

Running head: POSITIVE EMOTION AND LIFE SATISFACTION

Positive Affect and Life Satisfaction in Australian Adolescents

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I declare that the ideas, experimental work, analyses, and conclusions in this report are my own original work, and that the contributions of others have been duly acknowledged.

Abstract

Adolescents are disproportionately affected by mental health conditions (Vimpani, Patton, & Hayes, 2002), and one of the key missions of this century is to create a science of human strengths (Seligman & Peterson, 2001) by better understanding those factors that contribute to positive life outcomes for young people. The Broaden-and-Build Theory of positive emotions (Fredrickson, 1998) provided a framework for examining the relationship between positive emotions and psychological well-being in Australian adolescents. This theory asserts that positive emotions exist to solve problems concerned with personal growth and development, and that positive emotions produce upward spirals of well-being. Study 1 investigated the hypothesis that the variables Broadened Mindset, Self-Efficacy, and Life Meaning mediated the relationship between Positive Affect and Life Satisfaction. Data indicated that Broadened Mindset and Self-Efficacy variables partially mediated this relationship. These findings support Fredrickson's Broaden-and-Build theory, as well as previous research linking feelings of self-efficacy to psychological well-being (Bandura, 1992). Study 2 examined the effect of a youth program, the National Leadership Camp (NLC, Rising Generations, 2006), on participants' levels of Life Satisfaction, Positive Affect, Broadened Mindset, and Self-Efficacy over a 3 month period. It was found that participants attending the NLC had significantly higher levels of Life Satisfaction, Positive Affect, and Broadened Mindset following attendance at the NLC; however these significant gains were not maintained over a three month time period. This data suggests that the youth program succeeded in influencing adolescent well-being briefly, however further research is required to investigate how to maintain these improvements in the long-term.

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Table of Contents

List of Tables.....	vii
List of Figures.....	viii
Abstract.....	2
Chapter One: Positive Psychology and Australian Youth.....	3
<i>1.1 Introduction and Overview of the Current Research Project.....</i>	<i>3</i>
<i>1.2 Rationale for the Current Research Project</i>	<i>7</i>
1.2.1 Positive Youth Psychology.....	7
1.2.2 Current Positive Youth Development Programs.....	9
<i>1.3 Key variables in the Current Research.....</i>	<i>12</i>
1.3.1 Life Satisfaction and Subjective Well-being.....	12
1.3.2. Positive Affect.....	13
1.3.3 Broadened Mindset and the Broaden-and-Build Theory of Positive Emotion.....	15
1.3.4 Self-Efficacy	19
1.3.5 Life Meaning.....	21
<i>1.4 Introduction to the Research Design of Study 1.....</i>	<i>23</i>
Chapter Two: Study 1.....	26
<i>2.1 Method: Study 1.....</i>	<i>26</i>
2.1.1. Participants.....	26
2.1.2. Measures.....	26
2.1.3. Procedure.....	29
2.1.4. Data Screening.....	31

2.2 Results: Study 1.....	32
2.2.1. Descriptive Statistics.....	32
2.2.2. Bivariate Correlations.....	32
2.2.3. Mediation Regression Analysis.....	33
2.3 Discussion: Study 1	35
Chapter Three: The National Leadership Camp	39
3.1 Background and Rationale: Study 2.....	39
3.2 Research Design.....	44
3.3 Method: Study 2.....	46
3.1.1 Participants.....	46
3.1.2 Measures.....	47
3.1.3 Procedure.....	48
3.1.4 Data Screening.....	49
3.2 Results: Study 2.....	51
3.2.1 Descriptive Statistics.....	51
3.2.2 Correlation Matrixes for Control and Experimental Groups.....	51
3.2.3 Repeated Measures Analysis.....	52
3.2.4 Attrition Analysis.....	62
3.3 Discussion: Study 2.....	63
3.4 Conclusion.....	70
References.....	71
Appendixes.....	82

List of Tables

Table 1.	Descriptive Statistics for Life Satisfaction, Positive Affect, Broadened Mindset, Self-Efficacy, and Life Meaning Variables.....	33
Table 2.	Correlation Matrix of Life Satisfaction, Positive Affect, Broadened Mindset, Self-Efficacy, and Life Meaning Variables.....	34
Table 3.	Visual Representation of Design of Study 2 with Time as Within Subjects Factor.....	45
Table 4.	Control Group Descriptive Statistics for Life Satisfaction, Positive Affect, Broadened Mindset and Self-Efficacy Variables at Time 1, Time 2, and Time 3. (n= 62).....	53
Table 5.	Experimental Group Descriptive Statistics for Life Satisfaction, Positive Affect, and Self-Efficacy Variables at Time 1, Time 2, and Time 3. (n = 24).....	54
Table 6.	Correlation Matrix of Control Group Variables (Life Satisfaction, Positive Affect, Broadened Mindset, and Self-Efficacy) with Time (n = 62).....	55
Table 7.	Correlation Matrix of Experimental Group Variables (Life Satisfaction, Positive Affect, Broadened Mindset, and Self-Efficacy) with Time (n = 24).....	56
Table 8.	Descriptive Statistics for Attrition Analysis (Group 1 = remained in the study at Time 3; Group 2 = did not remain in the study at Time 3).....	63

List of Figures

Figure 1.	Hypothesised relationship between Positive Affect and Life Satisfaction as mediated by variables of Broadened Mindset, Self-Efficacy, and Life Meaning.....	24
Figure 2.	Group Means for Life Satisfaction at Time 1, Time 2, and Time 3.....	58
Figure 3.	Group Means for Positive Affect at Time 1, Time 2, and Time 3.....	59
Figure 4.	Group Means for Broadened Mindset at Time 1, Time 2, and Time 3.....	61
Figure 5.	Group Means for Self-Efficacy at Time 1, Time 2, and Time 3.....	62

Chapter One: Positive Psychology and Australian Youth

1.1. Introduction and Overview of the Current Research Project

According to Ryff and Singer (2003, p. 16), “a leading challenge of the present era is to recognise both darkness and light as central to understanding the human condition.” For the past 50 years, emphasis has been placed on understanding the ‘dark’ side of the human experience. Specifically, clinical psychology research since World War II has focused on mental illness, repairing weakness, and understanding human suffering (Gable & Haidt, 2005; Seligman, Park, & Steen, 2004). However, with the emergence of positive psychology, “the study of the conditions and processes that contribute to flourishing or optimal functioning of people, groups, and institutions” (Gable & Haidt, p. 104), efforts have been made to examine the ‘light’ side of human nature. This shift towards positive psychology has allowed a more balanced approach to understanding the human existence (Gable & Haidt).

In accordance with the goal of positive psychology, “to make people happier by understanding and building positive emotion, gratification, and meaning” (Seligman et al., 2004, p. 1379), Seligman and Peterson (2001) argued that one of the missions of this century is to create a science of human strengths. Their vision included a desire to understand how to develop virtues such as courage, future-mindedness, optimism, interpersonal skills, honesty, and resilience in young people. It was thought that if young people could be taught these skills, they would be less likely to suffer from mental illnesses such as anxiety and depression, and consequently, live more enjoyable lives.

Adolescence is a time of change, physically, emotionally, and intellectually (Australian Institute of Health & Welfare, 2007). As such, it is also a time of increased vulnerability to mental health problems (see Kazdin, 1993). Vimpani, Patton, and Hayes (2002) reported that young people are disproportionately affected by poor mental health conditions, which in turn can affect participation in society, education, and employment

(Nicholson, Sanson, Rempel, Smart, & Patton, 2002). Therefore, it is of little surprise that large volumes of research exist on various risk factors contributing to mental health problems in young people (Biramher et al., 1996; Goodman & Gotlib, 1999; Hawkins, Catalano, & Miller, 1992; Kazdin, 1993; Kessler & Magee, 1993; Lewinsohn et al., 1994).

In Australia, 3.7 million young people aged between 12 and 24 years account for 18% of the population (Australian Institute of Health & Welfare, 2007). Reports suggest that while young Australian people have better health compared to a number of other age groups, they are still particularly vulnerable to suicide, mental health and behavioural problems, teenage pregnancies, and substance abuse (Australian Institute of Health & Welfare, 2003). Current statistics on the prevalence of these conditions are alarming given that the health of today's young people stands to impact upon the health of Australia's future (Australian Institute of Health & Welfare, 2003).

Recent data indicated that there were over 47,000 hospital separations for mental disorders in young people aged 12-24 years in 2004-2005 (Australian Institute of Health & Welfare, 2007). Over half of these were attributed to psychoactive substance use, schizophrenia, and depression. Depression accounted for 19% of the mental health hospitalisations for females, and 13% for males (Australian Institute of Health & Welfare, 2007). These figures are alarming given that depression is a recognised risk factor for suicidal behaviour (National Health & Medical Research Council, 1997). Suicide rates in Australia are notably high, particularly for young men in rural settings (Nicholson et al., 2002). Recent data showed suicide to be the cause of the second highest number of deaths for young people, with 272 young people between 12 and 24 years taking their own life in 2004 (Australian Institute of Health & Welfare, 2007). Despite mental health being a National Health Priority area (DHA, Department of Health & Ageing, 2007), it appears that the current mental health status of young Australians still requires additional and urgent attention.

