial in ensuring children felt comfortable and knew they could step away when they recognized certain emotions "We have the nest in our school, so it's like a hub space where if they're feeling dis-regulated or if they just need a minute or they've, something happened at home, they know they can always go there." (participant 3). This was viewed as a facilitator as it showed students that the school places importance on mental health and having safe spaces they can go to in their moments of need. Finally, a useful addition, that some participants actually noticed was missing, was the inclusion of parents in understanding their child's mental health education:

"The parents come in and the children, each class, sets up a little stall about everything they've done that week, and then the parents stay for a session about how to support your children's mental health at home." (participant 3). This allows for mental health education to continue at home due to parents better understanding of mental health in children, which is an effective way to facilitate the promotion of student wellbeing and continuous learning. For example, parental involvement has been evidenced in literature as beneficial to school-based mental health interventions (Shucksmith et al., 2010), showing it to be a useful concept to utilize further. The sub-themes within this overarching theme of facilitators are supported by various data extracts, they show the range of successful elements the participants employ within their schools which solidifies this analytic claim. These findings create the idea that the importance of mental health education is not limited to a discrete activity, but most successful when incorporated more holistically with collaborative efforts (including parents and external providers).

6.3.2 Mental Health Passion

A pattern that was recognised in six of the participants responses was the language used when discussing mental health focused initiatives. It suggested that the work being done on mental health was due to that specific school's passion for supporting wellbeing or the individual teachers influence/effort themselves. Whilst this could fit into the 'facilitator' theme as something that supports mental health education, this was a distinctive theme that showed not just through what the participants said but how they phrased their words.

Firstly, looking at the sub-theme **school effort**, participants often worded their sentences using 'my school' (or similar) to signify that they know their specific school

did promote or employ specific strategies, insinuating other schools do not always do the same: "I think my setting do a very good job at it and I think I'm very proud of how far we've come in our mental health and what we've, the importance that we put on it." (participant 5), "I think in my school we do spend an adequate amount of time on it." (participant 8) and "My school are very lucky because we do the mental health week and we, and when it's children's mental health day or mental health week nationally, we talk about that in assemblies and stuff. So, we are really lucky to have that time and I think our PSHE lead and things, we like, really value that." (participant 4). These examples show how the individual participants talk about their specific school effort, with one participant comparing their school to others: "I think schools do it all so differently. So, what we're doing, I know other schools aren't doing, so children aren't getting the same thing across the board." (participant 4). This shows that teachers recognize the disparity across schools in how mental health and wellbeing is approached, above one participant mentions how their school are "lucky" and a further participant also uses the term: "I think I was very lucky to work in a school where we were all very conscientious about how we did things." (participant 6). The choice of the word 'lucky' gives the perception that other schools may not be as lucky to have robust mental health education or value the passion their individual schools have in supporting wellbeing.

In addition to school effort, there was the sub-theme of <u>individual effort</u>, this is where participants highlighted their personal input in mental health education: "I put a big priority on to teaching these things." (participant 5) and when talking about the main teachers in their school participant 6 said "And we were both, all three of us very experienced, very much on the ball with everything.". These data samples show how the teachers recognize the importance of their own effort into teaching about mental

health. Further participants also highlighted that they do their own training and research to enhance their knowledge of mental health education in order to have a better impact on the children: "So, a lot of it's your own CPT (common planning time) and training looking out there what to support children." (participant 2) and "Obviously, the training does help. And obviously it, it's so, it's so current, so there's things all the time like I'll do some reading on myself." (participant 3). These excerpts show that teachers understand there is need for more training and support, therefore they have to use their own passion in supporting children's mental health to further their comprehension of the topic. Evidence suggests that a teacher's passion is a key factor in education and can have perceived benefits such as improved wellbeing (Carbonneau et al., 2008; Ruiz-Alfonso & León, 2016) therefore, levels and drivers of passion may be important to consider. However, reliance should not be placed on an individual's dedication to mental health education, as teachers have varying passions, there should be policies in place to ensure consistency across classes and schools. The samples of data for both school effort and individual effort ground the analytic claims for this theme of mental health passion.

The emergence of this theme of passion and effort is integral in understanding elements that are missing in mental health education within England. With the participants drawing attention to the disparity of mental health education between schools and potentially classes, we have to question if the governmental guidance for English schools is insufficient in promoting consistency in mental health education across all schools. The Government made an advancement in mental health education by making it a statutory requirement to teach mental wellbeing in primary and secondary schools (Department for Education, 2017). However, unlike other mandatory subjects (e.g. Mathematics, English etc.) there is no specific national

curriculum to follow with detailed guidance for essential mental health education to be taught to children. The Government requires schools to have a policy in place with several wellbeing aims set "which allows schools flexibility in developing their planned programme, integrated within a broad and balanced curriculum" (Department for Education, 2019, p.10). Included on the Department for Education (2019) website there are plenty of resources available, including specific mental health resources that link to the PSHE Association and MindEd (an NHS organisation). As schools have flexibility over their mental health education, this can lead to inconsistency across schools, as highlighted by these participants, perhaps suggesting a need for a 'one approach fits all' guidance for schools.

6.3.3. Challenges of Mental Health Education

Throughout the responses it was evident there were multiple difficulties in implementing mental health support within primary schools. Whilst these emerging patterns could be themed as barriers, there was a distinct difference between difficulties that came from the teaching itself (challenges) and difficulties of being able to teach it at all (barriers). Therefore, when discussing the theme challenges, we are looking at the demanding situations that arise when teaching mental health education. There were a multitude of challenges described by the participants and these have been categorised into the sub-themes' parental effects, sensitivity, staffing, classroom impact, the curriculum, and additional challenges which encompass all other issues participants faced that did not fit into a specific sub-theme.

Firstly, looking at **parental effects**, it was noted by half the participants that parents can have an influence on the children's wellbeing. This is supported by evidence that suggests parental involvement can improve not just academic outcomes

but emotional functioning too (Wang & Sheikh-Khalil, 2014). With a further longitudinal study suggesting perceived parental support can be a marker for risk of poor mental health (Macalli et al., 2020), highlighting the importance of parental support in facilitating mental health education. Participant 2 noted three times across their interview how the communication between parents and children have decreased, leading to them missing conversations pertinent to supporting wellbeing: "A lot more parents are working, children aren't getting the time with parents. A lot more parents are split up so it's quite hard.", "Talking time between children and parents has decreased so much. Children aren't sat around the dinner table sharing things, having those conversations." and "I mean, you see children now where parents pick them up, they don't speak to their child. The child hands their bag over, the parent hands their phone over and they walk out of school gates. There's no communication.".

These examples show perceptions of poor parental support through reduced communication, which could mean the work being done to educate children on mental health in schools is not continued outside of the school walls. It was suggested by two participants that perhaps the parents did not have the mental health skills themselves for the continuation of mental health education to happen whilst at home too: "We teach the children so much, but their parents don't necessarily have those skills themselves. So, they're surrounded by... I work in a school and we've got quite a lot of vulnerable children, high people premium and things, so we have parents who can't manage their own emotions. So, all the work sometimes that we do in school then kind of gets left at the school door." (participant 4) and "I think parents, mental health has suffered and declined a lot in the last couple of decades. So, they're not able to support their children with resilience and perseverance and having a strong mental health."

(participant 2). These perceptions of parental involvement suggest teachers do not feel the children receive enough parental support in regard to mental health education.

An additional effect that was mentioned, regarding parents, was their negative opinions on mental health education and how that can then impact the child: "I do feel that, that the attitude of parents is reflecting on the children." (participant 6) and "Another challenge I think is sometimes there's a little bit of a worry of how parents are going to perceive what you're teaching the child, I think there are some parents that are very, very "yeah, you need to be teaching the children these things, it's very important" and there are other parents who you, you don't know what their situation is, but they will say "are you sure my child is ready to be talking about these sort of topics?"." (participant 5). Not only do these examples show that the negative opinions of mental health education could impact the children, but it also shows how it can become an obstacle for teachers to overcome when having to battle challenging parents over a subject that is required to be taught by the Government. However, this again, leads back to the discretion of what is taught by each school. If all schools had to follow the same mental health curriculum prescribed by the Government, parents would not be able to question teachers individually, reducing the challenges teachers must face.

Another challenge that emerged across the data was the <u>sensitivity</u> of the subject itself, this was a factor for participants to navigate as it could impact children differently: "It can be quite triggering for some children." (participant 3), "I think a big challenge is the sensitivity of the children. So, in year five before I've taught sessions on like, as you get older, feeling anxious, feeling like depression and all those different things, and I have to be very aware of, there are some children in the class who experience those emotions quite regularly. So, it's always I think, really important to

sort of know your audience and pre teach to some children and have pre discussions."

(participant 5) and "I have to be mindful of like self-harming and body dysmorphia,

because like I said, I have had children in my class with that." (participant 8).

These extracts signify the difficulties teachers face in educating children on such a sensitive topic, their priority is the wellbeing of the children and therefore, they feel they need to put extra effort into understanding each individual child to avoid triggering a poor mental health response. This suggests the idea that mental health education needs to be adaptable. This is highlighted in participant 7's response "I think as professionals, you're very aware, aren't you, of the boundaries you can't cross, and the things you can and can't say. So, I think, yeah, there are, there's just so many boundaries. There's so many challenges. You've just gotta be very aware of it and deal with the sensitivity of whatever comes up really." Participant 8 said "I think personally for me, I find it hard to teach due to the sensitivity of the topic.", showing the challenge is just not avoiding negative outcomes with children, but it is adding to the difficulty of teaching. Perhaps suggesting the need for more thorough training on mental health to allow teachers to feel more confident when approaching such sensitive matters or a more sensitive approach with what is required to be taught.

Another sub-theme that was identified within these challenges was <u>staffing</u>, which refers to the difficulties experienced by participants relating to staff. Firstly, it was noted that there are needs regarding staffing levels "I think sometimes a lack of staff and support for those children can definitely mean that that child is gonna struggle a lot more. I think there needs to be more support for those children that find it hard with their mental health and wellbeing." (participant 1), showing that understaffing is another challenge that can impact mental health support for children. Another staffing challenge highlighted was the challenge of poor communication

between staff that can influence the outcomes of mental health support: "I find as a team, we've talked about it, that actually the SENCO [special educational needs coordinator] takes a lot of that away from us. She knows a lot of the backgrounds for the children. So, you know, I've got a little... who's very highly sensitive I'll say, got a lot going on at the moment, but we didn't know half of it cause the SENCO knew, but it wasn't always communicated to us. So, we were kind of dealing with things and then was like "oh, god", you know oh, we should have known that so we could deal with this in a different way. So that's a bit of a challenge, I think in a bigger school the communication and the passing on that data hand over is really important."

(participant 7). This partially relates to the sensitivity sub-theme above; the teachers need clear communication about all students to allow for sensitivity to avoid possible negative outcomes.

Another staffing challenge that was mentioned was in relation to the training/skills the person delivering mental health education has, suggesting more training and experience is preferable: "Our team, we're quite experienced teachers and we are, we're very opinionated so we do just say that's not happening, we're doing this because this needs to happen. But for some like, early years teachers or early careers teachers, you know they, they haven't got the confidence to kind of fight the system to say "No, I need to do this and I'm going to do this for the right of my children"."

(participant 7) and "In my school, so when the teachers have their PPA (planning, preparation, and assessment) time and we have to leave work for our TAs to teach, and because Jigsaw is planned out, it's all done there for you. It's often jigsaw that the TAs teach. Now my TAs brilliant, she's an amazing teacher, but I do think sometimes if you've got a more skilled educator dealing with lessons that are quite sensitive, it's better for them to sometimes deliver some lessons." (participant 5).

These extracts suggest that if TAs are being utilized to teach prescribed mental health curriculum lessons straight from an external provider, there needs to be thorough training to ensure consistency in delivery in comparison to the qualified teacher. Additionally, if newly qualified staff lack confidence when it comes to mental health education, there needs to be support systems in place for those teachers.

However, it should be argued that teachers should not have to 'fight the system' to spend more time on mental health education for the betterment of their students, this should be an acceptable use of teaching time. Therefore, lacking confidence as a teacher should not be a barrier to mental health education, as policy should allow for consistent mental health education. These data examples show the several ways staffing can become a barrier in the implementation of mental health education.

The next sub-theme is <u>classroom impact</u>, this is where participants recognized the challenges of teaching about mental health to whole classes: "I think when you've got a class of 30 plus the maturity of that class is so varied, that some children take it really seriously and in the way they should be. And some see it as a bit of a joke and then the ones that really want to listen and learn and understand their own mental health sometimes don't feel they can be themselves because of the immaturity of a lot of the other children." (participant 2) and "The children are very comfortable in my classroom and will often just come in and say stuff. But I'm trying to teach them that absolutely share, and mental health is really important but choose your right people and your trusted adults to share with because it can become a really lovely lesson that then stresses out other children because they've learned something they maybe didn't need to be exposed to." (participant 4). These samples of data show that a whole class approach can be challenging and possibly lead to negative outcomes. The average class size in England is 26.6 (Office for National Statistics, 2023), this means that it is

possible when teaching sensitive topics, like mental health, immaturity and inappropriate information may surface exposing fellow classmates.

One participant also explains how the experiences differ from class to class, so it is not something that can be predicted and is not always an issue: "This year, my year, because that's all I can talk about really is my experiences, are better at being very open and sharing things, whereas my last year cohort was dreadful. You know they needed something a lot more and we had to adapt everything. And you know, there were several times throughout the year we just had to stop and deal with whatever was going on because they had a lot of difficulties." (participant 7). This demonstrates that whole class approaches to mental health education do not come without difficulties, therefore, further support and understanding is needed to reduce these issues. From the teacher interviews in Chapter 5, it is suggested that flexibility in lessons would help account for classroom differences. These data examples solidify the analytic claims that whole class teaching can be challenging for teachers leading to the sub-theme classroom impact.

A key sub-theme that emerged was the curriculum, which came from participants discussing issues with their PSHE/RSHE (relationships, sex education and health education) curriculums that impacts their teaching of mental health education. Participant 2 said "The main thing in the curriculum is your RSHE lessons that bring in some aspects of mental health, but it's very, very broad, and I find as a year six teacher, I need to narrow it down to personalise it for my own children" highlighting that the RSHE lessons they follow are not specific enough and need adapting to suit the participants cohort. Additionally, when referring to mental health education participant 2 said "It's too stand alone in RSHE. Again, it's about responding to needs within your class and your children. So, the curriculum, umm it, it touches on mental

the participant saying that mental health education is too standalone, it suggests that they feel mental health education is not connected throughout other subjects and it should be. Their final comments regarding the importance mental health education needs shows that the participant feels the curriculum they use is inadequate. A further participant notes which external provider they use and their thoughts on it: "Jigsaw is very good in the way it's laid out. But there are sometimes, the lessons are quite drawn out and the message that you're trying to get to the children is so specific and actually once you've had to do an hour's lesson based around that one thing, the children sort of lost the point a little bit." (participant 5). Whilst we cannot discredit this specific curriculum based on one participant, it does show that there is scope for enhancement regarding mental health curriculums.

