Psychological Well-being in Adolescents: Planning towards and Thinking about the Future.

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Abstract

Over recent years clinical psychology research has further explored what contributes to positive functioning in adults. Less, however, is known about positive mental health in adolescents. Psychological well-being (PWB; Ryff, 1989) consists of six dimensions that contribute to positive mental well-being. The primary aim of the present study was to explore the relationships between the dimensions of PWB, positive and negative affect, positive and negative future thinking and planning towards goals. The second aim was to examine school and demographic differences in PWB, planning towards goals and future thinking. 201 School students (15-19 years), from two different areas of the South-East of England completed two tasks, one that elicited goals and plans and one that elicited positive and negative future thoughts. They also completed self-report measures of affect, PWB and subjective socio-economic status. High positive affect was significantly associated with high Personal Growth, Self Acceptance and Purpose in Life. Dimensions of PWB were not significantly associated with negative affect or positive and negative future thoughts. Purpose in Life and Personal Growth were significantly positively correlated with specificity of steps towards education and career goals. The School from the more deprived neighbourhood, with a high BME population, had higher Self Acceptance and Personal Growth and generated significantly more positive and significantly less negative future thoughts than the school in the more affluent neighbourhood, with a high White British population. The findings extend the understanding of dimensions of PWB in adolescents and have implications for clinical and school based intervention.

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1.0 Introduction

1.1 Purpose of the Research

Research suggests that Subjective and Psychological Well-Being are distinct but related constructs (Waterman, 1993; Ryan and Deci, 2000; Samman, 2007) and that how people think about their future - higher anticipation of positive events and lower anticipation of negative events - is associated with mental health and well-being (MacLeod, 2013). In addition, in the general population, lack of anticipation for positive future events has been linked to lack of the cognitive ability to plan towards goals (MacLeod & Conway, 2005).

The aforementioned relationships, however, have been less well researched in young people. Anxious and depressed adolescents have been found to have more negative future expectancies than non-clinical controls, without differing on positive future expectancies (Miles, MacLeod & Pote, 2004). In addition, adolescents able to think about their future showed less emotional distress and a stronger sense of meaning in life (Aspinwall, 2005). In addition, there is a small amount of evidence to suggest that in adults different aspects of well-being relate differently to the different components of future thinking. There is, however, no evidence in an adolescent population, therefore bolstering the uniqueness of the study and providing the basis of for this research.

The interest in emotional well-being initiatives and clinical psychology input in schools is of growing importance in the UK (Children & Young People's Mental Health Coalition, 2014). Research suggests that seven young people in an average classroom will have been bullied (Murphy & Faulkner, 2011) and three will have an emotional or behavioural difficulty (Green, Howes, Waters, Maher & Oberklaid, 2005). Considering mental Health and well-being in schools is therefore an important avenue for both research and prevention.

The present study aims to investigate the relationship between dimensions of Psychological Well-Being (PWB) and Affect in adolescence. The relationship between the dimensions of PWB, Future Thinking and Planning towards Goals will also be explored. The study will go further by investigating the relationships in a socio-economically and ethnically diverse sample. A broader understanding of the impact of planning towards goals, and future thinking, on different aspects of PWB could not only assist the development of interventions for adolescents with low well-being, but could also provide preventative and educative options in schools. Early intervention can have a potentially lasting impact of an individual's emotional and psychological well-being.

This chapter will begin by outlining the current governmental, national and political focus on child and adolescent mental health, paying particular attention to well-being. The narrative will then move to discussing the growth of Positive Psychology and describe the research on well-being. The nature of Psychological Well-Being and its dimensions will be presented, followed by a

discussion of future thinking and planning towards goals. A section of the introduction will focus on discussing socio-economic and ethnic differences in PWB, future thinking and planning towards goals. The final part of the Introduction will present an argument for the research, paying particular attention to the relationships between dimensions of PWB, affect, future thinking and planning towards goals in adolescents. This will be supported by an explanation of the current literature and identification of the gaps in the research that the study is addressing. The chapter will end with a brief description of the study aims, methodology and research questions.

1.2 The Context of Adolescent Well-being

One in ten young people have a diagnosable mental health difficulty (Bird et al., 2010). Children and young people who experience mental health problems can often become a personal, social and economic burden on families, local communities and the wider society. Almost half of young people with fewer than five GCSEs, graded A* to C, said they always or often feel depressed, compared to only 30% of young people who are more qualified (The Prince's Trust, 2012).

There is growing evidence that investment in child and adolescent mental health services (CAMHS) should be focused on early intervention and prevention (House of Commons Health Committee, 2014). This has become even more important due to rising CAMHS thresholds and increased waiting times for already economically stretched services. The British Psychological

Society (BPS, 2014) reported percentage increase in referrals over the last two years ranging from 20-70% across the UK. Promoting good mental health and well-being, and building resilience, can reduce the need for interventions, whilst also improving the ability for people to contribute to economic growth. Additionally, improved well-being and ability to work could reduce health inequalities caused by long term mental and physical ill health (Marmot, 2005).

There is a growing acknowledgement that investment in mental health education and prevention should be standardized across schools in the UK (Children's Society, 2012). Despite this, young people report a lack of teaching and learning about mental health and emotional well-being. They go further to describe receiving little or no support for their mental health needs in school (Kennedy, 2010). Incorporated mental health support in education settings is a strategy supported by health professionals and 89% of health professionals feel the potential of schools for supporting health is not being fully realised (National Children's Bureau & NHS Confederation Survey, 2013).

In recent years, as part of the development and improvement of young people's services and school provision, a large amount of research and new policy has been developed. Of the five key themes drawn out of the Children and Young People's Mental Health and Well-Being Task Force (2014), one area was focused on promoting resilience through prevention and early intervention. In order to make early intervention successful, we need to

understand the relationships between adolescent well-being, future thinking and planning towards goals. In addition, targeting those who are potentially more at risk, by creating socio-economically and ethnically sensitive interventions, could be informed by research, such as the present study, on adolescent psychological well-being.

1.3 The Growth of Positive Psychology

The understanding of positive psychological functioning has been in the minds of psychologists for some period of time. Early theorists believed an individual needed to achieve self-actualisation (Maslow, 1968) and that psychological functioning was part of the view of the fully functioning person (Rogers, 1961). Despite this, the emphasis in clinical psychology research has been situated in maladaptive functioning. There has been an abundance of literature on pathology, unhappiness and suffering, yet positive aspects of human functioning have been neglected (Seligman & Csikszentmihalyi, 2000).

In the last two decades research in psychology and psychiatry has started to examine how individuals can be well, rather than simply how distress can be treated. The growth of positive psychology research has seen a shift in the way health policy is delivered and thought about. The move from the disease and deficit model has become more prominent, with Mental Health defined as “resilience, confidence and self-esteem” (Healthy Lives Healthy People, 2010). The continued rise in positive psychology has also led to an interest in what makes individuals ‘Flourish’ (Keyes, 2002), that is, how can the

conditions for optimal functioning be better understood and developed. Understanding whether the risk factors for mental health are opposite to the precursors to psychological wellbeing is an area of research that is contested and unclear (Huppert, 2009). The Positive Psychology movement emphasises psychological health being more than just the absence of psychopathology. In addition, prevention programmes have been developed as a result of the research. The research has increased the understanding of building strengths, such as future-mindedness and optimism (Seligman, 2005), which have informed the basis of such interventions.

There is a large amount of positive psychology research in adult samples, but less so in young people (Norrish & Vella-Brodrick, 2009). The scope for increased research in adolescent populations is strengthened by an awareness of the need for school and youth-orientated prevention programmes to be developed from a positive psychology perspective (Chafouleas & Bray, 2004).

1.4 Adolescence

The World Health Organisation describes adolescence as a critical transition, with a rate of growth that is second only to infancy (Lerner and Villarruel, 1994). The changes in adolescence are driven by biological processes and occur at different rates (Kipke, 1999). This can lead to it being a time of disorientation, which leads to the developmental stage presenting many potential risks to well-being (Kleinert, 2007).

Historically adolescence was thought of as a period of 'storm and stress' (Hall, 1904), characterised by difficulties with peer relationships and conflict with parents. This view has been reconsidered over time to account for individual and cultural differences in adolescents (Arnett, 1999). The task of identity formation (Erikson, 1968) makes adolescence an important time, but one also marked with increased vulnerability. Adolescents strive to establish a coherent sense of identity through emotional development. They achieve this by relating to others and the world around them and learning how to cope (Santrock, 1996). Cognitive changes also increase an adolescent's abilities to make decisions, think hypothetically and use metaphors (Piaget, 1976). This is a key change because it allows an adolescent to think about the future, evaluate alternatives, and set goals (Keating, 1990). An ability to think in this more abstract way can, however, increase uncertainty. Uncertainty can trigger positive and negative emotions through recall of past events, anticipation of the future, and introduction of novel or abstract ideas (Rosenblum & Lewis, 2003).

The influence of peers grows as adolescents become more independent from their parents. It becomes increasingly important for adolescents to feel they belong to the social and ethnic groups around them. Those with a lack of social support, or meaningful friendships, have poorer psychological adjustment and increased risk of psychological problems in adulthood (Hansen & Breivik, 2001). In addition the timing of maturation, and how prepared an adolescent feels, has a number of psychological and behavioural

implications, including depression, substance abuse, problem behaviours and eating disorders (Ge, Conger & Elder, 2001). Late adolescence is a particularly vulnerable time, with prevalence rates of clinical depression increasing from 3% to 18% between the ages of 15 and 18 years (Hankin et al, 1998). Late adolescence is also characterised by risk taking and experimentation. This enables adolescents to develop expectations of themselves, others, and the world. Increased exploration can, however, cause conflict between adolescents and adults, because an adolescent can sometimes over estimate their ability to face new situations with success. Risk taking can occur due to pleasure and reward seeking (Steinberg, 2008), peer pressure (Gardner & Steinberg, 2005) and as a result of poor environmental control (Huebner & Howell, 2003).

In terms of mental health practice and clinical psychology research, depression is now seen as a disorder that develops in adolescence, as opposed to one that was previously considered to have its onset in middle age (Seligman, Schulman, DeRubeis & Hollon, 1999). The rates of disorder rise steeply in middle to late adolescence and the profile of disorder changes with increasing presentation of the types of mental illness seen in adults (ONS, 2005). In much of the adolescent literature there has been a focus on understanding risk of disorder and promoting risk aversion. More recently, however, the emphasis has shifted to look at more positive aspects of adolescent development, such as happiness and well-being (Caffo, Belaise & Forresi, 2008). The Eudaimonic view of well-being (which will be presented in the next section), is a helpful way of understanding adolescent well-being.

This is because the view relates to adolescent development and the ideas that surround the self-realization of individual potential (Ryan & Deci, 2001).

It is important to study well-being in adolescent groups because it provides an opportunity for intervention and early identification of risk and protective factors. For example, a longitudinal birth cohort study found that children who were rated by teachers as happy had higher wellbeing and functioned more positively in midlife. This finding held when father's SES, childhood education, cognition and participants midlife SES were controlled for. Positive functioning in midlife was characterized by low probability of emotional problems, engaging in social activities and feeling satisfied with a successful career (Richards & Huppert, 2011).

1.5 Defining Well–Being

Well-being is seen as an essential part of a positive quality of life (Sagiv, Roccas & Hazan, 2004). In the past, UK data from the Office of National Statistics (ONS) has used the term 'Emotional and Social Wellbeing'. Overtime this has been operationalized and measured to increase the global understanding of well-being in what has been described as the absence of emotional and behavioural difficulties (Friedli, 2009). Overtime, the literature from both clinical and positive psychology has developed a more complex understanding of well-being and the definition, whilst difficult to reach agreement on, is seen as complex and multimodal. Well-being is not merely a psychological priority. Governments across the world are becoming

increasingly aware of the social, political and economic impact. This has led to an increased interest in measuring population well-being and the psychological processes that surround it. With this in mind, the construct, its development and the measurement of well-being has been given increased attention and critique. The pursuit for consensus over the definition, however, has been challenging (Ryff & Keyes, 1995).

The confusion within the literature is, in part, down to the interchangeable use of a number of different terms such as life satisfaction, quality of life, subjective well-being, happiness, and positive affect (Kozma, Stones, & McNeil, 1991). The additional confusion is due to the range of factors that are considered important to achieving optimal well-being (Dodge, Daly, Huyton & Sanders, 2012). Well-being has been simply conceptualized as living well, feeling good and functioning effectively (Huppert, 2009). Well-being is not merely the absence of distress and negative affect, but is related to an ability to manage these difficult emotions. In general, the ability to feel calm, happy and generous is central to many definitions. Many believe feeling useful and engaged with life are also aspects of wellbeing, as is the capacity for personal development. Good relationships with others are regarded as central to social, as well as mental, wellbeing. A sense of optimism about the future is often included in discussions about well-being, as well as a capacity for autonomy.

The early attempts to bring clarity around the definition of well-being came from Bradburn (1969), who concluded individuals with greater positive affect will be high in well-being and that negative affect and low well-being were on

the opposite end of the same continuum. More recently, however, positive and negative affect is considered as two separate constructs, rather than opposite ends of a continuum (Headley, 2008). As the interest in Well-being has grown, researchers have drawn on historical literature on views of positive functioning, to give a more theory driven perspective. Philosophers such as Aristippus and Bentham described hedonic ideas that suggest an individual's goal in life is to minimize pain and maximize pleasure (Kahneman, Diener, & Schwartz, 1999). This has, more recently, been broadened and redefined as Subjective Well-Being (SWB), conceptualized as the sum of affective and cognitive perceptions of happiness and life satisfaction (Diener, 1994). The origins of the construct were not driven directly from theory. Evaluations of SWB are made on the basis of related measures (Affect and Life Satisfaction) that are taken from the historical hedonic philosophy.

It has been argued that SWB is a simple conceptualization of well-being (Ryff & Keyes, 1995). It has however, been well used in research (Diener, Suh, Lucas & Smith, 1999; Ryan & Deci, 2001; Diener, Oishi & Lucas, 2003). The operational definition of Affect and Satisfaction with Life constructs can be used to measure SWB both psychometrically and through self-report (Ryan, Huta & Deci, 2008). This may account for its more popular position in the literature, but the simplicity of SWB has also resulted in an interest in developing other conceptualisations of well-being. There is a different school of thought that understands well-being as living in accordance with true values (Waterman, 1993). The idea of living in accordance to values, and doing so by engaging in meaningful activities, go back as far as Aristotle (350 B.C.). This

idea became known as the Eudaimonic view of well-being and has, overtime, generated concepts of well-being that are more complex and multidimensional, a notable example being Ryff's concept of Psychological well-being (PWB). The six dimensions of PWB are 1) Self-Acceptance, 2) Autonomy, 3) Personal Growth, 4) Positive Relationships, 5) Sense of Purpose and 6) Environmental Mastery. The dimensions of PWB, in themselves, have more recently been found to contribute to positive functioning (Ruini & Fava, 2012) and a lack of PWB has been implicated as a risk factor for depression (Joseph & Wood, 2010). The next section will more fully explain PWB, the scale development and it's use in the literature.

1.5.1 Psychological Well-Being (Ryff, 1989)

Ryff's Multi-dimensional PWB scale has become one of the most widely used measures of well-being (Abbott, Ploubidis, Huppert, Kuh & Croudace, 2009). The development by Ryff and colleagues was established from conceptualisations of positive psychological functioning that appear to converge (Ryff, 1989). Humanistic and existential approaches such as formulation of individuation (Jung, 1933), and Allport's (1962) notion of maturity were drawn together with developmental perspectives that emphasize the challenges of lifespan stages (Erikson, 1959; Neugarten, 1968). These theory driven ideas form the basis for the six core dimensions (Table 1).

Table 1 – Definitions of the Six Dimensions of PWB

Autonomy	This dimension outlines qualities such as self-determination, self-regulation and independence. The scale focuses on the ability to look to the self for approval, holding an internal locus of evaluation (Ryff & Singer, 1998).
Positive Relations	Good positive relations is characterised by an ability to maintain good relationships with others. This is a central part of positive Well-Being across the lifespan. This dimension not only describes warmth and empathy for others, but also relates to an ability to identify with, and feel affection for, family and friends (Ryff, 1989).
Environmental Mastery	The dimension of Environmental Mastery encompasses an ability to manipulate and respond to the environment as a key part of positive psychological functioning. Life span theories describe being able to creatively change and interact with the environment, physically and mentally, as a sign of maturity (Ryff, 1989).
Personal Growth	Having a strong sense of Personal Growth contributes to maintaining optimal functioning in the presence of the five other dimensions (Ryff & Singer, 1998). Well-being comes from developing potential and expanding as a person. In the clinical literature much is made of openness to experience and embracing new challenges to maintain positive functioning (Schmutte & Ryff, 1997).
Purpose in Life	This dimension focuses on having meaning, direction and a sense of future fulfillment. This leads to intentionality and an ability to work towards goals which allows for more productivity, creativity and emotional integration (Ryff, 1989).
Self Acceptance	The literature describes acceptance of the self as a recurrent criteria for positive psychological functioning and a central feature of mental health (Ryff, 1989). It is characterized by the ability to hold positive regard for the self, both in the present and from the past.

The six dimensions were used to create the Scales of Psychological Well-Being (Ryff, 1989; Ryff & Keyes, 1995). The original instrument contained 120 items, of equal numbers of positive and negative wording, with 20 items per dimension. The scale was significantly positively correlated with prior measures of Well-Being (Ryff, 1989). The original scale showed high test-retest reliability across six weeks (coefficients 0.81 to 0.88) and high internal consistency (reliability coefficients for each dimension were 0.86 to 0.93). Over time, the scales have become shorter, more accessible and used more widely. The shortest version has 18 items (3 per dimension), followed by a 42 item (7 per dimension), 54 item (9 per dimension) and 84 item (14 per dimension) scale (Ryff & Keyes, 1995).

Empirical studies have provided evidence to support the six-factor structure of PWB (Van Dierendonck, 2004; Cheng & Chan, 2005). In a study of 4980 older adults a model with fewer factors did not generate as good a fit as the six factor model (Clarke, Marshall, Ryff, & Wheaten, 2001). Furthermore, factor analysis of data from a sample of 1108 adults, provided evidence for the theoretical model of a six dimensional structure of PWB (Ryff & Keyes, 1995).

Despite the supportive evidence, a more recent debate about the methodological and statistical development of PWB has raised a question mark over how distinct the six components are (Springer, Hauser & Freese, 2006). In response, Ryff and Colleagues have strengthened their evidence and stood by the six-factor model. The findings substantiate the six factors

and finds each factor is related to different psychological processes and behaviours (Ryff & Singer, 2006).

Extensive use of the PWB scale is cited in the literature and research has shown cross-sectional age differences in total PWB. The dimensions of PWB show differential age correlations; Purpose in Life and Personal growth decreased with age, whereas, Autonomy and Environmental Mastery increased with age (Ryff & Singer, 2008). Whilst there is some support for these findings in longitudinal data (Kwan, Love, Ryff, & Essex, 2003), more research is needed to understand the pattern of PWB as individuals negotiate transitions and challenges across the lifespan.

Evidence supports the need to look at aspects of SWB and PWB separately as there are important differences between SWB and PWB. Ryff and Singer (1998) identified that positive affect and PWB are not directly connected, but that if a person is living a life to their full potential, happiness will follow. SWB and PWB also have different biological (Ryff & Singer, 2006) and psychological (Waterman, 1993) associations. The present study will look at affect and dimensions of PWB separately. The relationship between the two constructs needs exploration in an adolescent sample. The analysis of the six separate dimensions of PWB will also give a more in depth understanding of what aspects of positive functioning are associated with positive affect and therefore what skills can be developed to improve PWB, and potentially, positive affect in adolescents.

There is an additional debate about the relatedness of the six dimensions of PWB and how they relate to other constructs (Ryff & Singer, 2006). The response in research is still emerging and this study endeavours to add to this. Recent pilot data in an adult population (MacLeod, in preparation) has found that the different aspects of PWB were related to positive and negative future thinking separately. High levels of Autonomy, Environmental Mastery and Self-acceptance were correlated with low negative future thinking. In contrast, high levels of Positive Relationships, Personal Growth and Sense of Purpose correlated positively with positive future thinking.

The development of a more well operationalized and supported definition of Psychological Well-Being has begun to contribute to clinical psychology practice. As a result, 'Well-Being Therapy' (WBT; Fava, Rafanelli, Cazzaro, Conti & Grandi 1998), based on the multidimensional model of psychological well-being proposed by Ryff and Singer (1996), has been developed for clinical practice. A pilot study applied WBT to early adolescents in a school setting with the aim of helping pupils recognize and experience positive emotions. The therapy was compared to a parallel CBT intervention and both produced significant and comparable improvements, supporting the use of WBT as a comparably effective preventative intervention to CBT (Ruini, Belaise, Brombin, Caffo & Fava, 2006). These kinds of findings support the usefulness of exploring PWB in adolescents in both clinical and non-clinical research samples. By looking at each dimension of PWB separately, the intervention can be improved and focus on aspects of PWB that are more salient to improving positive affect.

1.6 Future-Directed Thinking

A common position for psychologists to explain present behavior in individuals from is by looking in the past. Seligman, Railton, Baumeister and Sripada (2013), however, suggest that past experience influences behaviours not through directly moulding behaviour but by providing information about possible futures. Understanding how people develop ideas about positive futures is therefore an important avenue of investigation.

Future thinking has been defined, measured and researched in different ways and refers to the ability to imagine future possibilities (Gilbert & Wilson, 2007). An ability to disengage thoughts from the present, to focus on a longer-term goal, or to consider the consequences of an action before carrying it out, is an important adaptive function (Tulving & Metcalfe, 2005). The study of future thinking is therefore gaining momentum across various domains of psychology. Seligman et al., (2013) suggest that the representation of possible futures is a central organizing feature of perception, cognition, affect, memory, motivation and action. The aforementioned constructs underpin the processes that are central to the understanding of human behavior in Clinical Psychology.

Positive future constructs such as Hope (Snyder, 2002) and Optimism (Scheier & Carver, 1985), as well as other concepts, such as Wishing and Wanting (Bruininks & Malle, 2005) have been used in research to investigate how different future thinking positions are related to a range of other

constructs. The research suggests that people think about their future to a greater or lesser extent, with some people being more future focused and some people being more focused on the past (Holman & Silver, 2005). When people are asked to think about the future, those who score more highly on fears and worries about the future have poorer well being than those who are able to think positively about, and plan towards, future events (Holman & Silver, 2005). The ability to think in a future-directed way is also seen as an opportunity to bring openness to new experiences and a hopeful, optimistic outlook on life (Fortunato and Furey, 2011).