In an attempt to improve the current mental health status of Australian people, the Council of Australian Governments (COAG) recently released a new Action Plan on Mental Health (COAG, 2006). Among other things, the plan aimed to improve mental health via increased emphasis on promotion, prevention, and early intervention. The plan also identified specific directions for policy initiatives aimed at building resilience and improving the coping skills of children, young people, and their families. Furthermore, it included efforts to expand mental health research, through universities as well as external bodies such as beyondblue (beyondblue, 2008).

Research efforts are focussed on achieving greater understanding of the factors that influence mental health and well-being. The World Health Organisation (2008) refers to health as a concept that integrates physical, social, mental, and spiritual well-being, not merely the absence of disease. Mental health has been further conceptualised as a state of well-being, where an individual recognises their abilities and potential (World Health Organisation, 2008).

Given the demonstrated links between depression and risk of suicide (National Health & Medical Research Council, 1997), investigation into youth programs that develop positive outcomes for adolescents (e.g., improved life satisfaction) is a research avenue worth pursuing. Accordingly, this research project was designed to investigate the relationship between positive affect and life satisfaction in a sample of Australian adolescents. Fredrickson and Losada (2005) reported that positive affect represents the pleasant end of a spectrum of feeling states, and can include feelings of gratefulness and appreciation, or being upbeat. Life satisfaction has been described as a subjective assessment of an individuals' quality of life (Sousa & Lyubomirsky, 2001). These constructs will be described in more detail later.

The current research project involved two studies. The major aim was to examine the

nature of the relationship between positive emotion and psychological well-being. Chapter One of this thesis provides a general overview and rationale for the current research. Key variables are defined and operationalised, and the design for Study 1 is presented. Study 1 examined whether variables of Self-Efficacy, Broadened Mindset, and Life Meaning mediated the relationship between Positive Affect (independent variable) and Life Satisfaction (dependant variable) in a convenience sample of 12-18 year old Queensland youth. Bandura (2005, p. 2) described self-efficacy as “the belief in one’s capabilities to organize and execute the courses of action required to manage prospective situations.” Broadened Mindset is a key concept of Fredrickson’s (1998) Broaden-and-Build Theory, which proposes that positive emotions influence psychological well-being via the creation of broadened cognitions. Life meaning has been described by King, Hicks, Krull, and Gaiso (2006) as having a goal, or purpose in life. These key variables will be defined further in Chapter One.

Chapter Two outlines the method, results, and discussion for Study 1, and provides a rationale for Study 2. The aim of Study 2 was to examine the relationship between key variables of Positive Affect, Life Satisfaction, Broadened Mindset, and Self-Efficacy following attendance at a four-day youth development program. This youth development program, known as the 2006 National Leadership Camp (NLC, Rising Generations, 2005), was a youth program structured around positive psychology concepts. Study 2 explored differences on the key variables (Positive Affect, Life Satisfaction, Broadened Mindset, and Self-Efficacy) between a control group of adolescents who did not attend the youth development program ($n = 62$), and an experimental group of adolescents who did attend the youth development program ($n = 24$). Finally, Chapter Three includes the method, results, and discussion for Study 2. Conclusions and limitations of the research project are also discussed here.

1.2 Rationale for the Current Research Project

1.2.1 Positive Youth Psychology

This research project investigated adolescent development from a positive psychology perspective. Given that development is a process of growth and increasing competence (Larson, 2000), parents, teachers, and community leaders are seeking interventions that promote optimism, compassion, and other strengths in children and adolescents (Gillham, Reivich, & Shatt, 2002). Consequently, past research in this area has involved implementing youth development programs in an attempt to prevent poor mental health and negative youth behaviours. However, little effort has been made to evaluate the effectiveness of such programs (see Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002).

At present, theoretical and empirical definitions regarding youth development vary (Catalano et al., 2002). As such, it is hard to draw strong conclusions about the effects of positive youth development programs (Gillham et al., 2002). Gilliam et al. reported that findings in this field are often mixed; relatively few studies include follow-ups and the effects of only a few programs have been replicated. Additionally, Greenberg et al. (2003) indicated that the goals of effective programs are diverse, with initiatives often being short-term and fragmented. Thus, despite many intervention programs being well intended, limited sustainable impacts have been made on youth and their health behaviours. Further, the majority of past research in the youth psychology field has focused on preventing health problems rather than promoting positive development and resilience (Catalano et al., 2002).

Psychology has previously focussed on preventing problems and examining human functioning from a disease perspective (Seligman & Csikzentmihalyi, 2000). However, the discipline of psychology in recent times has expanded to include positive aspects of health and well-being, in addition to the continued focus on distress and disease. Within the context of adolescent development, Pittman and Fleming (1991, as cited in Catalano et al., 2002)

effectively summarised the argument for health promotion, as opposed to health prevention, as follows:

For years, Americans have accepted the notion that – with the exception of education – services for youth, particularly funded services, exist to address youth problems. We have assumed that positive youth development occurs naturally in the absence of youth problems. Such thinking has created an assortment of youth services focused on “fixing” adolescents engaged in risky behaviours or preventing other youth from “getting into trouble”. Preventing high-risk behaviours, however, is not the same as preparation for the future. Indeed, an adolescent who attends school, obeys laws, and avoids drugs, is not necessarily prepared to meet the difficult demands of adulthood. Problem-free does not mean fully prepared. There must be equal commitment to helping young people understand life’s challenges and responsibilities and to developing the necessary skills to succeed as adults. (p. 3)

In light of this paradigm shift, youth development programs need to focus on building or promoting positive qualities in children, to help their development in family, school, and community contexts (Gillham et al., 2002). To assist with this strategy, Catalano et al. (2002) conducted a comprehensive review of youth programs in the United States. The review identified a number of constructs thought to play a role in positive youth development, including: bonding; resilience; social competence; emotional competence; cognitive competence; behavioural competence; moral competence; self-determination; spirituality; self-efficacy; positive identity; belief in the future; recognition of positive behaviour; prosocial involvement; and prosocial norms.

In addition to identifying and defining the above youth development constructs, Catalano et al. (2002) examined 77 youth development programs with evaluated interventions. Programs were selected for review on the basis of their attempt to develop one

or more positive youth outcomes (e.g., improved interpersonal skills, quality of peer and adult relationships, self-control, problem solving, and cognitive competencies). Programs involving treatment groups, or groups diagnosed with a disorder or behavioural problem, were not included in the analyses. Programs were evaluated on the basis of their research design, with the inclusion of a control group for comparison purposes being a determining factor for inclusion. All of the programs selected for analysis had to measure youth behavioural outcomes.

Of the 77 programs analysed, 25 were found to be well-designed and effective (e.g., see Botvin, Baker, Dusenbury, Tortu, & Botvin, 1990; LoSciuto, Freeman, Harrington, Altman, & Lanphear, 1997; LoSciuto, Rajala, Townsend, & Taylor, 1996). Interestingly, the three developmental constructs of competence, self-efficacy, and pro-social norms were prominent in all effective interventions. Competence was described as a young person's ability to obtain skills that are developmentally adequate across biopsychosocial domains. Self-efficacy was described as a young person's perception that they could achieve their goals through their own action, while pro-social norms were defined as clear beliefs or healthy standards (Catalano et al., 2002). Programs that delivered messages around healthy expectations, for example, the importance of knowing how to respond to negative peer influences, were considered to be addressing pro-social norms (Catalano et al.). Findings from Catalano et al.'s research highlight the need to examine the mechanisms by which such constructs improve adolescent well-being.

1.2.2. Current Positive Youth Development Programs

A number of programs that focus on promoting and improving the mental health of young people have been developed in the Positive Psychology Center (PPC), at the University of Pennsylvania. Specifically, the Penn Resiliency Program (PRP) is a resilience initiative and depression prevention program for youth and their parents (Reivich, Gillham,

Shatte, & Seligman, 2007). Reivich et al. reported that over the past 16 years, the PRP has been evaluated in 13 controlled studies with over 2,000 children and adolescents. The PRP provides a cognitive behavioural intervention, and the initial evaluation of the program indicated that the PRP successfully prevented depressive symptoms and improved optimism over a 2 year follow-up period (see Gillham, Reivich, Jaycox, & Seligman, 1995; Jaycox, Reivich, Gillham, & Seligman, 1994).

Recently, a number of Australian studies have used the PRP as a framework. Promoting Optimism Western Australia (POWA) was an organisation established to implement school based mental health programs in Western Australia. Roberts (2007) reported that research from the Positive Psychology Centre formed the basis of these school health initiatives. Specifically, studies by Roberts, Kane, Thompson, Bishop, and Hart (2003; 2004) outline the results of a 12 session PRP attended by rural pre-adolescents with depressive symptoms. While the data showed no direct effects for depression, a decrease in anxiety was found up to 3 years following the intervention. Additionally, reductions in anxiety were found to mediate reductions in depressive symptoms at the 3 year follow-up (also see Roberts, 2007). As a consequence of these positive outcomes, an Australian version of the PRP, Aussie Optimism, is now available for use in Australian schools.