A final sub-theme of <u>additional challenges</u> has been formed to include all other difficulties participants faced when teaching mental health education that did not fit into a themed category. Participant 2 discussed how external variables, completely out of their control, lead to impacts in the classroom: "Social media massively has impacted our children to the point that most of my issues in the classroom now are based around social media.", "Social media has an awful lot to play for poor mental health at the moment." and "I think it's difficult when some parents don't collaborate with us and tell us what's going on at home. And we're up against trying to teach a child with no understanding, really, that actually they've had no breakfast. And their gerbil has died, or they've got some issues with domestic violence at home. All of those things that impact on a child before they can come to us makes it really, really tricky.". Showing that some of the challenge's teachers face when delivering mental health education are unable to be controlled and therefore managed.

Participant 4 highlighted that the age of the children can have an impact, favouring younger children: "It definitely works better with younger children as they get older, they're less like into it." and "I think sometimes it is just that children don't understand to take it seriously. So, you do have to really teach them that, that's a barrier to overcome. Much easier for young years.". This is an unexpected finding, especially as previous concerns were with teaching certain mental health skills too young; however, this participant suggests it is easier to teach mental health education to younger children. This finding is crucial, if teaching them when younger is easier as they take it more seriously, then schools must ensure they start early with mental health education before students hit an age when they cease to take it seriously and could be less likely to experience the benefits.

Another challenge found is that mental health education is not always valued or prioritised: "I think it's seen as seen as a bit of a filler activity sometimes, mental health activities, it's not seen as equally important as RE [religious education] and equally important as PE [physical education] and equally important as science and all of those other curriculum subjects. But if children don't have a strong mental health, how are they supposed to learn and progress? They're the building blocks, aren't they? And we're missing all of those building blocks, it's straight in with academic subjects." (participant 2) and when talking about PSHE participant 6 said "You were supposed to weave this in, it was, it was difficult to monitor, and actually it was also easy to not do it at all.". These extracts demonstrate how mental health education is not always prioritized over other subjects and can also be missed out completely, which is a huge challenge for teachers to overcome when other subjects are valued more.

A final challenge noted by participant 2 with 25 years of classroom experience is the increased need for mental health education, they highlighted how there is more

demand for mental health support in children: "We are seeing more and more children come through that have mental health needs.", "The needs are increasing all the time so there isn't enough in the curriculum that that covers mental health." and "Children were much more robust even 15 years ago, and I think in such a short space of time children have lost the ability to be independent. They've lost the ability to persevere with things, they've lost coping strategies and skills in order to be resilient learners.".

The sub-themes within this umbrella theme of 'challenges of mental health education' call attention to the various challenges teachers face when implementing mental health education, as shown in the data extracts which support this theme.

6.3.4 External Barriers

Regularly mentioned throughout the interviews were barriers out of the teacher and schools' control, these were deemed as external barriers, something that was not a direct impact of the mental health education itself or the individual school organisation. These have been categorised into the sub-themes **Governmental**pressure, time pressure, insufficient training, budget, and school/class size.

Firstly, looking at the sub-theme <u>Governmental pressure</u>, it was evident in the responses that there were other curriculum subjects to prioritise as a requirement from the UK government: "Their curriculum is so jam packed that often things like RSHE get, although we have to timetable it, it gets pushed off the timetable." (participant 2), "The curriculum is so stretched. There's a lot to get through, especially being in year six. You've got SATS drummed into you, but actually there's 100% an argument there for what's more important." (participant 3) and "We are given time, but with everything that every curriculum aspect is expecting more and more of you and sometimes it doesn't get done as much as it should." (participant 5). These

examples recognize the prioritization of traditionally academic subjects which results in mental health education lessening.

The frustration at the lack of valuing mental health education and a personcentred care attitude towards children is clear in participant 7's response "I think PSHE as it's kind of known still, that kind of gets shifted because it's "Oh, it's, we're just having a chat". So, we'll just bin that and do whatever else is needed to be done, which, I just, we can't, we can't afford to do that. But I think that's coming from above as well, you know, the government, the pressure, like for all of us, on their SATS and meet these targets, do this, do that. I think it doesn't give you confidence to make the child at the centre of everything because you have to bow down to what they say.".

In addition to this, several participants explained how the demand for data (as the government requires evidence for what has been taught) can take over: "In my setting we have to record what all the, what the children do. I do sometimes feel like we're recording work for their mental health learning which actually doesn't need to be recorded, it's more discussion based. Um. So, I sometimes feel that we're making children do written work for the sake of it really." (participant 5) and "There's still so much else that needs to be done and I think coming higher up there's always the pressures of data. So, a lot of us often feel like we'd love to get in extra things, but we can't because it's extra SPaG [spelling, punctuation, and grammar] that needs to be taught. Suddenly we've got to do fluency for maths 3 times a week extra and I feel like because of that it's often the nicer activities, because I would call them that, they're more like, they're important in that way but also, they're lovely and enriching, they get dropped off because it's not a priority in some ways." (participant 4). These extracts of data exhibit the pressures teachers can face due to governmental policy and perceptions that mental health education is less valued and often missed. Based on

these comments, the barrier of governmental pressure influences the implementation of mental health education, which could explain the attrition and low adherence in the main study.

A further sub-theme that relates to Governmental pressure is **time pressure**. Some of the responses crossed between the sub-themes but if they specifically mentioned time they were included in this category. Multiple participants mentioned the pressures of time in their responses: "Teachers don't get the time to focus on mental health activities because it's such a crammed curriculum with the statutory subjects you have to fit in." (participant 2) and "There's not enough hours in the day and I put a big priority on to teaching these things. But as teachers we all have so much that we need to get done that it's normally for me, I would admit that PSHE in our jigsaw is one of those lessons that if we've got a very busy week, I'll say right, we'll skip it this week because we've got assessments, because we've got a trip and same with things like PE, but actually it's probably one of the most important lessons for the child's wellbeing, so that's definitely a challenge." (participant 5). One participant highlights the impact of time pressures on children's abilities to have important mental health discussions: "I don't think teachers have enough time. I think things are so regimented that they have to do certain subjects by a certain amount of time, and it doesn't always allow for discussions that children want to have. And sometimes those discussions, the most important part rather than the activities because it allows them to open up about different things and maybe experience's they've had at home." (participant 1). This finding is expected, it supports previous findings that suggest time to be a common barrier when implementing education interventions within schools (Brown et al., 2023; Shoesmith et al., 2021). This also supports the main study of this

doctoral research that found time pressures to have a substantial impact on intervention adherence.

As part of the interview participants were asked about any training they had received regarding mental health education. The responses led to the sub-theme of **insufficient training** due to all participants saying the training they had received, if any, was inadequate. The TA that was interviewed said "I in particular haven't actually done any training on mental health and wellbeing from my school." (participant 1), which was unexpected considering the amount of time TAs spend with students and the evidenced positive impact they have on children's mental health (Conboy, 2021).

In addition to this, qualified teachers mentioned they had not received any recent mental health training: "This year, I haven't actually had any formal training. We talk about it in staff meetings, especially when it's like mental health week coming up and stuff, we do things like that, but we don't, I've not actually had any proper training this year." (participant 4) and "I don't think we've had any specific mental health and wellbeing for children, oh no, I'm lying. We did, a couple of years ago." (participant 5). This is an important finding as evidence suggests when implementing mental health interventions within schools that health professional led lessons had better mental health outcomes for children in comparison to teachers (Stallard et al., 2014). Therefore, thorough training is necessary to increase the benefits children obtain through mental health education. However, from this study, it seems evident that regular quality training is not happening. This is having an impact on teachers, one participant was discussing how they rely on personal experience in order to be prepared for the delicacy of mental health education and said: "In terms of formal, formal training that they've given us, if that was all I'd had as a trainee, as a new teacher, I'm not sure I'd feel equipped." (participant 3). This evidence shows that

teachers recognize they have not been given suitable training, this is something that should be regimented across England for all staff encountering students as it can be a huge barrier in providing effective mental health support.

A factor that can affect the amount of training a teacher receives is **budget**. This sub-theme emerged due to participants discussing money as a barrier to being able to progress with certain aspects of mental health education. Firstly, in relation to the sub-theme of insufficient training participant 2 said "Again, budget constraints mean we, a lot of our training is done in house, not through external providers.", showing that financial support is required to be able to obtain higher quality training for teachers. In addition to this, it was recognized that more could be done for mental health support in schools if money was available: "I think obviously, if we had an endless bucket of money, we would actually be able to do a lot more. But obviously that's not the case. And the reality of like you know, we're scrounging for glue sticks, let alone, you know." (participant 3) and "But there is little support for schools out there as well. It's really hard to get ed-psych's in. We have 3 hours a year I think, before, before we have to pay an extortionate amount." (participant 2). These examples demonstrate how budget is a barrier for mental health education, this was an expected finding as previous school-based mental health intervention studies identified financial support as a barrier (Moore et al., 2022).

The final sub-theme is **school/class size**, this was an unforeseen theme but was integral to demonstrating the inconsistencies that can happen across schools. Within England there are some primary schools with mixed classes, where all key stage 2 students can fit into one class due to small numbers and there are also schools that have two classes per year group due to populations in catchment areas which is out of the schools control. One participant highlighted the positive impact a smaller

school/class size can have on children: "I could hand on heart say that that there were only that just a handful of children that that throughout the whole time in the part my, my last say, 10 years that were really a little bit more of a worry than others. But then because we were a small school, those as a, as staff in the older, teaching older children we've seen them come into school and the children all played together at play times. We were all out there at play times. So, it was very, very much a close knit, nurturing, caring society, and we were very lucky in that respect." (participant 6). This suggests that by having a smaller community around the children, it is easier to know them on a more personal level.

However, one participant bought up the experience of her children's small school in comparison to her large school: "I think because of where we are, and we've got these program's and we are very explicitly teaching it and dealing with things that come up. When I look at my children's school compared to where I am, they go to a very small village school up the road, you know they, they don't really have any issues, as you know, they, as you perceive them to be issues and they don't really have those conversations. They don't really have any particular, they do circle time which is very outdated, but they don't really talk about any of the things that are current now." (participant 7). This extract of data indicates that there are also disadvantages to smaller schools with this participant suggesting they are missing out on more current issues and are not up to date with mental health approaches.

A way for the Government to avoid discrepancy of mental health education across schools could be to employ a singular mental health curriculum across schools for consistency, participant 7 said "I think a consistent approach to it. So, everybody kind of understands it doesn't matter if you're in a, you know, in a middle, inner city school or a tiny little village square, everyone, every child's got the right to have that

same, that same curriculum delivered to them, haven't they? And I think if it's on paper and it's official, that would be a big step forward because then everybody has the same.". This response supports the notion of a singular mental health curriculum in schools to ensure equality in mental health education. The samples of data presented within each sub-theme support the analytic claims of the theme external barriers.

6.3.5 Importance of Mental Health Education

When analysing the data there were numerous examples of reasons why mental health education is so integral within primary schools. These have been categorised into the sub-themes: positive outcomes, the need and impact on staff.

Firstly, when looking at positive outcomes, there were multiple successes and benefits discussed from the implementation of mental health education: "I think it helps them to have a better understanding of what it is, and it allows them to be a bit more independent with trying to understand their emotions." (participant 1), "I think the children's understanding of mental health is much stronger." (participant 2), "They're able to say, like, really express their selves. So, if something isn't right, they'll often say things like, "oh, I'm very agitated" or "I'm feeling overwhelmed"." (participant 4) and "The awareness of their emotions has got better, so they, they're now very sort of in touch with their emotions and they can explain how they're feeling and why and so that's been really good." (participant 5).

As well as these explanations of how children have a better understanding of mental health, it was suggested they have also built suitable skills: "They have a variety of strategies to support their mental health inside and outside of school." (participant 8). These excerpts recognize individuals' positive outcomes from teaching mental health. Further participants noted the impact mental health education as a whole

school approach had on sociability with classmates: "As a whole the school has really taken on the ability to explain how you're feeling and also just being aware of others around you, that's really been powerful for our teaching. The children, especially in jigsaw lessons, are very sensitive towards others and some of the children are very openly honest and they say things that are quite confidential, but it's received really well by all the other children in the class, which is really nice." (participant 5) and "I think really importantly as well, the awareness and understanding of how others may be feeling. So even though a child may not have a mental health disorder, but if someone else in their class does, they kind of have that awareness of how to look after them or strategies to support them." (participant 8). These examples add to our comprehension of the perceived benefits that result from mental health education.

Secondly, within the importance of mental health education theme there is the sub-theme of the need. This sub-theme has surfaced to show why it is essential to educate children on mental health. It was recognized that the inability to learn can be a consequence of poor mental health: "It's hard to teach because children have to be ready to learn and a lot of the time, they're mental wellbeing prevents and prohibits them from making progress in the classroom." (participant 2) and "They might be hugely academic, but if they've got terrible mental health, how are they ever going to be able to reach, or focus, or study?" (participant 3). The responses here demonstrate the need for mental health education to support the wellbeing of students to strengthen their academic learning. It is well reported in literature that mental health is associated with academic performance, with an elementary school study showing a link between positive mental health and higher academic outcomes (O'Connor et al., 2019) and a longitudinal study finding poor mental health in childhood increased the risk of unsatisfactory academic outcomes (Agnafors et al., 2021).

Lastly, the impact on staff was a sub-theme that emerged showing there is a need to support children's wellbeing in the most optimal of ways as there can be effects on teachers too. Acknowledged within this sub-theme is the negative impact poor mental health education can have on the wellbeing of teachers: "I worry that it's going to be squashed out even further, when children need this more and more and more, and mental health difficulties that they're coming into school with, even at fourand five-year old's, is increasing all of the time." (participant 2) and "We have no time for it... and you feel really guilty." (participant 7). Worrying and feeling guilty that children are not gaining sufficient mental health support should not be a responsibility of the teacher, this impact on staff, along with other needs, indicates how essential it is to establish mental health education within the current English schooling systems. As mentioned within the theme 'external barriers' teachers have a lot of pressure to fit everything required in the curriculum into the time they have, with a heavy workload and feelings of guilt, it is not surprising that teacher retention rates in England are very low with the most recent 2023 study showing 88.7% of teachers who qualified one year ago are still teaching which decreases to 67.5% of teachers who were qualified five years ago still teaching (Office For Statistics Regulation, 2024). Within a separate study conducted in London (England), the most common reason cited for leaving the teaching profession was the workload (Perryman & Calvert, 2019). It is clear these impacts on staff can lead to negative outcomes, like teachers leaving the profession they have spent years training in. Therefore, it is important to ensure consistent support for staff and an exemplary mental health curriculum to improve staff wellbeing and retention rates.