Future thinking has been measured in a variety of ways across the research. Questionnaires such as The Consideration of Future Consequences Scale (CFC; Strathman, Gleicher, Boninger, & Edwards, 1994) and the Zimbardo Time Perspective Questionnaire (Zimbardo & Boyd, 1999) assess orientation to, and inclination of, future thinking. The CFC has been used to study eating behaviours (e.g., Dassen, Houben & Jansen, 2015), and health behaviours (e.g., Daugherty & Brase, 2010). Other measures, such as, The Time-style Inventory (Fortunato & Furey, 2009) have items that measure the perspective of an individuals thinking style. The items on this scale include descriptions of 'styles' of thinking, such as pioneering or imaginative. This measure has been used to explore the 'Theory of Mind Time', which draws comparisons between future thinking and future perspective taking (Fortunato & Furey, 2010) and how future perspective relates to well-being (Forunato & Furey, 2011). Future thinking has also been investigated with experimental

procedures, such as using visual cues to imagine future events (D'Argembeau & Van der Linden, 2004), listing fears and hopes for the future (Seigner, 2008) and eliciting future emotional responses to projected events (D'Argembeu & Van der Linden, 2012). Despite the broad range of procedures and questionnaires available, the The Future Thinking Task (MacLeod, Rose & Williams, 2003; MacLeod & Conway, 1996) has become one of the most widely used tools. The task was developed in an attempt to understand the psychological processes involved in hopelessness (MacLeod et al., 1993). The task asks individuals to generate a list of events that they are not looking forward to, as well as a list of events they are looking forward to, for three different time periods (in the next week, year, and 5-10 years.) They are given a time limit to complete the task and their responses are tallied to give a total number of positive and negative events.

Anxious-depressed individuals anticipate more negative outcomes and fewer positive future outcomes than non-clinical controls (MacLeod and Byrne, 1996). Para-suicidal (those that engage in self harm) adults, when compared to controls and depressed groups, were less able to generate positive future expectations, but did not differ on their ability to generate negative future expectations (MacLeod, Pankhania, Lee, & Mitchell, 1997). These relationships have been replicated in a range of studies and the task has become well used in further research (e.g., MacLeod, Tata, Kentish & Jacobsen, 1997; Kosnes, Whelan, O'Donovan & McHugh, 2013, Bjärehed, Sarkohi, & Andersson, 2010). The generation of positive and negative

future thoughts leads to different biological outcomes (Sharot, Riccardi, Raio, & Phelps, 2007) which offers further support for the distinction between the two ways of thinking and there existence not being on continuum.

The links between depressed individuals and future thinking are reversed from those found in anxious individuals, who commonly generate more negative future events, but do not differ on positive future events (e.g. Conaghan & Davidson, 2002; Hunter & O'Connor, 2003; MacLeod et al., 1997). This relationship fits with previous research that explains anxiety in terms of anticipation and exaggeration of potential future threat (Barlow, 1988; Kendall & Chansky, 1991). The findings in anxious adolescents, however, are less clear. Miles, MacLeod and Pote, (2004) found both no difference between anxious and depressed individuals, with both groups reporting significantly more negative events, but no fewer positive events. The literature shows the extensive use of the FTT in clinical populations, to understand the links between future thinking, distress, anxiety and depression. The findings strengthen the distinct nature of positive and negative future experiences, which has important implications for treatment and the need to not only tackle negative thinking, but also strengthen positive thinking. In non-clinical adults, lower Well-Being, as with depression, is associated with reduced generation of positive future events, regardless of the number of negative events (MacLeod & Conway, 2005). This supports the need to understand the skills that strengthen positive thinking in the general population, to act as a potential buffer to developing mental illness (Seligman & Csikszentmihalyi, 2000).

There has also been relatively little research on the relationship between future thinking and affect, when compared to the literature on past experiences and affect (Gilbert & Wilson, 2007). It is important to consider future thinking in further research because individuals ability to set goals and make plans to guide behavior is contingent on an ability to imagine possible futures (Bechara & Damasio, 2005). As outlined above, future-thinking research is well established in adult populations, particularly with clinical populations. The relationship between adolescent future thoughts and well-being, however, is less well established and therefore needs further consideration in the present study.

1.7 Planning Towards Goals

Goals can be defined as internal representations of desired outcomes (Austin & Vancouver, 1996). Those who are striving towards goals that are personally relevant and in line with their values report higher levels of life satisfaction, happiness, and sense of self-actualization (Sheldon & Kasser, 1995). In addition, para-suicidal individuals show an inability to plan towards their goals. They can think of positive life goals, but perceive more obstacles, and feel less in control of achieving the goal (Vincent & Boddana, 1994).

Plans assist people to move from present to future in a direction that they choose to go (Scholnick & Friedman, 1993). Relative to goals, plans represent a more detailed analysis and tend to be more indicative of everyday behavior.

Specific goals regulate action more reliably than vague goals (Locke & Latham, 2002) and a person who has a specific goal, and a specific plan towards it, shows higher levels of SWB. This research was conducted with a sample of those who self reported an ability to plan. The findings, therefore, need to be interpreted with caution, due to potential social desirability bias (Prenda & Lachman, 2001). In the present study, A Planning Task (MacLeod & Conway, 2005) will be used to ask participants to set a goal and produce a plan. This will give a more accurate representation of participants planning ability and therefore a better understanding of how planning and well-being relate. The Planning towards Goals Task (MacLeod & Conway, 2005) asks participants to set goals for different aspects of their life, such as Education and Career and Leisure and Activity. After someone has set a goal, they are then given a specified period of time to generate as many steps as they can to achieve the goal. The researcher will then code the steps for specificity. A planning ability score is derived from the total number, and specificity, of steps generated. The Planning Towards Goals Task has been widely used, with clinical and non-clinical samples (e.g. MacLeod & Conway, 2005; 2007).

Goals are an important part of achieving optimal Well-Being and personal goals typically represent people's attempts to gain a sense of meaning, purpose, and direction in life (Cantor & Sanderson, 1999). Engaging in chosen and intentional activities is an important contributor to PWB (Sheldon & Lyubomirsky, 2006). These intentional activities can be behavioural (e.g. taking regular exercise), cognitive (positive interpretation of events) or motivational (striving towards goals), but all contribute to factors of PWB. The

importance of setting goals and identifying the behavioural processes towards goals has been researched in specific outcomes in adolescent populations. These include: risky behaviour, educational attainment, social support, self-efficacy and many other constructs of adolescent behaviour, health and well-being (Massey, Gebhardt and Garnefski 2008), but not specifically with PWB.

Nevertheless, research on adolescent well-being has found associations with not only an ability to set a valued goal, but also associated with how this goal is pursued and realised (Nurmi, 1999). The different aspects of PWB have been associated with goals in different ways. Adolescent autonomy can be contextualized as having three components; 1) attitudinal, which refers to deciding on a goal, 2) Emotional, which refers to a confidence in the choice and 3) functional, which refers to the ability to develop a plan towards the goal (Noom, Dekovic & Meeus, 2001). Evidence suggests that different aspects of autonomy develop at different rates during adolescence and that whilst functional autonomy is relatively stable, emotional and attitudinal autonomy increases with age. The present study will add to the literature by exploring how other dimensions of PWB are related to planning towards goals.

1.8 Socio-Economic and Ethnic differences in Well-Being

There are strong links between mental health problems and social disadvantage, with children and young people in the poorest households three times more likely to have mental health problems than those growing up in

better-off homes (Green, McGinnity, Meltzer, Ford, & Goodman, 2004). In addition, if all young people had the same level of risk as those from the highest income households, there would between 35 and 65 percent fewer mental disorders across a range of diagnoses (Meltzer, Gatward, Goodman & Ford, 2003). The relationship between mental health and socio-economic status is, however, complex and bi-directional. Evidence suggests that deprivation is a key predictor of poorer mental and physical health (Marmot & Bell, 2012). Other studies, however, support the notion that deprivation can occur as a result of mental health difficulties, due to poorer educational achievement or parental mental health problems (Chan, 2010).

The well-established link between Mental Heath and Socio-economic status outlined above is not replicated in the well-being (PWB and SWB) and Socio-economic status (SES) literature, particularly in young people. The research that predominates the child Well-Being literature uses SWB as the well-being indicator. In a study of Children from countries with high income inequality, the UK rated as having the worst levels of Childhood well-being (UNICEF, 2007). In addition, The Children's Society conducted a 9-year longitudinal study of Well-Being asking 50,000 children what matters in their lives. In 2014, Children from families with fewer material resources experience less than average SWB (Good Childhood Report, 2014).

There is very little understanding of SES trends in PWB. A social gradient exists in adults whereby lower levels of socio-economic status are associated with lower psychological well-being and higher rates of disorder (Dolan, Peasgood & White, 2008; Ryff & Singer, 1998) in adults. There is also some research in older adults. More specifically, as part of the Elsa Project, a steep socio-economic gradient in PWB was seen in Older adults. This relationship was particularly pronounced for eudaimonic and evaluative measures of Well-Being (PWB) and was not apparent with affect or satisfaction with life (Steptoe, Demakakos & Oliveira, 2012). This suggests that in older adults socio-economic status is particularly related with PWB. The relationship in adolescents will be investigated in the present study to ascertain if SES and PWB are related in the same way.

Socio-economic status can limit opportunity for meaningful activities and sense of purpose, which would theoretically result in poorer well-being. This association is not inevitable, however, and in some instances those who face challenge and adversity can present with greater sense of purpose and meaning. Dodge et al (2012) considered well being as a balance between challenges and resources based on psychological, social and physical factors. For example two people could be faced with the social challenge of poverty, but if one person possessed the psychological resources (e.g. ability to plan towards goals) to overcome it they may well experience higher well being.

There is limited research into the mental health of children and young people from black and minority ethnic communities and small sample sizes often make it difficult to draw reliable conclusions (Dogra, Singh, Svirydzenka & Vostanis, 2012). In addition, the evidence of the relationships between Ethnicity and Well-Being is mixed and has produced contradictory findings. In the UK, Children's SWB is lower in White Children, than their Pakistani, Indian and Bangladeshi peers (The Good Childhood Report, 2014). It is difficult to identify a direct link or association between ethnicity and PWB. In research, proxy variables and other constructs have been used to look at the relationship between ethnic groups and PWB. Perceived daily racial discrimination, for example, was negatively correlated with PWB (Ryff, Keyes & Hughes, 2003). A protective factor, however, is an adolescent who has a stronger sense of ethnic identity. These adolescents report improved mental health outcomes and academic success across a range of research studies (Wakefield & Hudley, 2007). This is an important consideration for adolescent groups. Adolescence is both a time of identity formation, and, a time of grappling to fit in with peers. The way in which an adolescent relates to their ethnicity and the culture around them, may well contribute to their well-being.

The evidence suggests that our environment and external circumstances, such as socio-economic status, affect our well-being, but our actions, thoughts, and attitudes may have a greater influence (Huppert, 2009). By understanding the interaction between these internal and external factors, in

adolescents, we may be able to understand more about which has more of an influence of dimensions of PWB.

1.9 The Relationship between PWB, Future thinking and Planning towards goals

In a large sample of 12-18 year olds the majority of young people reported moderate emotional, social and psychological well-being (Keyes, 2006). The present study hopes to contribute a more rounded and full description of psychological well-being and positive functioning. This will help develop knowledge towards enabling young people, who are moderately mentally healthy, to function more optimally.

The relationships between future thinking and PWB in adolescents will also be explored. Previous research has examined the relationship between SWB and future thinking in adolescent groups, but not PWB. In a study of 7,000 young people (age 10-15 years), what might happen in the future was the thing young people were least happy about in their lives (The Children's Society, 2010). This was over and above their appearance, money, possessions and school. Clinical research has explored the relationship between distress and future thinking. Anxious or depressed adolescents generated significantly more negative events than controls. They did not, however, differ on number of positive events generated (Miles et al., 2004). This finding is inconsistent with adult populations and may suggest an association between the way adolescents think about their future and distress, which is specific to this age

group. The age group selected for the present study was done so based on these findings and the fact that older adolescents had the lowest mean happiness about what might happen in the future, when compared to younger adolescent (The Children's Society, 2010).

Adolescence represents a time of transition, thinking about and making choices about the future. It is a time where setting goals and making plans is particularly relevant. Previous research has also shown that prevalence of clinical depression and depressed mood rises dramatically in the 15 to 18 age group (Hankin et al., 1998). This provides the rationale to help understand if there is a relationship between PWB and an ability to plan towards goals. Goals provide meaning, purpose, and direction in life, as well as a framework for interpreting life experience (Schmuck & Sheldon, 2001). These Concepts are all factors within PWB and the proposed study will consider this association in an adolescent population.

The relationships between goals, future thinking and PWB need exploring in adolescents from different Ethnicities, Neighbourhoods and SES. The present study will address this with a diverse sample, from two different schools, in different neighbourhoods. In a sample of 2,311 16-24 year olds, weighted by age, gender and region to represent the UK, 22% from deprived homes believe that "few or none of their goals in life are achievable" and only 8% feel positive about their future (Princes Trust, 2012). At risk adolescents, with low socio-economic resources, are less likely to pursue their goals. In addition, a review of research of goal content and processes in adolescents, suggests

that whilst goal content varies across cultural and ethnic groups, little is known about the difference in goal processes (Massey et al., 2008). These sorts of findings are the basis for making predictions in the present study and highlight the value of this area of research.

The interest in adolescent well-being has predominantly come from more objective indicators, such as educational attainment (The Children's Society, 2010). These measures provide little in understanding adolescent PWB, leaving scope for more detailed analysis into the dimensions of PWB. There has been some research investigating the psychometric properties of the Scale of PWB in adolescent samples. For example Van Dierendonck (2004) found the same six factor structure in adolescents and other studies have shown the scale to have good internal, convergent and discriminant validity in adolescent samples (e.g. Vleioras & Bosma, 2005;Ruini & Fava, 2004)

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1.10 The Present Study

The present study brings Positive Psychology concepts to a clinical psychology study. This is in line with current trends in the literature and policy development. A recent policy on improving young people's health and wellbeing (Public Health England, 2015) highlighted the need to integrate thinking about how to tackle well-being of young people. Research suggests that at the centre of health and wellbeing is young people's relationships with others and that one of the fundamental features of improving well-being was providing a positive focus on what makes young people feel well.

Psychologists are well positioned to contribute to this in an effective way and the aims of the present study are based on such conceptualisations of good Mental Health.

The rationale for the present study is based on the literature presented in this chapter. The study will address a gap in the PWB literature in adolescent groups, by investigating how the six dimensions relate to affect, planning towards goals and future thinking. The study will go further by exploring PWB, planning and future thinking in different ethnic and socio-economic groups.

The aims of the present study, therefore, are to contribute a positive mental health perspective in adolescent groups. This hopes to contribute to prevention, interventions and a better understanding of what keeps young people functioning optimally.

1.10.1 Research Questions and Hypotheses

Based on the literature review and the findings outlined in the introduction, specific dimensions of Psychological Well-being will be considered separately as this will provide a novel contribution to the research literature. Separate predictions are proposed for individual dimensions of PWB to gain a more in depth understanding of specific aspects of PWB, in addition to identifying how each dimension relates to affect, future thinking and planning towards goals.

Hypothesis 1: Negative affect will correlate negatively with Autonomy, Environmental Mastery and Self-Acceptance and Positive affect will correlate positively with Positive Relationships, Personal Growth and Sense of Purpose.

Hypothesis 2: The six different dimensions of PWB will be associated with positive and negative future thinking in adolescents. Higher scores on different dimensions of PWB will be associated with significantly greater number of positive future thoughts and significantly fewer negative future thoughts.

This hypothesis is based on studies that report relationships between future thinking and well-being, depression, anxiety and hopelessness (MacLeod & Byrne, 1996; MacLeod & Conway, 2006; MacLeod, Pankhania, Lee, & Mitchell, 1997). More specific predictions for each dimension of PWB are not made because this study aims to address a gap in the literature by looking at the separate relationships of the six dimensions PWB to future thinking.

Hypothesis 3: The six different dimensions of PWB will be differentially associated with planning towards goals in adolescents**.** It is expected that higher scores on different dimensions of PWB will be associated with better planning ability.

The final hypothesis is made based on findings that link goals to measures related to PWB, such as life satisfaction (Nurmi, 1999) and finding purpose and meaning (Cantor & Sanderson, 1999). In addition, Sheldon and Lyubomirsky (2006) found that engaging with intentional activities contribute to

PWB. Specific predictions about the direction of the relationship are not made for each individual dimension of PWB because the study is intended to explore these associations in young people.

In addition, an exploration of the following research question will be conducted. This is to establish a clearer understanding of PWB, future thinking and goals in groups from different Neighbourhoods, Ethnic Groups and SES.

In order to test these hypotheses a corrected alpha level ($p < .01$) was used for all statistical tests. This was to account for the multiple correlations and the increased likelihood of Type 1 error.

Research Questions: Do adolescents from two different Schools, in different demographic areas and of a different age and ethnic composition differ on dimensions of Psychological Well-Being, Future thinking and Planning Towards Goals?

2.0 Method

2.1 Ethical Approval

The study received ethical approval by the Royal Holloway, University of London Research and Ethics Committee in August 2014 (Appendix 1).

2.2 Participants

School students were recruited from two schools in the South East of England and London. Participants met the inclusion criteria if they were aged between 15 and 18 years. 201 participants took part in the present study (127 males, 67 females, 7 missing data) and the mean age was 16.16 (SD = 1.16). Full participant demographics are reported in Chapter 3. Two schools were approached and selected by the researcher. The researcher had previously conducted research in both schools. The schools were also selected on the basis of their different demographic, ethnic, and socio-economic profiles.

2.3 Power Calculation

A predicted sample size of *N* = 84 was needed for the study (Cohen, 1992). The sample size is based on detecting a medium effect size with a power of 0.8 and an alpha equal to 0.05 using correlations and regressions for up to

four predictor variables (Cohen, 1992). The actual sample size of 199, for the correlation analysis gave a power level of 0.9 for the above analysis.

2.4 Design

A correlational design was used. All participants completed the self- report questionnaires, measuring Psychological Well-Being (PWB), positive and negative affect (PANAS) and subjective socio-economic status (SES). All participants also completed the verbal fluency task (FAS), the Future thinking task (FTT) and the planning towards goals task (PGT).

2.5 Measures

2.5.1 Questionnaires

Demographic Questionnaire

Participants completed a demographic questionnaire that was developed from examples of previous research with adolescent populations. The questionnaire gathered information about participant's age, school year group, gender and ethnicity. Questions about the home environment, parental education level and occupation were also included (Appendix 2).

Ryff Psychological Well-Being Scale (PWB) – 42-item version – Ryff (1989)

The Ryff Psychological Well-Being scale is a widely used measure of well-being. The measure of Psychological Well-Being has been well reviewed in the literature and was theory driven in its development (Abbott, Ploubidis, Huppert, Kuh & Croudace, 2009; Springer & Hauser, 2006). The Ryff's PWB Scales are one of the most widely applied measures of PWB in clinical and general samples varying in gender, age, marital status, level of education, health. The measure correlates highly with other aspects of Well-Being (Clarke et al. 2001; Keyes et al. 2002; Ryff 1989; Ryff and Keyes 1995).
The scale consists of statements, positive and negative, related to six different dimensions of Psychological Well-Being:

1. Autonomy (e.g., *"I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people")*
2. Environmental Mastery – *(e.g. "In general, I feel I m in charge of the situation in which I live")*
3. Personal Growth - *(e.g. "I am not interested in activities that will expand my horizons")*
4. Purpose in Life –*(e.g. "I live life one day at a time and don't really think about the future")*
5. Positive Relations –*(e.g. "Most people see me as loving and affectionate")*
6. Self-Acceptance –*(e.g. "When I look at the story of my life, I am pleased with how things have turned out")*

Participants rate each item on a six-point scale according to how much they agree or disagree with the statement. The present study uses the 42-item version of the scale. This is an alternative to the original 78-item and has been widely used. It's the shortest version of the scale that still shows good psychometric properties (Sewell, Hauser, Springer, & Hauser, 2004). The scale has shown good reliability and validity in its use with adolescent populations (e.g., Fernandes, Vasconcelos-Raposo & Teixeira, 2010). Cronbach's alpha for the whole scale was approximately .75 to .78 in a study with a similar sample of high school students (Garcia, 2011). The present study will use the dimensions of the scale separately and inter-correlations are reported in the next section (Table 6).

Positive and Negative Affect Scale – PANAS – Watson, Clark & Tellegan (1988)

The Positive and Negative Affect Scale is a self-report measure that consists of two, ten-item, mood scales of Positive and Negative Affect. It is a well-recognized, brief, measure of affective structure. The items are a list of words that describe different feelings and emotions. Participants were asked to what extent they have experienced these emotions in the past week, a method that has been used in previous research (e.g. MacLeod & Conway, 2005). The scale uses a 5-point Likert Scale. A score of one represents feeling the emotion 'very slightly or not at all' and a score of 5 represents feeling the emotion 'extremely'.

The measure shows high internal consistency for the Positive (α = .88 to .90) and Negative (α = .84 to .87) Scales (Crawford & Henry, 2004). The correlation between the Positive and Negative affect scales show good discriminant validity (α = -.16 to -.23) (Watson & Clark, 1997). The measure has been widely used in adolescent populations and is considered to have good psychometric properties in this population (Huebner, 1995; Melvin & Molloy, 2000). In the present study, the scale showed high internal consistency for the positive ((α = .84) and negative (α = .80) scales.

MacArthur Scale of Subjective Social Status (Adler & Stewart, 2000)

The scale was developed as a self-report measure of subjective socio-economic status. It consists of a picture of a seven-rung ladder. Participants were informed that the picture represents a 'social ladder'. They were then cued to the socio-economic indicators that would place different people at the top or bottom of the ladder (e.g., education, housing and employment) and asked to place an X on the rung they believe represents their own and their families' place in society. The instructions on the task are presented below.

Think of this ladder as representing where people stand in the United Kingdom. At the top of the ladder are the people who are the best off – those who have the most money, the most education, and the most respected jobs. At the bottom are the people who are the worst off – who have the least

money, the least education, and the least respected jobs or no job. The higher up you are on this ladder, the closer you are to the people at the very top and the lower you are, the closer you are to the people at the very bottom. Where would you place yourself/your family on the ladder?"

School Neighbourhood

Objective Socio-economic status was measured using the Office of National Statistics Index of Multiple Deprivation (2010). This is the combined and weighted score of 38 separate indicators across seven distinct domains:

1. Income Deprivation
2. Employment Deprivation
3. Health Deprivation and Disability
4. Education, Skills and Training Deprivation
5. Barriers to Housing and Services
6. Crime
7. Living Environment Deprivation

The combined score corresponds to the relative deprivation of every Lower layer Super Output Area (LSOA) in England. The measure is continuous. This measure was used to provide a score for the neighbourhood of each school.

Objective Socio-Economic Status

Participant's parental occupation data was used as a marker of Socio-economic Status. Occupations were coded into ten different categories based on the National Statistics Socio-Economic Classification system (NS-SEC, 2010). The frequency of occupations represented in each category was tallied for each parent.

The data were grouped based on the National Statistics Socio-Economic Classification system (NS-SEC, 2010) and the frequencies of each occupational category reported (Table 5). Two groups were then formed around the median to create a High (*N* = 57) and Low SES (*N* = 129) group based on Father's Occupation and High (*N*= 40) and Low (*N* = 108) SES group based on Mother's Occupation. Mother's and Father's occupation was separated due to a large amount of missing data. Two groups were created for the analysis because the NS-SEC (2010) does not hold the characteristics of a normal scale.

2.5.2 Tasks

Control Task - Verbal Fluency – FAS (Lezak, 1995)

The FAS task is a test of Phonemic verbal fluency and can be traced back to word fluency tests, which formed part of primary mental abilities tests. Benton (1968) later created an individual measure of verbal fluency, giving a time of one minute to generate words. They split letters of the alphabet into hard (e.g.,

Q & J), moderate (e.g., I, N) and easy (e.g., F, A) to gather a more in depth analysis of word generation. The FAS test was later developed into a controlled oral word association test and has been widely used across neuropsychological assessment (Tombaugh, Kozak & Rees, 1999) and clinical psychology research (Lezak, 1995).