School-based early intervention programs like the PRP and Aussie Optimism are becoming increasingly common in Australia. Neil and Christensen (2007) recently reviewed Australian school-based prevention and early intervention programs for depression and anxiety. Neil and Christensen concluded that the findings from depression prevention programs were encouraging for both targeted and universal prevention programs. These findings are consistent with outcomes from international research (Merry et al., as cited in Neil & Christensen, 2007). However, further evaluation of such programs under the guidelines set down by the Society for Prevention Research is needed (see Flay et al., 2005).

The Society for Prevention Research proposed three main criteria for program evaluation: efficacy, effectiveness, and dissemination. Efficacy requires that programs have a specific efficacy statement, a program description or policy, an outcome measure (including the use of psychometrically sound tests, as well as behavioural outcomes), long term follow-up, and include information about clarity of causal inference (e.g., generalisation of findings and replication of results). Effectiveness requires that programs have to satisfy the efficacy criterion plus incorporate additional information on the practical value and reproducibility of the program (Flay et al., 2005). Finally, dissemination requires that programs satisfy both the efficacy and effectiveness requirements plus possess the ability to be implemented on a large scale with appropriately developed monitoring and evaluation tools.

Neil and Christensen (2007) reported that the Friends for Life Program (Barrett, 2007), a cognitive behavioural intervention focussing on resilience, and prevention of anxiety and depression program for children and youth, fared well against the three criteria. Specifically, Neil and Christensen noted that each of the seven Australian-based trials using the Friends for Life Program demonstrated efficacy and effectiveness across a range of samples and classroom teachers. Other Friends programs exist (Barrett, 2007), including Friends for Children (for ages 7-11 years) and Friends for Youth (for ages 12-16 years). A typical Friends for Youth Program involves 10 participant sessions, two booster sessions, and two parent sessions (Barrett, 2007). Neil and Christensen's findings regarding the efficacy of prevention programs like Friends for Life are encouraging, especially given the Australian government's commitment to investing in school-based mental health prevention and early intervention programs for the next five years (Council of Australian Governments, 2006).

Another U.S. program, called Positive Psychology for Youth (PPY), investigated the effects of a positive psychology curriculum developed for high school students. Seligman (2005) indicated that major goals of PPY are to increase positive emotion and a sense of

meaning or purpose in young people. The program involves 25 lessons that focus on developing positive emotion through a range of activities including savouring and mindfulness, gratitude, optimism, and resilience (Seligman). Consistent with the PRP program filtering into Australian schools, an Australian version of PPY is being implemented at Geelong Grammar School in Melbourne during 2008 (Rule, 2007, as cited in Max, 2007). Max reported that following an address by Seligman to parents and alumni at the school in 2006, plans have been made to develop the school curriculum around positive psychology concepts. Such a decision, in conjunction with a new building dedicated to a "Wellness Centre - to provide everything for the mind, body, and soul" (Rule, as cited in Max, , p. 41) reflects positive change for young people within school environments and a movement towards school based positive psychology in Australia. This shift towards teaching positive psychology is consistent with recent evidence suggesting that experiences of positive emotion can be linked to substantial improvements in psychological well-being (Fredrickson, 2001). Specifically, Lyubomirsky, King, and Diener (2005) indicated that positive emotions are often associated with resources congruent with success and thriving, such as sociability, optimism, and energy. In light of this recent research, exploring the nature of the relationship between positive emotions and subjective well-being in Australian adolescents is a worthwhile exercise.

1.3. Key Variables in the Current Research

1.3.1. Life Satisfaction and Subjective Well-being

Subjective well-being is a field of psychology concerned with people's life evaluations (Diener, Suh, & Oishi, 1997), and comprises two key components: one cognitive, and one affective (Diener, 1984, 1994, 2000; Diener, Suh, Lucas, & Smith, 1999). The cognitive component relates to individuals' evaluations of their lives according to subjectively determined standards, and the affective component examines hedonic balance, or

experiences of positive and negative affect (Diener et al., 1999).

A vast array of literature exists on subjective well-being. Diener et al. (1999) conducted a comprehensive review of the progress made by researchers on this topic since 1967. The review examined relationships between subjective well-being and a number of variables including health, income, religion, marriage, and education. It was noted that ill health may negatively influence well-being as it interferes with goal attainment, and that income does not necessarily have a casual pathway with subjective well-being. Marriage was seen to have a positive relationship with subjective well-being, and education was also reported to have small, yet significant correlations with subjective well-being (Diener et al., 1999). Additionally, it was noted that genetic, situational, goal, and coping approaches all play potential casual roles in experiences of subjective well-being.

The first element of subjective well-being refers to cognitive evaluations of one's satisfaction with life. Studies by Andrews and Withey (1976), and Lucas, Diener, and Suh (1996) provide evidence for conceptualising life satisfaction as a separate construct from the two types of affect. Previous research indicates that people who score highly on global life satisfaction are less likely to attempt suicide (Moum, 1996, as cited in Diener et al., 1999). Higher levels of life satisfaction reduce the likelihood of becoming depressed in the future (Lewinsohn et al., 1994) and have also been negatively associated with measures of psychopathology (Diener, Emmons, Larson, & Griffin, 1985). With anxiety disorders, depression, and suicidal ideation prevalent in Australian youth (see Section 1.1), it appears that finding ways to improve life satisfaction may exist as a means of positively influencing adolescent well-being. Consequently, Life Satisfaction was selected as the dependent variable in Study 1 of this research project.

1.3.2 Positive Affect

Affect refers to “consciously accessible feelings” (Fredrickson, 2001, p. 218).

Research suggests that positive affectivity is heritable, and Seligman et al. (2004) speculated that for evolutionary reasons, emotions fluctuate between a genetically determined range. However, Seligman et al. also noted that within limits, humans can increase positive emotion about past, present, and future events. Further, while Seligman et al. believed that experiencing positive emotions is not the only pathway to happiness, it appears to be a worthwhile avenue for increasing psychological well-being.

Fredrickson (2003) argued that experiences of positive affect are beneficial because they allow individuals to engage with their surroundings. This engagement with the environment creates opportunities to take part in activities, which may be adaptive to the individual. Fredrickson (2003) based this argument on research evidence linking positive affect to approach behaviour (Cacioppo, Gardner, & Berntson, 1999; Davidson, 1993; Watson, Wiese, Vaidya, & Tellegen, 1999) and continued action (Carver & Scheier, 1990; Clore, 1994). Emotions, a component of affect, have also been associated with these concepts (Fredrickson, 2001).

Emotions are conceptualised as “multi-component response tendencies that unfold over relatively short time spans” (Fredrickson, 2001, p. 218). Emotions involve an assessment of meaning about an event. Assessments can be conscious or unconscious, and responses can include combinations of facial expressions, thought processes, and physiological changes (Fredrickson, 2001). In the past, research on negative emotions (e.g., anger, fear, and sadness) has dominated the affect literature. Conversely, despite evidence that people who feel good live longer (Fredrickson, 2003), investigations into exact mechanisms by which positive emotions such as love, joy, and contentment contribute to well-being are limited. However the Broaden-and-Build theory of positive emotions (Fredrickson, 1998, 2001), described in more detail in the following section, has generated interest in recent years as a basis for exploring relationships between positive emotions and

psychological well-being.

Positive affect has often been treated as an outcome, rather than as a predictor of a good life (Lyubomirsky et al., 2005). Therefore, the potential benefits of positive affect have received little attention in the literature. Congruent with this notion, Lyubomirsky et al. (p. 843) suggested that “research should begin to address the potential causal role of positive affect in securing positive life outcomes.” To this end, positive affect was selected as an independent variable in Study 1.

1.3.3 Broadened Mindset and the Broaden-and-Build Theory of Positive Emotions

Fredrickson’s (1998; 2001) Broaden-and-Build theory asserts that positive emotions exist to solve problems related to personal growth and development. It was developed after Fredrickson (1998) argued that models of emotion based on negative emotions did not appear to be applicable when examining positive emotions. Fredrickson reported that most past emotion models are based on specific action tendencies (e.g., Frijida, 1986). These models work on the idea that emotions create urges to act. Fredrickson (2001) noted that emotion theorists do not claim people always act on the urges they get when emotional. Instead, thought processes become narrow, and focus on a specific course of action on the basis of the emotion. Fredrickson used examples of fear (i.e., creating an urge to flee), and anger (i.e., creating an urge to attack) to demonstrate how these early models are appropriate when examining negative emotions. However, through the Broaden-and-Build theory, Fredrickson asserted that positive emotions have a different function – growth and development – and hence require a different model to investigate them.

In relation to the “broaden” aspect of the model, Fredrickson (1998; 2001) suggested that while negative emotions narrow one’s thought-action repertoire, positive emotions broaden it. Fredrickson drew upon studies that examined induced positive affect to support this hypothesis indirectly, noting that in research looking at individuals with bipolar disorder,

manic states have been associated with expansive and over-inclusive thinking (Richards & Kinney, 1990).