Within this theme, the extracts of data show how mental health education can be beneficial to students by improving their understanding of feelings/emotions as

well as improving their sociability. It also recognizes the need for mental health education to support academic attainment and finally, when mental health education is not sufficient enough and teachers are experiencing external pressures, there can be a negative impact on staff. These findings show the importance of mental health education and are supported by the various data samples.

6.3.6 Further Requirements for Success

The final theme that emerged from the data was further requirements for success. For this theme there were no sub-themes that emerged from the analysis of the various suggestions of improvements. There are suggestions for improvements within some of the data examples in earlier themes, they will not be repeated within this section, but should be considered as forming part of this theme.

A pattern that did emerge as a further requirement for success was the need for more consistency in the teaching of mental health education: "It is making an impact, it's just we need to do it a bit more frequently because sometimes if we haven't done it for a while, they then forget and it's hard to manage it." (participant 4) and "I would definitely argue that there would, should be more time spent, like I said, they're not necessarily a mental health lesson, like that, that drip feeding, I think is what's really important." (participant 3). These extracts show that participants believe that increasing the frequency of mental health education and inserting it into subjects outside of the prescribed PSHE lessons by 'drip feeding' would be advantageous.

It was also noted that there is a requirement for earlier intervention: "We're not putting it in, early intervention, early on, enough, before we get to that point where they need something more." (participant 2), suggesting mental health education needs to be consistently taught from as early an age as possible. Another improvement

suggested was for all schools to adopt the same approach to reduce confusion in the real world: "So the children in my class and in our school are all doing it one way, but then if they're out into the world with other people who aren't doing it, they then wonder why and that can become very confusing for them." (participant 4). This finding is not too dissimilar to previous findings in earlier themes regarding a standardized singular mental health curriculum for all schools in England.

There were suggestions on better standards of training: "Definitely around training for staff, school staff, right down to your lunch and supervisors. I think sometimes they're really key staff. They have those children at the unstructured times. That hour is really important, but they don't get access to the same training that we necessarily do, and we don't get a lot either." (participant 2). This extract recommends the thorough training of all staff to ensure mental health support is not only from your main teacher but is consistent throughout all times of the school day. Finally, circling back again to the theme facilitators, parental support was noted as a beneficial element in mental health education and it has also been recognized as a need within schools: "I think it's not necessarily the teacher's job to teach the parents, but I do think a big part of children's mental health and education should be putting things out there or there being something available for parents." (participant 4). This participant suggests that involvement of parents in the education of their children on mental health would be valuable. These enhancements highlighted by the participants show other ways mental health education can be developed for more efficacious results, the theme 'further requirements for success' is grounded in the data extracts included.

6.4 Discussion

The main aim of this study was to gain a deeper understanding of teachers experiences with mental health education as well as barriers they faced in the implementation. The themes that emerged from this analysis present the various experiences the participants encountered, with both positive and negative factors encompassed. The findings of this study show that mental health education needs bettering, and this information is integral in guiding future research and developments of mental health curriculums. The barriers and challenges faced by participants show there is a difficulty in the feasibility of implementing mental health education, which reinforces the previous qualitative findings.

Reviewing the themes, it is clear there are multiple strategies that can be implemented to improve feasibility of intervention implementation, several of which are relevant to this research. Firstly, *facilitators* were identified as the opposite of barriers, they were methods that were perceived to be beneficial to mental health education. Within this theme the embedding facilitator is a beneficial method to adopt, it involves inserting mental health education outside of prescribed PSHE lessons. Within the main study the curriculum was only used within the one-hour weekly slot, therefore, embedding core principles into assemblies, other traditional lessons and activities can form a school ethos. Evidence suggests a supportive school environment is vital to the promotion of mental health in schools and building a sense of community (Wyn et al., 2000). With the whole school dedicated to promoting wellbeing, it is plausible mental health education will be taught more consistently.

Secondly, the theme *mental health passion* emerged suggesting the efforts of schools or individuals themselves influence wellbeing support. To utilise this in future intervention research, co-creation of intervention programs will give teachers/schools

ownership and may increase their passion for the intervention. Thirdly, within the challenges of mental health education theme, it was found that participants perceived there to be issues with the PSHE curriculums they used. It was suggested that some mental health topics were too broad and at times needed personalisation, which is similar to findings in Chapter 5 regarding the need for flexibility in curriculums.

Alongside co-creation to allow for personalisation, curriculums should be designed with flexibility in mind to make it more feasible for teachers to implement. In addition to this, the challenges of mental health education theme found teachers perceived younger ages as easier to teach mental health education. Notably, if it is easier, it will be more feasible, but importantly, it suggests that starting mental health education earlier could be more beneficial to teachers due to less immaturity. Furthermore, evidence suggests that starting wellbeing interventions earlier would have a positive impact on pro social behaviours and social, emotional and behaviour difficulties (Cefai & Camilleri, 2014).

Similar to findings in Chapter 5, governmental and time pressures were perceived to be barriers to the implementation of mental health education. These are external barriers out of teachers control, therefore difficult to account for in future research. However, improvements to governmental policy would ensure more support and less pressure on teachers to deliver mental health education, eliminating external barriers would significantly increase feasibility of implementation. Within the theme importance of mental health education, perceptions from teachers aligned with Chapter 5 findings which show the positive outcomes mental health interventions can have. The final theme, further requirements for success, suggests that teachers felt there could be better standards of training. Whilst findings in Chapter 5 do not indicate

a need for better training, it highlights the need for thorough training to make it easier to implement the interventions.

There were various positive experiences noted from the participants, especially when articulating facilitators of mental health education. However, a common argument that surfaced across most themes within this analysis was the need for a singular mental health curriculum that could be rolled out across all schools. This appeared to be a solution to many of the barriers and challenges faced by the teachers, although, this is not an easy solution. It would require a large amount of funding to start the development and would take a lengthy amount of time to complete, and choosing a psychological model to underpin the curriculum would be challenging as no one model triumphs the rest. But most arduous of all, lobbying the UK Government to prioritise mental health in the national curriculum is unattainable in the near future. Therefore, smaller advancements would need to be made over time in the hopes of a larger breakthrough.

There are several limitations of this study to consider. First, the participants included in the study identified as female; therefore, the male experiences of mental health education are not accounted for. However, it is representative of primary school teacher characteristics in England whereby only 14% of teachers are male (Office for Statistics Regulations, 2024). When recruiting for volunteers on social media no male teachers came forward to participate, future research should try to employ better tactics to ensure male participation for a more representative sample.

Additionally, all teachers were from schools within the Southwest of England, therefore it is difficult to generalize the findings to the rest of England, especially in bigger cities that are likely to experience more complicated challenges. However, there were a range of ages (22-63 years old) and experience (3-37 years) represented in the

sample, with the inclusion of various teaching roles (teachers, TA, deputy head teacher and assistant head teacher).

A limitation to consider is that the participants were all known to the researcher increasing the risk of sample bias. To negate this risk, the participants did not know about the details of this thesis and a semi-structured interview was conducted to ensure consistency in questions asked. Whilst this is typically seen as a limitation, perhaps the already established rapport with participants led to more open and honest responses in the interviews. Research has recognized the benefits of interviewing peers, suggesting the researcher can distinguish honesty of answers and elicit more intimate details due to enhanced rapport (Hockey, 1993). Another possible limitation is that the interviews were delayed due to the COVID-19 pandemic, because of this, it is probable that there could have been more extensive changes to education and mental health needs as an after effect of the COVID-19 pandemic. Therefore, comparisons with data and findings from earlier chapters should be made cautiously, due to the impact of COVID-19 on student wellbeing, e.g., increased levels of anxiety (Kwong et al., 2021). This supports the need for continued research into the experiences of teachers in England, especially when rates of children with a probable mental health disorder are increasing from 1 in 8 (Sadler et al., 2018) to 1 in 6 (Newlove-Delgado et al., 2021) in just 4 years.

A final limitation of this study is the lack of triangulation in the process of the thematic analysis, as highlighted by Braun and Clarke (2013) this can increase researcher bias. The coding and themes were categorised by one researcher alone, additional researchers could have coded the data and identified emerging themes that were different to the ones detected. Researcher bias should be accounted for within the reflexivity section to show how internal biases may influence the outcomes of the

analysis. Due to this being a doctoral thesis the analysis was completed solely; however, future research should ensure appropriate procedures are followed, such as triangulation, to reduce the risk of researcher bias.

6.5 Conclusion

The main focus of this doctoral work involved evaluating the effectiveness and feasibility of an ACT informed PSHE curriculum. However, due to poor adherence and attrition in the main study further investigations were required to understand the difficulties of implementing a universally delivered mental health intervention within schools. Therefore, this chapter highlights various experiences from a range of teachers, giving insight into challenges teachers face when implementing mental health education. The findings provided ways to improve intervention feasibility as well as ways to enhance mental health education from a teacher's perspective. Future recommendations and evaluations are discussed in the concluding chapter.

Chapter 7: Conclusion

7.1 Introduction

This works initial aim was to develop a curriculum style intervention based on ACT (Acceptance and Commitment Therapy), and then examine the effectiveness and feasibility of implementing this wellbeing curriculum in primary schools. Preliminary research into the mental health of children and young people suggested an increase of probable mental health disorders in the past 20+ years from 1 in 10 to 1 in 6 (Green et al., 2005; Newlove-Delgado et al., 2021). This highlighted the importance of supporting wellbeing in children, showing there is room for psychology to guide interventions within schools. Further research demonstrated the effectiveness of mental health interventions in schools, such as promoting alternative thinking strategies (PATHS), MindUp and FRIENDS, in supporting children's wellbeing by increasing pro-social behaviours and emotional competence as well as reducing depressive symptoms (Humphrey et al., 2016; Schonert-Reichl et al., 2015; Stallard et al., 2014). ACT is a form of psychotherapy whereby the therapeutic processes have been found to reduce anxiety and depression in children (Fang & Ding, 2020b) as well as improve psychological flexibility (Livheim et al., 2015; Swain et al., 2015). Whilst there is evidence regarding the effectiveness of wellbeing interventions within schools, at the time of this research, there was insufficient evidence regarding the effectiveness of ACT as a whole school approach. That is, wellbeing curriculums that have been empirically evaluated do not use ACT informed materials for their interventions, thus making this approach novel. Additionally, there are aspects of the methodology that are novel such as the use of the psychological flexibility measure with the young age sample included. Finally, it can be argued that due to the constantly changing economy in England, with different pressures on children as well as evolving educational policies, continuous research is required to remain informed of educational needs.

Therefore, the studies carried out in this thesis add to the research gap, update the evidence base and inform practice.

7.2 Overall Summary of Findings

Within this thesis there are 6 studies. Study 1 developed and then piloted the lesson plans and measures chosen for the main study to refine the materials for the main study, Study 2 evaluated the training of the teachers. Both studies included feedback opportunities to further enhance the lesson plans created. Study 3 was the main study evaluating the effectiveness of the intervention. This study was conducted over the course of the school year with teachers delivering the DNA-V curriculum to year 5 students. Studies 4 and 5 consisted of individual student and teacher interviews post-intervention to understand the acceptability and feasibility of the curriculum. Finally, Study 6 examined the current mental health education experiences of teaching staff in primary schools in England. Several of the main findings are discussed below regarding the acceptability, effectiveness, and feasibility of the intervention.

One objective was to discern if the curriculum, enhanced by the outcomes of Studies 1 and 2, would be acceptable to the participants, this was assessed through diary analysis and post-intervention interviews with students and teachers in Studies 3, 4 and 5. Based on findings it can be suggested that the DNA-V model was understood by participants as there were examples of correct uses of the terminology used in the DNA-V model, especially the discoverer and advisor skills. These findings demonstrated evidence of two conclusions: 1) the developed DNA-V curriculum was acceptable to

the students and therefore a viable ACT model to be used with young children, and 2) the DNA-V approach can be used as a whole class curriculum.

In relation to the effectiveness of the DNA-V curriculum on wellbeing and psychological flexibility as part of Study 3, there were two important significant findings. Firstly, teacher observed measures of pro-social behaviours increased pre- to post- intervention, suggesting the DNA-V curriculum improved students' pro-social behaviours. Because there was no control group for comparison, the changes may have been developmental rather than due to the curriculum; however, it is still positive to note these shifts as one of the aims of the curriculum was to support wellbeing, and existing evidence shows a positive correlation between pro-social behaviours and wellbeing (Kakulte & Shaikh, 2023). Whilst cause and effect cannot be determined, it can be assumed that a person involved with pro-social behaviours is likely to also have positive wellbeing affects, and vice versa. Secondly, through exploratory analysis the participants were separated into a sub-group of below average wellbeing, their psychological inflexibility and wellbeing scores were then analysed. Results from the analysis across three time points showed a decrease in psychological inflexibility and an increase in wellbeing, both with large effect sizes (h = 0.55 and h = 0.66, respectively). This suggests that the DNA-V curriculum was effective in improving psychological flexibility and supporting wellbeing, as students that had lower scores of wellbeing pre-intervention saw improvements across the course of the intervention. The sample size for this analysis was small (N = 5), therefore a further intent-to-treat analysis was conducted which increased the sample size (N = 14). Whilst this analysis did not find significant differences in psychological inflexibility scores it did find an increase in wellbeing scores with a large effect size (Cohen's d = -0.92), continuing to support the notion that the DNA-V curriculum can support the

wellbeing of students that perhaps need it most, showing it to be effective. This does show how evaluating preventative interventions can be challenging, that is, if a child is fine at the time of the intervention but uses the skills learnt from the intervention later in life when needed, that is difficult to measure. It is almost impossible to measure the trajectory of an individual's life longitudinally, in comparison to a control individual going through the same life challenges. Therefore, identifying the sub-group of lower wellbeing is beneficial to the understanding of the preventative effects.

As part of Study 3, the fidelity of the intervention was assessed through totalling the diary completions. Results indicated fidelity was high at the start of the intervention with 86.89% coverage of lessons in term 1, this decreased to 6.67% in term 5, with term 6 lessons not covered at all. This decline in adherence to the lesson plans over time suggests there were challenges with delivering the lessons. This was supported through study 5, where teachers were interviewed post-intervention about their curriculum experiences. Findings highlighted four themes, of these, lesson plan improvements and time pressures relate to feasibility. Firstly, reviewing lesson plan improvements, a need for flexibility in lesson plans was identified. Whilst guidance and structure were listed as important, tailoring lessons to class situations led to a decrease in adherence. Evidence has found, in generic teaching, lesson plans are not flexible enough to account for the needs of all students, influencing the quality of lesson delivery (Lika, 2017). In an evaluation of sustainable implementation of a whole school resilience program, teachers attributed flexibility of the programs as one of the contributors to their long-term implementation (Noble & McGrath, 2018). Suggesting that improving flexibility and having extra lesson plans, to account for different circumstances, could improve the feasibility of the lessons and implementation of the lessons.