The FAS assessed general levels of cognitive fluency. In the present study, participants were asked to generate words that began with the letter F, A and S. They were given a minute to generate as many responses as they could. They were told that all words had to be three or more letters and that no names, places or the use of prefixes and suffixes were allowed.

The task was used to prime participants to get in the right frame of mind for doing the FTT and also to control for possible effects of general verbal fluency. Participants had to generate responses and get used to writing them down for a restricted period of time. It is commonly used as preparation for the FTT.

Future Thinking Task (FTT) – MacLeod, Rose & Williams (1993)

The future thinking task is an adaptation of the FAS which is the standard verbal fluency task described above. The future thinking task cued participants with three future time periods (“the next week”, “the next year” and “the next five to ten years”). They were then asked, in turn, to think of positive experiences and negative future experiences that they thought could might

happen. Participants were given a set time of two minutes for each condition. They were told to generate as many responses as they could.

Participants were introduced to the FTT (See Appendix 2 for full instructions) and presented with each time period in turn. The order of positive and negative future conditions was manipulated to try and negate any order effects. Participants were given examples of things that they might be looking forward to and told that the responses needed to be things that would "definitely happen or more than likely happen". Prior to starting the task, the groups of students were given the opportunity to answer questions.

Following the pilot study, it was decided that participants would be given two minutes for each condition. Ordinarily, the task is presented and responded to verbally on a one to one basis. As this task was being delivered in a group, in the classroom, the participants were given the additional time to write and to try and limit the effects of varied literacy ability across the group.

Two variables (Positive and Negative) were produced from the Future Thinking task. The researcher counted future thoughts for each time period (the next week, next year and next five to ten years) and then added the score for each time period to create a total. Any repetition of thoughts in more than one time period was not counted. The FTT score is based on a simple count of instances and it is not standard practice to calculate inter-rater reliability. This practice was adopted in the present study.

Planning Towards Goals (MacLeod & Conway, 2005)

Planning towards goals was measured using a task designed by MacLeod and Conway (2005). There are two stages to the task. First, the participants were given verbal and written instructions to identify a goal for each of three different aspects of their lives. They were asked to think about something that they would like to achieve in the future and were given prompts for each category. The three categories were selected because they represent very broad life domains and were considered to be relevant to the adolescent population. The three categories, with the prompts that were used were:

1. Education and Career - *e.g., a job/course/exam results/university or dream career.*
2. Leisure and Activity – *e.g., hobbies/fitness/music/health/sport or social groups.*
3. Family and Friends – *e.g., time with friends and family/presents/activities or communication with family and friends*

In the second stage, participants were asked to think of each goal in turn. The goal category was written at the top of the page (e.g., Education and Career) to cue them to the correct goal. The participants were asked to think about where they are now and the goal they had set. They were asked to generate as many steps as they could towards their goal. Instructions emphasised making the steps as detailed, effective, specific and realistic as possible. Participants were given the opportunity to ask questions before the time was

started. They were also reminded to try their best and continue to generate steps for the full length of time provided. They were then given two minutes to write the steps. The process was repeated for each goal.

Three variables were derived from the task and examples from the data are shown in table 2:

1. **Number of Steps** – The mean number of steps generated for the three goals. The researcher counted the steps for each goal. This was often straightforward, with steps presented on separate lines. In cases where the participant had written a more continuous passage of prose, the researcher numbered steps within the passage. In addition, restating the goal or commenting on a goal or step was ignored.

2. **Plan Specificity** – The specificity score is derived from coding each step towards each goal with a four-point rating scale (0-4). The steps had to be specific to the goal that had been generated. The researcher used coding instructions from previous research (Macleod et al, 2005). The instructions provided examples, based on previous responses, for each score. Specificity was conceptualized by having a time frame and measurable outcome to the goal set (E.g. I want to lose 3kg in 1 month). Specificity of steps was conceptualized by the step being specific to the goal, action focused and well planned (E.g. I will go to the gym twice a week). A random sample of 10% of responses was coded by a second, blind rater and showed good agreement. A two-

way mixed intra-class correlation was run (ICC = .78) showing good reliability of the raters.

3. **Goal Specificity** - The specificity score is derived from coding each goal with a four-point rating scale (0-4). The researcher used coding instructions from previous research (Macleod et al, 2005). The instructions provided examples, based on previous responses, for each score. Specificity was conceptualized by having a time frame and measurable outcome to the goal set (E.g. I want to lose 3kg in 1 month). A random sample of 10% of responses was coded by a second, blind rater and showed good agreement. A two-way mixed intra-class correlation was run (ICC = .78) showing good reliability of the raters.

Table 2: *Goal and Plan Specificity Coding Score – Examples from the data*

Goal Type	Coding Score	Goal Specificity Examples	Plan Specificity Examples
Education and Career	0	*'to be happy in whatever I do'*	*'determination'*
	1	*'A Surgeon'*	*'work hard'*
	2	*'Getting merits and distinctions in all my B-techs'*	*'pay more attention in lessons'*
	3	*'get a B or higher in my biology and chemistry AS and A2'*	*'go to university to study medicine after my a-levels'*
Leisure and Activity	0	*'relaxation'*	*'be talented'*
	1	*'get into running'*	*'eat healthy'*
	2	*'becoming diamond in league of legends'*	*'spend a lot of time practicing on the game'*
	3	*'improve my swimming PB by 10 seconds'*	*'go to football training twice a week'*
Family and Friends	0	*"to be closer"*	*'see people'*
	1	*'No arguments and living peacefully'*	*'be nice to sister'*
	2	*'to see my Granddad more regularly'*	*'plan trips with family'*
	3	*'meet up with my friends after school once a week'*	*'have dinner with my family twice a week'*

2.6 Pilot Study

The aims of the pilot study were as follow:

1. To gain feedback from teaching staff about the suitability of the tasks and questionnaires for their students.
2. To check that all the questionnaires and tasks could be understood by a representative sample
3. To time the completion of the questionnaires and tasks
4. To identify any procedural changes in administering the tasks and questionnaires to a group of students.

Phase One

In the initial phase of the pilot study the questionnaires were emailed to three members of staff at each school. The staff were asked to review the questionnaires and task pack and asked for feedback. Following feedback about the length of questions, the duration that students would need to complete tasks and suggestion that the research should be supported by teaching assistants and class teachers, phase two of the pilot study was carried out.

Phase Two

A small sample of 15-18 year olds were involved in a practice administration. The full procedure was followed and delivered to the students, before they were then given the opportunity to provide feedback on their experiences.

The students were given a brief presentation that explained the aims of the study, what their involvement would include and the consent information. Questionnaire pack completion and the administration of tasks took 55 minutes. The questionnaire completion took students between fifteen and twenty minutes. The students were then asked for their feedback on the tasks and questionnaires. As a result of the pilot study and the feedback from staff and pupils, amendments were made to the task pack instructions and the data collection protocol. The FTT and Planning task were changed to give participants two minutes per condition (as suggested by teaching staff). The instructions given during the data collection protocol gave opportunity for questions in between in each task. In addition, the students were reminded to continue working on the task and the questionnaires at specified time points (See Appendix 2).

2.7 Procedure

Recruitment

The researcher presented the research study, to students in both schools on two separate days. In one school, this was done one month in advance of data collection to each of the groups that would be taking part. In the second

school it was done in two assemblies, Year 11 and Sixth form, 3 weeks prior to data collection. The presentation introduced the project, the main topics involved (Well-Being, Goals and Future Thinking) and described the procedure. The study aims and confidentiality considerations were also described. Students were given the opportunity to ask questions. The students were then given parental-opt out letters (Appendix 3) and informed that these needed to only be returned if they did not want to participate.

Data were collected in November and December 2015. The researcher spent one full day in each school. In School 1, five classes took part in the research. Two of these classes were Year 11 PE groups. The other three groups were Sixth Form classes, which completed the tasks and questionnaires during their Form Time. During an hour and a half lesson, the researcher led the delivery of the tasks in thirty-minute slots. The groups were left to complete the questionnaires in the rest of the session, with a member of teaching staff present. The teacher had been briefed on the questionnaire pack and was able to offer assistance if required. In school 2 the researcher conducted the data collection in 5 different sessions. Pupils had been informed which group they were in and attended the lesson in there class groups. There were two year 11 groups and 3 groups that included Year 11 and Sixth Form students.

The completion of tasks and questionnaires took one hour. The session always began with a short description on the study, informed consent (Appendix 3), and an overview of what the session would include. Students

were then given the opportunity to ask questions. They were informed they could withdraw at any point during the session and that this would not impact on their education. Students who chose not to partake in the research, were given a different piece of work by their class teacher.

The order of the tasks and questionnaires was manipulated for the different groups to account for order effects. Equal numbers of participants completed the questionnaires or the tasks first. This was achieved by rotating the order of delivery of task and questionnaire packs for different classes. In addition, the order of the questionnaires and tasks, within the administration packs, was different across the groups. This was achieved by numbering task and questionnaire packs and randomly assigning numbered packs to participant groups. The number on the task and questionnaire pack was matched for each individual.

The Tasks

The delivery of the task instructions was standardized across all the groups. The researcher provided verbal instructions (Appendix 2) and a Presentation, showing written prompts, was used as a reminder to students during the tasks (Appendix 4). The participants were given a paginated Task Pack (Appendix 5). The instructions on the front page were read aloud by the researcher:

1. *Instructions for each task will be given by the researcher.*
2. *There are no right or wrong answers.*

3. *Please work on your own.*
4. *You will have a set amount of time to complete each task.*
5. *The researcher will tell you when to start, stop and turn the page.*
6. *There will be opportunity to ask questions at the START and END of each task.*

The participants were then given the opportunity to ask questions. They were requested to hold questions for the beginning and end of each task. They were then instructed to turn to the first page of their task pack. The first page contained the FAS task. The researcher held a Task Pack up at the front of the room to show participants which page they should have in front of them. This was repeated each time participants were asked to turn the page. The following instructions were then given:

"*I would like you to now think of as many words as you can beginning with a certain letter. I will ask you to do this for three different letters of the alphabet. You will have one minute for each letter."*

Participants were informed that they could not use Names of places and people, sequences of the same word and Brands. They were asked if they wanted to ask any questions prior to the task start. The letters F, A and S were then presented in turn by asking students to write the letter, needed for each minute, at the top of the column.

The second section of the task pack was the Future Thinking Task. Participants were instructed to turn to the next page. The task was introduced with the following statement:

"I would like you to think of things that will happen in your future at the three different time periods. I will give you each time period one at a time. This time you will have two minutes for each part of the task."

The researcher continued to explain that the thoughts needed to be about things that will, or at least, likely to happen. They were cued to think about different areas of their life during each condition by telling them to think about their Friends, family, school, future careers and leisure activities. The participants were instructed to keep trying to generate thoughts for the whole time period even if they were finding it difficult. The task was completed for the two conditions (Positive and Negative) and across three separate conditions (the next week, next year and next five to ten years). Each condition was presented in turn and on a separate page. Participants were given the opportunity to ask questions between the positive and negative sections of administration. The Positive condition was introduced:

"*I am going to ask you to think about things you are looking forward. These are positive things, which you think you will enjoy."*

During the two minutes, the researcher let students know when they were half way and when there was 15 seconds left. As before the presentation at the

front of the room reminded students of the instructions. Participants were given the opportunity to pause and ask questions before the Negative condition was introduced:

"Now think about things you are worried about and are not looking forward to. These are negative things that you would prefer not to happen."

The final task was the planning towards goals task. The task begins with participants being instructed to set three goals. The three goals were written, in the participants task pack, under three headings:

1. Education and Career
2. Leisure and Activity
3. Family and Friends

Examples were presented verbally and on the visual presentation. Prior to beginning the task, the researcher ensured all participants had enough time to have written their goals. The instructions for the next phase of the task were then given:

"Now, for the first goal I want you to write as many things or steps that you can think of that will help you achieve this goal. Think about where you are now and what you need to do to get to the first goal you wrote down. Be as specific as you can. Try to make each goal realistic and think about how likely, it is, to help you reach your goal."

Participants were given the opportunity to ask questions before the task started. They were reminded to try and generate steps for the whole time given, even if they were finding it difficult. Then each goal was presented in turn, on a separate page, for two minutes. As with the FTT, participants were informed half way through the time and with 15 seconds to go.

The Questionnaires

The questionnaire packs (Appendix 6) were given out to participants. If they had completed the task first, participants were asked to leave the task pack on the side of their desk for the researcher to collect them. They were then directed to look at the front page of the Questionnaire Pack. The researcher held the pack up and read the instructions aloud:

- *"This pack contains all the information you need.*
- *There are three written questionnaires and one task to complete.*
- *Please work through the booklet, in order, one page at a time.*
- *Please complete all questions.*
- *There are no right or wrong answers.*
- *Do not spend too long on each question, just put the first answer that pops into your head.*
- *If you have a question, at any point, please raise your hand."*

Participants were then given 25 minutes to complete the questionnaires. Teachers and the researcher circulated to prompt students to continue to work through the questionnaires and respond to any questions.

Debrief

Participants were thanked for participating in the research. They were reminded of their right to withdraw and given the opportunity to ask any further questions. They were advised to take any future questions, or concerns they may have, to their teachers. The researcher explained the purpose of the study, the hopes for the findings and the planned dissemination of the results. The confidentiality and school anonymity protocol was reiterated.

Ethical Considerations: Both schools agreed to have at least one other teacher present when the researcher was carrying out the data collection. The students were advised to speak to their teacher or the researcher if the questions or tasks had made them feel lower or more worried than usual. All students were debriefed by the researcher and told what the research was hoping to achieve.

3.0 Results

3.1 Data Entry

The data were analysed using IBM SPSS Statistical Data Editor version 21. All data were checked for accuracy prior to the analysis. Missing values were coded and the data file was set up to exclude all missing values from the analysis.

The distribution of scores, for each variable, were checked for normality. Normality of distribution was assessed using Histograms, Skew and Kurtosis. A normal distribution was found in most variables. In some variables, the distribution was significantly non-normal, with a Z score of more than 2.58 for Skew or Kurtosis (Field, 2005).

In order to establish whether the non-normality of the distribution was due to outliers, an analysis of outliers was carried out using boxplots. There were two clear outliers for the variable Environmental Mastery that were 4.32 and 2.72 standard deviations, respectively, from the mean. These same cases were also outliers on total Psychological Well-Being (5.48 and 3.76 standard deviations, respectively, from the mean). These two cases were removed from the dataset. Normal distribution was then established for all variables, that is, the Z scores were all below 2.58 (Field, 2013).

Internal consistency was tested for the Ryff Psychological Well-Being Scale (Table 3). The scale showed good reliability (α = .79). The six subscales that make up Psychological Well-Being showed reasonable internal consistency. Autonomy had an alpha lower than .6 and was therefore removed from the analysis because of its lack of internal reliability. Environmental Mastery and Positive Relations showed Cronbach's alpha lower than the recommended .7 but because they were between .65 and .70 were included in the analysis although with a note of caution for any interpretation of effects involving them.

Table 3: *Cronbach alpha score for the internal consistency of the Ryff Psychological Well-being Scale Subscale Categories*

Subscale Category	Cronbach Alpha
Autonomy	.56
Environmental Mastery	.68
Personal Growth	.71
Positive Relationships	.65
Purpose in Life	.76
Self Acceptance	.77

3.2 Participant Demographics

3.2.1 Age/Gender

The sample consisted of 127 males and 67 females (*N*=199), from two different schools (School 1 = 101, School 2 = 98). The age range was 15-19 (Mean = 16.16, SD = 1.03 years).

3.2.2 Ethnicity

A total of 18 different ethnic groups were represented in the sample (Table 4).

Table 4 - *Ethnicity – Number of participants from each school in each Ethnic Group*

	School		
Ethnicity	1	2	Total
White British	16	95	111
Bangladeshi	3	2	5
African	9	1	10
Pakistani	6	1	7
Black British	20	0	20
Black Caribbean	20	1	21
Gypsy	1	0	1
African	1	0	1
White Irish	1	0	1
Turkish	3	0	3
Kurdish	1	0	1
Eastern European	4	1	5
Chinese	3	0	3
Mixed White/Black	3	0	3
Asian	2	0	2
Indian	2	0	2
Other	1	0	1
Total	101	96	197

3.2.3 Objective Socio-economic Status (SES)

Participant's parental occupation data was used as one marker of Socio-economic Status. Occupations were coded into ten different categories based on the National Statistics Socio-Economic Classification system (NS-SEC, 2010). The frequency of parents represented in each occupation category were tallied (Table 5). There was a large amount of missing data and 67 participants reported not knowing the employment status of their parent. These responses were not included when the median split was performed.

Table 5: *frequency of Mother's and Father's Occupational Group*

	School 1		School 2	
Occupational Group (NS-SEC, 2010)	Father	Mother	Father	Mother
Higher Managerial and Administrative Occupations (e.g. chief executive, production manager)	6	0	0	0
Higher Professional Occupations (e.g. barrister, doctor)	16	8	12	3
Lower Managerial or Professional Occupations (e.g. nurse, teacher, journalist)	3	5	1	2
Intermediate Occupations (e.g. fireman, photographer)	5	10	3	12
Self-employers and Own Account Workers (e.g. builder, hairdresser)	6	4	2	2
Lower Supervisory, Crafts or related Occupations (e.g. train driver, electrician)	7	2	2	4
Semi Routine Occupations (e.g. postman, care assistant)	14	6	6	2
Routine Occupations (e.g. refuse collector, waitress)	10	15	17	13
Unemployed	12	22	18	10
Unknown	12	14	26	20

The data were grouped based on the National Statistics Socio-Economic Classification system (NS-SEC, 2010). Two groups were then formed around the median to create a High (*N* = 57) and Low SES (*N* = 129) group based on Father's Occupation and High (*N*= 40) and Low (*N* = 108) SES group based on Mother's Occupation.

3.2.4 Subjective Socio-economic Status

The total score for participants was calculated as the sum of the two subjective SES measures. Participants were asked to place their family and themselves on two separate MacArthur Subjective SES measures. The combined score was used as a composite Subjective Socio-Economic score. The two scores were significantly, positively associated with each other (r= .41 , p < .001). The maximum possible score was 14 and the minimum score was 2. The participants were grouped into High and Low Subjective SES around the mean (M = 7.01; SD = 2.45). 46.8% of participants were in the Low Subjective SES group and 53.2% were in the High Subjective SES group.

3.3 Hypothesis 1: Negative Affect will correlate with Autonomy, Environmental Mastery and Self-Acceptance and Positive Affect will correlate with Positive Relationships, Personal Growth and Sense of Purpose.

After the data screening, the first analysis was run to explore the associations between affect and dimensions of PWB. Psychological Well-Being (Mean = 170.37 ; SD= 25.21) was split into six subscales: 1) Autonomy (M = 29.13 ; SD 5.46), Environmental Mastery (M = 26.63 ; SD = 3.97), Personal Growth (M = 29.23 ; S.D. = 5.86), Positive Relations (M = 27.90 ; SD = 5.50), Purpose in Life (M = 29.62 ; SD = 6.32) and Self Acceptance (M = 27.87 ; SD = 6.59). In order to investigate the construct validity, subscale inter-correlations were run (Table 6). In line with previous research, dimensions were significantly correlated.

Table 6: *Intercorrelations for the Subscales of Psychological Well-Being.*

	EM	A	PiL	PR	PG	SA
Environmental Mastery (EM)		.39**	.51**	.46**	.42**	.59**
Autonomy (A)			.38**	.34**	.34**	.42**
Purpose In Life (PiL				.46**	.64**	.56**
Positive Relations (PR)					.43**	.50**
Personal Growth (PG)						.54**

** P < .01

Prior to the analysis, descriptive statistics for the PANAS were run. The mean score for Positive Affect was 32.30 (SD = 7.83) and the mean score for Negative Affect was 21.24 (SD = 7.36). The two constructs show good divergent validity, with a small, non-significant correlation value ($r = .03$, $p = .72$).

Bivariate Pearson Correlations were selected to examine the relationships between Positive and Negative Affect and the six dimensions of Psychological Well-Being. Table 7 shows the correlations between Positive Affect, Negative Affect and the dimensions of PWB. The hypothesis was partially supported by the results. Positive Affect, as expected, was significantly positively correlated with Personal Growth and Purpose in Life. It was not, however, correlated with Positive Relations. Contrary to what was predicted, Positive Affect also significantly positively correlated with Self Acceptance. A positive correlation was also found in Environmental Mastery ($p = .02$), however, to account for Type 1 error, the p value for significant results will be set at $p < .01$ (Field, 2005) and Environmental Mastery will therefore not be include. The analysis therefore indicates a relationship between higher positive affect and higher scores on three dimensions of Psychological Well-Being.

There were no significant relationships between Negative Affect and dimensions of PWB. This shows a different pattern from that seen in adult populations. The results indicate that PA and NA are associated to specific aspects of PWB in different ways. The importance of these dimensions to adolescent development will be considered in the discussion section.

Table 7: *Correlations between Positive Affect, Negative Affect and Psychological Well-Being Dimensions.*

	Personal Growth	Positive Relations	Environmental Mastery	Self Acceptance	Purpose in life
Positive Affect	.31**	.10	.18*	.27**	.21**
Negative Affect	-.04	-.09	-.08	-.11	.04

N = 190

** p <.01

* p < .05

3.4 Hypothesis 2: The six factors of PWB will be associated with positive and negative future thinking in adolescents.

Bivariate correlations were selected to examine the extent to which future thinking, both positive and negative were associated with different dimensions of PWB. Table 8 shows the mean and standard deviations for the Future Thinking Task in the positive and negative conditions. Descriptive statistics were reported for each time period and the total number of positive thoughts across time periods. On average, participants generated similar number of thoughts across time periods. Previous research using the Future Thinking Task has found that there are rarely different effects for the different time periods (e.g., Macleod & Byrne, 1996; Macleod et al, 1997). In addition,

correlations existed between time frames within the present study. Positive future thoughts in the next week were positively associated with positive future thoughts in the next year ($r = .33$ $p < .001$) and the next five to ten years ($r = .29$, $p < .001$) and positive future thoughts in the next year were positively associated with positive future thoughts in the next five to ten years ($r = .37$, $p < .001$). In the negative condition, with an alpha level of .01, there were no associations. Whilst correlations only existed between time domains in the positive condition, previous research supports the decision to combine the three time frames to create two variables: 1) Positive Future Thoughts and 2) Negative Future Thoughts.

Table 8

Descriptive Statistics for Future Thinking Task – Positive and Negative Future Thoughts

	Mean (SD)			
	Next Week	Next Year	Next 5-10 Years	Total across time Periods
Positive Future Thoughts	4.41 (2.55)	4.40 (3.30)	4.06 (2.72)	12.81 (6.46)
Negative Future Thoughts	3.88 (1.63)	4.18 (1.85)	4.02 (2.00)	12.01 (3.42)

Table 9 shows the correlations between Future Thinking Task scores and the six dimensions of PWB. There were no relationships between Positive Future Thinking and the six dimensions of Psychological Well-Being. There were also no relationships between Negative Future Thinking and Positive Relations, Personal Growth, Purpose in Life and Environmental Mastery. There was a significant ($p = .04$) negative association between Negative Future Thoughts and Self-Acceptance. However if account of Type 1 error is taken by setting significance levels to $p < .01$ (Field, 2005) this would no longer be significant.