In addition to examining indirect evidence for the broadening hypothesis, Fredrickson and Branigan (2005) tested it directly using a dependent variable of a thought-action repertoire. Participants were randomly assigned to groups and were shown short film clips to induce emotions of joy, serenity, fear, and sadness. Showing one group an old screen saver that induced no emotion was used as a control condition. Straight after viewing the films, participants were asked to write down all of the things they wanted to do immediately. Those in the positive emotion conditions (joy and serenity) identified more potential actions compared to those in the negative and neutral conditions (Fredrickson & Branigan, 2005).

In another experiment designed to investigate the effects of positive emotion, Fredrickson and Levenson (1998) demonstrated that positive emotions undo the physiological effects of negative emotions on the human body. Participants were connected to physiological sensors (measuring heart rate and finger pulse) and then viewed a film designed to induce a fear response. A second film was subsequently shown that induced emotions of contentment, amusement, or sadness. The control condition induced no emotion. Participants in the two positive film conditions returned to their pre-fear film level of cardiovascular activation faster than those in the negative and neutral conditions. These data, in conjunction with evidence supporting the broadening notion, suggest that positive emotions have beneficial effects (Fredrickson & Levenson, 1998).

The second assertion of the Broaden-and-Build hypothesis is that positive emotions, through their broadening effects, build a range of personal, social, and intellectual resources (Fredrickson, 1998). Fredrickson proposed that if positive emotions broaden cognitions and lead to creative thinking, then they should also play a role in coping with stress and adversity. Fredrickson, Turgade, Waugh, and Larkin (2003) demonstrated this to be the case using data

collected before and after the September 11, 2001 terrorist attacks. An initial study on emotions was conducted at the University of Michigan in March and June, 2001, where 133 participants completed measures on trait resilience, trait affectivity, and psychological resources (which included measures of life satisfaction and optimism). Following September 11, 18 men and 25 women from the initial study participated in follow up research to examine reactions to the attacks. The data revealed that positive emotions experienced in the wake of attacks (e.g., love and gratitude) fully accounted for relationships between pre-crisis resilience and later development of depressive symptoms. These results are similar to previous studies examining positive affect and coping. For example, Stein, Folkman, Trabasso, and Richards (1997) showed that positive affect, along with plans and goals, predicated psychological well-being 12 months after bereavement. Moreover, a growing body of research exists on post-traumatic growth (see Tedeschi & Calhoun, 1995), which examines positive benefits, such as gains in personal strength, that may arise for individuals following a crisis. Paton (2006) stated that in relation to experiences from emergency populations (e.g., fire and rescue service workers), “exposure to adverse duties need not always result in negative consequences” (p. 266).

It has been noted that positive emotions play a key role in coping with adversity (Fredrickson et al., 2003). Specifically, Fredrickson (1998, 2001) argued that it is through having a broadened mindset that positive emotions act as a key mechanism for facilitating psychological growth, development, and well-being. Consequently, Broadened Mindset was selected as a mediating variable in Study 1 to examine the relationship between positive affect and life satisfaction. Previously, Fredrickson and Joiner (2002) utilised a measure of broadened cognition in their study examining coping styles and psychological well-being. In their research, the variable of Broadened Mindset was measured using the Cognitive Analysis subscale of the Coping Response Inventory (CRI; Moos, 1988). The CRI asks respondents to

pick "the most important problem" they faced during the past year, and to indicate how often they used various coping strategies to deal with it. Fredrickson and Joiner reported that they chose the Cognitive Analysis subscale for their research as its face validity suggested it assessed broadened cognitions. For example, two of the items on the subscale were "think of different ways to deal with the problem", and "try to step back from the situation and be more objective."

In the current research, alternative measures of broadened mindset were explored. The measure selected needed to have face validity and to be theoretically linked to broadened cognitions. This approach was consistent with Fredrickson and Joiner's (2002) method of finding an appropriate measure of the Broadened Mindset variable. The Exploration scale of the Curiosity and Exploration Inventory (CEI; Kashdan, Rose, & Fincham, 2004), and the Inspiration Scale (IS; Thrash & Elliot, 2003) were each selected to contribute to a combined measure of Broadened Mindset.

The Exploration subscale of the CEI provides a measure of openness to information (Kashdan et al., 2004), a key component in any definition of Broadened Mindset. Kashdan et al. suggested that exploratory behaviours set in motion by curiosity increase opportunities for fulfilling competence and interpersonal relatedness such as vitality and joy (also see Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). The Exploration subscale of the CEI has also been found to have small, yet significant negative relationships with indexes of global negative affect and Neuroticism (see Kashdan et al., 2004). The subscale of CEI included four items examining strivings for novel and challenging information, and experiences (Kashdan et al.). Consequently, Exploration was chosen to measure openness to information, and was combined with a measure of inspiration to provide a measure of broadened cognition in the current study.

Inspiration is defined as "a breathing in or infusion of some idea, purpose etc. into the

mind; the suggestion, awakening, or creation of some feel or impulse, especially of an exalted kind” (Simpson & Weiner, 1989, p. 1036). Inspiration was selected as a sub-component of the Broadened Mindset variable as recent research shows it predicts a range of positive consequences including Openness to Experience (Thrash & Elliot, 2003). Further, Inspiration appears to allow for an influx or bolstering of psychological resources (Thrash & Elliot, 2003), and is therefore reflective of the second premise of the Broaden-and-Build Theory (Fredrickson, 1998, 2001).

1.3.4 Self-Efficacy

Bandura (1994, p. 71) defined perceived self-efficacy as “people’s beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives.” Self-efficacy beliefs are thought to regulate human functioning in four main ways, through cognitive, motivational, affective, and selection processes (Bandura, 1992).

In relation to cognitive processes, Bandura (1992) noted that perceived self-efficacy and cognitive stimulation have a bi-directional relationship. For example, self-efficacy beliefs appear to influence the types of thought scenarios that people construct and rehearse. That is, people with high self-efficacy visualise scenarios that assist with positive performance (Bandura). These cognitions then assist them to deal with challenging tasks, mastery of which reinforces earlier high self-efficacy beliefs. Conversely, people with low self-efficacy are more likely to visualise failure scenarios, which then undermine their performance (Bandura). Individuals with low self-efficacy tend to focus on all of the things that could go wrong, and as such performance is likely to decline (Bandura). Experiences of failure then act to reinforce their pre-existing levels of low self-efficacy.

In addition to cognitive processes, research indicates that motivational processes play a role in self-efficacy beliefs. According to Bandura (1992) most human motivation occurs

via cognitive mechanisms. Specifically, goal achievement has been linked to feelings of self-efficacy. Individuals with high levels of self-efficacy commit themselves to more challenging goals, persevere with efforts when faced with setbacks, and attribute any failure – or inability to reach their desired goals – to lack of effort on their part, or lack of knowledge which they believe can be acquired (Bandura). Conversely, people with low levels of self-efficacy see difficult tasks as personal threats and dwell on their personal deficiencies (Bandura).

Interestingly, Bandura reported that whilst it is normal to have self doubts after a setback, of particular importance is how quickly an individual returns to their original levels of perceived self-efficacy, noting that “some people quickly recover their self-assurance; others lose faith in their capabilities” (p. 22).

Affect processes have also been linked to self-efficacy beliefs. In line with Social Cognitive Theory, Bandura (1986) suggested that use of self-efficacy beliefs to exercise control over potential threats plays an important role in physiological arousal. People who believe they can exercise control over potential threats do not conjure up apprehensive thoughts (Bandura, 1992). That is, they are not bothered by them. In comparison, those who believe they cannot manage potential threats experience considerable anxiety and often dwell on their coping deficiencies. They may perceive many aspects of their environment as dangerous, and worry about things that have a rare chance of occurring. This can lead to distress, and hence impair daily functioning (Bandura, 1992).

Selection processes have also been associated with self-efficacy beliefs. Bandura (1994) noted that choices people make can influence the different sets of competencies, skills, and social networks they acquire. The social aspects associated with these choices can also lead to competencies, values, and interests that an individual can maintain long after engaging in an activity, or being in a new environment. Bandura described career choice and development as an example of how selection processes are related to self-efficacy.

Specifically, it was noted that the higher the level of a persons' perceived self-efficacy, the wider range of career choices they consider. Further, the greater a persons' interest in their career path, the better they will prepare themselves for it, and hence, they will be more likely to succeed (Bandura).

Research suggests that human accomplishments and well-being are related to a sense of personal efficacy (Bandura, 1994). In the context of youth development, Caprara et al. (2006) reported links between self-efficacy and subjective well-being. The study involved 664 Italian adolescents, with Caprara et al. concluding that adolescent self-efficacy beliefs to manage positive and negative emotions, as well as interpersonal relationships contributed to; promoting positive expectations about the future; perceiving a sense of life satisfaction; and to experiencing more positive emotions. These results support the idea that mood and self-efficacy influence each other bi-directionally. Bandura (1992) reported that "perceived self-inefficacy breeds depression" (p. 30), while positive mood appears to enhance self-efficacy (Kavangagh & Bower, 1985). On the basis of this prior research, self-efficacy was selected as a mediating variable between positive affect and life satisfaction using a sample of Queensland youth.