The most novel finding of this research was the issue of feasibility in the main study, which was further supported by study 6 findings. Additional interviews of teachers independent of the main study found six key themes, of these external barriers and challenges of mental health education are key to understanding feasibility issues. Firstly, summarising external barriers, these compare to commonly found barriers within existing studies such as time constraints, financial support, curriculum demands and external support (Moore et al., 2022; Shoesmith et al., 2021). These are listed as external barriers to the implementation of mental health education due to the lack of control schools/teachers have on them. Therefore, highlighting the necessity for policy amendments to support school systems adequately, which in turn will improve wellbeing support. Secondly, in the challenges of mental health education theme, teachers outlined problems with their current PSHE curriculums suggesting the need for adaptability and flexibility in what they teach to actively respond to children's needs. Therefore, oftentimes curriculums are not followed to allow teachers freedom to cover what they believe to be suitable for their class at that time. Whilst this affects the adherence to mental health education, thus the feasibility, teachers are continuing to support wellbeing in individually developed ways.

In addition to the barriers teachers perceived, they also discussed facilitators of mental health education which are beneficial to future recommendations in both research and policy. Crucial facilitators to detail are designated time, embedding and external providers. Within these sub-themes, teachers highlighted how designated mental health education time allowed them to be consistent, embedding the curriculum outside of prescribed lessons ensured that mental health education continued even if specific lessons could not, and finally external providers ensured schools had professional support and access to pre-existing wellbeing curriculums.

Previous research outlined barriers such as time constraints, inadequate funding, insufficient external support, staff capacity and poor understanding of the intervention aims (Brown et al., 2023; Moore et al., 2022; Shoesmith et al., 2021). The findings of this research provide current understandings of teachers' mental health education experiences as well as give deeper insight into barriers and facilitators aside from those previously highlighted.

7.3 Limitations of Methods and Recommendations for Future Research

Below is an itemised summary of the methodological limitations of this work and suggestions for future work in this area.

7.3.1 Control Group

A major limitation of Study 3 was the lack of control group for comparison. The lack of control group for the main study makes it difficult to determine whether results from the study are as a result of the intervention or other variables, such as time as the participants are going through maturation which could account for behavioural changes. The feasibility of a control group was considered; however, due to low numbers of schools, it was not possible to split the schools into two groups as 1) the participant numbers would be too small to test the hypotheses and 2) schools were interested in taking part to have access to the intervention, they did not want to be in a control group. To improve this, widening the invitation to schools outside of the Southwest would have led to a higher number of volunteers to implement a randomised controlled trial and making use of incentives (e.g., free training and access to intervention post-intervention) may encourage schools to partake in control groups.

However, as this was a single researcher project, increasing the distance of schools would have been improbable in order to complete in person training and data collection. Therefore, it is deemed beyond the scope of the capabilities of this self-funded individual research project, but the findings have set the foundations and methodological approach for more complex research in this area. Thus, future research should widen its volunteer search to enable the use of control groups.

7.3.2 Outcome Measures

This section critically discusses the measures used throughout the studies. Firstly, important to discuss is the risk of bias due to both principal measures (Sterling Children's Wellbeing Scale, SCWBS; Avoidance Fusion Questionnaire for Youth, AFQ-Y) being self-report measures with children. Self-report measures can introduce social desirability bias whereby participants respond in ways they deem to be acceptable rather than how they truly feel. Specifically, in wellbeing self-report measures it has been found that results are inflated as individuals tend to increase their rates of satisfaction and happiness (Caputo, 2017). This would account for the students' above average scores of wellbeing in both Study 1 and Study 3; an inflation of scores can lead to a restriction in the range of change that can be recorded. Future research could employ the Children's Social Desirability scale (CDS-S; Crandall et al., 1965) to reliably assess levels of social desirability that may influence self-report measures. In addition to children's social desirability, the teachers completed observational measures of their students' behaviours using the Multidimensional Peer Nomination Inventory for Teachers (MPNI) which was susceptible to social desirability. The teachers understood the premise of the studies aims to support wellbeing, therefore, to demonstrate their adherence to the intervention and want for improvements they could have responded

in a biased way. Similar to above, a measure of social desirability could be introduced to take bias into consideration. Additionally, a parental measure would be beneficial to have multiple subjective measures to account for social desirability effects. There can be parental bias too; however, including this additional measure is good for triangulation and giving a richer picture of the data.

The SCWBS, as a principal measure, was the only measure used for specific wellbeing outcomes. Whilst the aim of the ACT underpinned intervention was not to reduce symptomology, perhaps a wider range of outcome measures could have been used to evaluate the full extent of effects and to make comparisons. Other school-based intervention studies typically measure a wider range of outcomes such as depression, anxiety, emotional competence, and social skills (Corrieri et al., 2014; Humphrey et al., 2016; Pophillat et al., 2016; Rooney et al., 2013; Schonert-Reichl et al., 2012; Werner-Seidler et al., 2017). Future research could utilise other child appropriate measures of wellbeing related outcomes, this would 1) show the breadth of the intervention effectiveness and 2) allow for closer comparisons to other intervention studies.

The second principal measure, AFQ-Y, was used to measure psychological flexibility due to ACT aiming to increase this trait. There are several psychological flexibility measures suitable for use with adults and adolescents; however, the chosen measure was the closest measure that exists for the age group used in this research. The AFQ-Y has been used with 9-10-year-olds; however, most research utilising the AFQ-Y conduct research with participants aged 11+ years (Valdivia-Salas et al., 2017; Venta et al.,2012). Another limitation of this measure is that all items are negatively worded in order to gain a psychological inflexibility score, perhaps having reverse coded items or more positively worded items would be beneficial for children. With

the advancement of ACT in psychology, future research should focus on developing young children friendly ACT measures. In addition to psychological flexibility, as ACT encourages people to live in line with their values for a purposeful life (Hayes et al., 2006), perhaps quality of life and/or flourishing measures could be implemented. This would add an additional measure for the core processes of ACT to gain a more thorough understanding of the effectiveness of the ACT elements in the curriculum.

Finally, the sociometric measures of pro-social behaviours and friendship networks could be revised as the measures caused difficulty in the earlier stages of research due to schools concerns over peer nomination measures. It was beneficial to have peer nominated observational measures, but due to schools opting out of the measure there were reduced participant numbers for this measure. This is where co-creation could be utilised further, it would give schools the opportunity to voice their opinions, give suggestions for amendments and be more invested in the measures collaboratively chosen for the study.

7.3.3 Adherence Measures

To measure the class adherence to the lesson plans there were two processes in place, firstly, clear communication allowed teachers to notify researchers of lessons that were not completed. Secondly, the students' diary entries were used to measure fidelity to the lessons. Teachers noted the time constraints that resulted in diaries not being completed every lesson, therefore the diary measure was not a reliable adherence measure. Future research should work closely with teachers to understand approaches to how the curriculum could be used effectively with good adherence with more reliable measures of adherence to record how much of the curriculum was delivered, including how much time was spent on each lesson. This leads back to the

idea of co-creation, whilst this work followed good practice to an extent and included teachers during the developing and piloting stages, future research could take co-creation further to increase the adherence to materials. Additionally, this process of adherence measuring can only create numerical data regarding fidelity. It would be beneficial to examine whether the teachers delivered the model consistently with what researchers expected, to understand if non-qualified individuals can deliver the model suitably. Therefore, regular check-ins should be considered in future research to observe teacher delivery.

7.3.4 Interviews

Implementing interviews post-intervention was beneficial to add depth to the researchers understanding of the intervention, highlighting the acceptability of the DNA-V curriculum with the sample age, showing it as a plausible model to underpin wellbeing interventions in future research. Additionally, the interviews gave a clear understanding of the feasibility of a universal school ACT based curriculum, suggesting multiple barriers to the implementation, leading to future recommendations to improve intervention adherence. However, there were some limitations to both the student and teacher interviews.

Firstly, the interviews with the students lacked depth of responses. Most responses to questions were short even when prompted, this is likely due to researcher inexperience. However, it is important to note the students were 9-10-year-olds and were having a conversation with a researcher they had only met twice previously, which could have impacted the level of response. As discussed in Chapter 5, my minimal personal experience of interviewing children could have led to the reduction in rich responses. Evidence indicates the importance of the researcher's

ability to recognise the child's pace and when to step in to help prompt (Greenspan & Greenspan, 2003). Therefore, it is recommended that experienced researchers conduct interviews with children to improve the richness of responses for a more insightful analysis.

Secondly, due to low retention rates of volunteering schools only two teachers took part in the post-intervention interviews. This low number made analysis of data challenging as patterns were less emergent across just two datasets which affects the sufficiency of themes (Fugard & Potts, 2015). Retrospectively, it would have been beneficial to interview all teachers involved, especially those that withdrew from the study to get a better understanding of why. In addition to this, due to the end of the school year being too busy for schools to complete the final term of lessons, it is likely curriculum experiences were not as recent for when interviews were conducted. Therefore, future research could implement interviews during the middle of the intervention, which might result in more teacher responses before withdrawal from the study.

Finally, the additional interviews completed as a follow up to the main study consisted of a biased sample. All bar two of the participants were known in some capacity to the researcher increasing the risk of sample bias. To account for this, details of the main research study were omitted until the interviews concluded and informal discussions were had. Furthermore, interviews were semi-structured to ensure all participants were asked the same questions for consistency and reliability. Counter actions were taken to reduce bias surfacing, nevertheless, there is evidence to imply interviewing peers can help establish rapport and obtain more intimate details (Hockey, 1993). Though there are benefits, future research should focus on reducing

bias and therefore try to avoid conducting interviews with peers regardless of perceived benefits.

7.4 Implications of Findings

The findings of this research have several implications to consider in relation to

1) the use of ACT as a universal school-based intervention and 2) the feasibility of implementing mental health interventions within schools.

7.4.1 ACT as a Universal School-Based Approach

Studies 3 and 4 suggest that DNA-V (an adapted model of ACT for youth) was acceptable for use with 9-10-year-olds in a school setting. This was reflected in both diary entries and student responses in interviews, whereby they understood the key DNA-V skills and were able to coherently discuss them. Whilst the evidence base for ACT supporting wellbeing outcomes is continuously growing, there is still minimal evidence for its use with children in a school setting. Therefore, this research demonstrates the theoretical implication that ACT is an acceptable model when used in the form of DNA-V to be utilised within schools.

Initial quantitative findings did not show improvements in psychological flexibility or wellbeing, which could imply that the DNA-V model derived from ACT is not suitable for this style of implementation. Although, crucial to note, there is evidence of school-based interventions having adverse effects on student wellbeing outcomes (Garmy et al., 2015; Lindholm & Nelson, 2015), as the DNA-V intervention has not yielded negative outcomes it should continue to be researched as a model for use with children. Especially when splitting the data to create a sub-group of below

average wellbeing students showed their psychological flexibility and wellbeing increased. Demonstrating that the DNA-V curriculum can have an impact on students who potentially need wellbeing support most. However, it could be argued these results suggest DNA-V should be used as a targeted intervention instead of a universal approach. Implying that DNA-V may be more successful if students that need wellbeing support are targeted specifically. Continued research is required into the application of ACT/DNA-V within schools to carry out more rigorous procedures to test its effects (e.g. randomised controlled trial) and the best implementation method (universal or targeted).

An important theoretical implication to consider of the DNA-V model, based on ACT, is whether the core principles of ACT were established enough within the model and subsequently the developed curriculum. The main aim of ACT is to improve psychological flexibility to support psychological wellbeing and there is empirical evidence that suggests ACT can improve psychological flexibility (Livheim et al., 2015; Samuel & Williams 2024; Swain et al., 2015). Within this research, the use of DNA-V did not increase psychological flexibility measures across all participants, therefore, it questions whether DNA-V fulfils all the core principles within ACT. As the DNA-V model is designed for children, it is plausible that the potency of the ACT principles has been lessened which reduces its impact on psychological flexibility. This is crucial to consider when future research on DNA-V is conducted.

7.4.2 The Feasibility of Implementing Mental Health Interventions in Schools

The most novel finding to this research is the understanding of school/teachers' feasibility of implementing mental health interventions. That is, there are multiple barriers schools and teachers face that impede their ability to deliver

mental health education. This is first evidenced in Study 3, where attrition rates were high, and fidelity measures low, leading researchers to question feasibility. It was further supported in Studies 5 and 6, where teachers responses in interviews identified the multiple barriers they experience in this research explicitly as well as teaching in general. Teachers highlighted the importance of mental health education in supporting students; however, time constraints, governmental policy and other themes outlined in Studies 5 and 6 interrupt that support. This has led to multiple suggestions of improvements that can reduce the impact of these barriers and help facilitate mental health education, several of which are outlined below.

The use of flexible interventions would be beneficial to allow teachers to tailor the lessons to the needs of their classroom. When sessions are too prescribed, they can be missed to allow for other relevant topics to be covered. Therefore, a flexible intervention that requires minimal planning for teachers would be desirable. Cocreation is a process that is highly favourable, this involves collaborating with teaching staff and students for the development of the intervention and evaluation methods (Leask et al., 2019). By including participants in the processes of creation and development it may enhance their passion for the intervention and give them a sense of ownership, therefore, increasing adherence. This would involve including all stakeholders (school admin, teachers, teaching assistants and students) from the start of the process for a fully collaborative approach, this work only involved students and staff once the prototype curriculum was complete and methodological plans in place. By giving schools the opportunity to give initial suggestions then amend mental health curriculums, it should improve feasibility as they would customise, alongside psychologists, the intervention curriculum to suit their requirements, e.g. flexibility.

Lastly, pertinent to the feasibility of mental health education is governmental policy. It is clearly evidenced across the perspectives of teachers in Studies 5 and 6 that there is pressure upon teachers that reduces their capacity to deliver mental health education as they prefer. Within England it is a statutory requirement to teach mental wellbeing in primary schools (Department for Education, 2017); however, schools make their own decisions on how to deliver mental health education. There is no specific policy in place to guide schools in the best ways to support wellbeing in students, there is just various guidance from different external sources. Therefore, more rigorous rules should be in place regarding mental health education to ensure consistency across all schools. In addition to the need for wellbeing guidance, governmental changes are needed to reduce the academic load on teachers to allow for wellbeing support. It is evidenced throughout Studies 5 and 6 that teachers have other subjects to prioritise and evidence to collate which means mental health education gets missed. This consequentially leads to students missing vital wellbeing support for subjects that are pushed as more important. It sets a precedence to young children that mental health should not be prioritised; therefore, governmental policy needs to be amended to make mental health education mandatory for a specific amount of time. For example, one hour a week could be allotted as safe time for wellbeing support. But there also needs to be a release of pressure on teachers to reduce the risk of mental health education being neglected for other subjects.