Table 9: *Correlations between Positive and Negative Future thoughts, Dimensions of Psychological Well-Being.*

	Environmental Mastery	Purpose in Life	Self Acceptance	Positive Relations	Personal Growth
Positive Future Thoughts	-.03	.07	.13	.01	.09
Negative Future Thoughts	-.09	-.09	-.15*	.06	-.12

N = 190

* p <. 05

3.5 Hypothesis 3: The six factors of PWB will be differentially associated with planning towards goals in adolescents.

The final hypothesis, in relation to dimensions of PWB, was to examine the associations with planning towards goals. Means and standard deviations for the specificity of each goal set, for the number of steps generated towards goals and the specificity of the steps across the three goals are presented (Table 10)

Table 10: *Descriptive Statistics for the Planning Towards Goals Task*

	Mean (SD)		
	Education and Career	Leisure and Activity	Family and Friends
Specificity of the goal set	1.73 (.82)	1.61 (.81)	1.47 (.65)
Number of steps generated	4.02 (2.45)	4.03 (2.02)	3.99 (1.69)
Specificity of steps	1.46 (.61)	1.50 (.71)	1.52 (.49)

The average number of steps generated is broadly consistent across the three different types of goals. The distribution of specificity scores and the average across the data is also comparable for the different types of goals.

The specificity of the Education and career goal was significantly, positively, associated with the specificity of the leisure and activity goal ($r = .35$, $p < .001$).

There was no relationship between the specificity of the leisure and activity goal and the family and friends goal. There were no significant relationships between the number of steps generated for any of the goals. The specificity of the steps generated towards the friends and family goal was significantly, positively, associated with the specificity of the steps towards the leisure and activity goal ($r=.32$, $p <.001$). There was no relationship between the specificity of steps generated towards the Education and Career goal or the steps generated towards the other two goals.

Based on protocol from previous research (e.g. Macleod & Conway, 2005), the analysis were run with three variables: 1) Average Goal Specificity across the three goals set (Mean = 1.60; SD = .53), 2) Average Number of Steps across the three goals (Mean = 4.01, SD = 1.26) and 3) Average Specificity of Steps across the three goals (Mean = 1.52, SD = .53). Inter-correlations showed a relationship between the specificity of the goal set and the specificity of the steps generated towards goals ($r = .16$, $p = .05$). There were no other significant correlations between the planning variables. This suggests that adolescents who can set specific goals are also more able to generate more specific steps towards their goals.

Bivariate Correlations were run with the six dimensions of PWB. Table 11 shows there were no significant relationships between planning towards goals and dimensions of Psychological Well-being.

Table 11: *Correlations between Psychological Well-Being and Planning Towards Goals.*

	Average Specificity of the goal set	Average number of Steps Generated	Average Specificity of Steps towards Goals
Environmental Mastery	.01	-.01	.05
Personal Growth	-.03	-.05	.13
Positive Relations	-.13	.08	-.02
Purpose in Life	.04	.05	.13
Self Acceptance	-.02	.02	.07

N = 190

To further explore the hypothesis the analysis were run using the data for each of the three goals independently. There were two reasons that different goals may require further investigation. Primarily, the goals may hold different relationships to dimensions of PWB because they relate to Education and Career, Family and Friends and Leisure and Activity. These may be of different value and more, or less, important to adolescents. Whilst previous research, in adults, has grouped goals to form one variable, less is known about planning in adolescent samples. This study was also carried out with a school sample of students whom were approaching examinations and making university and career decisions, thus goals in this domain may be particularly salient. As these different parts of life could be differentially related to PWB,

the Specificity of the Goal, the Specificity of Steps generated and the Number of Steps generated for each goal was used.

Table 12 shows the Bivariate Correlations for specificity of each goal, the number of steps generated and the specificity of steps for dimensions of PWB. There were no significant relationships between dimensions of Psychological Well-Being and specificity of the Education and Career goal, the Leisure and Activity Goal and the Family and Friends goal. There were also no relationships between the number of steps generated towards each of these goals and dimensions of PWB. The only association with PWB dimensions was seen with the specificity of steps generated towards Education and Career goals. Students who generated more specific steps towards their Education and Career goals also had greater Personal Growth ($r = .33$, $p < .001$) and Purpose in Life ($r = .22$, $p < .001$). This association suggests that different types of goals, in adolescents, have different relationships with Psychological Well-Being and its dimensions.

Table 12: *Bivariate Correlations of Goal Specificity, Number of Steps and Step Specificity for each goal and Dimensions of PWB.*

	Goal Specificity			Number of Steps			Specificity of Steps		
	1	2	3	1	2	3	1	2	3
EM	-.05	.03	.07	-.05	.04	-.02	.14	.23	-.03
PG	-.09	.02	-.01	-.06	.02	-.06	.33**	-.04	.00
Pil	-.03	.03	.10	-.05	.02	.14	.22**	.05	.01
PR	-.07	-.14	-.06	.06	.09	-.00	.17	-.12	-.04
SA	-.06	.04	-.05	-.05	.05	.05	.13	.05	.01

N = 191

** p <.01

1. Education and Career
2. Leisure and Activity
3. Friends and Family

Table 13 shows the results of a Multiple Linear Regression model. This analysis was conducted to determine if Specificity of Steps towards Education and Career goals (Dependent Variables) could be predicted from Personal Growth and Purpose in Life (Independent Variables). The Independent Variables accounted for a significant amount of variance in the Specificity of steps score (R^2 = .11, adjusted R^2 = .09; F(3,169) = 6.83, p < .001) The partial regression coefficients showed that Personal Growth had a significant unique contribution to Specificity (B = .03, Beta = .31, t(169) = 3.17, p < .001).

Table 13: *Regression Analysis for Specificity of Steps towards Education and Career Goals*

	Model		
Variable	B	SE B	β
Personal Growth	.03	.09	.31**
Purpose in Life	.001	.01	.02**

N = 191

****** p<.01

3.6 Analysis by School

The results thus far have provided an overview of the association between dimensions of PWB and three other variables; 1) Affect, 2) Future thinking and 3) Planning towards goals. Across the analysis, there were limited significant associations. Whilst there were some interesting findings, which will be reviewed in the Discussion, there is value in extending the analysis further. The data collection took place in two schools, which will be compared in the additional analysis section. Prior to comparing schools on variables, the correlational analyses were carried out for the two schools separately (Appendix 7 for Correlation Tables). Significant results are only reported for a P value of < .01 due to the high number of correlations and the possibility of Type 1 error (Field, 1985). In both schools, there were no significant correlations between dimensions of PWB and Negative Affect. In the main

analysis, Personal Growth, Purpose in Life and Self Acceptance were significantly positively associated with Positive Affect (Table 7). When the data were split by school, correlations with PA remained significant in School 1 for Personal Growth ($r = .40$, $p < .01$) and Self Acceptance ($r = .31$, $p < .01$) but not Purpose in Life ($r = .27$, $p = .02$). In School two, there were no significant correlations between PA and Personal Growth ($r = .11$, $p = .34$), Self Acceptance ($r = .17$, $p = .13$) and Purpose in Life ($r = .18$, $p = .12$). To calculate the significance of difference between the correlation coefficients for School 1 and School 2 a Fisher's r-to-z transformation was carried out. The correlations between PA and Environmental Mastery ($Z = 3.8$, $p < .001$), were significantly different between School 1 and 2. The correlaitons between School 1 and School 2 did not significantly differ on any other associations between PA, NA and dimensions of PWB.

The main analysis and the analysis by school showed no significant relationships between future thinking and PWB dimensions. When Bivariate correlations were run for dimensions of PWB and Planning towards goals in each school, there were no significant associations. The two schools correlation coefficients for the association between Positive Relations and Number of Steps ($Z = 2.5$, $p < .001$) and Self Acceptance and Specificity of steps ($Z = 2.16$, $p < .001$) were significantly different. This suggests that the lack of significant associations is attributable to the entire sample and the relationships only significantly differ between schools on specific variables (Appendix 7 for Z score table). The pattern of results within the whole sample

and schools remains for the Education and Career goal. As with affect, there are more significant associations in School 1, with Personal Growth, ($r = .29$, $p<.01$) and Purpose in Life ($r = .30$, $p < .01$) significantly positively associated with Specificity of the steps generated towards the Education and Career goal. In School 2, only Personal Growth remained significant ($r = .41$, $p <.01$).

The next section will explore the data to establish differences between groups. The analysis will initially be run to investigate the differences between schools. The first stage of the analysis will establish if there is a difference between the two schools on dimensions of PWB, Affect, Future Thinking and Planning towards goals. The second stage will identify the possible factors that contribute to any difference between schools and provide an account to explain the differences.

3.7 Additional Analysis

3.7.1 Research Question 1: Do adolescents from different schools differ in their Psychological Well-Being, Future thinking and Planning Towards Goals?

The two schools were from different demographic areas, as indicated by the ONS Index of Deprivation (IMD) Score and Rank for each school catchment area. The maximum possible IMD, in England, is 87.80. The minimum score is 0.53. The ranking ranges from the most deprived (rank 1) to the least deprived (rank 32482).

School 1 was situated in a London Local Authority ranked 7th most deprived in the Country, with 42% of the Lower Layer Super Output Areas (LSOAs) in the district amongst the most deprived in the country. The IMD score across LSOAs in School 1 was 43.02. The average Rank, relative to all the LSOAs in England, was 4231. School 2 had an IMD score, across the LSOAs, of 11.10. The average Rank, relative to all the LSOAs in England was 23369. School 1 could therefore be considered to be from a neighbourhood of low objective SES (IMD = 43.02) and School 2 was in an area of comparably high objective SES (IMD = 11.10).

Demographics

School 1 (*N*=100) had a mean age of 15.71 (SD = .78) whilst the mean age for School 2 (*N*=93) was 16.63 (SD = 1.03). An independent t-test showed that the mean age for the two schools was significantly different ($t(191) = -6.96$, $p < .001$), although only by 1 year.

Table 14 shows the frequencies for other demographic categories (Gender, Ethnicity, SES and Parental Occupational Group). Pearson Chi Squares were carried out for each demographic factor. Results showed that Gender ($X^2(1) = .91$, $p = .340$), Subjective SES $X^2(1) = .47$, $p = .492$) and Mother's Occupational group $X^2(1) = .15$, $p = .702$) did not significantly differ between the schools. Ethnicity $X^2(1) = 119.85$, $p < .001$) was, however, significantly different between the two schools.

Table 14: *Demographic Information for School 1 and School 2*

	School 1	School 2
Gender		
Male	62	65
Female	37	29
Ethnicity		
BME	95	16
White British	6	80
Subjective SES		
Low	58	51
High	42	45
Fathers Occupational Group		
Low	55	69
High	36	18
Mothers Occupational Group		
Low	59	49
High	27	19

FAS Scores

An independent t-test compared the FAS total scores for the participants from the School 1 and School 2. Results showed that there was a significant difference in the number of words that the participants from School 1 scored, than School 2 ($t(191) = -3.10$, $p < .001$). This shows that the verbal fluency of

the participants is different in each of the school, with school one generating fewer words in the one minute, than School 2.

Table 15: *Table of the FAS total scores for Schools*

	Mean	Std. Deviation
School 1	22.28	8.95
School 2	26.44	9.68

Psychological Well-Being

A group (School 1, School 2) X Well-Being (Positive Relations, Environmental Mastery, Personal Growth, Self-Acceptance and Purpose in Life) mixed model ANOVA was carried out. Mauchly's test of Sphericity was significant therefore Huynh-Feldt was used. A significant main effect of Well-being $F(3.82,271.75) = 16.31$, $p < .001$) suggests that the Ryff Psychological Well-being scores differ from one another. There was also a significant main effect for group $F(1,172) = 10.94$, $p < .001$) where School 1 had a higher PWB than School 2. Bonferroni corrected post hoc tests show that this difference was significant ($p < .001$). There was a significant interaction of school and PWB ($F(4.79,823.26) = 3.44$, $p = .01$) suggesting that the schools varied significantly in their PWB dimension scores (Table 16 for means).

The significant interaction of school and dimensions of PWB was further explored by carrying out Independent t-tests (Table 16 for means). There was no significant difference between the schools on Environmental Mastery ($t(172) = 1.65$, $p = .10$), Positive Relations ($t(172) = 1.70$, $p = .09$) and Purpose in Life ($t(172) = 1.84$, $p = .07$) scores. Participants from School 1 scored significantly higher on Personal Growth ($t(172) = 3.82$, $p < .001$) and Self-Acceptance ($t(172) = 3.49$, $p = .00$) scores. The two schools differed significantly on age, but this was not controlled for because the age does not represent a true scale, so does not lend itself to a covariate analysis.

Table 16: *Descriptive Statistics, by School, for Dimensions of PWB*

	Mean (S.D.)	
	School 1	School 2
Environmental Mastery	27.14 (4.01)	26.14 (3.94)
Personal Growth	31.00 (5.90)	27.64 (5.69)
Positive Relations	28.45 (5.03)	27.05 (5.75)
Purpose in Life	30.52 (6.08)	28.80 (6.25)
Self Acceptance	29.84 (6.18)	26.51 (6.40)

Planning towards Goals

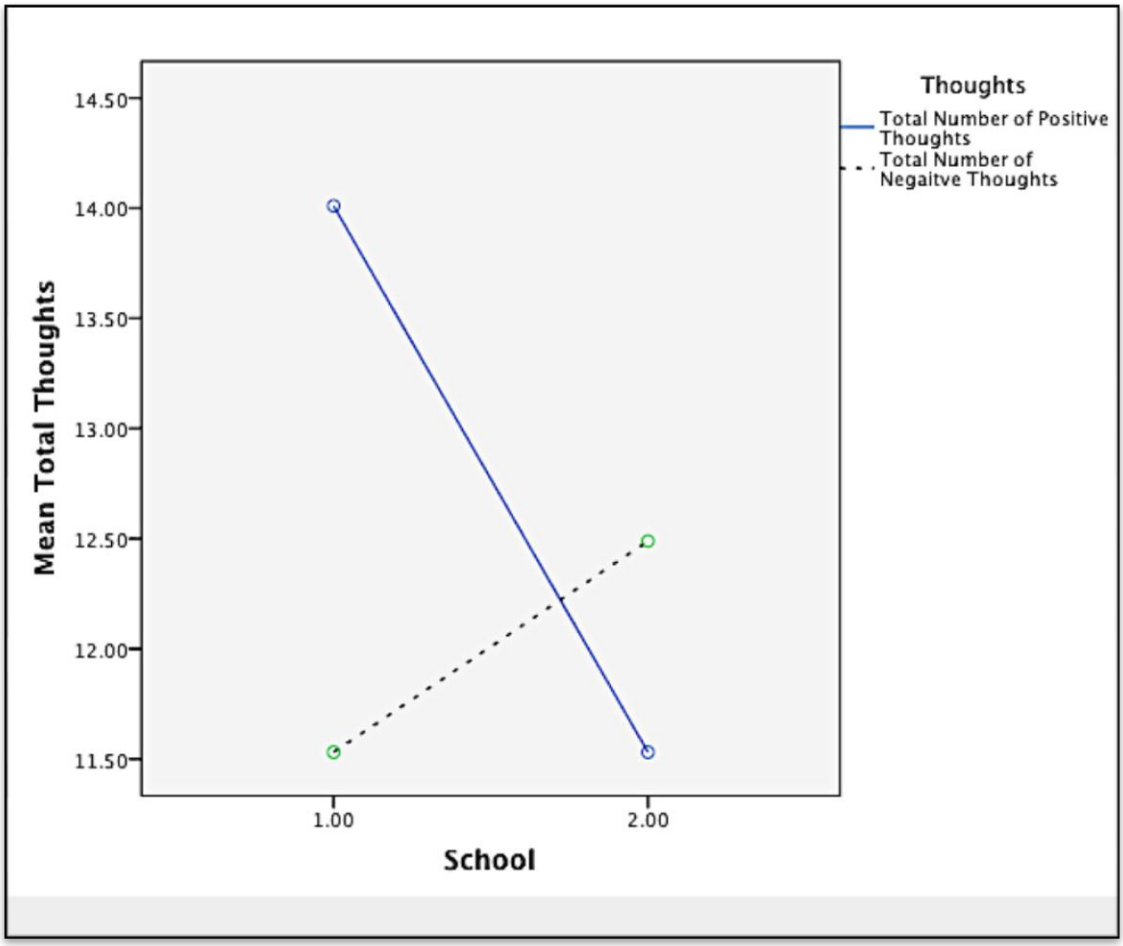
A School (School 1, School 2) X Planning Towards Goals (Specificity, Specificity of Steps, Number of Steps) mixed model ANOVA was carried out.

There was a significant effect of Planning, suggesting that Specificity of steps, specificity of the goal set and the number of steps generated differ ($F(1.40,764.61) = 577.94$, $p < .001$). There was no significant main effect of group or significant interaction effect of school and planning towards goals. This suggests that the schools did not differ on steps, specificity of steps or the specificity of the goal set.

Future Thinking

Future Thinking was compared between schools with a (School 1 x School 2) X Future Thinking (Positive X Negative) mixed model ANOVA. There was no significant effect of future thinking ($F(1, 55.51) = 2.32$ $p = .13$), which suggests the number of positive and negative future thoughts generated did not differ. There was also no significant main effect of school ($F(1, 55.51) = 1.94$, $p = .17$). There was, however a significant interaction effect of school and future thinking ($F(1, 283.59) = 11.86$, $p < .001$). This shows that there was an effect of school, when both Negative and Positive future thoughts were taken into consideration (Figure 1).

Figure 1: *Significant Interaction of School 1 and 2 and Positive and Negative Future thinking*



Independent t-tests showed a significant difference, between schools, of the mean number of negative ($t(190) = 1.95$, $p = .05$) and positive ($t(190) = 2.69$, $p = .008$) thoughts generated. School 1 generated, on average, significantly fewer negative thoughts than those from School 2. They also generated, on average, significantly more positive future thoughts. The ability to generate more future thoughts was not related to a lack verbal fluency in School 1, as the main effects of School on Positive Thoughts ($F(476,1) = 12.50$, $p<.001$)

and Negative Thoughts ($F(50,1) = 4.32$, $p = .04$) remained significant when FAS was covaried.

The final section of the results will explore whether the significant age and ethnic group differences between the two schools can explain the differences in PWB dimensions and future thoughts. Planning will not be included in further analysis because no main group or interaction effects were found for school. In addition, FAS has already been accounted for, due to results remaining significant when FAS scores were covaried. For completeness, SES groups will also be compared. This is based on previous research that commonly finds SES differences in well-being. Research questions two and three will explore the differences between BME and White British groups and younger and older groups to contribute to the discussion and conclusions made about school differences. Research question four will examine differences between High and Low, Subjective and Objective, SES groups.

3.7.2 Research Question 2: Can Age account for the differences between Schools on Psychological Well-Being and Future thinking?

Age was grouped around the Median (16) to create two groups. The two groups were compared by demographic factors (Table 17). Age groups did not significantly differ on Gender ($X^2(1) = .33$, $p = .569$), Subjective SES ($X^2(1) = .00$, $p = .994$) and Mothers ($X^2(1) = 1.05$, $p = .306$) and Fathers ($X^2(1) = .1.50$, $p = .221$) Occupational Group. The two age groups were, however,

significantly different in Ethnic group ($X^2(1) = 21.5$, $p < .001$). This matches the distribution by school.

Table 17: *Demographic Information by Age*

	Younger	Older
Gender		
Male	84	40
Female	40	24
Subjective SES		
Low	70	37
High	55	29
Fathers Occupational Group		
Low	80	42
High	32	20
Mothers Occupational Group		
Low	70	32
High	30	17

Psychological Well-Being

A group (Younger, Older) X Well-being (Positive Relations, Environmental Mastery, Personal Growth, Self-Acceptance and Purpose in Life) mixed model ANOVA was carried out. Mauchly's test of Sphericity was significant therefore

Huynh-Feldt was used. A significant main effect of Well-being F(3.86, 687.31) = 11.03, p < .001) suggests that the Ryff Psychological Well-being scores differ from one another. There was also a significant main effect for group F(1,168) = 17.17, p < .001) where those in the younger group had a higher PWB than the older group (Table 18). There was a significant interaction of age group and PWB (F(3.86,416.03) = 6.67, p < .001) suggesting that the age groups varied significantly in their PWB category scores.

Table 18: *Descriptive Statistics, by Age Group, for Dimensions of PWB*

	Mean (S.D.)	
	Younger Group	Older Group
Environmental Mastery	27.12 (3.75)	25.97 (4.25)
Personal Growth	30.89 (5.54)	26.34 (5.73)
Positive Relations	28.10 (5.25)	27.11 (5.77)
Purpose in Life	30.96 (6.12)	27.56 (5.68)
Self Acceptance	29.53 (6.25)	25.64 (6.27)

Independent t-tests were run to establish which dimensions represent the differences in PWB. There was no significant difference between Age groups for Environmental Mastery (t(168) = 1.83, p = .07), and Positive Relations (t(168) = 1.13, p = .26). Younger adolescents scored significantly higher than older adolescents on Purpose in Life (t(168) = 3.57, p < .001), Personal Growth (t(168) = 5.07, p < .001) and Self Acceptance (t(168) = 3.89, p < .001). These differences showed that Purpose in Life differences are significant

between younger and older adolescents, but not between schools. The difference in Self Acceptance and Personal Growth cannot be accounted for by age or school separately because the differences are seen between School 1 and 2, and, between Younger and Older age groups.

Future Thinking

An Age Group (Younger, Older) x Future Thinking (Positive, Negative) ANOVA was carried out to compare age groups on Future thoughts. There was no significant effect of future thinking, no significant main effect of group and no significant interaction effect between age groups and future thinking. This suggests that the differences in future thoughts and the interaction between thoughts and groups occur as a result of differences in schools and not age differences.

3.7.3 Research Question 3: Can ethnic group account for differences between Schools in Psychological Well-Being and Future thinking?

Ethnicity was categorised into two groups: 1) White British (*N*=91), and 2) Black/Ethnic Minority (*N*=82). Group 2 consisted of ethnic minority groups from a total of 17 different ethnicities that are all considered a black or ethnic minority in the United Kingdom (Office of National Statistics, CENSUS, 2011). The White British group had a mean age of 15.89. The BME group had a mean age of 16.52. The age difference was small, but as seen in the school groups significantly different ($t(191) = 4.39$, $p < .001$).

The two groups were compared by demographic factors (Table 19) and did not significantly differ on Gender ($X^2(1) = .28$, $p = .597$), Subjective SES ($X^2(1) = 1.40$, $p = .236$) and Fathers ($X^2(1) = 1.25$, $p = .264$) and Mothers ($X^2(1) = .63$, $p = .426$) Occupational Group.

Table 19: *Demographic Information by Ethnic Group*

	BME	White British
Gender		
Male	70	57
Female	39	27
Subjective SES		
Low	65	43
High	45	42
Fathers Occupational Group		
Low	65	58
High	36	19
Mothers Occupational Group		
Low	68	39
High	25	22

Psychological Well-being

A group (White British x BME) X Well-being (Positive Relations, Environmental Mastery, Personal Growth, Self-Acceptance, and Purpose in Life) mixed model ANOVA was carried out. Mauchly's test of Sphericity was significant therefore Huynh-Feldt was used. A significant main effect of Psychological Well-being $F(3.83,999.01) = 15.55$, $p < .001$) suggests that the Ryff Psychological Well-being scores differ from one another. There was also a significant main effect for group $F(1,171) = 5.60$, $p = .02$) where those in the BME group had a higher PWB than the White British group. There was a significant interaction of Ethnic group and PWB ($F(3.83) = 3.44$, $p = .01$) showing that the ethnic groups varied significantly in their PWB category scores. Psychological Well-Being and the six dimensions were compared for White British and BME groups (Table 20) to establish what dimensions contributed to the main effects.