1.3.5 Life Meaning

According to King et al. (2006, p. 179), life meaning can be defined as "a sense of one's life having a purpose or investing time and energy into the attainment of cherished goals". Fredrickson and Joiner (2002) reported that people experience positive emotions in the face of adversity by finding positive meaning in ordinary events, or within adversity itself (Folkman & Moskowitz, 2000; Fredrickson, 2000). They also noted that previous research has shown that finding positive meaning is correlated with increased well-being and health (Davis, Nolen-Hoeksema, & Larson, 1998). As such, Fredrickson (2000) and Fredrickson and Joiner (2002) proposed the idea that the relationship between positive meaning and positive

emotions is reciprocal. That is, finding meaning in an event triggers a positive emotion, which broadens thought processes, and which in turn, increases the chance that an individual will find positive meaning in future life events.

In light of this hypothesis, Fredrickson and Joiner (2002) examined whether the effects of positive emotions accumulate and compound. Specifically, they questioned whether broadened attention and cognition triggered by earlier experiences of positive emotion facilitated coping with adversity. Additionally, they hypothesised that if this was the case, improved coping would be a predictor for future experiences of positive emotion. In order to explore these hypotheses, affect and coping were assessed at two different times (5 weeks apart) in a sample of 138 undergraduate psychology students. Data from the two assessment waves provided support for the upward-spiral prediction. Therefore, Fredrickson and Joiner concluded that positive emotions, through their effects on broadened thinking, predicted future increases in positive emotion. They also reported that individuals who achieved such upward spirals showed improved emotional well-being, as well as coping abilities to assist them in dealing with future adversities (also see Aspinwall, 1998, 2001).

More recent research by King et al. (2006) examined the role of positive affect in experiences of finding meaning in life. Six studies indicated that positive moods may predispose individuals to feel that life is meaningful, and that positive moods may increase sensitivity to the meaning relevance of a situation (King et al.). Consequently, Life Meaning was selected as a potential mediating variable when examining the relationship between Positive Affect and Life Satisfaction in Study 1.

In sum, it appears that positive emotions have an important role to play in our day to day lives. Positive emotions have been linked to improvements in subjective well-being, self-efficacy, and life meaning. Evidence also suggests that positive affect fosters a number of resources and behaviours. These include sociability, altruism, liking of self and others, and

effective conflict resolution skills (see Lyubomirsky et al., 2005 for a comprehensive review). Additionally, it appears that positive moods and emotions lead people to think, feel, and act in ways that promote both resource building and involvement with approach goals (Elliot & Thrash, 2002; Lyubomirsky, 2001). Intuitively, it appears that these skills, resources, and behaviours fostered by positive emotions may have the potential to improve levels of life satisfaction in young people.

1.4 Introduction to Research Design of Study 1

It is evident that experiences of positive emotion increase the likelihood of people feeling good in the future. Positive emotions also increase the tendency to find meaning in subsequent life events (Fredrickson & Joiner, 2002). Thus, young peoples' lives may be optimised by creating opportunities for them to experience positive emotion. The aim of the current research was to examine the relationship between Positive Affect and Life Satisfaction in a group of Australian adolescents. This research was based on Fredrickson's (1998; 2001) Broaden-and-Build Theory of Positive Emotions, with Study 1 using a similar research design to that adopted by Fredrickson and Joiner.

Study 1 examined the relationship between positive affect and life satisfaction in a sample of young Queenslanders at a single point in time. Similar to Fredrickson and Joiner (2002), Study 1 utilised a mediation testing approach. It was hypothesised that an independent variable Positive Affect could be used to predict a dependent variable Life Satisfaction through mediating variables of Broadened Mindset, Self-Efficacy, and Life Meaning. A diagrammatic representation of this model can be seen in Figure 1 on the following page.

According to Baron and Kenny (1986) variables acting as mediators represent the generative mechanism through which the focal independent variable (Positive Affect) is able to influence the dependent variable of interest (Life Satisfaction). Paths a and b together

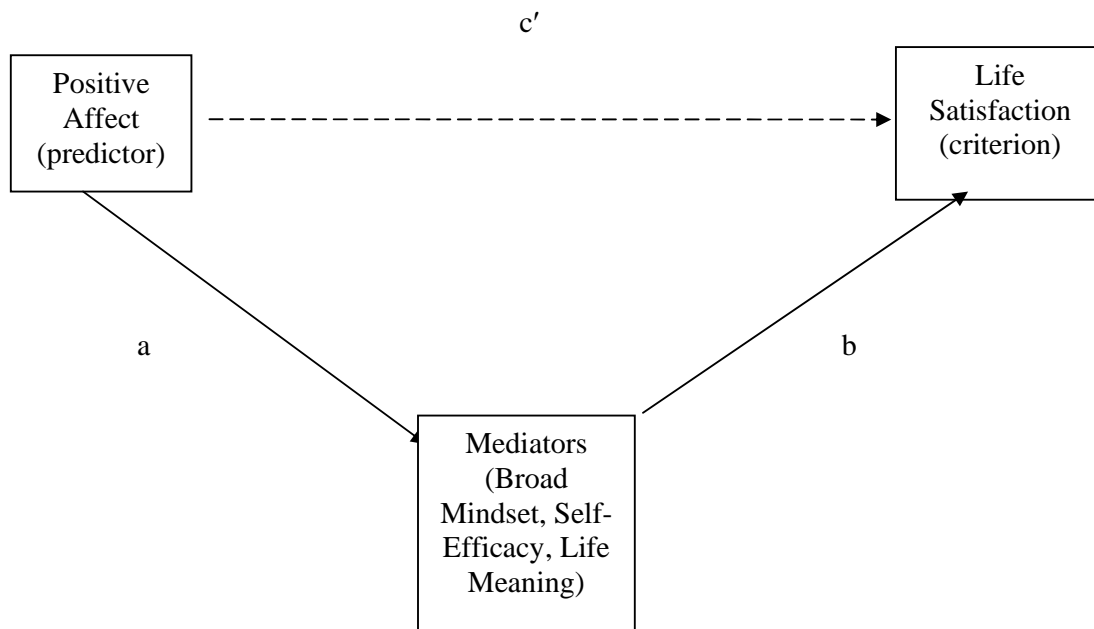


Figure 1: Hypothesised relationship between Positive Affect and Life Satisfaction as mediated by variables of Broadened Mindset, Self-Efficacy, and Life Meaning

show the mediated or indirect path from the predictor (Positive Affect) to the criterion measure (Life Satisfaction) via the mediators (Broadened Mindset, Self-Efficacy, and Life Meaning). Baron and Kenny stated that in order for a variable to function as a mediator, three conditions must be met. Initially, the predictor or explanatory variable (Positive Affect) must account for significant variation in Broadened Mindset, Self-Efficacy and Life Meaning (the hypothesised mediators). This is represented by path a in Figure 1. Secondly, these mediator variables must account for significant variation in the Life Satisfaction criterion measure. This is represented by path b in Figure 1. The third and final condition as represented by path c' in Figure 1, is that when the relationships between the predictor (Positive Affect) and the

mediators (path a) and between the mediators and the Life Satisfaction criterion (path b) are controlled, a previously significant relationship between the predictor (Positive Affect) and the criterion (Life Satisfaction) becomes zero (complete mediation) or substantially reduced (partial mediation). In line with this mediation approach, the data were analysed using mediation regression analysis.

Study 1 was designed to examine the relationship between Positive Affect and Life Satisfaction in a sample of 12-18 year old Queenslanders. It was hypothesised that Positive Affect would predict Life Satisfaction through mediating variables of Broadened Mindset, Self-Efficacy, and Life Meaning.

Chapter Two: Study 1

*2.1. Method: Study 1**2.1.1. Participants*

Sixty-seven females and 26 males between 12 and 18 years of age ($M = 14.74$, $SD = 1.55$) were recruited from St Joseph's Nudgee College ($n = 26$), and Lourdes Hill College in Brisbane ($n = 67$). A total of 69.9% of these high school students identified as living in a Boarding House. All male participants and just over half of female participants (58.2%) were boarders. Response rate was not able to be calculated for this sample as the school statistics were not available. Nevertheless, this sample provided a convenient sample of youth between 12 and 18 years of age.

2.1.2. Measures

Participants completed a self-report survey containing the following measures (see Appendix A):

1. Personal Demographics. Age, sex, and education levels were measured.
2. The Positive and Negative Affect Schedule (PANAS, Watson, Clark, & Tellegen, 1988). The PANAS is a 20-item scale with two factors, Positive Affect and Negative Affect. Respondents were asked to indicate on a 5-point Likert scale (1 = *very slightly/not at all*, 5 = *extremely*) the extent to which they experienced certain feelings or emotions during the past week. Watson et al. reported Cronbach alpha levels for the Positive Affect subscale between .86 to .90. In Study 1, the alpha level for this scale was .75. The 10 items from the Positive Affect subscale (Items 1, 4, 6, 7, 9, 12, 13, 15, 17, and 18) were summed to provide a measure of Positive Affect. Scores on this subscale could theoretically range between 10 and 50, with higher scores indicating more Positive Affect. Negative Affect scores for participants were not calculated, as this variable was not relevant to the current

research aims.