7.5 Considerations and Future Recommendations

The aim of this research was to evaluate the effectiveness of a universal ACT curriculum in primary schools, whilst the findings provide valuable insights into ACT's

applicability to this context, there are considerations and future recommendations that need to be discussed.

Firstly, it is important to address the potential cultural differences that could impact the use/effectiveness of the curriculum if implemented in culturally diverse classrooms in England. Often interventions are culturally adapted to account for differences; however, it has been noted that cultural adaptation should not be required if ACT is practiced both functionally and contextually (Masuda et al., 2023). In terms of DNA-V, these specific skills taught are done so in a functional way and can be applied to various contexts to suit each culture. For example, when looking at values this can be done to reflect both individual needs and cultural expectations. In addition to this, the universal approach could be culturally beneficial. It is well documented that in hospitals Black, Asian and Minority Ethnic (BAME) individuals with mental health difficulties are disproportionately represented (Jacobs & Pentaris, 2021). This is often due to the stigma attached to mental health which effects BAME individuals from engaging in help seeking behaviours (Eylem et al., 2020). Therefore, the DNA-V curriculum allows skills to be taught universally, without a need for individuals to seek help, allowing students across all cultures to have access to wellbeing support. It removes the stigmatised process of needing and asking for psychological assistance, particularly for young children who may not feel able to communicate this with their parents due to cultural beliefs around mental health. Therein giving students a stepping stone into understanding their mental health and proactively building skills to support it.

However, when looking at the ability to use this curriculum outside of England, there are some challenges. Due to the curriculum being designed specifically to suit PSHE in primary schools in England, the curriculum, as it is, cannot be directly

transferred for use in other countries. There would need to be adaptations to suit each individual nations mental health educational policies. However, the use of the DNA-V model to underpin a universal curriculum could be utilised in other countries. The model itself draws on key ACT principles to teach distinct skills to children, therefore, its use within other countries is plausible. The theoretical basis of ACT allows for flexibility in its application, making it culturally adaptable. To support this, there is empirical evidence that suggests ACT is successful in improving both physical and mental health symptoms across a variety of countries such as Iran, China, Sweden, Australia and multiple countries within sub-Saharan Africa (Akbari et al., 2022; Fang & Ding, 2020a; Geda et al., 2021; Livheim et al., 2015). Therefore, in terms of this curriculum (specifically using DNA-V) it would require restructuring to suit each countries educational framework and piloting to ensure the concepts are understood like they are in England.

Addressing some future recommendations, there should be an increase in research to understand the most feasible ways to support student wellbeing in schools. Specifically, when looking at ACT, there could be more rigorous applications of the DNA-V model into a universal curriculum with a larger range of process focussed outcome measures (e.g. psychological flexibility, valued action, quality of life). This would help to highlight the true effectiveness of the DNA-V model. Additionally, cross cultural evaluations would be pertinent to ensure cultural adaptability of the model to be able to generalise findings and see its wider application.

In addition to future research recommendations, it is useful to discuss governmental and school policy recommendations. In an ideal world where money was not a constraint on mental health services, children would have more access to interventions, more teachers would be available to support students in need and more

training would be given to support teachers. However, in the current British climate improvements to mental health education need to be meticulously planned to ensure feasibility and effectiveness. Due to the wealth of research showing an increase in mental health issues in children (Newlove-Delgado et al., 2021; Newlove-Delgado et al., 2022; Sadler et al., 2018) there must be a governmental shift. If governmental policy could be informed, it should ensure mental health education is deemed as important as Math and English core subjects. That being, the national curriculum would reflect this as well as teacher training. In addition to the involvement of teachers, the importance of wellbeing support and mental health education needs to be filtered into parenting, school policy should ensure regular parental involvement reinforced by parent assemblies and family wellbeing homework. If money was not a factor, a higher presence of educational psychologists and trained professionals to assist schools would be monumental in supporting student wellbeing. They would be able to provide 1:1 support for students as well as lead universal interventions to reduce the pressures teachers already face with the national curriculum.

Finally, the DNA-V curriculum was created with a vision for whole school application. It is recommended that to reinforce mental health education that a school ethos must exist (Hornby & Atkinson, 2003), this allows students to continue through each year of school building upon the skills they slowly develop. DNA-V has the ability to do this, the terminology is easy to grasp, the skills are applicable to a range of situations and teachers find the model acceptable. If the DNA-V curriculum is to advance, it would be best developed into a whole school progressive curriculum with further evaluations to analyse the impact of a school DNA-V ethos.

7.6 Final Reflections

This has been a rewarding experience to create and develop an original wellbeing curriculum that has been implemented within multiple primary schools. In Study 4, post-intervention, students expressed the ways DNA-V supported them which could potentially have a long-lasting impact on those students. The schools still have access to those research outputs (31 lesson plans and all associated resources), which were made available for use by the schools for future cohorts. They now exist as a usable intervention curriculum. I am proud of this curriculum that has been developed and that despite some schools withdrawing, others chose to continue delivering the curriculum I created. The process of creating and developing an intervention from the ground up has provided me with numerous skills. I can adapt materials to suit target ages, I can generate creative and fun activities underpinned by psychological theory and I can produce thorough guidance for other individuals to deliver what has been developed.

Through the piloting and training stages my confidence in delivering both lesson plans and training material improved my public speaking skills greatly. This benefitted my presentation of research at the ACBS UK and Ireland conference in Liverpool, where I presented qualitative findings to show the acceptability of DNA-V with 9-10-year-old children. This felt like a tremendous achievement as well as an honour, to present in front of respected professionals in the area of psychology I have grown so passionate towards. In addition to this, my understanding of ACT and DNA-V have benefitted my associate lecturer and academic personal tutor roles at UWE (University of the West of England). I have run seminars introducing students to ACT and helped them to carry out values and mindfulness activities. When personal tutees have confided in me about challenges they have been facing during their degree, I

have been able to advise suitable ACT activities and teach skills to help them through these tough times. These learned skills have been beneficial to students and the development of my career, which I am equally proud of.

This thesis tells a story, this research takes a journey from the novel idea of developing an original ACT based curriculum for primary schools to successfully implementing a year-long wellbeing curriculum. From the studies I have conducted it is clear ACT is an acceptable approach to be understood by young children in a school setting. Regarding its effectiveness, for students with poor wellbeing, the curriculum has the potential to improve wellbeing and psychological flexibility. For students in general, data shows the curriculum is likely to improve pro-social behaviours such as helping behaviours. In relation to its feasibility, there are barriers that impact teachers' ability to implement mental health education that need to be addressed. Future research should first focus on improving the feasibility of the curriculum to ensure good adherence before continuing with thorough evaluation to see the true extent of the curriculum's effects.

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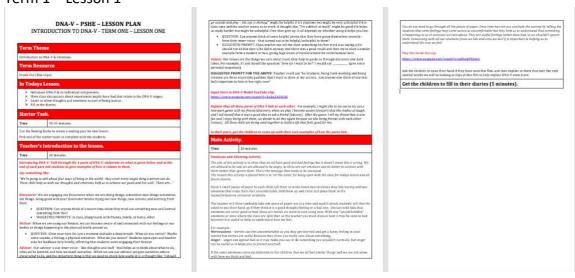
Appendices

Appendix A. Key words used in the search engines for Literature Review.

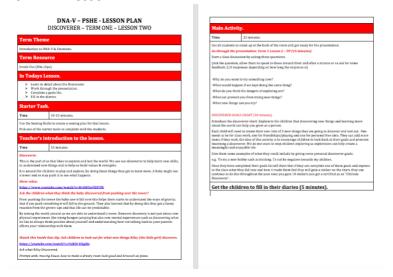
"school aged children" or "school children" or "young children" or "primary school children" or "schools" or "4-11 years old" AND "cognitive behavioural therapy" or "psycho-social intervention" or "psychological intervention" or "acceptance and commitment therapy" or "mindfulness" or interpersonal psychology" or "resilience" or "cognitive therapy" or "therap*" or "psychological techniques" AND "in school" or "at school" or "school program" AND "psychological wellbeing" or "wellbeing" or "wellbeing" or "depression" or "anxiety" of "stress" or "child welfare" AND "randomised control trial" or random controlled trial" or "RCT" or "control".

Appendix B. Lesson plans for Chapter 2 and main study.

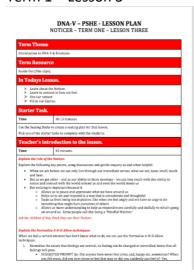
Term 1 - Lesson 1

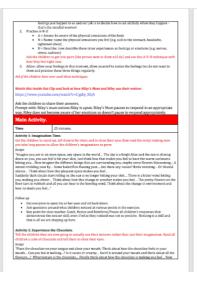


Term 1 – Lesson 2



Term 1 - Lesson 3

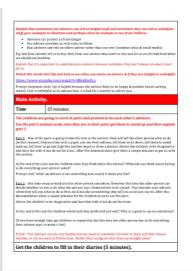






Term 1 – Lesson 4





Term 1 – Lesson 5



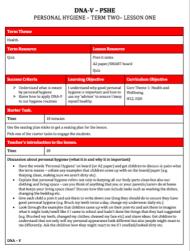


Term 1 - Lesson 6





Term 2 - Lesson 1



- people talk to me etc.) Ask children if they have any of their own comments from their advisor regarding personal hypirms (versind children that it could be good or had but it doesn't make them good or had,).

 Get the children to write down helpful things that your advisor could say to improve their personal hypirms and ask children to put their advisor skills historaction this week.
- Get the children to fill in their diaries (5 minutes).

Term 2 – Lesson 2



- down an among froch as they can think of for each heading them share their dates as a class and collate are not bound/paper.

 Box Years and the second paper and discuss what types of food we should be exteng the most of and what we should be exteng the least of.

 Box Years of the second paper of the second paper and the second paper of the
- 8. Which has one ride is, against an invest fixed:

 1.1 Near 3 beech high is calcium.

 1.2 Which has one ride is language or Merganity spec.

 1.2 Near 3 beech high is calcium.

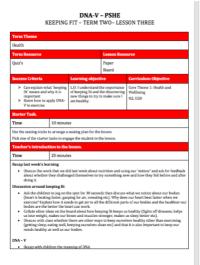
 2.1 Near 3 beech high is calcium.

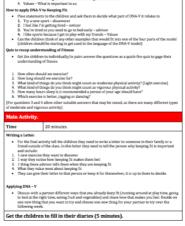
 2.2 Confect in the shaded wash and announcement (you can award them with your schools revourd oysters e.g. howe prests, griden time, etc.).

 2. The shade of the confect is the shaded with the confect is the confect of the confect is the confect of the confect

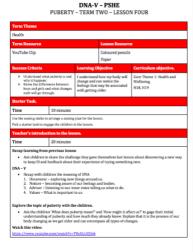
Get the children to fill in their diaries (5 minutes).

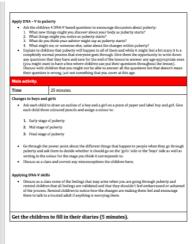
Term 2 - Lesson 3





Term 2 - Lesson 4





Term 2 – Lesson 5

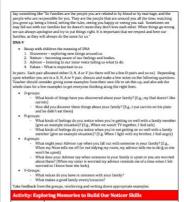


Explains to children that smaking and direkting low's likegal, but it is something that could cause us better which is why there is an age restriction to both activities.

Bell and the state of the

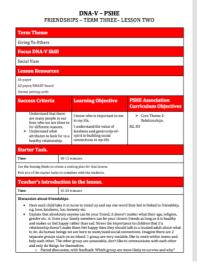
Term 3 - Lesson 1

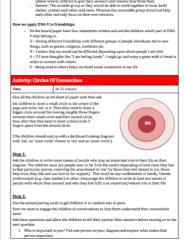




When we are working on Noticer skills, we can do an exercise called A-N-D (like DNA backwards, if it bulys to resemble 13). When we do that called a not receive the second of the secon

Term 3 – Lesson 2





2. Whe on your list can you seek help from it times of need and what is it about them that naises them is helpful.

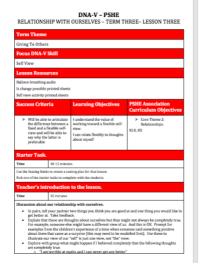
3. Was there was body you. Inch out of the diagram, if so why?

4. Choose one previous on this diagram, you woll you were closer to. What one small time could you do wolley to have the power you would not be closer to the could you do wolley to have the power you were damed them and went to be closer to them?

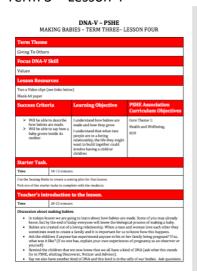
That reflected from the whole group at the end, picking out a cought of example-responses for each question.

Get the children to fill in their diarries (5 minutes).

Term 3 - Lesson 3



Term 3 - Lesson 4



	to elicit current understand of what this is and provide clarity accordingly (Eg. DNA is the genetic material that is passed to us from our mother and father).
•	Babies are created when a man and woman engage in sexual intercourse, "explain the penetration of the vagina with the male sexual organ (penis) in the way you feel most
	comfortable*. When this happens the male ejaculates sperm into the vagina, the sperm carry the male's DNA to the female's egg, which contains her DNA; this is why babies have half their mun's DNA and half their dad's. We are now going to watch a video about how a baby is created.
How	a baby is created video clip:
https:	//www.youtube.com/watch?v=DGyRD9HnXVs&frags=pl%2Cwn
•	In pairs, tell your partner one thing that you learned from watching this video that you didn't know before. Take feedback from a few individual children thereafter.
How	a baby grows video clip:
•	Something else that is important to learn about is how the baby grows inside its mother's womb. In this video clip you will be able to see the journey of the sperm right up until the baby is ready for birth.
https:	//www.youtube.com/watch?v=K7kaw40pPYw&frags=pP62Cwn
How	we apply DNA-V to making babies.
	e children how they think our DNA-V skills might link to having a baby and building a family
	ples of questions you might ask:
	hat might a mother discover during pregnancy?
	hat might the mother notice (i.e. what Noticer skills might she use) when she is pregnant?
A - W	hat helpful and/or unhelpful Advisor thoughts might show up when you know you are going to
	s baby?
V - W	hat are some important Values that might be helpful for guiding behaviour when someone is
lookis	ng after a baby?
0	Ask: As we are focusing on our values skills today, what kind of things should be valued in the
	whole baby making process?
	Answer: E.g. The mothers body should be valued for being able to create life, value the
D	Answer: i.g. The mothers body should be valued for being abse to create are, value the

For this activity give the children as an Art piece of pages and tally it is portrait.