Table 20: *Descriptive Statistics of PWB by Ethnic Group*

	Mean (S.D.)	
	BME	White British
Environmental Mastery	26.87 (4.08)	26.33 (3.84)
Personal Growth	30.72 (5.65)	27.73 (6.03)
Positive Relations	28.04 (5.29)	27.38 (5.54)
Purpose in Life	30.10 (6.18)	29.07 (6.12)
Self Acceptance	29.32 (6.47)	26.78 (6.20)

An independent t-test was run for each dimension. Where t-tests were conducted homogeneity of variance was checked and separate variance estimates used if necessary. There was no significant difference between White British and BME groups for Environmental Mastery ($t(171) = .90$, $p = .37$), Positive Relations ($t(171) = .80$, $p = .42$) and Purpose in Life ($t(171) = 1.10$, $p = .88$). BME adolescents scored significantly higher than White British adolescents on Personal Growth ($t(171) = 3.37$, $p < .001$) and Self Acceptance ($t(171) = 2.62$, $p < .001$). The differences in Self Acceptance and Personal Growth were consistent between younger and older age groups, schools and White British and BME ethnic groups. The differences in dimensions of PWB can therefore not be separately accounted for by these variables and need to be considered in conjunction when conclusions are made.

Future Thinking

An Ethnic Group (White British x BME) x Future Thinking (Positive x Negative) mixed model ANOVA was conducted to explore differences in Future-directed thinking between White British and BME groups. There was no significant effect of future thinking ($F(1, 37.53) = 1.51$ $p = .21$), which shows the number of positive and negative future thoughts generated did not differ. There was also no significant main effect of ethnic group ($F(1, 7.60) = .27$, $p = .61$). There was a significant interaction effect of ethnic group and future thinking ($F(1, 105.51) = 4.22$, $p = .04$). This shows that there is an effect of Ethnic Group, when both Negative and Positive future thoughts are taken into consideration (Figure 2).

Figure 2 – *Main Interaction Effect of Positive and Negative Future Thoughts and Ethnic Group*

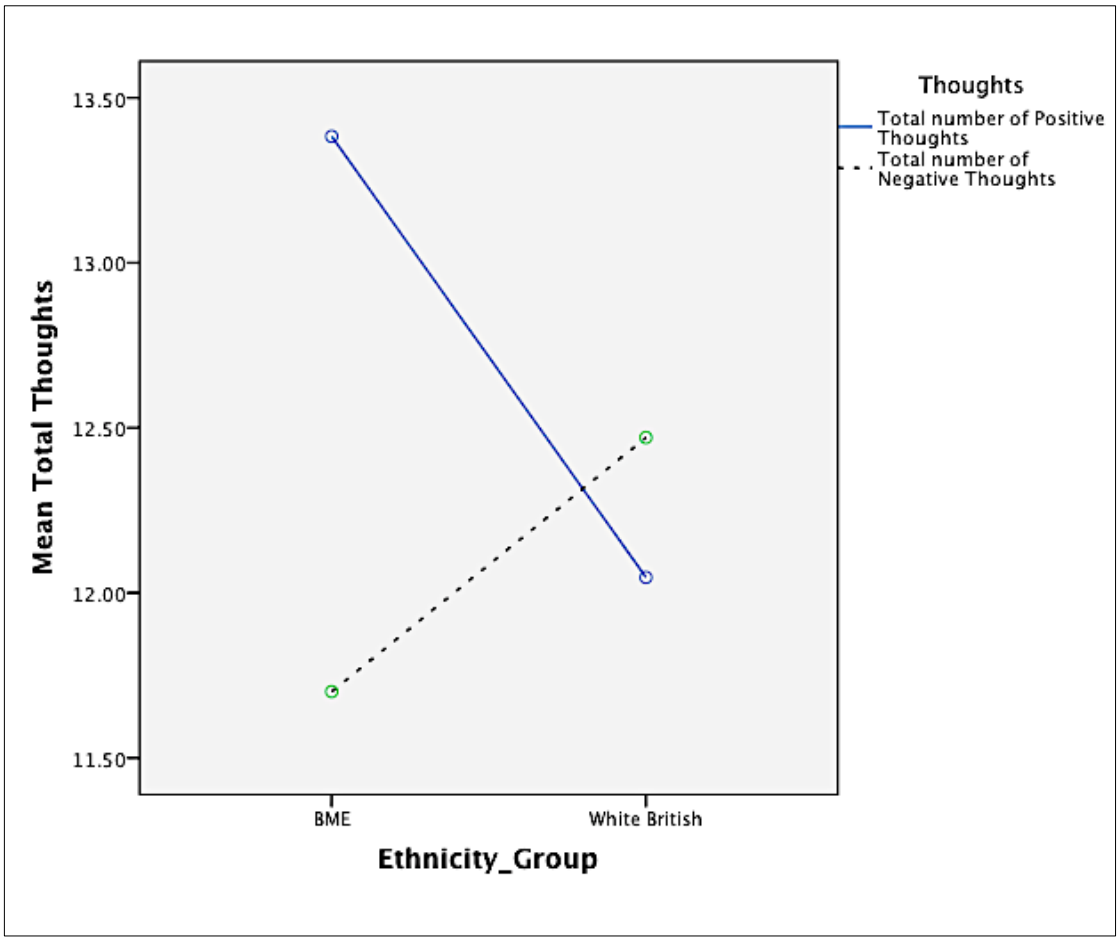


Figure 2 shows the interaction between Ethnic groups for Positive and Negative Future thoughts. The interaction, as expected, is very similar to that seen in the two schools (Figure 1).

Independent t-tests showed no significant differences, between Ethnic Groups, of the mean number of negative ($t(190) = -1.55$, $p = .16$) and positive ($t(190) = 1.42$, $p = .12$) thoughts. The interaction in the absence of individual

comparisns indicates a potential difference between the groups on type of thought but only a marginal one.

3.7.4 Research Question 4: Do adolescents from different Subjective and Objective SES groups differ on Psychological Well-Being and Future thinking?

It is common for well-being to differ between socio-economic groups. In the present study, SES was measured subjectively (Macarthur SES Scale) and Objectively (Mother's and Father's Occupational group). The measure of subjective SES was not associated with Mother's (r = .08, p = .37), or Father's r = .18, p = .03) Occupational group. This contradicts previous research and formed the basis to consider subjective and objective SES separately in the analysis. As outlined in the measures section, SES was grouped into high and low in order to explore differences between groups.

Subjective SES

Subjective SES groups (High x low) were compared by other demographic factors. High SES (*N* = 84) had a mean age of 16.13. Low SES (*N* = 107) had a mean age of 16.19. An independent t-test showed no significant difference in age between the two groups. Demographic differences were explored (Table 21). The two groups significantly differed on Gender ($X^2(1) = 6.44$, p = .01), and Father's Occupational Group ($X^2(1) = 14.26$, $p < .001$). The two

groups did not significantly differ on Ethnicity ($X^2(1) = 1.40$, $p = .24$) and Mother's Occupational Group ($X^2(1) = 9.36$, $p = .009$).

Table 21: *Demographic Information by Subjective SES*

	High SES	Low SES
Gender		
Male	65	61
Female	21	44
Ethnic Group		
BME	45	65
White British	42	43
Fathers Occupational Group		
Low	65	61
High	33	24
Mothers Occupational Group		
Low	58	48
High	25	21

FAS Scores

The FAS scores for each Subjective SES group were compared (Table 22). An independent t-test compared the FAS total scores for the participants from the low and high SES groups. Results showed that there was no significant difference between scores on the FAS task ($t(193) = -1.64$, $p = .10$). This shows that the verbal fluency of the participants from low and high Subjective SES groups did not differ.

Table 22: Table of the FAS total scores for Subjective SES

	Mean	Std. Deviation
Low SES	25.32	9.28
High SES	23.04	10.08

Subjective SES groups were analysed using mixed model ANOVAs as described in previous research questions. There were no significant differences between subjective SES groups and no main interaction effects for dimensions of PWB, Future Thinking or Planning towards goals. The results showed that adolescents who reported different levels of subjective SES did not differ on dimensions of PWB, future thinking or planning towards goals.

Objective SES

Objective SES was taken from Father's and Mothers Occupational group. The data were grouped based on the National Statistics Socio-Economic Classification system (NS-SEC, 2010). The participants reported the specific job, which was given a corresponding number based on the NS-SEC category it corresponded to. A median split created High and Low objective SES groups, for both Mother's and Father's Objective SES. The age of the High (Mean = 16.19 years) and Low (Mean = 16.10 years) Mother's Occupational group and High (Mean = 16.17 years) and Low (Mean = 16.20 years) did not

significantly differ. Demographic differences were explored for Mother's and Father's Occupational group (Table 23).

Table 23: *Demographic Information by Objective SES*

	Mother's High	Mother's Low	Father's High	Father's Low
Gender				
Male	32	68	35	78
Female	15	35	19	43
Ethnic Group				
BME	25	68	36	65
White British	22	39	19	58
Fathers or Mothers Occupational Group				
Low	22	72	27	72
High	20	27	20	22
Subjective SES				
Low	21	48	24	61
High	25	58	33	65

Mother's Occupational Group differed significantly on Father's Occupational Group ($X^2(1) = 233.45$, $p < .001$), but groups did not differ in Gender ($X^2(1) = .48$, $p = .79$), Subjective SES ($X^2(1) = 9.36$, $p = .009$) and Ethnicity ($X^2(1) = 6.70$, $p = .035$). Father's Occupational group did not significantly differ on Subjective SES ($X^2(1) = .63$, $p = .43$), Gender ($X^2(1) = .63$, $p = .73$) and Ethnic

Group ($X^2(1) = 2.78$, $p = .25$), but did significantly differ on Mother's Occupational group ($X^2(1) = 233.45$, $p < .001$).

FAS Scores

The FAS scores for each Objective SES group were compared (Table 24). An independent t-test compared the FAS total scores for the participants from the low and high SES groups. Results showed that there was no significant difference between scores on the FAS task for Father's ($t(176) = 2.13$, $p = .03$) and Mother's ($t(148) = 1.11$, $p = .27$). This suggests that the verbal fluency of the participants from low and high Objective SES groups did not differ and therefore does not account for any group differences that may be found in subsequent analyses.

Table 24: Table of the FAS total scores for Objective SES

	Mean	Std. Deviation
Mother's High	25.38	8.63
Mother's Low	23.51	9.71
Father's High	27.00	9.57
Father's Low	23.83	9.04

Group differences in dimensions of PWB, future thinking and planning towards goals were explored using mixed model ANOVAs (as above). As with

subjective SES, there were no significant differences between groups and no main interaction effects. The results indicate that adolescents whose Mother's and Father's occupational group differ, do not differ on dimensions of PWB, future thinking or planning towards goals.

The SES findings are limited and fewer conclusions can be drawn about the impact of SES, both subjective and objective, on PWB dimensions, Future Thinking and Planning towards goals. The implications will be considered in the Discussion

3.8 Differences between schools summary

The data analysis identified group differences on PWB dimensions and Future Thinking. Schools differed on Personal Growth and Self Acceptance. In addition, schools differed on the total number of negative and positive future thoughts they generated, with a significant interaction between school and future thoughts. The two schools did not differ in their ability to plan towards goals. PWB dimensions and Future Thinking were therefore explored for differences between Ethnic and Age Groups. In Ethnic groups, BME participants reported, on average, higher Self Acceptance and higher Personal Growth. There was an interaction between Ethnic Group and Future thoughts, but no difference between White British and BME adolescents when positive and negative future thoughts were considered separately. Younger adolescents had higher Purpose in Life, Personal Growth and Self Acceptance than older adolescents. They did not differ on the positive and

negative thoughts they had about the future. The findings indicate that the differences in dimensions of PWB (Personal Growth and Self Acceptance) can be found in schools and ethnic groups. Differences in Purpose in Life were only seen in different age groups. The group differences for positive and negative future thoughts were more complex. There was a significant interaction for Ethnic Group and School, which showed that the level of positive and negative future thoughts generated changes in association with being in a different School and a different Ethnic Group.

4.0 Discussion

The primary aim of the present study was to explore the relationships between Affect, Future-directed Thinking, Planning Towards Goals and dimensions of PWB in adolescents. The secondary aim was to explore these variables in a socio-economically and ethnically diverse, adolescent, sample. It was predicted that Future-directed Thinking and Planning towards Goals would be associated with dimensions of PWB. It was also predicted that Positive and Negative Affect would be differentially associated with the six dimensions of PWB. This was based on previous findings in adult populations and additional research of relationships of the variables with SWB in adolescents. In addition, previous research suggests that SES and ethnicity would be related to dimensions of PWB, planning and future-thinking, however, the direction and scale of the associations were less clear. It was suggested, that the findings from the present study would add to the understanding of PWB in adolescents by identifying how the six dimensions relate to future-thinking, affect and planning ability. The study hoped to add to the PWB literature by investigating a socio-economically and ethnically diverse sample to provide information of both clinical and practical relevance.

4.1 Summary of Main Findings

The six dimensions of PWB were differentially associated with positive affect, but not negative affect. Adolescents who experienced more positive affect in

the past week also had higher Self Acceptance, Personal Growth and Purpose in Life. PWB dimensions were not associated with Negative Affect. This pattern suggests adolescent's Psychological Well-being is linked to positive affect and negative affect to differing degrees and in a different way to that found in adult populations.

Against expectations, the future-directed thinking data showed no associations with the dimensions of PWB. The planning towards goals data was associated with Personal Growth, Purpose in Life and Positive relations, but not for all types of goals. Those Adolescents who generated more specific steps towards their 'Education and Career' goal also reported higher levels of Personal Growth and Purpose in Life. This pattern was not seen in goals related to adolescent's 'Family and Friends' or 'Leisure and Activity'.

4.2 Summary of Additional Findings

Differences between two schools from different areas of South East England were investigated. As the Index of Multiple Deprivation (ONS, 2010) score represents, the two schools were situated in very different socio-economic districts. School 1 was from a very low SES district of England, whilst School 2 was from a comparably more affluent area. The two schools, however, were comparable in the two other measures of SES. Participants from both schools reported similar levels of Subjective SES, with a total of 51 (School 1) and 58 (School 2) participants in the Low Subjective SES groups and 42 (School 1)

and 45 (School 2) in the High Subjective SES groups. The other proxy measure of parental occupational group indicated that the two schools were also similar in their SES (Table 14). This information suggests that the differences in adolescents Personal Growth, Purpose in Life and the number of positive and negative future thoughts they generated were not as a result of any differences, between the two schools, in SES.

There were three additional factors (verbal fluency, age and ethnicity), in which schools significantly differed. Verbal fluency was accounted for by including total FAS in a covariate analysis. The analysis indicated that the differences remained significant after accounting for verbal fluency. The differences in age were largely down to a larger number of sixth form students in School 1 than in School 2. Whilst the age differences were small (1.08 years), they were significant. There were significant differences between the younger and older groups on three dimensions of PWB. Younger participants reported more Purpose in Life, Personal Growth and Self Acceptance. They did not differ on planning or future thoughts. Differences on PWB dimensions Personal Growth and Self Acceptance, therefore, are seen in different schools and different age groups. Differences in purpose in life, however, were only found between younger and older participants. The differences that were found on future thinking between schools were not found between Age groups.

The final factor on which the schools differed significantly was ethnic group. School 1 was almost completely of BME origin (95 of 101 participants). In

contrast, School 2 only had 16 BME participants and 80 White British. The implication of this on the analysis is important to consider. The Ethnic groups and School groups have a large amount of cross-over within the sample (many participants will appear in both groups). The similar results are an indication of the difficulty in identifying where the differences in groups can be found. School 1 and BME participants had significantly higher Personal Growth. School 1 and BME participants also had significantly higher Self Acceptance. Ethnic groups did not differ for future thoughts, but Schools did, with School 1 generating significantly fewer negative thoughts and significantly more positive thoughts than school 2. This suggests that, in terms of future thinking, differences can be attributed to School and not Ethnic group. In terms of PWB, the comparisons in School and Ethnic group differences were small, but notable.

The data were finally grouped as high and low SES on three separate measures. One measure was subjective and the two other measures were Mothers and Father's occupational group (NC-SES, 2010), which are used as objective measures of SES in a wide range of studies. There were no significant differences when participants were grouped by measures of SES. This contradicts some previous findings, in adults and adolescents, but contributes to the undecided literature on the links between well-being and SES. These findings will be discussed later in the chapter.

The main aim of the present study was to explore dimensions of PWB in an adolescent sample. Of particular interest, was how these dimensions were

related to Affect, Future Thinking and Planning Towards Goals. The main findings are presented above. The next section will summarise the findings and the implications, by taking into consideration previous research and proposing potential avenues for future study. The following section in the Discussion will go on to explore the findings in relation to differences between schools and then ethnic and age groups, with reference to previous research and future applications. Finally the strengths, limitations and clinical implications will be presented.

4.3 Discussion of Dimensions of PWB Findings

The first research hypothesis that Negative affect will correlate with Autonomy, Environmental Mastery and Self-Acceptance and Positive affect will correlate with Positive Relationships, Personal Growth and Sense of Purpose was partially supported. The associations between higher positive affect and higher personal growth, acceptance of the self and purpose in life partially support previous research, whereby, adolescent's level of affect was associated with levels of PWB in different dimensions. More specifically, however, higher positive affect was associated with higher total PWB in the cited study (Garcia & Siddiqui, 2009). The present study does not provide full support due to a lack of association between negative affect and different dimensions of PWB compared to Garcia and Siddiqui who found an association.

Historically, there has been debate about whether Positive Affect (PA) contributes to or is a measure of well-being (Kahneman, Diener & Schwarz 1999). PWB research would consider higher PA to be as the result of having purpose, striving for growth and establishing full engagement in challenges and relationships (Ryan & Deci 2001). In adults, there are mixed findings in the relatedness of positive and negative affect. There is a correlation between PA and NA, but knowing a person's PA does not always predict the same person's experience of NA (Watson et al., 1988; Watson & Tellegen 1985). This identifies the distinct nature of the two constructs. In the present study PA and NA were not correlated and were also related in different ways to PWB. This therefore substantiates the distinctness of PA and NA and also contributes to the literature by identifying this in an adolescent sample.

Despite the abundance of literature on the positive relationship between PA and PWB, Ryff and Singer (1998) have identified times that the pursuit of potential and striving towards personal achievement may not always bring higher PA. In the present study, adolescents who were high on PA, were also high on Purpose in Life and Personal Growth. This suggests that striving and trying to fulfil potential is related to PA in adolescents. Ryff has, in early studies, identified that high scores on her purpose in life sub-scale are associated with a subjective sense of well-being (Keyes, Shmotkin, & Ryff, 2002; Ryff & Keyes, 1995), which includes a measure of PA. The mixed findings suggest that having purpose in life and growth can be related to both PA and NA. The cross-sectional nature of the research may indicate limitations for the cited and the present study. At different times, individuals

PA and Purpose in life might have a positive relationship, but at other times this pursuit may be more difficult and therefore not contribute to increased short-term PA. In addition, constantly striving in pursuit of goals and new experiences might lead to feeling dissatisfied and therefore increase NA. Although there are some inconsistencies with NA, both in the literature and the present study, the positive relationship between dimensions of PWB and PA in adolescents is well supported. For example, among Swedish adolescents, Psychological well-being, and especially the self-acceptance and environmental mastery dimensions, strongly relate to high levels of positive affect and life satisfaction (Garcia, 2011, 2012; Garcia & Archer, 2012; Garcia & Siddiqui, 2009). The present study replicated these studies by identifying a positive relationship between PA and dimensions of PWB and added to the literature by doing so in an ethnically diverse sample from the UK.

There are many explanations for the relationships found in the present study. Adolescents, particularly aged 15-18, are at an age where they are taking action and thinking about their future. This focus on personal growth, and purpose, is a key developmental process and part of everyday school life for young people. Adolescents who experience more Personal Growth and Purpose in Life may also experience more PA. In addition, higher levels of PA could also contribute towards a sense of purpose and ability to see opportunity for personal growth. The ‘Broaden and Build’ theory suggests that positive emotions are a significant factor in strengthening personal human resources (Fredrickson, 2001). The fundamental aspects of growth and

purpose are related to feeling able to strengthen personal resources by pursuing goals and self-improvement. This, in part, offers an explanation for the relationships identified in the present study

There were no associations between dimensions of PWB and NA in the present study. Evidence suggests that this is not ordinarily the case. Dimensions of, and total, PWB have been found to correlate with both PA and NA in adolescent samples. The only notable exception was Autonomy (Garcia & Siddiqui, 2009). The un-relatedness of dimensions of PWB and Negative Affect in this study may contribute to our understanding of SWB and PWB. Evidence suggests that, when measuring the specific components of PWB and SWB, the two constructs are distinct and more of the variance can be explained by the specific factors than the constructs as a whole (Chen, Jing, Hayes & Lee, 2013). Other research has suggested that SWB and PWB are more closely linked and that positive affect may be a pre-requisite to meaning in life (Kings, Hicks, Krull, & Del Gaiso, 2006). The lack of correlation of NA and PWB is consistent with other research and the present study strengthens the need to look at positive aspects of human experience, rather than just negative aspects to better understand well-being.

As outlined above, the findings provide further evidence for the theory that positive and negative aspects of experience may be two separate psychological systems rather than opposite ends of a single dimension (MacLeod & Moore, 2000). It also provides support, in an adolescent sample, that suggests personal happiness is linked to committing oneself to a

meaningful and purposeful life (Baumeister & Vohs, 2002; Dykman, 1998). Considering that adolescence is a period of increased negative emotions (Larson, Moneta, Richards & Wilson, 2002), distinguishing Purpose, Growth and Self Acceptance links with positive affect contributes substantially to adolescent research. The indication that negative affect is not related to dimensions of PWB supports the distinction between PA and NA that is notable, in this study, and previous research (e.g. Linley, Maltby, Wood, Osborne & Hurling, 2009).

4.3.1 Future thinking

In the present study, future thinking was not related to dimension of PWB. This is contradictory to evidence from previous studies in adult populations (Macleod & Conway, 2007, Macleod, 2013) and adolescent populations (Garcia & Siddiqui, 2009) that found higher levels of well-being were associated with more positive and fewer negative future thoughts. This finding is also surprising because previous research has indicated that future thinking is related to suicide attempts, drug abuse and delinquency in adolescent groups (Proctor, Linley & Maltby, 2009). Previous studies also show adolescents concerns about the future and what might happen to them are related to SWB, particularly in late adolescent groups (The Children's Society, 2010). The evidence for the link between PWB and future thinking is less well established and whilst the present study suggests that there is not a relationship between dimensions of PWB and future thinking the findings should be considered critically and form the basis for further research.