3. Curiosity and Exploration Inventory (CEI, Kashdan et al., 2004). The CEI is a self-report inventory assessing individual differences in the recognition, pursuit, and integration of novel and challenging experiences and information. The CEI is a 7-item scale with two factors, Exploration and Absorption. The measure has good internal reliability with Cronbach alpha levels ranging between .63 to .80 (Kashdan et al.). Moderately large positive relationships have also been found with intrinsic motivation, reward sensitivity, and Openness to Experience (Kashdan et al.). Respondents were asked to rate items using a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). The first factor, Exploration, refers to strivings for novel and challenging information and experiences (Kashdan et al.). This subscale was specifically chosen to measure openness to information, a key indicator for Broadened Mindset. Prior to summing the four items on the Exploration subscale (Items 1, 3, 4, and 7) to obtain total participant Exploration scores, Item 4 was reverse scored. Scores on this measure could theoretically range between 4 and 28. Participant scores for the second subscale, Absorption (items 2, 5, and 6) were not calculated, as this variable was not relevant to the current research aims.
4. Inspiration Scale (IS, Thrash & Elliot, 2003). The IS is a measure of an individual's inspiration levels. This measure was included as a subscale of Broadened Mindset as it has been shown to predict a range of positive consequences including Openness to Experience, work-mastery motivation, creativity, perceived competence, and self-determination (Thrash & Elliot). The measure has strong psychometric properties, with Cronbach alpha levels ranging from .90 to .95 (Thrash & Elliot). This 8-item scale measured how deeply and strongly participants experience 'inspiration'. Respondents were asked to rate items using a 7-point

Likert scale (1 = *never*, 7 = *very often*), and responses were summed to obtain a total measure of Inspiration. Scores on this measure could theoretically range between 8 and 64. Following calculation of separate scores for Inspiration and Exploration, a factor analysis with varimax rotation, was conducted to support the combining of these measures to represent a measure of Broadened Mindset. Results from this factor analysis (unreported) showed Inspiration and Exploration measures to load on a single factor. Scores from both measures were then summed to form the variable Broadened Mindset. Scores for Broadened Mindset could theoretically range between 12 and 84. The Cronbach alpha level for the combined Broadened Mindset measure in this study was .85.

5. Meaning in Life Questionnaire (MLQ, Steger, Frazier, Oishi, & Kaler, 2006). This 10-item questionnaire measures two dimensions of meaning in life, Presence and Search, with each dimension comprising of 5 items using a 7-point scale (1 = *Absolutely Untrue*, 7 = *Absolutely True*). The MLQ has good internal consistency, with Cronbach alpha levels ranging from .72 to .92 (Steger et al.). The alpha level for this study was .73. The MLQ has been found to positively relate to wellbeing, intrinsic religiosity, extraversion and agreeableness, and to be negatively related to anxiety and depression (Steger et al.), and item 9 was reverse scored. Scores from all items on this measure were computed to form the variable Life Meaning in this study. Scores for Life Meaning could theoretically range between 10 and 70.
6. Satisfaction with Life Scale (SWLS, Diener et al., 1985). The 5-item SWLS is designed to assess satisfaction with life; participants integrate and weigh their life domains (e.g., health or finance). Respondents used a 7-point Likert scale to indicate their disagreement (1= *Strongly Disagree*) or agreement (7= *Strongly Agree*) on each item. Alpha coefficients for the SWLS have been shown to range

between .82 and .87 (Diener et al.). In the current study, the alpha level was .86. The SWLS has also been shown to positively relate to other measures of subjective well-being, and to negatively relate with measures of psychopathology (Diener et al.). Item scores were summed to provide the dependent variable, Life Satisfaction. Participant scores on this measure could theoretically range from 5 to 35.

7. Generalised Self-Efficacy Scale (GSES, Schwarzer & Jerusalem, 1995). The GSES is a 10-item unidimensional self-report scale designed to assess optimistic self-beliefs to cope with a variety of difficult demands in life. Participants were asked indicate how true each statement (e.g., “I can always manage to solve difficult problems if I try hard enough”) was for them on a 4-point scale (1 = *Not at all true*, 4 = *Exactly true*). This scale has been shown to be reliable, with Cronbach alphas ranging from .75 to .91 (Scholz, Dona, Sud, & Schwaezer, 2002). The current study had a Cronbach alpha level of .60. The GSES also has acceptable criterion-related validity, with positive coefficients found with measures of favourable emotions, dispositional optimism, and work satisfaction (Schwarzer & Jerusalem). The scale is negatively correlated with measures of depression, anxiety, stress, burnout, and health complaints (Schwarzer & Jerusalem). Participant scores from all items on this measure were summed to form the variable Self-Efficacy. Scores for Self-Efficacy could theoretically range between 10 and 40, with higher scores indicating higher levels of Self-Efficacy.

2.1.3. Procedure

The Psychology Research Ethics Committee approved this study in April, 2006. Principals from two Brisbane high schools, St Joseph’s Nudgee College and Lourdes Hill College, were then approached for permission to access their students for potential participation in the study. As an incentive for participation, each school was offered one

sponsored place at the 2007 National Leadership Camp (Rising Generations, 2006). National Leadership Camp is an annual event run by a Sydney-based not-for-profit youth organisation, Rising Generations. The Australian Government's Department of Education, Science and Training endorsed this event. The school Principals were each responsible for determining the pupil from their school to be offered the sponsorship (the student selected for the sponsorship did not need to take part in the study). Following receipt of written permission from schools to approach the students, information packages (see Appendix B) and consent forms (see Appendix C) were sent home to students' parents. The current researcher attended both sites and conducted the questionnaire delivery.

At Lourdes Hill College, the Dean of Student Welfare was nominated as the point of contact for assisting with the study. The Dean of Welfare chose one class from each year group at random, and distributed information and consent forms to be returned by parents/guardians to the school. Additionally, all students from the school boarding house were asked if they would like to participate. Students who attended the day school, and who had parental consent could choose to participate by attending the testing session scheduled for the 17th May 2006 in the school hall. Students from the boarding house who had guardian consent chose to participate by completing questionnaires during study time on the 18th May 2006. Testing sessions took approximately half an hour and all measures were given to the students in a consistent order (see Appendix A for specific outline of the questionnaire package).

At each testing session, students were given a brief outline of the study's background and aims, as well as information on debriefing procedures (i.e., procedures for asking further questions, and receiving their written feedback at the end of the study in 2007). Participants were also informed that participation was voluntary and that responses to questionnaires would be kept confidential. Those participants who returned consent forms but who did not

attend the scheduled testing sessions were followed up by mail a week later.

At St Joseph's College Nudgee, the Principal nominated the Director of Boarders as the contact point for the study. Information and consent forms were emailed to parents of boarding house students in order to obtain written consent. Those students who had parental permission and who were willing to participate were tested in a group testing session during study time on the 4th June 2006. Again, debriefing procedures were outlined at the beginning of the session. The Dean of Boarding personally followed up with those participants who returned consent forms but who were unable to attend the scheduled testing session. The Dean then mailed any late questionnaires to the principal researcher. Data from these two groups were combined for analysis.

2.1.4. Data Screening

A total of 120 consent forms were received, and a total of 95 completed questionnaires were received for analysis. Responses were screened for missing data. Cases with missing data from entire measures were removed from the data set ($n = 2$). After cases with entire measures were removed, limited data were missing. Given there were no patterns within these missing data, all missing data were replaced with sample means (Tabachnick & Fidell, 2007).

The existence of univariate and multivariate outliers were considered via histograms and using Mahalanobis distance. To identify any univariate outliers, z scores for all predictor scores were calculated to identify z scores with a likelihood occurrence of 1 in 1000 ($z < 3.29$). No univariate outliers were identified. Evaluation of Mahalanobis distances for all regression analyses revealed that all values were within expectations according to their chi squared ceiling values (Field, 2005). Thus, no multivariate outliers were identified.

Power calculations for regression were considered using Green's (Green, 1991, as cited in Field, 2005) two rules for choosing appropriate sample sizes, namely $N > 50 + 8k$

(where k is the number of predictors) for testing the multiple correlation, and $N > 104 + k$ for testing individual predictors. Green suggested that if interested in both multiple correlation and testing individual predictors, N should be calculated both ways and the larger value chosen. Using these rules, the current sample size ($n = 93$) is acceptable for multiple correlation calculations but falls short of the recommendation for individual predictors.

Normality was assessed and revealed no skewness or kurtosis for any variables. Therefore, no variable transformations were considered necessary. Linearity and homoscedasticity were assessed via inspection of the residual plots for each of the cases in the analysis. There was no unusual dispersion or definite patterns in residual scores for each of the analyses, supporting the assumptions of linearity and homoscedasticity.

Multicollinearity was assessed via the correlation matrix, with no correlations found to be above .90, suggesting singularity of all variables used in the study.