They will them are thought their piece of pages and there with the hostistated
Lines (see example to right). The children will be develop three different parts of
what gives into making a body, and them to be treative and use colors (you can
replay the videos in the
hastingnostal to being a body, and them to be treative and use colors (you can
replay the videos in the
hastingnostal to being been).

Part 1.

An adult couple spending time ingelier diving scenarious gives evily suppoler (class tracher could
give an example of dementing they love diving with a partier or other level one)

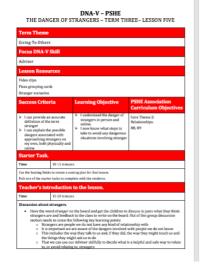
Fart 2.

The null.

The full grown halvy still inside the words ready to be born.

Get the children to fill in their diarries (5 minutes).

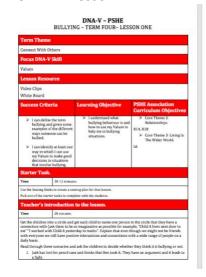
Term 3 - Lesson 5





Time	20-25 minutes
•	Please print off document "Term 3 - Lesson 5 - Stranger Stemarios" and out them into 6. Get the pixra grouping cards out and ask the separate groups to six together either around table or on the fill on activity to develop our Advisor skills and that we are all listening to what each other. Advisors would say in these situations.
Hand o	out a different scenario to each group and tell them:
need t	e read through your scenario as a group and keep it a secret from the other groups. You will o discuss what you want your answers to be because in 10 minutes you will stand up as a read out your scenarios and answer these three questions:
1.	What shouldn't you do in that situation?
2.	What should you do in that situation?
3.	Is the scenario dangerous? What could happen?"
	the children roughly 10 minutes to read their scenarios and talk through answers. Then mly select groups to stand up in front of the class and present their scenario and answers.
	the class to give a bit of feedback and any additional comments they might have about the rios (i.e. if they thought of anything else they should or shouldn't do).

Term 4 - Lesson 1

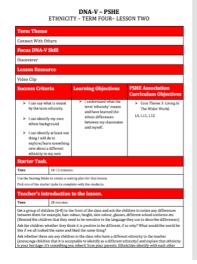


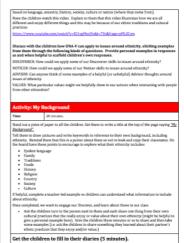
2. Toroyalay, Surah calls [M* recapit [M* voder has breach when no ease this is looking.

3. During play time a group of challows were playing colonals. When one team secred they started discribe ground and calling lower* to the callest read.

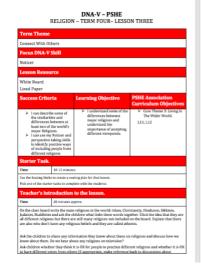
3. The start of the colonia of

Term 4 - Lesson 2





Term 4 – Lesson 3



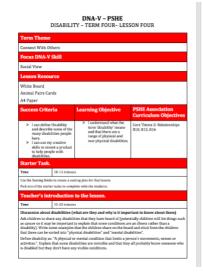
statement and variation being a positive thorig rotor to previous beautiful (content) what seems in statement and variation being a positive thoright and variation of the content of the

D: Now, return to the position of yourself in the class... Take three or four more slow breaths. You can count them on the exhale of heligful... Then begin to open your eyes and perhaps give a big stretch and take a deep breath. Ask children to share the sensations and feelings when they are taken out of their confort zone an

uplain that this might be how someone with a different religion feels when starting a new scho Write down three things that you could do that would make the person feel accepted.

Get the children to fill in their diaries (5 minutes).

Term 4 - Lesson 4



Storagies:

D - hear note about different disabilities so it know how to help.
T - stories how whether beef, many people with disabilities so traggle with different things so if it can notive that can help them.
A - my anterne railpeted me to help someone with a disability, e.g. help someone in a wheelchair result someofing of a shelf in a slave;

T - Value about healingsteen as well as my own, but of people with disabilities can be balled so I know not to do thus.

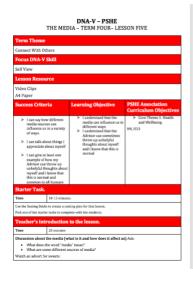
Activity: Product Creation

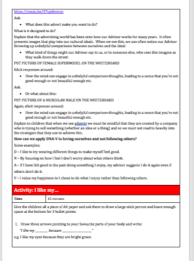
Time:

Joi 25 minutes

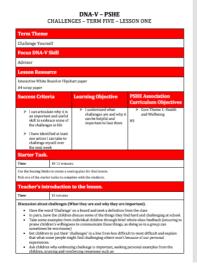
Joi

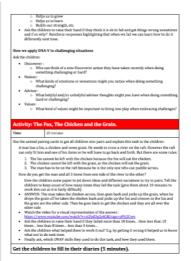
Term 4 - Lesson 5



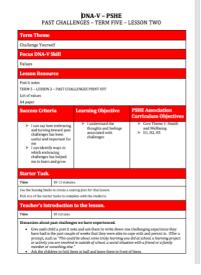


Term 5 - Lesson 1



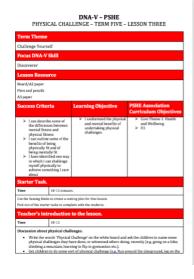


Term 5 - Lesson 2



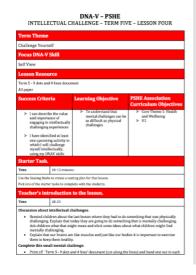
How can we supply our DNA+ Wallist to challenging experiences? Adult challenging learning situations? Discovered: Discovered: Number or signify we apply our Discoverer shifts to challenging learning situations? A What feelings and sensetties might we existe dering challenging learning situations? A What feelings and sensetties might we existe dering challenging learning situations? A What feelings and sensetties might we existe dering challenging learning situations? Takes: 2 What feelings are situations? There was a situation of the s	and then	the children to raise their hand if they think their challenge was a positive experience and them to raise their hand if they think it was a negative experience. Invite the to elaborate on their views about this verbally if they want to.
Discoverse:	How can we ap	oply our DNA-V skills to challenging experiences?
Blow might we apply our Discoverer shifts to their designing learning statution? Notice: I hoster: Advice: What shipld and cohelpful Advorse thought might their way during challenging learning statution? Advice: What shipld and cohelpful Advorse thought might their way during challenging interminence statutions? Notice: What shipld might be highly to thole to the shipld to show it subtlenging tearning statutions? Adult/typ Learning from past challenges Time: An interminence of the shipld to show it is shipld to show it subtlenging tearning statutions? Adult/typ Learning from past challenges Time: An interminence of the shipld to show it is shipld to show it is shipld to show it is shipld to shipld to show it is shipld to	Ask the childre	n DNAV specific questions
Times Streams and child a primer der GTTEMS + 1 (2000) + 1 NeXT CRALLENGES FRENT OFF A six terms to consider the primer of GTTEMS + 1 (2000) + 1 NeXT CRALLENGES FRENT OFF A six terms to the children or the consideration of the consideratio	Noticer: Values: Values:	ion might we apply our Discoverer skills to challenging fearning situations? What feelings and sensations might we notice during challenging learning situations? That holpful and underlyful Advisor thoughts might show up during challenging naming situations?
Comment halds a prime of of "TEME 1 - TESSENT 1 - PLOT COLLIANCIES TRUNT COT". As a lateral to your option per lateral to the control of the control of the page. Model security of the colliance space over supple diagrams to show children certain veneds or phress that they could use. Suppressible diagrams to show children certain veneds or phress that they could use. Suppressible diagrams to show children certain veneds or phress that they could use 1. What 2 foreign around your pack make they you found had nices your childrenge 1. What 2 foreign around your pack make they you found had nices your childrenge 1. What 2 foreign around your pack make they you found had nice you had white childrenge 1. What do worth a foreign shad are around revelopment you found you had white childrenge that white a prime of the prime of	Activity: Le	arning from past challenges
open sp their print is not an advantage in the maddle of the pages. Model asswering the operations on your own spilled inflames to show cludders certain works or printed but by could use. 100 years spilled relayers, put they not it in the middle and 1. What a Traing are annually our practice has they you found hard allows your challenge. 1. What a Change are maddle you practice has they you found hard allows your challenge. 2. What a Good was a transglos and 2 areas for development you found you had which dong this challenge there would be intellectual ship, practical shifts or shift you have a wrond coping of the challenge the control to the institution of the practical shift or shift you have a wrond coping of the challenge that come it is not present to the particular challenging experience. What has the challenge that came from presisting with the particular challenging experience. You, to have the challenge in John which is particular that challenge and the different woods they write a consequent of the challenge in the challenge is the challenge and the different woods they write when the whole class. Whit the white class. White white class is with the white class is the challenge is the challenge in the challenge is the challenge of the challenge is the challenge of the challenge is the challenge of the challenge is the challenge in the challenge is the white it is a war to be an including the particular that the challenge is to discuss the white it is a to write them then it is not the challenge in the challenge is the challenge in the challenge is not in profit in the white is the discussion. It is the white it is a challenge in the challenge is not in the challenge in the challenge in the challenge is the challenge in the challenge is the challenge in the challenge is the challenge in th	Time	20 minutes
awand it. Ensuring that no child feels pressured to do so, enquire as to whether anyone would like that their classes. All these their classes all thempts experience, with free whole class. Them the list of visualize previoled, ask the children to select the top three values they would want to show in their actions when faced with childrenging learning instances. Once selected, ask the children is one with their actions when faced with childrenging learning instances. These selected, ask the children is written classes, the form the children is previously a single classes and the children is not reported as with the children is previously as the children is considered to the children in the conversation approach of the children is spirit, as a feet of the children is spirit, as the children is spirit, as a feet of the children is spirit, as the	your own spider 1. Write 3: 2. Write do 3. Write do challeng with tric 4. Write de experier	er diagness to show children certain works or phrases that the you'dud vine. Enginemy park by point he be middle and fringe around your parel is not the through the children point he before per security was provided by the property of the children point to be before the children point of the children point point the children point point the children point provided by the children point point provided by the children point point provided by the children point provided by the children point provided by the children provided provided by the particular childrenging or the best filling that cases from premoting with this particular childrenging or the level filling that cases from premoting with this particular childrenging or the provided provided by the children provided by the children provided the children provided by the children provided provided by the children provided provided provided by the children provided provided provided by the children provided
show in their actions when foxed with challenging learning situations. Once selected, ask the child's to write them draws. From those three, pick just one that feels like the single most important value show in challenging learning situations. Turn to your partner and tell them which values you have chosen. Suggest that the children might be able to identify in their conversation a person (in their actual life or perhaps a fictional character when they feel is really good at howing this value in their actual life or perhaps a fictional character when they feel is really good at howing this value in their most of the second section.	around it. Ensu share their cho	ring that no child feels pressured to do so, enquire as to whether anyone would like to sen challenge-experience, with reference to the four sections of the activity above.
	show in their as to write them d show in challen chosen. Sugges actual life or pe actions.	tains when faced with challenging learning situations. Once selected, ask the childre www. From those three, pick; jets one that feels like the single most important value to going learning situations. Tam to your partner and tell them which values you have that the children might be able to identify in their conversation a person (in their rhaps a Sctional character) who they feel is really good at showing this value in their
As you move into the Diary Completion section of this lesson, invite the children to hold their chose value in mind when identifying one action they can take forward from the lesson.		
Children complete their DNA- V Diaries (5 minutes).	Children co	omplete their DNA- V Diaries (5 minutes).

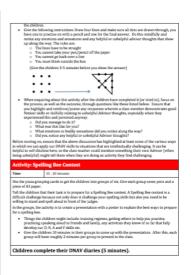
Term 5 - Lesson 3



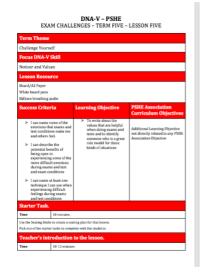


Term 5 - Lesson 4



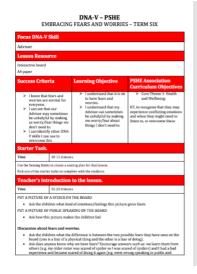


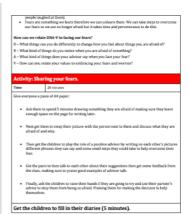
Term 5 - Lesson 5



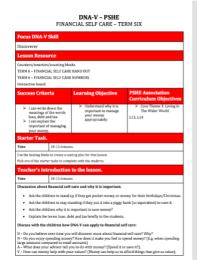


Term 6 - Lesson 1



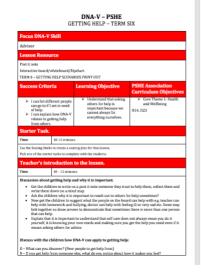


Term 6 - Lesson 2





Term 6 - Lesson 3



A - Sees poor advisor normally lad you to said for help or next And why?

**V - Do you wake your Crisendalitys, teachers and purents? If so, doors that mean you are more likely to be able to go to their the left?

Activitys Scenarios

Time

**S - No mention

1. Due the pistua grouping cards to arrange children into groups of six.

1. Due the pistua grouping cards to arrange children into groups of six.

1. One the pistua grouping cards to arrange children into groups of six.

1. One the pistua grouping cards to arrange children into groups of six.

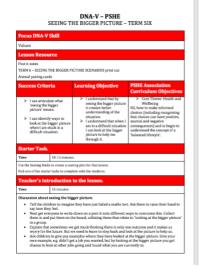
1. One the children into masses to practice acting this scenario calc including who they would go to use the help also been they have left you to use the help also been they have left you to use the help also been they have left you can be the help also been they have left you also been they have left in the life in which the districts with the children's stems.

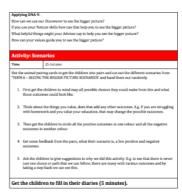
4. Allow each group to act out their scenario to the whole class.

5. Pilloub by grating some feeblack from the distinct, where they agreed with who they would go to be help in one of the first extensive set.

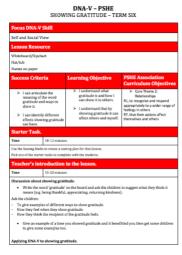
Cet the children to fill in their diarries (5 minutes).