There is a large amount of clinical evidence to suggest that depressed and suicidal groups differ from controls on their ability to generate positive future expectancies (Bjarehead et al., 2010; MacLeod & Byrne, 1996; MacLeod, et al., 1993). This previous research has been focused on understanding what contributes to hopelessness, depression and anxiety in adults from clinical and non-clinical samples. The findings for depression and hopelessness show a significant correlation with positive future-directed thinking, but no relationship with negative future-directed thinking (e.g., MacLeod & Conway, 2007; MacLeod et al., 1997; MacLeod et al., 1993). The findings for anxiety, however, show a significant positive correlation with negative future thinking, but no negative correlation with positive future thinking (MacLeod et al, 1996; 1997). In non-clinical samples, the lack of personal positive future thoughts was linked to well-being (MacLeod & Conway, 2007). This suggests that positive future thoughts are important to well-being and less distress, whilst negative future thoughts are more commonly linked with anxiety.

In the present study the lack of correlations in both positive and negative future thinking could suggest that the way adolescents think about their future is not related to their PWB as it is in adults. One explanation for this could be due to cognitive and hormonal differences between adults and adolescents. Adolescents possess less formal operational thinking (Greene, 1986) and a less well-developed prefrontal cortex (Steinberg, 2008) than adults. This contributes to a stereotypical view of adolescent future thinking that is present focused and not able to consider future consequences of their present

decisions and actions (Pfeifer & Blakemore, 2012). This may explain links to well-being because adolescents do not consider the future thoughts relevant to themselves at the present time. Whilst they might report being worried about an exam the following week, it may not seem close enough to need to act upon, when compared with present concerns. This may therefore explain the lack of correlations with PWB because, perhaps, asking about the more imminent future would be more related to well-being. In relation to the FTT, adolescents may find it difficult to imagine future outcomes and possibilities and therefore produce fewer future thoughts across all conditions and time periods. In addition, asking adolescents to think 10 years into the future could be experienced as too distant, because it is a larger proportion of their life span, when compared to adults (Gardner, 2011). This may result in the FTT being a less accurate measure of future thinking in adolescent groups. In previous adolescent research, future thinking has been studied under the term 'future orientation' (Nurmi, 1989) in an attempt to cover the cognitive, affective and motivational aspects of future thoughts. Perhaps, the combination of the cognitive, affective and motivational aspects of future thinking are a more accurate and well-rounded representation of the way adolescents think about the future than the FTT.

Whilst the content of thoughts were not coded, there were many consistent themes across participant responses. The content of future thoughts were related to core developmental tasks and life events that reflect the adolescent to adult transition. The themes included relationships, careers, family and friends. Adolescence is characterised by making these normative future-

orientated decisions, which influence later life (Nurmi, 1991). The thoughts in the present study also support previous research on adolescent future-orientation. The most common responses in adolescents, when asked about future thoughts were related to Education and Occupation (Sundberg, Poole & Tyler, 1983) and the second most common related to family and marriage (Nurmi, 1989). This was replicated in the present study with thoughts such as "I am looking forward to having children'" and "I am not looking forward to failing my degree". This could contribute to some explanation for the lack of correlations between dimensions of PWB and Future thinking. Adolescent future thinking is, potentially seen as a normative task to make future-orientated decisions and an important part of identity formation (Nurmi, 1991), but one they do not choose and may therefore be less related to current feelings of well-being. For example, Environmental Mastery, which is conceptualized as feeling in control over a situation and creating a context suitable for personal needs may be more important to an adolescent's current thoughts than those normative decisions about the future. The cross-sectional, correlational analysis used in the present study means these suggestions for the relationships between future thinking and PWB are based on previous research and cannot be substantiated. The ideas cannot be supported in the present study, but are identified as possible explanations and considerations for future research.

4.3.2 Planning towards goals

The final hypothesis related to dimensions of PWB and planning towards goals and was based on previous research in adults. A relationship between planning towards goals and dimensions of PWB was expected, but the direction and strength of the expected relationships was unclear. The hypothesis was not initially supported by the main analysis. This was when the different types of goals and the different planning measures were combined to form one variable for each measure of planning towards goals. There were therefore no associations between dimensions of PWB and 1) the specificity of the goal set, 2) the number of steps generated and 3) the specificity of the steps generated. When the goals were analysed separately, the initial lack of correlations remained for goals about leisure and activity and family and friends. That is, there was no association between dimensions of PWB and being able to set specific goals and plan a number of specific steps towards goals related to family and friends or leisure and activity. This does not support previous research, which has found an association between planning towards goals and dimensions of PWB, across a range of methodologies and samples (MacLeod and Conway 2005; Nezlek 2001; Prenda and Lachman 2001). In the present study, however, there was a significant positive relationship between Personal Growth and Purpose in Life and an ability to generate specific steps towards pursuing an education and career goal. The additional analysis was unplanned and the alpha correction not very severe, but the findings, whilst not expected, are notable for the discussion. Firstly, Sheldon and Elliot (1999) highlight that goals set need to hold personal value and be linked to the self-concept in order to be related to well-being. In the present study, education and career goals could be seen as holding great

value to participants, particularly as the majority of the sample was in an examination year group. Secondly, the process of striving to achieve personal goals is thought to be an important aspect that facilitates psychological growth (Sheldon, Kasser, Smith, & Share, 2002). The present study provides support for the important link between goals and growth, with particular respect to education and career. Another notable addition of the present study to the literature, is the notion that planning towards goals is related to specific dimensions of PWB. This is important to adolescent groups because previous research suggests that setting a goal towards a chosen career is the most common personal goal for adolescent groups (e.g. Carroll, 2002; Knox, Funk, Elliott, & Bush, 200; Yowell, 2000). The study suggests that there is an association between having a specific plan towards education goals and having increased personal growth and sense of purpose. It may therefore be important for adolescents to not only set education and career goals, but also take the time to create specific plans towards them. In addition, strengthening an adolescent's sense of purpose, direction and focus on their ability to improve and develop as a person might well increase their ability to plan steps towards career goals.

The particular association of growth and purpose to education and career goals, contribute an interesting avenue for discussion and future research. The significant association of these two dimensions was seen in the specificity of steps generated variable. This fits with previous findings that suggest a sense of satisfactory progress and not actual attainment is sufficient to affect well-being (Carver & Scheier, 1990). Individuals are likely to experience

increases in well-being merely, through anticipation of successful goal attainment (MacLeod, 2013). In the present study, this appears relevant to the education and career goals. Those who have more specific plans, and therefore an understanding of the action needed to attain the education and career goal, also have higher levels of PWB. It is not clear that the association is this way round. Indeed, there is evidence to suggest that the dimensions Personal Growth and Purpose could contribute to the ability of adolescents to make more specific plans. Importantly, however, the findings in the present study provide some support for the notion that the link between well-being and goals is skill based (Sheldon & Kasser, 1998) and not just a result of personal beliefs held about goal attainment, such as optimism and hope (Scheier, Weintraub, & Carver, 1986).

The results indicated that Personal Growth and Purpose in life account for the variance in steps generated, in different ways. It is therefore an important opportunity to look at each dimension separately in the discussion and consider the implications for understanding adolescent PWB. There are two basic process by which Personal Growth is believed to develop: 1) Personality models suggest growth occurs through increased awareness, self-acceptance, and social integration and 2) 'Catastrophe' model that describes growth occurs as a response to an emotional or psychic trauma (Tedeschi, Tedeschi, Parks, & Calhoun, 1998). From a personality perspective, growth occurs at particular times in life, as people negotiate normative role or age transitions, such as adolescence (Erikson, 1963). Such a view of Personal Growth is supported by the present study. Goals pertinent to education and

career, which have specific plans, could create increased opportunity for personal growth. The opportunity for growth may also strengthen the belief an adolescent has in their personal growth, which makes them more able to imagine the necessary plans to achieve goals. This view is supported by the idea that personal goals are important to psychological need satisfaction and self-discovery (Sheldon & Elliot, 1999). There is growing evidence that searching for, and establishing, purpose occur through distinct processes (Burrow & Hill, 2011). Having a sense of purpose is important to having hope that the goal will be achieved. In addition, having a plan leads to an ability to envision the cognitive pathways and initiate the actions towards goal attainment (Snyder, 2002). This supports the close links between Purpose in Life and goals found in the present study. The value and personal relevance of a goal is important to having purpose and direction, which in turn can lead to a sense of meaning to one's life. This may be particularly relevant to education and career goals because of the specific impact that these goals will have on an adolescent's future.

The finding in relation to the Education and Career variable, in an adolescent sample, could be attributed to factors that were not controlled for. It is important to acknowledge the data were collected in a school setting. Participants are therefore likely to be primed and focused on school, examinations and education when completing the tasks. In addition, the students may well have thought the task was being assessed or part of their academic planning. An additional consideration for the specificity of plans generated being related to personal growth and purpose in life in the sample

is that the Education and Career goal was most relevant to the age of the sample and the same results may not be seen in students who are not in an academic examination year. The students in the sixth form may well have already made plans towards their education and career by taking exams and applying for university. The task could well have replicated these plans or been a retrospective list of tasks they had already completed.

Nevertheless, the link between Education and Well-Being is not unique to this study. Previous research has measured competence and control beliefs in relation to well-being and academic achievement. Hope, defined as, the belief that one can plan a path towards a desired goal (Snyder, 2002) was a strong predictor of life satisfaction, decreased negative affect and improved academic attainment (Robinson & Snipes, 2009). In addition, students who are more engaged with their education on an emotional, cognitive and behavioural level have higher subjective well-being and greater academic performance (Wang & Holcombe, 2010). The present study adds to the findings described above by suggesting more specific links between behavioural ability to plan towards goals and specific dimensions of well-being. The findings of the present study could be broadened, by investigating if an ability to plan towards goals improves academic achievement. This would help identify the potential processes that contribute to the association between well-being and academic achievement.

The present study also contributes to the research on the processes that are related to the association between planning and well-being. One concept that

has been developed is known as “Painful Engagement” (Macleod & Conway, 2007). In a clinical sample, of adults high on suicidality and hopelessness, individuals were able to identify goals and positive future expectancies, but were not able to believe in, or develop, a likely way to achieve these goals. This leads to an engagement with goals, which produces distress rather than positive well-being because a goal can be imagined, but not perceived as achievable. In the present study, the ability to generate specific steps could explain a more positive engagement with the goal and a belief that it is likely to be achieved. The present study therefore suggests the concept of Painful Engagement can be used to describe non-clinical adolescents who find it more difficult to make plans towards goals, in addition to previous research describing clinical populations.

Fundamentally, having and progressing towards goals is central to theoretical perspectives of well-being (Schmuck & Sheldon, 2001; Sheldon et al, 2002). The relative importance of goals and having aspirations has been shown to be more strongly associated with dimensions of PWB, than SWB in previous research (Chen, Jing, Hayes & Lee, 2012). The present study partially supports this finding by identifying an association between planning towards education and career goals and personal growth. It goes further by specifying the types of goals and the specific dimensions of PWB goals in a non-clinical adolescent sample. It does not fully support the cited research, however, because SWB was not used as a measure in the present study. Nevertheless, the cited ,and present, research support the link between PWB and planning towards goals.

4.4 Discussion of differences between Groups

The research questions in the present study sought to explore the differences in dimensions of PWB, planning and future thinking between schools. The analysis attempted to account for Age, Ethnic and SES differences in order to establish the extent to which conclusions can be made. Ford, Goodman, & Meltzer, (2004) have demonstrated that several individual and family factors in psychosocial well-being are closely inter-correlated. This can make it difficult to identify which variables account for the variance between groups. Within the next section the variables that contribute to differences between PWB, Planning and Future thinking will be discussed. The discussion will draw on previous research and consider the relatedness of the demographic factors within the present study.

4.4.1 Schools

The school can be seen as an extension of the family, the community, the local health services and other agencies (Nutbeam, 1992). This is both an asset and a risk to well-being of students from different schools. Students who leave school without qualifications are at risk of poorer quality of life as adults (Dougherty, 2003; Newcomb et al, 2002). For adolescents school contributes to their relationships, their potential for growth, and an opportunity for success and failure. These factors lead the school environment and context to be an important consideration in well-being research (Kaplan & Maehr, 1999). In

the present study, differences between schools were identified. This was in both PWB dimensions and positive and negative future thoughts. There were, however, demographic differences between the two schools that were not controlled for. These were the demographic area the school was situated in, the age differences between schools and the Ethnic split of the two schools. To help understand the potential impact of these factors to findings in the present study, the previous literature will be reviewed.

The two schools were from different neighbourhoods. One school was situated in a deprived area of London, with high inequality. Kupersmidt and colleagues (1995) suggested that exposure to health damaging risks may be multiplied in poor neighbourhoods and that poorer health in deprived areas can contribute to poorer mental health. Despite this and many other studies that identify poorer mental health in deprived areas (e.g. Cutrona, Wallace & Wesner, 2006; Leventhal & Brooks-Gunn, 2003), the school in the more deprived area in the present study had better PWB. This could be related to a person–environment fit model, which suggests that disparities between the individual's own specific circumstances and conditions typical of their neighbourhood, both social and economic, may be damaging to mental health (Kupersmidt et al., 1995) and not the neighbourhood itself. In School 1, they may feel the neighbourhood fits their needs, it is what the pupils know and as an adolescent it provides the peers and social interactions they place importance on. This may contribute to one explanation for the higher levels of PWB in School 1, compared to School 2.

Drawing comparisons between the two schools may be difficult, due to the large amount of confounding and unknown variables that are not accounted for. Nevertheless, exploring PWB, future thinking and planning towards goals in schools can offer an insight into opportunities for understanding what enables students to flourish. Research suggests that context can make a difference to how likely one is to experience racial discrimination and how likely this is to impact on their well-being (Gee, Spencer, Chen, Yip & Takeuchi, 2007). A study in the USA, used the Integrative Model (Coll et al, 1996) to examine the contextual influences of race on African American adolescents. The model suggests that individuals are stratified in society based on social class, gender, race and other social position variables. The results also suggested that the relationship between perceptions of racial discrimination and psychological well-being were moderated by the diversity in adolescents' schools and neighbourhoods (Seaton & Yip, 2009). The ethnic density of the schools appeared to be high. That is, School 1 had a high BME density and school 2 had a high White British density. The Ethnic density in school 1 was higher than in school 2 within the sample. The greater PWB that was seen in participants from school 1 could therefore be due to the Ethnic Density. For example, Wickrama, Noh, and Bryant (2005) found that for black adolescents, risks of mental distress fell as the ethnic density of the community increased. This research finding supports an argument that denser concentrations of ethnic minorities is beneficial for psycho-social health. In the present study, it contributes to understanding the higher PWB and higher Positive Future thoughts of School 1 that can potentially be attributed to the higher Ethnic density. This suggestion is based on the assumption that the

samples taken from each school represent the ethnic demographic of both the school and the surrounding area. The present study did not collect this data, but can draw partial conclusions based on the findings, the sample and the literature.

Another factor that was not measured in the present study, but is important for consideration of the findings, is School Social Status. School social status has stronger associations with measures of health than SES (Sweeting & Hunt, 2014). Future research could include a measure of school social status to improve the understanding of adolescent well-being in schools. The School Social Status measure was successfully implemented in the aforementioned study by adapting the Subjective SES measure used in this study. This was achieved by asking students to put themselves on the ladder, with respect to where they see themselves, compared to their school peers and is based on previous research that has implemented a similar format (e.g. Goodman et al, 2001). It has been suggested that it is important to facilitate the development of children from less than optimum home backgrounds. The intervention of the school can be the turning point for many children with few other supports (Gross, 2008). The present study is evidence of a school from a deprived neighbourhood, whose students are higher on Growth, Self Acceptance and Positive Future thoughts. This could suggest that schools can be an important contributor to positive mental health and a vehicle for improving well-being and preventing poor mental health.

In the discussion of differences between schools, the narrative has focused on explaining the higher number of positive thoughts and greater PWB in School 1. The differences between the schools, although significant, were relatively small. To account for the differences, it is also important to consider what might contribute to lower PWB and fewer positive future thoughts in School 2. One potential explanation is that SES (self report subjective and Objective Parental Occupation) did not significantly differ between the two schools. This is despite the fact that schools were from two areas that differ on levels of deprivation, according to the Index of Multiple Deprivation (ONS, 2010). This could suggest that adolescents from either School 1 or School 2 do not represent the demographic from the neighbourhood surrounding their school. The results indicate that it is potentially School 2, as a higher number of participants fall in the low SES groups (Table 14) than the high SES group. If those students from School 2 perceive a lower SES, than the surrounding neighbourhood, this could be detrimental to their well-being. Social comparison and expectation may lead to the perception of an income disparity, which is likely to be related to comparisons with the local and societal context (Whelan, Layte, Maitre, & Nolan, 2001). Pupils from School 2, who report similar low SES to School 1, may experience the impact of inequality in their local area, which is a common risk factor for poor mental health (see Murali & Oyebide, 2004). In addition, the specific differences between Personal Growth and Self Acceptance could be as a result of a perceived lower status than those in their community. This could potentially lead to an experience of not being able to personally grow and achieve their goals, due to the barriers of deprivation or social comparison. In addition, it

could potentially feel harder to hold a positive regard for the self, if you feel inadequate, when compared to the wider community. If School 2, however, do represent the more affluent area, it is important to consider the reliability of the subjective and objective SES measures. This will be explored further in the limitations section.

4.4.2 Ethnicity

Ethnic variability in mental health is well established in adults, but less well understood in adolescents (Maynard & Harding, 2009). The findings in the present study support existing evidence that adolescents from Black African, Indian and Bangladeshi origin have better psychological well-being than their White British peers. In the UK, Children's SWB is lower in White Children, than their Pakistani, Indian and Bangladeshi peers (The Good Childhood Report, 2014). This finding is related to the present study that found higher dimensions of PWB in Black Ethnic minorities, which included 23 (N=95) participants of Pakistani, Indian and Bangladeshi origin. One explanation for the differences of previous research and those found in the present study is protective factors. Ethnic Identity is defined as the part of individual self-concept that is formed by the value placed on belonging to a particular ethnic group (Tajfel, 1982). The transition from adolescence to adulthood is an important period of ethnic identity formation. Studies indicate that many young adults strive to define and derive meaning from their ethnic identity (Phinney, 1992). The adolescents that identify more highly with their ethnic group report improved mental health outcomes and academic success across a range of

research studies (Wakefield & Hudley, 2007). The findings in the present study could suggest further support for ethnic identity. The BME group showed higher Self Acceptance, in a context where they potentially feel more identified with their ethnicity, due to the high proportion of BME students in their school and BME individuals in their community (ONS, 2010).

Another explanation for the findings in the present study may relate to recent research on immigrant populations. In a sample of 1250 mixed ethnicity immigrants in Spain, higher levels of Personal Growth, Self Acceptance and Purpose in Life were found, when compared to a matched native comparison group (Bobowik, Basabe & Paez, 2015). Well-being was higher in the immigrant populations than the host nationals, when controlling for perceived friendship, marital status, income, gender and age. The study highlights the need to look at dimensions of PWB separately, as was done in the present study, to generate a more rounded understanding of well-being in minority groups. The present study, in line with the aforementioned study, found higher Personal Growth and Self-Acceptance in BME groups. One reason to account for this finding could be an ability to overcome adversity and a resulting 'learnt resilience. Personal growth, in BME adolescents, may develop as a result of parental messages and modelling. Immigrant parents may communicate the value of working hard and seeking better opportunities to their children and show this through their behavioural approach to daily tasks (Roffman, Suarez-Orozco & Rhodes, 2003). In the present study, we cannot conclude that this is the case, as the birthplace of parents and participants was not acquired. Nevertheless, the higher Personal Growth scores in the

BME group could be explained by internalising such messages and attitudes. The BME group were from a neighbourhood of deprivation and a capacity to maintain high levels of purpose, mastery, or growth in response to adversity has been found to lead to increased resilience (Singer, Ryff, Carr, & Magee, 1998).

When considering the ethnic group differences found within the present study, it is important to acknowledge the cross-cultural validity of the scales used. The PWB scale was developed from theory that is predominated by Western literature, which potentially creates a value laden view of PWB that is not cross-culturally relevant (Ryff 1989;1998). There is some support for the cross-cultural validity of the PWB scale (Cheng & Chan, 2005; Kitamura et al, 2004), however, there is also evidence to suggest that a three dimension scale is a better fit in a sample of 270 male Indians (Malla, 2013) and a four factor model suitable within a Spanish PWB scale (Badia, Gutiérrez, Wiklund, & Alonso, 1996). When drawing conclusions in the present study, both individual and cultural conceptulisations of psychological well-being should be considered. For example, students from different ethnic groups may want to present themselves in a certain light and differences between groups could well have been present due to social-desirability bias when completing tasks and questionnaires.

4.4.3 Socio-Economic-Status

The lack of differences between high and low SES groups replicates similar findings when research has been carried out with adolescent samples. Whilst there is a large body of research which suggests that higher objective SES is associated with better well-being in child and adult cohorts (Marmot, 2005), there is little or no evidence of consistent differentials in adolescents self report of well-being and various indicators of parent or household SES (Fagg, Curtis, Cummins, Stansfield & Quesnel-Vallée, 2013; Spencer, 2006). A similar finding was present in this study, with both objective and subjective low and high SES groups showing no differences across variables. One explanation for this could be the measure of parental occupation. Splitting the groups by manual and non-manual (NS-SEC, 2010) is a dichotomous measure, which is fairly crude and may not represent an accurate representation of low and high SES. Nevertheless, obtaining parental occupation information from adolescents has been shown to be a reliable source in other studies (Lien, Friestad & Klepp, 2001). The relationship between socio-economic status and well-being, therefore appears to change across the life-span, with a noticeable difference in adolescent groups. A potential explanation for this pattern is a decreased effect of the family, parents and home environment and an increased effect of the school and peer group on adolescents (West, 1997). This is supported by the present study as shown by the differences between groups being seen in schools and ethnic groups and not in low and high SES.

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4.4.4 Age

The present study revealed significant age differences between older and younger students. Whilst the sample age range was small, the differences in dimensions of PWB are noteworthy and replicate similar findings in Well-Being literature. The younger participants had greater Purpose, Personal Growth and Self-Acceptance than the older participants. Ryff (1989) compared PWB between young (18-29 years old), midlife (30-64 years old) and old aged (65 years old or more) adults and found different aspects of PWB increasing or decreasing, while other not changing at all. Environmental mastery and autonomy increased with age (especially from young to midlife adults), purpose in life and personal growth decreased (especially from midlife to old aged adults) and no differences where found for self-acceptance and positive relations with others. The present study offers further support for age differences in PWB and a need to investigate smaller age ranges in an adolescent sample. The changes that occur in adolescence are vast and at a rate that is second only to infancy (Lerner and Villarruel, 1994). This highlights the need to understand that adolescents of different ages may have different needs and strengths, even when only a year apart.

The sample were all in late adolescence. Eccles and Gootman (2002) specify a number of psychological, social, and physical challenges during this time. These challenges include finding meaning and purpose, identifying personal strengths and weaknesses and making plans to pursue future goals, tasks that contextualise the significant results in the present study. The higher levels

of PWB dimensions in the sample were Personal Growth, Purpose in Life and Self-Acceptance. Perhaps, the age of the sample is representative of these dimensions and Autonomy, Environmental Mastery and Positive Relations are of less importance. Purpose in life is also described as a positive developmental tool (Benson & Scales, 2009) that contributes to individual flourishing (Seligman, 2002). This could explain the important contribution of the Purpose in Life dimension in the present study and the fact that at different stages of development, the levels of Purpose in life were different.