2.2 Results: Study 1

2.2.1 Descriptive Statistics

Descriptive statistics for key variables are presented in Table 1. The scales used to measure Positive Affect, Life Satisfaction, and Life Meaning had satisfactory internal consistency estimates (see Diener et al., 1985; Steger et al., 2006; Watson et al., 1988). However, alpha levels for the Self-Efficacy measure were lower than those obtained in previous studies (see Scholz et al., 2002), and as such, results regarding this variable should be interpreted with caution. The composite Broadened Mindset measure also showed acceptable internal consistency (see Kline, 1999).

2.2.2. Bivariate Correlations

Bivariate correlations for all variables were calculated, as shown in the correlation matrix in Table 2. Significant positive relationships were found between most variables of interest ($p < 0.05$). Broadened Mindset was significantly positively related to all variables,

with a moderate to strong correlation evident with Positive Affect ($r = .51, p < .01$). Self-Efficacy also showed moderate positive correlations with all variables except Life Meaning. Life Satisfaction was significantly positively correlated with all variables except Life Meaning.

Table 1

Descriptive Statistics for Life Satisfaction, Positive Affect, Broadened Mindset, Self-Efficacy, and Life Meaning

Measure	<i>M</i>	<i>SD</i>	No. Items	Score Range
Life Satisfaction	23.75	6.94	5	6-35
Positive Affect	32.28	5.99	10	18-45
Broadened Mindset	53.81	9.26	12	29-74
Self-Efficacy	29.27	3.36	10	20-36
Life Meaning	45.44	8.26	10	19-69

Note. $N = 93$. For score ranges, higher scores indicate higher levels of either Life Satisfaction, Positive Affect, Broadened Mindset, Self-Efficacy, or Life Meaning

2.2.3. Mediation Regression Analysis

Mediation regression analysis was used to test the hypothesis that the independent variable Positive Affect would predict the dependent variable Life Satisfaction through mediating variables of Broadened Mindset, Self-Efficacy, and Life Meaning. Following the procedures outlined by Baron and Kenny (1986), all bivariate associations between predictors

Table 2

Correlation Matrix of Positive Affect, Life Satisfaction, Broadened Mindset, Self-Efficacy, and Life Meaning Variables

Variable	1	2	3	4	5
1. Life Satisfaction	1.00	.32**	.26*	.37**	.16
2. Positive Affect		1.00	.51**	.29**	.31**
3. Broadened Mindset			1.00	.27**	.37**
4. Self-Efficacy				1.00	.19
5. Life Meaning					1.00

Note. ** $p < 0.001$ (2-tailed); * $p < 0.01$ (2-tailed)

needed to be significant to be amenable to tests of mediation. However, as shown in Table 2, Life Meaning was not significantly correlated with the Life Satisfaction, and Life Meaning was subsequently removed from further analysis.

A series of regression analyses were then performed to investigate the relationship between Positive Affect and Life Satisfaction. In the first analysis, Positive Affect was regressed onto the Broadened Mindset variable, $R^2 = .12$, $F(2, 90) = 5.86$, $p < .05$, $f^2 = .14$. Results indicated that Broadened Mindset partially mediated the relationship between Positive Affect and Life Satisfaction, $\beta = .26$, $p < .05$. In the second analysis, Positive Affect was regressed onto Self-Efficacy, $R^2 = .19$, $F(2, 90) = 10.55$, $p < .05$, $f^2 = .23$. Results revealed that Self-Efficacy also partially mediated the relationship between Positive Affect and Life Satisfaction, $\beta = .23$, $p < .05$.

Following the mediation regression analysis, a hierarchical regression analysis was

conducted to further examine which of the mediating variables was the most important predictor of Life Satisfaction. Positive Affect was entered into the first equation, Broadened Mindset and Self-Efficacy variables were then entered simultaneously. Results revealed Self-Efficacy to be the most significant predictor of Life Satisfaction once Positive Affect had been accounted for, $\beta = .30, p < .05$. There was also a significant R^2 change from .10 in Model 1 (Positive Affect) to .09 in Model 2 (Positive Affect, Self-Efficacy, and Broadened Mindset), $p < .05$.

2.3. Discussion: Study 1

Findings from Study 1 supported the hypothesis that Positive Affect would predict Life Satisfaction through mediating variables of Broadened Mindset and Self-Efficacy in a convenient sample of Queensland youth. However, results did not support the hypothesis that Life Meaning would act as a mediating variable between Positive Affect and Life Satisfaction. These data supported previous research showing relationships between positive emotion and broadened cognitions (Fredrickson, 1998), and positive emotion and self-efficacy (Kavangagh & Bower, 1985). Specifically, results from this sample indicate that the creation of positive emotions and positive experiences can be used as an avenue for improving life satisfaction in adolescents.

Baron and Kenny (1986) describe a mediating variable as the mechanism by which a focal independent variable (Positive Affect) is able to influence a dependent variable of interest (Life Satisfaction). Broadened Mindset, the first potential mediator tested, was found to partially mediate the relationship between Positive Affect and Life Satisfaction. According to the Broaden-and-Build Theory (Fredrickson, 2001), this result is unsurprising. According to Fredrickson, positive emotions such as joy, interest, contentment, pride, and love all share the ability to widen individuals' thought/action repertoires, and build enduring personal resources. These resources range from physical and intellectual resources, to social and

psychological resources.

Fredrickson (2001) believed that the benefits of positive emotions are in part related to broadened cognitions that result from such experiences. Data from this research support this notion. On the basis of these results, as well as data from previous studies examining the benefits of positive emotion (see Lyubomirsky et al., 2005), further investigation into the role that positive emotions and broadened cognitions play in adolescent development is worthy of further research. Current data indicate that efforts made to increase access to, and development of, positive experiences during adolescence have significant implications for improving subjective well-being. It also indicates that finding ways of broadening young people's cognitions may exist as a viable pathway for improving adolescent experiences of life satisfaction. Finally, these findings support Fredrickson and Joiner's (2002) notion that positive emotions produce upward spirals of well-being, in contrast to the pessimistic and negative-thinking patterns often documented in the cognitive depression literature (Peterson & Seligman, 1984).

Findings from Study 1 also showed that Self-Efficacy played a partial mediation role in the relationship between Positive Affect and Life Satisfaction. Additionally, results of the hierarchical regression analysis indicated that Self-Efficacy contributed to the overall model after controlling for Positive Affect. Collectively, these findings provide support for Caprara et al.'s (2006) research on adolescent self-efficacy beliefs and positive affect, and Maddux's (2002) notion that both physiological and emotional states influence self-efficacy. Maddux reported that individuals learn to associate poor performance or perceived failure with adverse physiological arousal, and success with pleasant feeling states. Data from this research are also consistent with Bandura's (1992, 1994) premise that self-efficacy beliefs play a significant role in psychological well-being.

Another key finding from Study 1 is that the Life Meaning variable did not mediate

the relationship between Positive Affect and Life Satisfaction. Bivariate regression results showed Life Meaning to be correlated with all variables except Life Satisfaction and Self-Efficacy. The hypothesis that it would correlate with Life Satisfaction was not supported. Life Meaning was included in the survey to further examine the relationship between positive emotion and positive meaning. Fredrickson (2000) suggested that finding positive meaning in events can trigger positive emotion and broadened cognitions, therefore increasing the likelihood of finding positive meaning in subsequent events. Results of the current study however, suggest that although Positive Affect and Life Meaning are positively related, Life Meaning did not mediate the relationship between Positive Affect and Life Satisfaction.

Fredrickson's (2000) believed positive emotions should relate with life meaning as people are likely to experience positive emotion in the face of adversity. That is, people can find positive meaning in ordinary events, and within the adversity itself (see Affleck & Tennen, 1996; Folkman & Moskowitz, 2000). The current measure of Life Meaning (Steger et al., 2006) asked participants to "take a moment to think about what makes your life and existence feel important and significant to you". This is in contrast to previous research that has examined life meaning in the context of a specific adverse event. Consequently, the current results might reflect a mismatch between the measure used to examine Life Meaning, and why the proposed relationship was not supported in the current data. Additionally, previous research with the MLQ has used University students rather than adolescents as used in the current study. Therefore, a number of adolescent participants may have found the questions on the measure difficult to answer – they might not yet know their life purpose. Anecdotal comments supported this view.

Key findings from Study 1 were that Broadened Mindset and Self-Efficacy partially mediated the relationship between Positive Affect and Life Satisfaction. Further investigation into the role that positive emotions (and associated broadened cognitions), and self-efficacy

play in adolescent development is warranted. The current data indicate that efforts made to increase access to, and development of, positive experiences during adolescence has significant implications for improving subjective well-being. The current data therefore provides support for the Broaden-and-Build Theory that asserts that positive experiences result in broadened mindsets, increased enduring personal resources, and improved coping mechanisms for handling adverse events (Fredrickson, 1998; Fredrickson & Joiner, 2002).

Given the current mental health status of Australia's young people, a deeper investigation into the role that positive emotions play in improving adolescent life satisfaction is justified. Gaining a greater understanding of the functions and mechanisms by which positive emotions and broadened cognitions influence life satisfaction stands to benefit the health of the nation's young people and consequently the health of Australia's future. Study 2 was therefore designed to examine the effects of a positive youth development program in an attempt to better understand how positive emotions might influence Australian adolescents' growth and development.