Term 6 - Lesson 4





Term 6 - Lesson 5

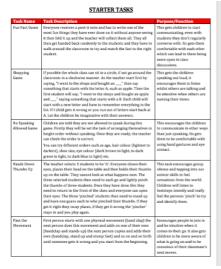


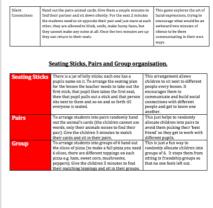


Accessible link to all lesson plan documents: https://uweacuk-my.sharepoint.com/:f:/g/personal/emily3 searle uwe ac uk/Eph1dctcRM1Dsz24yy4
XgxAB nXSbqMyGc2ZnRUknVjLmA?e=DBWmgY

Appendix C. Starter task and other lesson plan resources for Chapter 2 and main study.

Starter tasks, seating and grouping activities





Example discoverer chart

DISCOVERER CHART

NAME	1	2	3	4	5	6	7	8	9	10	ULTIMATE DISCOVERER
Arabella Smith	✓	1	✓								
Brendan Williams	✓	1									
Charlie Gray	1	1	1	1	1	1					
Zahra Suileman	1	1	1	1	1	1	1				
Andy Bath	1	1	1	1							
Jamal Edwards	1	1	1	1	1	1	1	1	1	1	CERTIFICATE ACHIEVED
Thomas Jenkins	1	1									
Alice Harnett	✓	1	✓	1	✓	✓	1	1	1	1	CERTIFICATE ACHIEVED
			_			_	_	_			
								_			
			_			_	_	_			
						<u> </u>					
						-	-	_			
			-			-	-	-			
						_	_				

Ultimate discoverer certificate



Values posters



Table documenting visual aids and print out resources per lesson

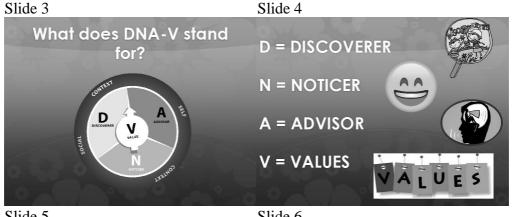
Term	Lesson	Resources Associated				
1	1	PowerPoint slides, DNA-V video, Inside Out video				
	2	PowerPoint slides, discoverer video, Inside Out video				
	3	PowerPoint slides, Inside Out video				
	4	PowerPoint slides, Inside Out video 1, Inside Out video 2				
	5	PowerPoint slides, Inside Out video				
	6	PowerPoint slides				
2	1	PowerPoint slides				
	2	PowerPoint slides				
	3	PowerPoint slides				
	4	PowerPoint slides				
	5	PowerPoint slides				
3	1	PowerPoint slides				
	2	PowerPoint slides				
	3	PowerPoint slides, 'Is Change Possible' print out, self view activity				
	4	PowerPoint slides				
	5	PowerPoint slides, stranger scenarios				
4	1	PowerPoint slides				
	2	PowerPoint slides				
	3	PowerPoint slides				
	4	PowerPoint slides				
	5	PowerPoint slides				
5	1	PowerPoint slides				
	2	PowerPoint slides, past challenges print out,				
	3	PowerPoint slides				
	4	PowerPoint slides				
	5	PowerPoint slides				
6	1	*				
	2	Financial self-care hand out, financial self-care numbers*				
	3	Getting help scenario print out*				
	4	Seeing the bigger picture scenarios*				
	5	*				

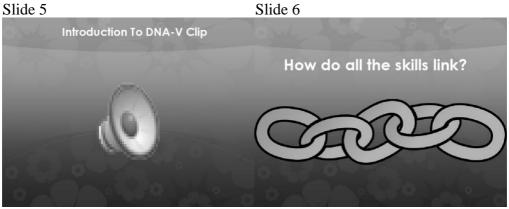
Note: * no visual aids (PowerPoint slides) were created as teachers were unable to deliver these lessons.

Example PowerPoint slides for Term 1 – Lesson 1

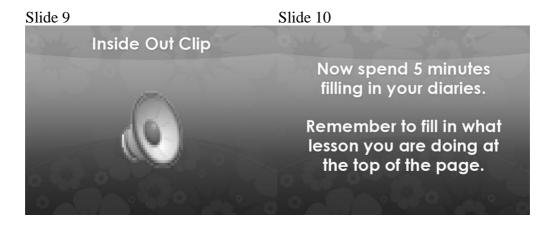
Slide 1 Slide 2











Accessible link to all PowerPoint slides and resources: https://uweacuk-my.sharepoint.com/:f:/g/personal/emily3 searle uwe ac uk/EnERE6 3KIhAucqIiMny Mz4B8nN_M -r0yLeVwZO70h55w?e=ICv9JF

Appendix D. Teacher training PowerPoint slides for Stage 2.

Slide 1



Slide 2



Dr Duncan Gillard – Senior Educational Psychologist @ Bristol Inclusion Service

Dr Nic Hooper - Lecturer @ The University Of The West Of England

Emily Searle - PhD Student @ The University Of The West Of England

Slide 3

OUTLINE OF THE DAY

- 9am 10.15am: Shaping behaviour and the Connect curriculum (DNA-V, its origins and evidence base).
- 10.15 11am: Values
- 11am 11.15am: Coffee Break
- 11.15am 12.45pm: Advisor and Noticer
- 12.45pm 1.30pm: Lunch break
- 1.30pm 3pm: Discoverer and Self and the Social World. · 3pm - 3.15pm: Coffee break.
- 3.15 4.15pm: Looking through the lesson plans.
- 4.15pm- 4.30pm: Wrapping up.

Slide 4

AIMS

- To gain knowledge of:
 The approach we are taking to mental health in children
- What the evidence says about best practice for developing positive and prosocial behaviour. The DNA-v model, both intellectually and experientially, and its origins and evidence base
- How the *Connect* curriculum brings DNA-V to life in the context of a universal PSHE curriculum.
- To build a relationship with us, as trainers, so that we can support you over the next year.

Slide 5



Spend a couple of minutes, in pairs, talking about the key things you do to promote pro-social behaviour and emotional wellbeing with the children in your class.

Slide 6

PSHE: THE CHANGING LANDSCAPE

- · Aspects of PSHE to become statutory from 2019 (DfE, 2017)
- Relationship and (Primary phase)
 Relationship and sex ed (Secondary phase)

 Achieved through an amendment to the Children & Social Work Bill
- We see this as hugely positive as PSHE is the first line of defence against MH problems in childhood and later life.
 Currently a low-bar regarding evidence-base in PHSE
- . The problems of a plurality (or lack) of models informing PSHE curricula
- Hence....DNA-v!

Slide 7

"MENTAL HEALTH" OR "SKILLS FOR WELLBEING"

- The narrative within our culture often reinforces the idea that mental health is something you have or don't have.
- Psychological research over recent decades shows that mental health is strongly associated with certain specific skills. As with all skills, these are things we can learn!
- Can you think of any examples of skills that could be associated with wellbeing/mental health in CYP?

Slide 8

SHAPING SKILLS

- The model that is at the heart of the *Connect* curriculum will train students in 5 key wellbeing skills, across multiple contexts.
- As with building any skill set, there are some core learning principles that will optimally facilitate their emergence.
- So before we start on the actual DNA-v model (which is at the centre of this curriculum) we will spend a little time talking about shaping skills/behaviour.

Slide 9

SHAPING SKILLS

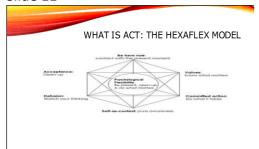
Discussion:

In pairs, discuss 2-3 specific things you feel you do well in your regular practice to promote children's mental health, social skills and emotional literacy.

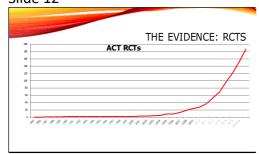
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SHAPING SKILLS

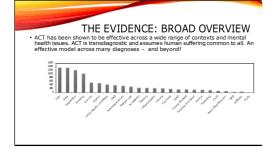
- We do this because when DNA-v skills show up, they need to be reinforced:
- · Positive reinforcement always preferable
- Be specific in your praise e.g. reference to the specific skill/behaviour you are reinforcing (within the DNA-v model)
- "Who is our DNA-v Wizard of the Week?" (and why?)



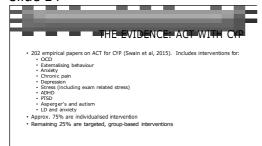
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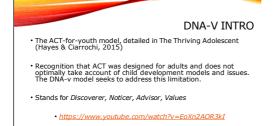
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Slide 14



Slide 15



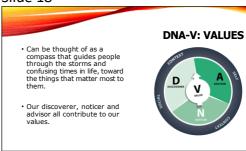
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Slide 17

DNA-V INTRO The evidence thus far: - DNA-V is ACT simplified for children, so many techniques used in ACT are also used within DNA-V. One study using ACT as individual therapy for 12-18 year olds showed 58% of participants had significant improvements for depressive symptoms compared to 56% in treatment as usual (TAU). In the same story there was a significant improvement in the follow up for ACT participants compared to TAU). Suggesting the effects of the intervention continued even after the therapy has stopped. Other studies showed all these improvements when ACT was being used as a group intervention; Significant decrease in depressive symptoms compared to TAU Significant decrease in stress levels compared to TAU Significant decrease in stress levels compared to TAU Increase in mixed with the same of the treatment of the same of the treatment of th

Slide 18



Slide 19

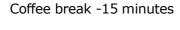


Slide 20





Slide 22



Slide 23

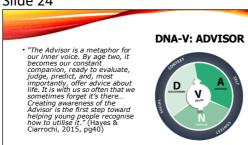
GIVE YOUR MIND THE **MICROPHONE**

- Your job for the next 3 minutes is to write down everything that comes to your mind without stopping, no matter how trivial.
- \bullet Its fine to write the same thing over and over. Do not worry about grammar or punctuation.
- For example, you may write "How much longer, this room is hot, how much longer, is this three minutes up yet".
- What you write down is for your eyes only, you can destroy it after if you wish.

Notes: After three minutes:

- What was your experience of this activity?
- Did you notice how busy your mind was?
- Did you notice any labeling, evaluating, judging, positive things, negative things, worrying etc.?
- Did you notice how it actually never stops?

Slide 24



Slide 25

DNA-V: ADVISOR

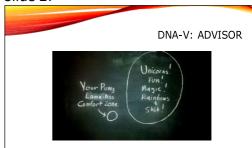
- The aim of work & activities focused around developing the Advisor is not about quieting its voice.
- · The aim is to:
 - Learn to use it skilfully.
 - Move to and from it flexibly, as and when helpful (i.e. it often has a lot to say when we move towards our values).
 - · Get some distance from the Advisor when its being unhelpful.

Slide 26

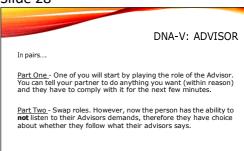
DNA-V: ADVISOR

In pairs, think of a recent time in your life when you did something really important, even though your mind (your Advisor) was telling you that you shouldn't do it. What was the thing you did? What unhelpful stuff was your Advisor telling you?

Slide 27

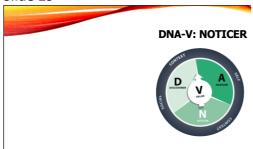


Slide 28



Notes: Questions to ask:

- In part one what did your advisor feel like? (Controlling, overbearing etc.)
- In part two what did it feel like to have choice?
- What has this activity taught you?





Slide 31



- The act of realizing your mind has wandered, and bringing your attention back to the breath/body, without criticizing yourself. (Adapted from "Finding Peace in a Frantic World" by Williams and Penman)
- "Paying attention in a particular way; on purpose, in the present moment and non-judgementally" (Kabat-Zinn 1994)

Slide 32

MINDFULNESS AND THE NOTICER

- Mindfulness training
 A method of mental training.
 Cultivating a more skilful use of our attention and awareness.
 Learning or relate skilfully to the world inside our skin, such as thoughts, teelings and sensations.
 Using mindfulness to help strengthen the skill of valuing.

- Three ways to practice mindfulness

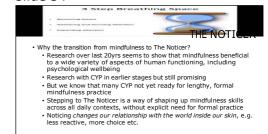
 More formal eyes-closed meditations.

 Bringing present moment awareness to routine daily activities.
 - · Regular mindful 'check-ins'.

Slide 33



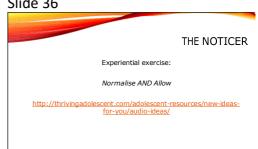
Slide 34



Slide 35

THE NOTICER Something we can do from birth – but as we learn thinking skills in infancy we can begin to lose touch with our ability to notice the world around us. The Noticer helps us Tune into our body and what is happening in it Track our own actions in the world and the outcomes they are having Notice what is on offer in the world around us and Reconnect with the world around us when we get stuck in unhelpful thoughts (unhelpful Advisor messages) Respond more skilfully (and in a less avoidant way when helpful) to aversive thoughts and feelings

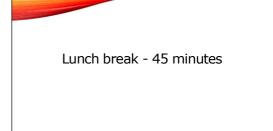
Slide 36



Slide 37



Slide 38



DNA-V: DISCOVERER

 The discoverer represents behaviours related to exploring and testing the world. Within the DNA-v model, we use Discoverer skills to broaden our behavioural repertoires, try new things and assess how they work, find and create values and build strendths.



Slide 40

DISCOVERER

- "We define discovery as an adaptive form of risk-taking, undertaken explicitly for the purposes of selecting new behaviours that are life-enhancing (Hayes & Ciarrochi, 2015)
- · Three key steps in building Discoverer skills:
 - Tracking the natural consequences of engaging in new behaviours
 - 2. Identifying values
 - 3. Building strengths

Slide 41

DISCOVERER • Close your eyes for an imagination task.

Notes: Script "You are on holiday, somewhere nice and hot. You have taken a stroll and come across several people jumping off a small cliff into the blue sea... It looks fun. Everyone that is doing it is fine and enjoying the thrill... You think it would be something fun to try. You stand on the edge of the cliff... What to you notice?... What sensations do you feel in your body?... What is your advisor telling you?... Is it safe? Should you do it? Will it be worth it?... Imagine you jump off the cliff... How do you feel? You have discovered something you hadn't before. Now open your eyes"

Questions to ask:

- What feelings did you notice before 'jumping'?
- What kind of things did your advisor say?
- What did it feel like to be a discoverer?

Slide 42

DISCOVERER IN PRACTICE

- There can often be something inherently slightly aversive about engaging
 The Discoverer because, by definition, it involves doing something new or out
 of one's comfort-zone. In this activity, we are going to invite you to lean into
 this a bit!
- If you're willing, turn to the person next to you and tell them something that
 you have appreciated about something they have done or said today, and
 why you appreciated it. See if you can identify a particular quality (value)
 that their actions seemed to you to show.
- Role of the recipient of this information is to simply listen, be responsive, be open to these comments and to thank your partner for this reflection.

Slide 43

DNA-V: SELF VIEW AND SOCIAL VIEW

 Involves developing skills that enable flexible perspective taking. This includes taking a view of oneself in different times and places (self-view) and of other people's perspectives (social view).