4.5 Clinical Implications

4.5.1 School Interventions

Seligman, Ernst, Gillham, Reivich and Linkins (2009) emphasize the function of positive well-being in improved learning and attainment in schools. In addition, parents want their children to not only be happy, but also want them to be thriving and achieving in all areas of their lives. This supports the utility of well-being interventions in a school setting, to support all children and not just those who are already presenting with difficulties. In line with the findings in the present study and previous research it is important that interventions developed for older adolescents fit their growing maturity and expertise. Interventions, for these groups should consider new school subjects, their increasing cognitive capacities, their increased concerns about identity, and their transition into adulthood (Zarrett & Eccles, 2006). In addition, the importance of Education and Career goals to dimensions of PWB highlighted

in this study is well supported. Eccles and Gootman (2002) identified the need to focus on adolescent educational and career goals by providing career planning activities. This type of support was found to help young people develop personal strategies of success (Eccles & Gootman, 2002).

The present study found particular associations between Planning specificity of Education and Career goals and dimensions of PWB. This could help inform understanding what contributes to 'Adaptive Achievement Strategies' (Aunola, Stattin, & Nurmi, 2000). Theses strategies are underpinned by various characteristics including both optimism and an ability to overcome obstacles. These characteristics are consistent with the findings in the present study because improving Personal Growth and Purpose in Life would likely contribute to an ability to plan towards goals. Improving the ability to have specific plans would also, in turn, appear to improve Personal Growth and Purpose in Life. This would likely represent an ability to overcome obstacles and face future events with optimistic expectations. The importance of interventions in Schools will not only relate to improving academic achievement and outcomes, but will also relate to improved self-esteem and lower externalizing problem behaviours (Aunola et al., 2000). These types of preventative and strength based interventions would be an important contribution to work with adolescents.

Over the past 20 years, there has been a significant increase in the number of young people staying on in education at 16 years and the numbers taking A-level courses have doubled since the 1970s, from around 18 per cent to over

40 per cent (Wolf, 2011). Older adolescents, therefore, are still in Education and face different stressors than in the past. They are also making career choices, thinking about their future and planning towards goals. Much of the research on understanding more about the mental health and well-being link to academic achievement has been focused on negative behaviours and understanding the contribution of additional stressors on academic achievement. The present study highlights the positive link between education and well-being and presents a promising avenue to continue promotion of positive mental health into late adolescents, whilst these individuals are still accessing education (Weare & Markham, 2005). Promoting Well-being is also key to pursuing educational goals, which could potentially facilitate better attainment and exam results. The most effective school interventions, therefore, should focus on skills to promote positive mental health and not merely how to deal with problems or achieve academically (Green, Howes, Waters, Maher et al, 2005).

4.5.2 Clinical Interventions

Kazdin (1993) argued that the prevention and treatment of child and adolescent mental health should cover two domains: firstly, promoting the absence of dysfunction and secondly, encouraging optimal functioning in psychological domains. The role of PWB to this conceptualisation of Mental Health shows the two areas are not completely distinct and the present study contributes further to the understanding of this. Clinically, it is important to

work with individuals to improve components of their well-being, particularly due to the associations shown between dimensions of PWB and positive affect. Depression can occur due to a lack of positive Affect in children (Lee, & Rebok, 2002). There is therefore great potential for prevention and treatment of depression by strengthening aspects of PWB. Dimensions of PWB could lend themselves to certain types of therapeutic intervention. In addition, paying attention to strengths based models and building resilience could improve adolescent growth and purpose, which could also relate to increased positive affect.

Planning towards goals is a skill that offers an accessible avenue for intervention. An ability to set a goal and plan towards it can influence future achievements, which may in turn impact upon well-being. Planning and goal setting are also cognitive tasks, which are amenable to individual level intervention. In the present study Education and Career goals, and the plans toward them, were particularly pertinent to Personal Growth and Purpose in life. A recent study showed a brief planning intervention to be effective in improving SWB (Macleod, Coates & Hetherton, 2007). The Goal setting and planning intervention (GAP) could be developed and tested in schools, with a particular emphasis on goal setting and planning for education and careers. This would potentially facilitate better academic achievement and more focused career development in adolescents, whilst increasing levels of PWB.

A further consideration from the present study is the clinical utility of identifying patterns of PWB and positive and negative future thoughts in different ethnic

groups. The proportion of Black Ethnic minorities accessing mental health services is three times higher than the proportion of Black Ethnic Minorities in the general population (ONS, 2011). This does not reflect the Ethnic groups differences in PWB that were found in the present study. There are a number of potential reasons for this. Common mental health difficulties are lower in African Caribbean people in the UK, but representation in hospital and schizophrenic populations is higher. There is also evidence to suggest diagnosis misrepresents the number of BME individuals with mental health difficulties due to cultural differences and engagement with services (Mental Health Foundation, 2014). These factors may represent some of the considerations for the present study. Higher PWB in adolescence is seen as a protective factor to later adult Mental Health across a range of studies. This trend, however, seems to be reversed in BME groups. Understanding how to improve PWB in White British adolescents to prevent adult Mental Health is crucial. It is also important, however, to build on the Personal Growth and Purpose in life resources of BME groups to prevent later adult mental health and potentially limit the over representation in services.

One explanation for the higher PWB in adolescent BME groups not necessarily leading to lower mental health rates in adult groups could be related to a mismatch between expectations and opportunities. The Growth dimension and the Purpose dimension allow BME adolescents to strive towards opportunities and be determined to pursue goals. In society, however, their beliefs and individual actions may well be halted by lack of opportunity and discrimination. In a survey of 740 BME adults experiencing mental health

difficulties between a half and two thirds report discrimination in finding or keeping a job; in housing or education; and in forming relationships and having a family (Rehman & Owen, 2013). The disparity between the internal strengths and external opportunities may results in growth and purpose reducing over time.

4.6 Strengths

Sample Size: The sample in the present study exceeded what was needed for adequate power. This enabled rejection of the null hypothesis that sample estimates do not statistically differ between participants and the population. The large sample also allowed for a range of analyses by group. This was particularly helpful to explore Ethnic, SES and age differences in the adolescent population. Increasing the understanding of purpose in life in BME populations is addressing an important gap in the literature in PWB, which has been criticized for a reliance on college-aged, European American samples (Kiang & Fuligni ,2010).

Student Involvement: Carrying out the research in a school setting is a time and cost effective way of collecting data. In addition, however, the study also helped to normalize mental health, well-being and Clinical Psychology in an educational setting. The researcher provided teaching to an A-level Psychology class after completing the data collection. In addition, a small group of sixth form students were invited to present the research findings to

the participants. After the study, these students also spent time with the researcher, and head of sixth form, to explore ways in which their school could continue to improve Well-Being.

4.7 Limitations

Sample: The study was carried out in a non-clinical sample. This provides evidence of the relatedness of dimensions of PWB, Future Thinking and Planning towards goals, in adolescents, but does not allow results to be generalized to clinical groups. The sample was an opportunistic sample from schools known to the researcher. The sample was limited because the two schools were not matched and therefore do not provide a homogenous group. Whilst this allowed for comparisons to be made between the schools, it may have been more beneficial to have an ethnically diverse population from one school or a range of schools. The age-range within the sample was small and therefore did not allow for comparisons across adolescence. This would be interesting to investigate in future research, particularly in relation to Personal Growth and Self Acceptance at different developmental ages.

Schools: Carrying out the research in a school context led to a number of limitations. Firstly, the tasks were delivered in a classroom setting, in large groups. Whilst instructions were standardized and a presentation was used to keep students on task, the participants were easily distracted at times and a number of them appeared to not continue with the task for the full amount of

time. The second confounding factor of delivering the research in a school was the priming effect of being in a classroom. Participants completed the research as part of their school day. The tasks and questionnaires may well have felt like an academic task or one that was being evaluated and marked. Although it was made clear there were no right or wrong answers, it is difficult for students to differentiate the data collection from the context of school. This limitation may well explain the Education and Career goal providing the most significant result, with participants potentially placing more importance and effort on this, than the other tasks. Participants may have been practiced at producing specific plans towards these goals due to the year group they were in at the time of data collection. In addition, those with higher PWB may be more able to plan specifically in lessons and in the task itself. The conclusions related to specific planning therefore need to be taken with caution.

Measures: The data collection took an hour to complete and required a consistent effort from participants. This, particularly in an adolescent group, could have led to fatigue and boredom. As a result, there were high numbers of missing data across questionnaires and tasks. There also appeared to be tasks that were completed well at the start of the booklet, but less well completed at the end. This could be representative of accurate responses to the tasks, but may well be representative of less effort or a difficulty concentrating for the full hour.

The Ryff PWB Scale requires a level of abstract thinking that adolescents may not be able to access without specific prompting. The scale has been criticized

for being an expert view of well-being, rather than a measure that explains what makes a person's life good (Diener, Sapyta & Suh, 1998). Also, the Planning and Future Thinking Tasks are measures that require a certain amount of investment and effort from participants. They too require individuals to have the cognitive ability to think about their future. In the literature, 'Future Orientation' refers to the attitudinal, cognitive, affective and motivational constructs that describe the processes in youth shortsightedness (Steinberg, 2008).

The ability to think and consider the future generally increases across childhood and adolescence. Compared to younger adolescents, older adolescents think more about completing their education and going to work and are also able to consider future emotions such as fear and hope (Nurmi, 1991). These findings suggest that having an older adolescent sample is required for the tasks used, but perhaps does not account enough for individual differences in future orientation and does not account for lack of significant future thinking results in adolescents in this study. This may also explain why adolescent findings in the present study, contradicts findings in adult populations.

Coding: The data from the Future Thinking Task was used to create the positive and negative future thinking variables. To calculate positive and negative future thinking the researcher summed the number of thoughts generated, in the positive and negative conditions, across time periods. Any repetitions were excluded. The process could well have incurred human error.

The inclusion and exclusion of thoughts was at the researchers discretion. The participants did not always write lists of thoughts and some thoughts did not appear related to the questions asked. To try and account for the potential researcher bias, and human error, a subset of 20 task packs was coded by an independent person. The scores for all 20 matched those scored by the researcher.

The planning towards goals task was coded based on protocol from previous research (Macleod & Conway, 2005; 2007). The researcher used an instruction guide and examples to inform the coding of the specificity of the goal and specificity of the steps. The examples were not adolescent specific, but nevertheless, were informative to the types of statements that could be coded as more or less specific. As with the FTT, coding is subject to human error and researcher bias. Participants did not always write the steps as lists. In addition, there were occasions where participants set more than one goal for each condition. The researcher used the goal that the participants had identified more steps towards in the second stage of the task. This was kept consistent across the analysis. As with the FTT, a subset of task-packs was coded by an independent rater. The inter-rater reliability was high and some of the limitation of this method can therefore be reduced.

Multiple Analysis: There were a large amount of variables considered in the present study. The data was explored at great length, which led to a large amount of analysis. Multiple comparisons and statistical tests can lead to an increase in Type I Error; that is a rejection of the null hypothesis when it is in

fact true. In order to control for this in the present study, the alpha level was set at 0.01. This method contributes to reducing Type I error, but can be criticized for leading to increased likelihood of Type II error in a failure to reject a false null hypothesis (Rothman, 1990).

Between Group Differences: There were a number of limitations to the group analysis. For Research question 4, the Parental occupational groups were split into high and low around the median. A median split analysis was carried out due to the abnormal distribution of the scores. This method, on the one hand creates two equal groups, but on the other hand may falsely represent all scores above the median as equal. This type of measurement error does not always account for the values at each end of the data being different from those that fall in the middle.

The between group analysis is most notably limited due to the significant differences across demographic grouping variables and FAS scores. Differences between groups can therefore not be attributed to a single group factor, which makes it difficult to draw firm conclusions. The age and ethnic differences between schools would have contributed to the differences found between the schools. The study provides a rationale for future research, in these areas, to help infer more about where the differences occur. FAS scores were used as a measure of verbal fluency. The differences in FAS scores were interesting because they were in the opposite direction to what was expected. Significant differences in Verbal fluency is said to confound results on the FTT and Planning Tasks because those who are more verbally fluent

may well do better on the tasks. Despite this expectation, and contrary to previous research, those who were more verbally fluent had lower scores across tasks. It was assumed, and supported by covariate analysis, that FAS did not confound results or contribute to the variance between groups. Whilst this was the case, the inconsistency of the FAS scores and FTT scores, in the present study, may explain a lack of accuracy in task completion.

4.8 Further Research:

The present study was carried out in a school setting and thus generated a priming mechanism for responses to relate to education and the school. In addition, the context may have led to an increased awareness of social desirability in participants, as well as an over emphasises on feeling like they were in a 'tested' or evaluative environment. The study would benefit from replication in different settings. This is particularly relevant for the task-based exercises. Asking adolescents to set goals and think about their future may generate a contextual dependent memory (D'Argembeau & Van der Linden, 2004), which leads to goals that were specific to the context they were generated in.

Differences between age groups were identified in the present study, but further exploration would be useful. A replication of the present study would identify if it is useful to investigate adolescents of small age ranges to establish if the suggestion that the rate of developmental processes is related

to differences in PWB dimensions. A different analysis would be useful to look at age differences across a wider age range to identify how PWB, Future Thinking and Planning changes between age groups and across the whole of adolescent development**.** An additional avenue of investigation that would be beneficial would be to investigate the same group of adolescents with a longitudinal study design. This would address a current gap in the literature because very few studies have examined the extent to which well-being can change over time (Gallagher & Lopez, 2009). It would also enable more in depth analyses of the potential interventions that are needed to strengthen well-being in adolescents of different ages.

The sample was ethnically diverse, however, this diversity existed within the schools. This therefore made it difficult to decipher whether the differences between White British and BME groups existed as a result of ethnicity or as a result of the school they attended. Replicating the research in a diverse sample, from the same context would be a useful progression to explore the relationship further. The relationship between BME and White British groups suggested that BME groups had higher levels of PWB, particularly in certain dimensions. This finding is supported by some studies (The Good Childhood Report, 2014), but also contradictory to others (Burnett-Zeigler, Bohnert, & llgen, 2013). With this in mind, further investigation is required. It would also be useful to understand the impact of being in an ethnic majority or minority and if this can be implicated in dimensions of PWB. The findings in the present study could be attributed to the BME group being in a high density BME community and therefore not experiencing discrimination and identifying

more highly with their surroundings and community. Ethnic identity and less discrimination is associated with less problem behaviours, less risk taking and lower well-being (Cokley, 2007). The relationships found in the present study could be extended by looking at relationships between dimensions of PWB and Ethnic identity in a diverse adolescent sample.

The Socio-economic status measures in the present study were limited and further research to explore the relationships between dimensions of PWB and SES with more robust measures would be beneficial. The use of subjective and objective measures of SES is an important avenue for further exploration. In adolescents, it is unclear whether actual, or perceived, poverty have a greater impact on PWB. It is also important to investigate accurate measures of SES in adolescents. Whilst the Index of Multiple Deprivation (ONS, 2010) of the Schools and Parental Occupational Status have both been used in a variety of research, they are proxy measures that may lack construct validity. One commonly used measure of adolescent SES is free school meals (Hobbs & Vignoles, 2007). This could not be used in the present study, however, as School 1 gave all pupils at the school a free meal. Ordinarily Free school meals are given, based on family income, so replicating the study with this measure may produce different SES implications for future thinking, planning towards goals and dimensions of PWB.

4.9 Conclusions

The present study, whilst somewhat limited, contributes to the adolescent well-being literature. Most notably, the present study supports the distinct nature of Positive and Negative Affect. It also supports the literature regarding the relationship between increased positive affect and psychological well-being. The increased understanding of the relationship between Positive Affect and PWB in adolescents is applicable to the general population and clinically. The study supports the need to look at strengthening mental health, as opposed to merely treating mental ill-health. The lack of relationship between negative affect and PWB highlight the need to not only promote interventions that focus on the removal of negative symptoms and distress, but also promote interventions that are focused on building strengths and psychological resources.

The present study identified the integral nature of Education and Career goals to adolescent PWB. This has important implications and opens up research opportunities in the development of education planning interventions and assessing their impact on PWB. In addition, the findings support the need to consider Well-being in educational settings and promote positive psychological interventions. The present study suggests that by addressing PWB you may well contribute to improved ability to plan towards career goals. Future longitudinal research could assess whether more specific plans generate greater potential to achieve career goals in the future. There is not only an individual argument for this, but also an economic one.

Identifying relationships between adolescent's affect, planning, and PWB, in the present study, is strengthened by also exploring group differences. Awareness of cultural and ethnic differences is a key component of effective psychological intervention (BPS, 2010). The differences between Schools also highlight the importance of developing interventions in schools that fit the specific needs of the students, as well as addressing the unique aspects of the neighbourhood that the school is situated in. Research on child and adolescent mental health is viewed with great importance (Future in Mind, DOH, 2015). At this time, research on Psychological Well-being, future thinking and planning towards goals adds a significant contribution to considering the positive aspect of adolescent functioning. This contributes to the development of adolescent strengths and provides accessible avenues for school and clinical interventions to promote well-being.

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APPENDIX 1 – Ethical Approval

Psychology-Webmaster@rhul.ac.uk

Mon 14/07/2012 15:29

To: nxjt027@rhul.ac.uk; Macleod, A;

Cc: PSY-EthicsAdmin@rhul.ac.uk; Leman, Patrick; Lock, Annette: umjt001@rhul.ac.uk

Applicant Name: Natalie Seymour

Application Title: Psychological Well-being in Adolescents: Planning towards and thinking about the future

Comments:

Approved. Reviewer comments below for information.

Reviewer 1. The application is complete and the project does not raise any ethical concerns other than the ones identified by the applicants, for which they have proposed appropriate measures.

Reviewer 2. Ethical issues have been carefully considered and the applicant has experience of working with these schools. My only query is why the schools chosen are so different. Is there a hypothesis concerning the differences between schools (in which case this should be mentioned), or will using these two schools simply ensure that a range of adolescents is sampled?

APPENDIX 2 – Full verbal instructions read by the researcher during data collection

Welcome

Hi, I'm Natalie Seymour and I am studying psychology. As part of my course I am doing some research on future thinking, goals and well being. You may remember me from last month, when I came to do a presentation in your assembly. Thank you for taking part in my research, it is very helpful for me and I hope it might be helpful to others too.

Today we are going to do some tasks. I am going to ask you to think about the future, to set some goals and plan towards them. I am also going to ask you to fill in some questionnaires.

There are no right or wrong answers. You will be working on your own for each task and I am most interested in what you think.

If you have any questions your teachers, or I, will try to answer them and help you if necessary.

Consent

You have an information and consent form on the desk in front of you. All the information you need was given to you in my presentation and on the letter you took home.

Please read the information on the form and then print your name, fill in the date, and sign it in the correct place indicated (show example). Once you have done this, leave the form on your desk and we will collect them.

If you have any questions, or are unsure about agreeing to take part, please raise your hand and we will come and help you.

Introduction

We are now going to start the tasks. You will be given instructions for each task and then given the opportunity to ask questions. Where possible, please hold onto questions until this time. If you have a question during the task please ask by raising your hand.

Do you have any questions?

Ok we will now begin our first task, listen carefully to the instructions and just give your best effort.

FAS TASK

I would like you to now think of as many words as you can beginning with a certain letter. I will ask you to do this for three different letters of the alphabet. You will have one minute for each letter.

Write down as many different words as you can think of and keep trying for the full minute. You should not use:

1. *Names of people and places*
2. *Numbers*
3. *Sequences of the same word Eg: teach, teacher, teaching.*

Does anyone have any questions before we start?

Ok, the letter is (F, A or S) … and your minute starts now. Please stop writing and turn to the next page.

Future Thinking Task

I would like you to think of things that will happen in your future at the three different time periods. I will give you each time period one at a time. Like before you will have a minute for each part of the task.

It does not matter what the things you think of are, as long as they will, or are at least, quite likely to happen. Think about different things in your life, such as family, friends, school, the future, hobbies etc.

If you are finding it hard to think of things, that is fine, but keep trying for the whole minute.

***POSITIVE:** firstly I am going to ask you to think about things you are looking forward. These are positive things, which you think you will enjoy.*

Do you have any questions?

a) *Including today, think of as many positive things as you can for the next week. Your minute starts now.*
b) *Think of as many positive things for the next year.*
c) *Think of as many positive things for the next five to ten years.*

***NEGATIVE:** Now think about things you are worried about and are not looking ford to. These are negative things that you would prefer not to happen.*

Does anyone have any questions?

Repeat A, B and C (as above).

Goals

Next I am going to ask you to thinkj about your goals. By goals I mean things in your life that you would like to happen in the future and you would like to work towards. II want you to think of three different goals, each relating to a different aspect of your life.

a) *Education and career. This could be about going to university, a certain career or particular exam results.*
b) *Leisure and Activity. This goal is related to your hobbies and interests E.g; Sport, Music, Dance, Health etc*
c) *Family and friends. This goal is about anything related to your family and friends. E.g; Helping them, spending more time with them etc.*

Write each goal next to number one, two and three on the page in front of you.

Does anyone have any questions?

Now, the next part is about thinking about how you would get to your goals – what things you need to do or steps you need to take to get to them. I am going to ask you to write down each goal again and then to write down all the steps you can think of that you need to take to achieve the goal. Think about where you are now and what you need to do to get to the each goal you wrote down. Be as specific as you can. Try to make each step realistic and think about how likely, it is, to help you reach your goal.

Does anyone have any questions?

I want you to turn the page. At the top of this next page I want you to write down the first goal you wrote on the previous page (let them do that). Now I want you to write down as many things or steps that you can think of that will help you get to this this goal.

Repeat for each goal. Prompt students to move onto the next goal during the time on the task.

Questionnaire Packs

You will now be given a questionnaire pack. Please work through this, one page at a time, one question at a time. There are no right or wrong answers. Answer each question with the first thing that comes into your mind.

If you have any questions please raise your hand and someone will come and try to help you.

Thank you/Debrief

Thank you for taking part in the research. You will be given a debrief sheet to read through. If you have any questions following this please raise your hand.

I really appreciate the time that you have given up and I hope the findings will be interesting.

APPENDIX 3 – Parental Opt-out Letter

Dear Parent/Carer,

I am writing to you to explain my research project and give you the opportunity to withdraw consent for your child's participation in the research. I hope this letter provides you with the all the information you need to make an informed decision.

I am a Trainee Clinical Psychologist at Royal Holloway, University Of London, and I am completing a project, under the supervision of Professor Andrew MacLeod, that aims to widen our understanding of the factors which contribute to adolescent well-being. I am particularly interested in how young people plan towards their goals, and think about their future, and the way this is related to their well-being. The information I gather will hopefully further our understanding of adolescent well-being and how best to promote well-being in this general age group.

What does the project involve?
Your child's school has partnered up with me in order to carry out this research project. I will be asking your child to complete some questionnaires about how they feel and what makes them feel better about their lives. I will also be asking them to complete two tasks, one in which they will set and plan steps towards their goals and one in which they will be asked to think about what they are and are not looking forward to in the future. They will also be asked about their socio-economic status and ethnicity and background, so that I can have an overall description of the group that is taking part.

Your child's answers will be kept entirely confidential and their names will not be attached to their answers. Their taking part in the study is entirely voluntary and even if they do take part they are allowed to withdraw from the project at any point in time. If they raise any concerns about the questionnaires or the tasks with you please feel free to get in contact myself or my supervisor Professor Andrew Macleod.

Participating in this research will NOT interfere with your child's educational timetable. I have worked closely with the school staff to organise time for participation. The project will be part of your child's PSHE lesson.

How will this benefit your child?