Slide 44

DNA-V: SELF VIEW & SOCIAL VIEW

- Some of this language can feel a little ethereal or hard to grasp so we prefer the following:
 - Self-view a young persons story about themselves and the ways in which sometimes that can get in the way of them moving in positive directions.
 - Social-view addresses the importance of empathy and perspective taking skills in order to function well in a social world.

Slide 45

DNA-V: SELF VIEW

How do you view your self?

 $\underline{Part\ 1}$ – read the following statements and rate them to the extent in which you agree with them. 1 being strongly agree and 6 strongly disagree.

- ____People don't change.
 ____I cant improve my intelligence that much.
- ____If I'm bad at something, it probably means I'll never be good at it.
- __ I cant develop talent at something. I either have it or don't have it.

Part 2 - please fill in your hand out.

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DNA-V: SOCIAL VIEW

- We are going to draw something that looks a bit like a dart board. On the middle of a piece of paper write "ME" then draw a circle around it, then draw another circle around that about 2cm width away from "ME" and then another circle around that 2cm width away.
- Now write some names of people that play some role in your life on the diagram, putting people nearer to the centre or farther away depending on how close they are to you. And by close we mean someone you can trust and turn to in times of need. Try to put all people you connect with in the diagram even if it means they are far from the centre.

Slide 47 DNA-V: SOCIAL VIEW · Encouraging empathy through restorative conversation. ♦ What happened and who was affected? ❖ Is there a chance that someone was hurt? \diamondsuit **S**o how do we put things right? \diamondsuit **H**ow can we do things differently next time? Slide 48 Questions? Slide 49

Slide 50 CURRICULUM STRUCTURE · Six themes One theme per term Each term has 5 weekly lessons Each lesson focused on one of the DNA-V segments > Introduction to DNA-V & Emotions > Health > Relationships > Diversity > Dreams & Goals > Building Resilience

Coffee break -15 minutes

Slide 51

LESSON PLANS

- First 6 lesson plans main focus is on introducing DNA-V.
- Each lesson is tailored to be 1 hour long.
- Each lesson has Starter Tasks, some may have one that specifically suits the lesson and others you can pick from a selection.
- · Fach lesson has a 'tell' and a 'do' part.
- At the end of every lesson a minimum of 5 minutes should be assigned for children to fill in their diaries.

Slide 52

RESOURCES

- There will be different film and video resources used that relate
- Discoverer Chart Ultimate Discoverer
- · DNA-V Wizard Stickers for Diaries
- · Grouping Activities

Slide 53

LETS LOOK AT THE LESSON PLANS

- Plans have been through a 2 stage review process so far
 We want to develop the final plans with you, iteratively
 So this next hour is the review period:
 Split into six pairs
 One lesson per pair
 15 minutes per review approx.
 Consider the following:
- Is the lesson plan clear?
 Does it contain enough or too much/too little information?
 What other information might you need to deliver this?
 What questions arise as you read this through? Write them

down.
Please write down all relevant information of the paper provided.

Appendix E. Knowledge Multiple Choice Questions for Stage 2.

- 1. What is the best way to shape behaviour?
 - a. Positive reinforcement
 - b. Negative reinforcement
 - c. Punishment
 - d. Extinction
- 2. If you use reinforcement, how will you know that your reinforcer works?
 - a) The child will be happy

b)	The child will display the behaviour that you want more frequently
c)	The child will display the behaviour you want less frequently
d)	The child will be uninterested in your reinforcer in future interactions

- 3. What name has been given to the picture most associated with ACT?
 - a) The MAC model
 - b) The DNA-V model
 - c) The Hexaflex model
 - d) The Three Pillar model
- 4. What does ACT aim for?
 - a) Happiness
 - b) Being better able to control unwanted thoughts and feelings
 - c) Psychological flexibility
 - d) Reduced symptoms of mental illness
- 5. DNA-V is an ACT model which better accounts for:
 - a) How children live in modern day society
 - b) How children learn curriculum skills
 - c) How children develop their resilience and wellbeing
 - d) Bad parenting practices
- 6. What does DNA-V stand for?
 - a) Diffuser, Noticer, Advisor, Vocaliser
 - b) Discoverer, Noticer, Advisor, Values
 - c) Discoverer, Namer, Accepter, Values
 - d) Decider, Namer, Accepter, Vocaliser
- 7. Which part of DNA-V uses a metaphor about having an 'inner voice'?
 - a) D
 - b) N
 - c) A
 - d) V
- 8. Which part of DNA-V is often described as a compass that guides us through storms and confusing times?
 - a) D
 - b) N
 - c) A
 - d) V
- 9. Which part of DNA-V should we move to when we feel a little stuck in unhelpful thoughts?
 - a) D
 - b) N
 - c) A
 - d) V
- 10. Which part of DNA-V do we describe as 'an adaptive form of risk taking'?

- a) D
- b) N
- c) A
- d) V
- 11. In the DNA-V model, what do the letters S & S stand for?
 - a) Source & Solve
 - b) Self & Summarise
 - c) Shape and socialise
 - d) Self and Social
- 12. A good way to get students thinking about their values is via (circle all that are correct):
 - a. Conversation cards
 - b. Asking students to describe a person that they look up to
 - c. Getting the student to describe how their parents want them to be
 - d. Asking students to think about the things in their life that give them a sense of meaning and vitality
- 13. In terms of DNA-V what does D represent?
 - a) The part of us that explores and tests the world through new behaviours
 - b) The part of us that helps us connect with our feelings
 - c) The part of us that reinforces our behaviours
 - d) The part of us that uses our past experiences to guide us
- 14. What is our aim with the 'A' part of DNA-V?
 - a) To allow ourselves to feel our emotions
 - b) To help us to learn from trial and error
 - c) To improve social skills and decrease bad behaviour
 - d) To use our thoughts when it's helpful and distance from them when its unhelpful
- 15. In terms of DNA-V what does N represent?
 - a) The part of us that uses our past experiences to guide us
 - b) The part of us that reinforces our behaviours
 - c) The part of us that helps us socialise
 - d) The part of us that becomes aware of our experiences without reacting to them
- 16. Discoverer is key in helping us to:
 - a. Manage our advisor
 - b. Tune into our noticer
 - c. Build new behavioural skills that promote growth and strength
 - d. Explore our values
- 17. Noticer in the DNA-V model is closely related to:
 - a. CBT
 - b. Mindfulness

- c. A person-centred approach
- d. Psychodynamic therapy
- 18. In the classroom, in order to reinforce a student's Discoverer skills, I should:
 - a. Ask students to think about what they are good at
 - b. Encourage safe and adaptive risk-taking
 - c. Tell students that they should try to choose the safe option
 - d. Encourage friends to keep each other safe
- 19. In terms of DNA-V what does A represent?
 - a) The part of us that helps us socialise
 - b) The part of us that wants to try new things
 - c) The part of us that uses our past experiences to guide us
 - d) The part of us that shows what we care about
- 20. Noticer exercises are designed to create a space where unwanted thoughts and feelings can simply be:
 - a. Watched
 - b. Changed
 - c. Discredited
 - d. Suppressed
- 21. In terms of DNA-V what does V represent?
 - a) The qualities we want to show in our actions
 - b) How we see ourselves in different settings and society
 - c) How we overcome and solve difficulties
 - d) The ability to connect with our thoughts and feelings
- 22. Our Advisor can often give us advice that keeps us in a comfort zone, why does it do this?
 - a. Because it our advisor evolved to protect us from threat
 - b. Because it wants to stop us from achieving
 - c. Because it knows that we will be happiest in our comfort zone
 - d. Because it loves to confuse us
- 23. In terms of DNA-V what does S & S represent?
 - a) The ability to connect with our thoughts and feelings
 - b) How we relate to our sense of self and our sense of the social world around us
 - c) How we overcome and solve difficulties
 - d) Where our passions lay and what we care about
- 24. Is it possible to carry on doing things that are important to you, even if your advisor thinks it is a bad idea?
 - a. Yes
 - b. No
 - c. It depends on the context
 - d. I'm not sure

- 25. A fundamental skill needed for effective social functioning is:
 - a. Happiness
 - b. Values
 - c. Self Esteem
 - d. Perspective Taking
- 26. In Normalise A-N-D Allow, what does A-N-D stand for?
 - a) Aware, Name, Describe
 - b) Accept, Notice, Discover
 - c) Amend, Name, Detect
 - d) Admire, Normalise, Dream
- 27. Our WISH pneumonic aims to encourage empathy through:
 - a. Feedback
 - b. Reinforcement
 - c. Restorative conversation
 - d. Rules

Appendix F. DNA-V diary example for Stage 3.

DNA-V DIARY	TERM: LESSON: Write down one thing that you learned in the lesson today.
	Write down how you might apply what you have learned to your life.
	Draw a picture that relates to the lesson today.
Pupil Code: UWE University of the of t	
School Code:Bristol Westerd	

Appendix G. Analysis split for gender comparisons.

Table: Independent t-test comparing male and female wellbeing and psychological flexibility scores pre- and post- intervention.

		Male		Female				
		Means	Std.	Means	Std.	t	df	р
			Dev		Dev			
1.	Pre AFQ-Y	25.02	10.70	22.34	12.07	1.29	119	0.20
	Post AFQ-Y	22.09	11.89	21.62	8.95	0.18	61	0.86
2.	Pre SCWBS	51.57	10.07	52.73	11.34	-5.89	118	0.56
	Post SCWBS	52.77	10.25	52.31	7.61	0.21	63	0.84

Repeated measure ANOVA split for male and female participants across three time points (excluding the follow up due to high attrition) to compare potential significant differences found across genders:

- Repeated measures ANOVA with Greenhouse-Geisser corrections found no significant difference between male psychological flexibility scores (F(1.53, 42.96) = 0.54, p = 0.54).
- Repeated measures ANOVA with sphericity assumed found no significant differences between male wellbeing scores (F(2, 56) = 0.58, p = 0.56), female psychological flexibility scores (F(2, 52) = 1.75, p = 0.19) or female wellbeing scores (F(2, 52) = 0.10, p = 0.91).

Results showed no significant effects across t-test comparisons and no significant differences found for either gender when comparing variables across timepoints.

Appendix H. Student interview questions for Stage 4.

- 1. How do the DNA-V lessons work for you and your classmates?
- 2. What did you enjoy about the lessons?
- 3. What did you not enjoy about the lessons?
- 4. What do you think would make the lessons better?
- 5. What have you learned from the lessons?
- 6. How have the lessons helped you?

- 7. Have the lessons changed how you feel and behave?
- 8. How have you used DNA-V outside of the lessons?
- 9. Do you feel like the lessons have affected others in the classroom, if so how?
- 10. Would you like to continue doing lessons like these and why?
- 11. Is there any other information you would like to share?

Appendix I. Teacher interview questions for Stage 5.

- 1. How do DNA-V lessons work within the year 5 classroom?
- 2. How did you find the lesson plans to deliver?
- 3. What did you like about the lessons?
- 4. What did you not like about the lessons?
- 5. What do you think could improve the lessons?
- 6. How do you think the lessons affected individuals?
- 7. How do you think the lessons affected the class as a whole?
- 8. Have you seen DNA-V being used outside of the lessons and how?
- 9. Do you feel like any adults involved in the teaching/supervision of this class have been affected by the lessons (including yourself)?
- 10. Would you like to continue with lessons like these and why?
- 11. How did these lessons plans compare to other PSHE lessons you have delivered?
- 12. How do you think lessons like these can impact on children's mental health?
- 13. Do you think these sorts of lessons are suitable for primary school aged children and why?
- 14. How do you feel about the time teachers get to deliver lessons like this and more mental health focused activities?
- 15. Is there any other information you would like to share?

Appendix J. Additional teacher interview questions for Stage 6.

- 1. What do you currently do within your school/class that educates your students on mental health and wellbeing?
- 2. Where in the curriculum does mental health education fit within your school/class?

- 3. What training has your school provided you on mental health and wellbeing?
- 4. Have you experienced any challenges when teaching mental health focussed lessons?
- 5. What impact do you think these lessons have on children's mental health?
- 6. Are there any elements missing from mental health education?
- 7. What are your thoughts on the time teachers get to focus on mental health focused activities?
- 8. Do you have any final thoughts you would like to add or any things you would like to follow up that I haven't asked?

Appendix K. Ethical approval code.

UWE research ethics reference number: HAS.18.04.149

(It was deemed as one large study with continuous stages, therefore only one code)

Appendix L. Pilot study data normality tests.

Kolmogorov-Smirnov tests of normality.

Measure	Sig.
AFQ-Y	0.55
SCWBS	<0.001*
Pro-social	0.200
Anti-social	0.002*
Close friend nominations	0.187
Popular nominations	<0.001*

Note: *suggests normality was violated.

Appendix M. Spearmans correlation of pilot data for comparison.

Correlations between study measures, showing the same significant relationships.

Measures		1.	2.	3.	4.	5.
1. AFQ-Y	Pearson Correlation					
	Sig. (2-tailed)					

	N					
2. SCWBS	Pearson Correlation	47**				
	Sig. (2-tailed)	<.01				
	N	97				
3. Pro-social	Pearson Correlation	07	01			
	Sig. (2-tailed)	.57	.95			
	N	75	76			
4. Anti-social	Pearson Correlation	.12	09	50**		
	Sig. (2-tailed)	.31	.95	<.01		
	N	75	76	76		
5. Close friend	Pearson Correlation	08	-0.1	.55**	38**	
	Sig. (2-tailed)	.52	.91	<.01	<.01	
	N	75	76	76	76	
6.Popular	Pearson Correlation	0.15	-0.2	.13	.14	.42**
	Sig. (2-tailed)	.90	.89	.25	.23	<.01
	N	75	76	76	76	76

Note: 1. Psychological flexibility score, 2. Wellbeing score, 3. Pro-social score, 4. Anti-social score, 5. Close friend peer nominations, 6. Popular peer nominations.

AFQ-Y = Avoidance and Fusion Questionnaire for Youth, SCWBS = Sterling Children's Wellbeing Scale.

Appendix N. Training data normality tests.

Kolmogorov-Smirnov tests of normality.

Measure	Sig.
AAQ-II	0.085
MCQ	0.200

Note: *suggests normality was violated.

^{**} Correlation is significant at the 0.01 level

Appendix O. Main study data normality tests.

 ${\it Kolmogorov-Smirnov\ tests\ of\ normality}.$

Measure	Sig.
AFQ-Y	0.200
SCWBS	0.196
Pro-social	0.200
Anti-social	<0.001*
Close friend nominations	0.050
Popular nominations	<0.001*
Helping behaviours	<0.001*
Indirect aggression	<0.001*
Direct aggression	<0.001*

Note: *suggests normality was violated.