Participation in this project will involve your child setting some goals. They will also be asked to develop plans to achieve these goals. This is something that they may find helpful. There will also be an opportunity for some children to present the overall findings to their peers, which will help them learn more about well-being and develop their presentation skills. The results of the study may also be used to develop interventions to promote adolescent well-being in the future.

Consent

Your child's participation in this project is entirely voluntary. If you would NOT like your child to participate in the research project, please complete the form below and hand it back to your child's form tutor. Your child will also be given the opportunity in school not to take part or to withdraw from the project at any time.

If you would like to discuss the project further and have any questions regarding your child's participation, please do not hesitate to contact me by email; Natalie.seymour.2012@live.rhul.ac.uk or Professor Andrew Macleod; A.Macleod@rhul.ac.uk.

Yours sincerely,

Ms Natalie Seymour
Trainee Clinical Psychologist

Professor Andrew Macleod

Royal Holloway, University Of London

I would NOT like (*student's name*)…… of (*student's form class*)…… to participate in the research project during his/her PSHE lessons. Please arrange for my child to complete alternative work during this lesson.

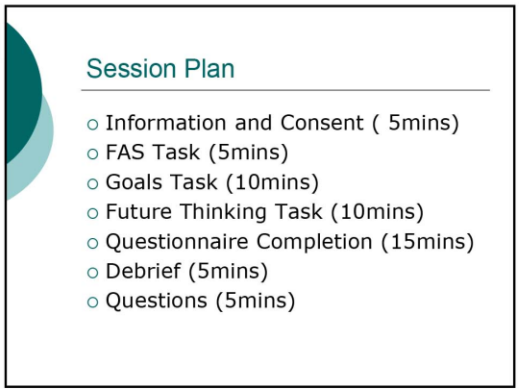
Name: ……

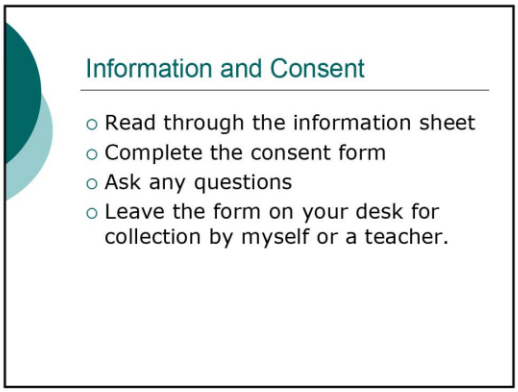
Signature: …….

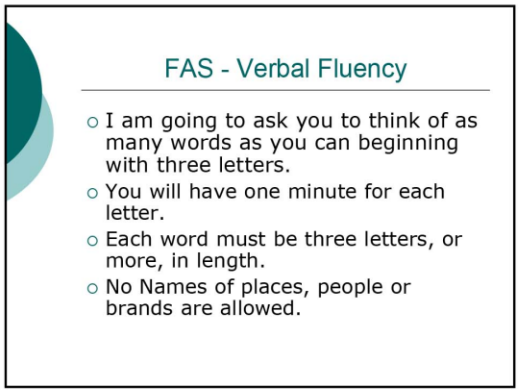
Date: …….

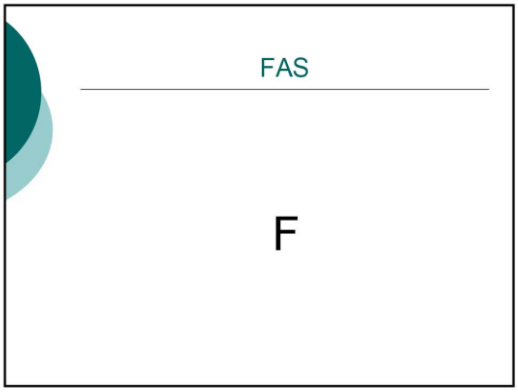
Handing in this form means that your child will NOT be taking part in the project

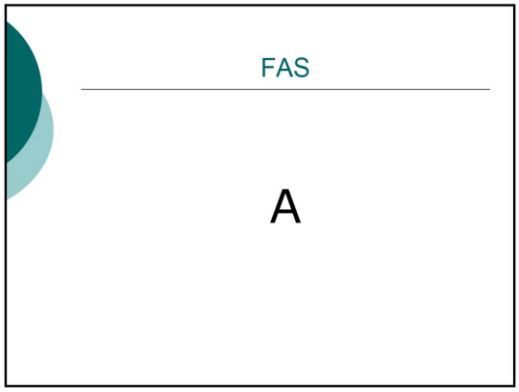
APPENDIX 4 – Presentation for Data Collection











FAS

S

Planning Towards Goals

- I am going to ask you to think about three goals.
- You will need to set a goal and think about how you are going to achieve that goal.
- Think about each thing or idea as a 'step' towards the goal you set.

Goals – Career/Education

- Think of a goal for your career or education.
- This could be a certain job/course/university or dream career.
- Write this down on the page.

Goals – Leisure/Activity

- Think of a goal for your leisure or activity time.
- This could be related to your hobbies/fitness/health/music/social group.
- Write this down on the page.

Goals – Family/Friends

- Think of a goal for your friends or family.
- For example: *'I would like to spend more time with my friends/family'*
- Write this down on the page.

PTO

GOALS

- You now need to think about how you are going to achieve the goal.
- You have two minutes to write down as many 'steps' from where you are now to your chosen goal.
- Try to make each step SPECIFIC and REALISTIC.

EDUCATION/CAREER

How are you going to achieve your goal?

PTO

LEISURE/ACTIVITY

How are you going to achieve your goal?

PTO

FAMILY/FRIENDS

How are you going to achieve your goal?

PTO

Future Thinking Task

- I am going to ask you to think about your future.
- I am going to ask you to do this for positive and negative thoughts separately.
- You will have two minutes for each task.
- Please write down as many thoughts as you can for each task.

FTT – Next week

Think of as many positive thoughts, about the next week (including today), as you can.

PTO

FTT – Next year

Think of as many positive thoughts, about the next year, as you can.

PTO

FTT – Next 5 to 10 years

Think of as many positive thoughts, about the next five to ten years, as you can.

PTO

FTT – Next week

Think of as many negative thoughts, about the next week (including today), as you can.

PTO

FTT – Next year

Think of as many negative thoughts, about the next year, as you can.

PTO

FTT – Next 5 to 10 years

Think of as many negative thoughts, about the next five to ten years, as you can.

PTO

Questionnaires

- You will now be given a questionnaire pack
- Please follow the instructions and answer all the questions in order.
- There are no right or wrong answers
- Please work on your own
- Do not think too much about the answer before you respond.
- If you have any questions raise your hand and someone will come and help you.

Debrief

- Thank you for taking part in the research.
- If you have any questions please ask me or your teachers.
- If you are concerned about anything or wish to withdraw your answers after today please tell your teacher and they will contact me.

Any Questions??

Natalie.seymour.2012@live.rhul.ac.uk

A.Macleod@rhul.ac.uk

APPENDIX 5 – Informed Consent and Information for Participants

Information and Consent Form

Investigating Well-Being in Adolescents

My name is Natalie Seymour and I am a Trainee Clinical Psychologist at Royal Holloway University. As part of my course I am doing a piece of research to understand more about adolescent well-being. I would like to invite you to help me with my project.

What's my project about?

I am trying to understand what helps young people feel good about themselves and their lives. I am particularly interested in how young people plan towards their goals and how they think about their future.

To do this I am going to ask you to complete some short questionnaires, which will ask you some questions about how you feel, what is important to you, and what makes you feel better about your life. I am also going to ask you complete two simple tasks. One will ask you to set some goals and plan some steps towards achieving these. The other will ask you to think about things you are and are not looking forward to in the future. I will also ask you to tell me about your age, gender, socio-economic status and ethnicity and your background

If you don't want to take part then just let me or a teacher know once I've finished talking and we can arrange for you to do something else. You can also change your mind at any point in time, even if you complete the tasks and questionnaires today.

Please read each question carefully before deciding on your answer. It is important to keep your answers to yourself and to not copy anyone else. I am only interested only in what you think. **There are no right or wrong answers.**

Your answers will be used to help me with the project I am doing. The responses are anonymous – you will not be asked to put your name on anything, except to sign below to show that you agree to take part in the study, and I will collect the responses at the end. All the information you provide will remain confidential and the schools involved will not be mentioned in my report.

If you are finding it difficult to answer any of the questions, please ask me or a teaching assistant for help. If you have any questions raise your hand and we will try to answer them.

If you have any worries or concerns about the questionnaires or tasks after today please tell your teacher and they will get in contact with me. There are ways that we may be able to support or help you in future.

Please tick boxes if you agree to the following statements

• I understand the information sheet and have had the opportunity to ask questions.	
• I understand that I can stop taking part at any time without giving a reason and that this will not affect my education.	
• I agree to take part in the project.	

Your Name	Class	Today's Date

APPENDIX 6 – Example TASK Pack

TASK PACK

Instructions for each task will be given by the researcher.

There are no right or wrong answers.

Please work on your own.

You will have a set amount of time to complete each task.

The researcher will tell you when to start, stop and turn the page.

There will be opportunity to ask questions at the START and END of each task.

Task One

FAS

Write down as many words as you can with the letters given to you by the researcher. A Space is provided to write the Letter at a top of each column.

……	……	……

DO NOT CONTINUE UNTIL TOLD TO DO SO

Task Two

FTT

Write down as many *positive things*, nice things, which you are looking forward to for each time period. DO NOT go onto the next page/time period until told to do so.

In the NEXT WEEK I am looking forward to…..

DO NOT CONTINUE UNTIL TOLD TO DO SO

In the next YEAR I am looking forward to……

DO NOT CONTINUE UNTIL TOLD TO DO SO

In the next 5-10 YEARS I am looking forward to……

DO NOT CONTINUE UNTIL TOLD TO DO SO

Write down as many *negative things*, horrible things, things that you are NOT looking forward to, for each time period. DO NOT go on to the next page/time period until told to do so.

In the next WEEK I am not looking forward to….

DO NOT CONTINUE UNTIL TOLD TO DO SO

In the next YEAR I am not looking forward to……

DO NOT CONTINUE UNTIL TOLD TO DO SO

In the next 5-10 YEARS I am not looking forward to…..

DO NOT CONTINUE UNTIL TOLD TO DO SO

Task 3

Planning Towards Goals

I am going to ask you to set three goals for different things. Write down each goal in the relevant space below:

1. **Education and Career**

……
……
……
……..

2. **Leisure and Activity**

……
……
……
……..

3. **Family and Friends**

……
……
……
…….

DO NOT CONTINUE UNTIL TOLD TO DO SO

Write as many specific steps as you can to reach your goal:

1. **Education and Career**

DO NOT CONTINUE UNTIL TOLD TO DO SO

Write as many specific steps as you can to reach your goal:

2. Leisure and Activity

DO NOT CONTINUE UNTIL TOLD TO DO SO

Write as many specific steps as you can to reach your goal:

3. **Family and Friends**

DO NOT CONTINUE UNTIL TOLD TO DO SO

APPENDIX 7 – Example Questionnaire Pack

Questionnaire Pack

This pack contains all the information you need.

There are three written questionnaires and two tasks to complete.

Please work through the booklet, in order, one page at a time.

Please complete all questions.

There are no right or wrong answers.

Do not spend too long on each question, just put the first answer that pops into your head.

If you have a question, at any point, please raise your hand.

Demographic Questionnaire

The information you provide below will be confidential and not be seen by anyone other than the researchers involved in this project.

- Date of birth

Day_____ Month_____ Year_____

- What year are you in at school? Please circle

Year 10 Year 11 Sixth Form

- What is your gender? Please circle

Male Female

4. How would you describe your ethnicity? Please circle

White White British White Irish White Other	Mixed Mixed White and Black Caribbean Mixed White and Black African Mixed White and Asian Other Mixed	Black or Black British African Caribbean Other Black
Asian or Asian British Indian Pakistani Bangladeshi Other Asian	Chinese	Any other ethnic group Please state: _____

5. Who lives at home with you at the moment? Please circle all that apply.

Mother
Father
Step-Mother
Step-Father
Other carer(s)
Brother(s)
Sister(s)
Other relatives (please state): _____

6. What level of education did your father/carer complete? Circle the highest level that was completed

Primary school
High school/Secondary school
Undergraduate university degree
Postgraduate university degree (Ma, Ph.D, M.D, law degree etc.)
Don't know

7. What level of education did your mother/carer complete? Please circle the highest level completed

Primary school
High school
Undergraduate university degree
Postgraduate university degree (Ma, Ph.D, M.D, law degree etc.)
Don't know

8. What is your father's/carer's occupation?

_____

Unemployed
Retired
Don't know

9. What is yout mother's/carer's occupation?

_____

Unemployed
Retired
Don't know

The PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then circle the appropriate number in the space next to that word, indicating the extent to which you have felt this way during the past week.

	very slightly or not at all	a little	moderately	quite a bit	extremely
interested	1	2	3	4	5
distressed	1	2	3	4	5
excited	1	2	3	4	5
upset	1	2	3	4	5
strong	1	2	3	4	5
guilty	1	2	3	4	5
scared	1	2	3	4	5
hostile	1	2	3	4	5
enthusiastic	1	2	3	4	5
proud	1	2	3	4	5
irritable	1	2	3	4	5
alert	1	2	3	4	5
ashamed	1	2	3	4	5
inspired	1	2	3	4	5
nervous	1	2	3	4	5
determined	1	2	3	4	5
attentive	1	2	3	4	5
jittery	1	2	3	4	5
active	1	2	3	4	5
afraid	1	2	3	4	5

Ryff's Psychological Well-Being Scales (PWB), 42 Item version

Please indicate your degree of agreement (using a score ranging from 1-6) to the following sentences. The higher the number, the more you agree with the statement.

1.	I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people.	1 2 3 4 5 6
2.	In general, I feel I am in charge of the situation in which I live.	1 2 3 4 5 6
3.	I am not interested in activities that will expand my horizons.	1 2 3 4 5 6
4.	Most people see me as loving and affectionate.	1 2 3 4 5 6
5.	I live life one day at a time and don't really think about the future.	1 2 3 4 5 6
6.	When I look at the story of my life, I am pleased with how things have turned out.	1 2 3 4 5 6
7.	My decisions are not usually influenced by what everyone else is doing.	1 2 3 4 5 6
8.	The demands of everyday life often get me down.	1 2 3 4 5 6
9.	I think it is important to have new experiences that challenge how you think about yourself and the world.	1 2 3 4 5 6
10.	Maintaining close relationships has been difficult and frustrating for me.	1 2 3 4 5 6
11.	I have a sense of direction and purpose in life.	1 2 3 4 5 6
12.	In general, I feel confident and positive about myself.	1 2 3 4 5 6
13.	I tend to worry about what other people think of me.	1 2 3 4 5 6
14.	I do not fit very well with the people and the community around me.	1 2 3 4 5 6

15. When I think about it, I haven't really improved much as a person over the years. 1 2 3 4 5 6

16. I often feel lonely because I have few close friends with whom to share my concerns. 1 2 3 4 5 6

17. My daily activities often seem trivial and unimportant to me. 1 2 3 4 5 6

18. I feel like many of the people I know have gotten more out of life than I have. 1 2 3 4 5 6

19. I tend to be influenced by people with strong opinions. 1 2 3 4 5 6

20. I am quite good at managing the many responsibilities of my daily life. 1 2 3 4 5 6

21. I have the sense that I have developed a lot as a person over time. 1 2 3 4 5 6

22. I enjoy personal and mutual conversations with family members or friends. 1 2 3 4 5 6

23. I don't have a good sense of what it is I'm trying to accomplish in life. 1 2 3 4 5 6

24. I like most aspects of my personality. 1 2 3 4 5 6

25. I have confidence in my opinions, even if they are contrary to the general consensus. 1 2 3 4 5 6

26. I often feel overwhelmed by my responsibilities 1 2 3 4 5 6

27. I do not enjoy being in new situations that require me to change my old familiar ways of doing things. 1 2 3 4 5 6

28. People would describe me as a giving person, willing to share my time with others. 1 2 3 4 5 6

29. I enjoy making plans for the future and working to make them a reality. 1 2 3 4 5 6

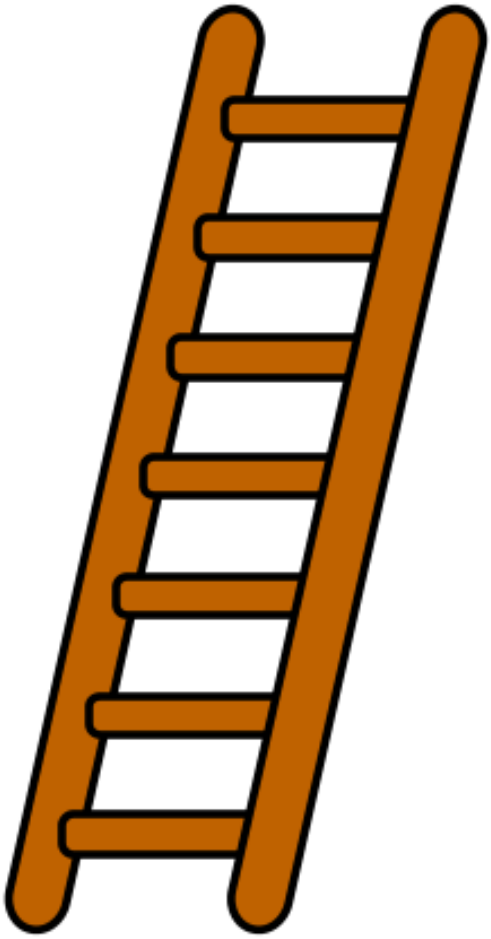
30. In many ways, I feel disappointed about my achievements in life.	1	2	3	4	5	6
31. It's difficult for me to voice my own opinions on controversial matters.	1	2	3	4	5	6
32. I have difficulty arranging my life in a way that is satisfying to me.	1	2	3	4	5	6
33. For me, life has been a continuous process of learning, changing, and growth.	1	2	3	4	5	6
34. I have not experienced many warm and trusting relationships with others.	1	2	3	4	5	6
35. Some people wander aimlessly through life, but I am not one of them	1	2	3	4	5	6
36. My attitude about myself is probably not as positive as most people feel about themselves.	1	2	3	4	5	6
37. I judge myself by what I think is important, not by the values of what others think is important.	1	2	3	4	5	6
38. I have been able to build a home and a lifestyle for myself that is much to my liking.	1	2	3	4	5	6
39. I gave up trying to make big improvements or changes in my life a long time ago.	1	2	3	4	5	6
40. I know that I can trust my friends, and they know they can trust me.	1	2	3	4	5	6
41. I sometimes feel as if I've done all there is to do in life.	1	2	3	4	5	6
42. When I compare myself to friends and acquaintances, it makes me feel good about who I am.	1	2	3	4	5	6

The MacArthur Scale of Subjective Social Status (2007)

1. This is a ladder. Imagine the ladder represents how the Great Britain society is set up.

    - At the top of the ladder are the people who are the best off – they have the most money, the highest amount of schooling and the jobs that bring the most respect.

    - At the bottom of the ladder are people who are the worst off – they have the least money, little or no education, no jobs or jobs that no one wants or respects.

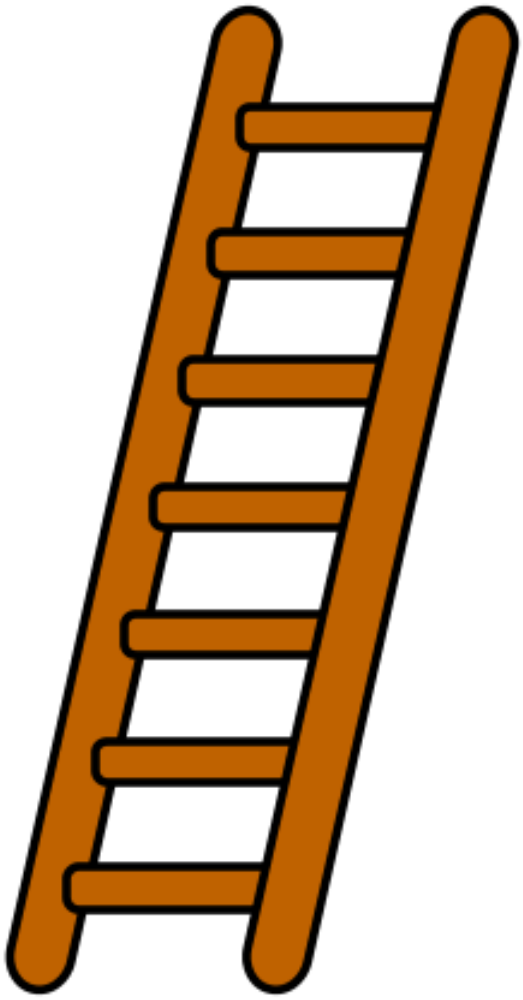


Now think about **YOUR FAMILY**. Please tell us where you think your family would be on this ladder. **Mark on X on the ladder in the place that best represents where YOUR FAMILY would be.**

2. Here is another ladder. Imagine this ladder represents how your local community is set up. Your local community is made up of the people who live in the same area as you.

- At the top of the ladder are the people who are the best off – they have the most money, the highest amount of schooling and the jobs that bring the most respect.

- At the bottom of the ladder are people who are the worst off – they have the least money, little or no education, no jobs or jobs that no one wants or respects.



Now think about **YOURSELF**. Please tell us where you think you would be on this ladder. **Mark on X on the ladder in the place that best represents where YOU would be.**

Appendix 8 – Correlation Tables for School Analysis

Table 25: *Correlations of Dimensions of PWB with affect, future thinking and planning towards goals for School 1*

	EM	PG	PR	PiL	SA
Positive Affect	.27*	.40**	.10	.26*	.31**
Negative Affect	-.14	.00	-.15	-.08	-.19
Positive Future Thoughts	-.09	.12	-.13	.02	.12
Negative Future Thoughts	-.02	-.17	-.04	-.05	-.12
Goal Specificity	.00	-.08	-.16	-.03	-.05
Number of Steps	-.13	-.06	-.14	.01	-.05
Specificity of Steps	.11	.16	.10	.17	.26*

*p < .05
** p < .01
N = 81

Table 26: *Correlations of Dimensions of PWB with affect, future thinking and planning towards goals for School 2*

	EM	PG	PR	PiL	SA
Positive Affect	.07	.11	.10	.18	.17
Negative Affect	-.12	-.10	-.15	.02	-.14
Positive Future Thoughts	-.02	-.05	.07	.05	.05
Negative Future Thoughts	-.11	-.03	-.08	-.11	-.15
Goal Specificity	.01	.08	-.09	.10	.03
Number of Steps	.08	-.07	.24*	.03	.03
Specificity of Steps	.00	.18	-.07	.16	-.07

- $p < .05$
  $N = 91$

Table 27: *Fisher Transformation Z Score – Significance of Difference on Dimensions of PWB with affect, future thinking and planning towards goals for School 1 and 2*

	EM	PG	PR	PiL	SA
Positive Affect	3.80**	2.00	.00	.07	.96
Negative Affect	.13	.65	.00	.64	.33
Positive Future Thoughts	.45	1.10	1.30	.19	.45
Negative Future Thoughts	.58	.91	.26	.39	0.20
Goal Specificity	.06	1.03	.33	.84	.51
Number of Steps	1.40	.06	2.50**	.13	.51
Specificity of Steps	.71	.13	1.10	.07	2.16**

** P < .01