Chapter Three: The National Leadership Camp

3.1. Background and Rationale: Study 2

In the past, much emphasis has been placed on implementing youth development programs to address youth problems, whether it be poor mental health or negative youth behaviours (see Catalano et al., 2002). For example, a prevention program is typically aimed at youth experiencing psychological distress. However, recent efforts investigated youth development programs from a positive psychology perspective. In Australia, programs such as Friends for Life Program (Barrett, 2007) and Aussie Optimism (Roberts, 2007) appear to be effective in influencing adolescent psychological well-being in schools, and community settings. The youth development program chosen for investigation in Study 2 similarly focused on the developing positive emotions in young people.

The aim of Study 2 was to investigate the effect of a positive youth development program on participants' levels of Life Satisfaction, Positive Affect, Broadened Mindset, and Self-Efficacy. The focus of the intervention program, known as the 2006 National Leadership Camp (NLC, Rising Generations, 2005), was to "develop, challenge, and encourage Australia's young people to be leaders who actualise their own potential, and who use their gifts and energies to serve others" (Rising Generations, 2006, p.2). Participants who attended the youth leadership program were either self-nominated or had been nominated by their schools to attend the event.

The NLC 2006 (Rising Generations, 2006) was run and organised by a not-for-profit Sydney based youth organisation, Rising Generations. It was also endorsed by the Australian Government's Department of Science, Education, and Training. The camp was a 4-day and 3-night experience, with delegates travelling from across Australia to participate. While the organisers of the program did not make any claims regarding the psychological benefits of attending the camp, the program was thought to be an avenue for improving participants'

levels of positive emotion due to its basis on positive psychology concepts. These concepts included future-mindedness, values, resilience, pro-social behaviour, and having a passion for a field of endeavour. Such concepts have been examined in both positive psychology (e.g., Peterson & Seligman, 2004; Seligman & Peterson, 2004) and in the youth development literature (see Catalano et al., 2002).

Each day of the intervention program focussed on a concept consistent with current positive psychology literature. For example, future-mindedness was the theme on Day 1; values the theme on Day 2; resilience the focus on Day 3; and prosocial behaviour (servant leadership) was emphasised on Day 4. A fifth theme of having a passion for a field of endeavour was reinforced throughout the camp experience through various activities. The theme for each day was introduced to participants every morning, and the activities that followed were tailored to reflect this theme. For example, on Day 3 participants undertook a physical fitness boot camp before breakfast. This experience was then used as a focus point for the discussions on resilience. As noted in the camp promotional flyer, activities undertaken by the participants varied over the course of the four days. These activities included listening to, and learning from, speeches by prominent Australian leaders; participating in seminar groups to develop leadership and interpersonal skills; and taking part in physical and mental challenges. An outline of the camp program can be seen in Appendix D.

The focus for participants on Day 1 of NLC was future-mindedness, or having a vision for the future. Future-mindedness has been identified as an aspect of hope in the positive psychology literature. Hope and future-mindedness fall under the broad virtue of transcendence according to the Values In Action (VIA) Classification of Strengths and Virtues recently developed by Peterson and Seligman (2004). The VIA Classification of Strengths and Virtues is a system focussed on the strengths of character that make a good life

possible. The VIA Classification of Strengths and Virtues was developed following a review of literature that addressed good character from psychiatry, youth development, character education, religion, philosophy, organisational studies, and psychology. From this research, 24 positive traits emerged, and were organised under six broad virtues of wisdom and knowledge, courage, love, justice, temperance, and transcendence (Peterson & Seligman).

Under the category of transcendence, hope is referred to as expecting the best in the future. Research suggests hope is beneficial to well-being, and has been associated with self-esteem, positive emotions, coping, and achievement (see Snyder, 2000). Therefore, participants spending time focussing on their hopes for the future and discussing these hopes with other young people was believed to be an avenue for generating positive emotions. Positive Affect was the variable measured to determine the effect of the NLC program on participant levels of positive emotion.

Day 2 of the NLC program focussed on the concept of values. According to Sagiv, Roccas, and Hazan (2004, p. 68), “values are social-cognitive representations of motivational goals.” Research on values is increasing in the positive psychology literature, because values influence decisions, choices, and behaviours (Sagiv et al., 2004). Kasser and Ryan (1996; 2001) made a distinction between extrinsic and intrinsic goals. They suggested that goals and values associated with consumerism, such as money, possessions, status and image can be classified as extrinsic. In contrast, goals that involve striving for personal growth, intimacy, and contribution to the community can be classified as intrinsic. A growing body of research suggests that intrinsic goal orientations can be healthy for an individual, whereas as extrinsic goals do not promote well-being (Kasser & Ryan, 1993). Kasser and Ryan (1993) demonstrated this concept in a study of college students by examining the importance participants placed on financial success compared to goals for self-acceptance, affiliation, and community feeling. They found that those who focussed on the extrinsic goal (i.e. financial

success) reported lower levels of self-actualisation and higher levels of depression and anxiety. Conversely, those with an intrinsic goal approach had lower frequencies of depression. In light of this research, participants spent the second day of camp exploring questions such as "what are values?" and "what do I value?" It was thought that giving young people an opportunity to explore their values, with a focus on intrinsic values, could provide the capacity to increase participants' levels of positive affect, broad mindset, self-efficacy, and life satisfaction. Measures of Broadened Mindset, Self-Efficacy, and Life Satisfaction were taken in conjunction with measurement of Positive Affect to investigate the effect that attending NLC had on participants' well-being.

Day 3 of NLC introduced young people to the concept of resilience. According to Tugade and Fredrickson (2004, p. 320), psychological resilience refers to "effective coping and adaptation although faced with loss, hardship, or adversity." Resilience is a popular concept in positive psychology. As mentioned earlier, the notion of resilience was introduced to participants by way of a physical boot camp challenge under the guidance of qualified physical trainers. The key message expressed to young people during this experience was to persevere when faced with a challenge. Keynote addresses and small group discussions on the topic of resilience facilitated the brainstorming of ideas about what they might achieve when faced with challenges in their lives. Exposing young people to the idea of resilience and providing them with an opportunity to hear experiences from other Australians who had overcome adversity was thought to be another avenue for increasing levels of positive emotion as measured by the Positive Affect variable.

Day 4 of NLC focussed on servant leadership, or doing things for other people without expecting anything in return. The concept of servant leadership appears to mirror definitions of prosocial behaviour in the positive psychology literature. Caprara and Steca (2007) referred to prosocial behaviour as an individual tendency to undertake voluntary

action aimed at others. A substantial volume of literature has shown that engaging in prosocial behaviours, which include sharing, donating, caring, comforting and helping, can improve the quality of social interactions. Caprara and Steca suggested that not only do the targets of prosocial behaviour (i.e., the person being assisted) benefit, but, in the act of providing assistance, the helper also benefits by receiving social approval. Preventative factors such as self-enhancement, self-acceptance, and positive mood are also thought to be developed through acts of prosocial behaviour. Specifically, Eisenberg and Fabes (1998) demonstrated positive correlations between prosocial behaviour and psychosocial adjustment in children and adolescents.

Prosocial behaviour was addressed at the camp by participants brainstorming ideas and action plans about how they could make a positive difference to other individuals, schools, and the communities they lived in once they returned home. Further, NLC organisers set the participants a group challenge of collectively raising \$10, 000 to set up a fund to donate to Opportunity International (Opportunity International, 2006), an organisation that provided loans to individuals and groups in third world countries. This challenge was subsequently met within three months of participants returning to their hometowns around Australia. It was thought that this opportunity to engage in prosocial behaviour would provide a mechanism for increasing positive affect among participants.

Key concepts of NLC included the daily themes: future-mindedness, values, resilience, and prosocial behaviour. Additionally, participants learnt about a fifth concept over the course of the week, namely having a passion for a chosen field of endeavour. This theme was introduced on Day 1 as an overarching concept for the NLC experience. Wrzesniewski, Rozin, and Bennett (2003) noted that there is a surprising absence of literature on passions, leisure activities, or hobbies in psychology. In an attempt to add to this field, Wrzesniewski et al. examined passion as a domain of leisure. They administered a survey on

passions to 235 University of Pennsylvania undergraduates and to 47 adult family and friends of a subset of these students. Results indicated that passions were seen as positive, enriching activities in the participants' lives that offered an outlet for amusement and fun. Specifically, Wrzeniewski et al. reported that respondents felt that their passions sustained their mental health and existed as a stress outlet. It was concluded that people in the sample generally had positive attitudes towards their passions (Wrzensniewski et al.). Therefore, encouraging young people to have a passion and to become engaged in activities they are passionate about appeared a fruitful means for generating positive emotion in participants.

Collectively, it was thought that the NLC experience would provide a number of opportunities to improve positive affect in those who attended. Study 2 investigated Life Satisfaction, Positive Affect, Broadened Mindset, and Self-Efficacy variables in a sample of NLC participants ($n = 24$), and compared results to a control group of young Queenslanders who did not attend NLC ($n = 62$).

3.2. Research Design

Study 2 was designed to further investigate the nature of the relationships between Life Satisfaction, Positive Affect, Broadened Mindset, and Self-Efficacy. These variables were deemed to be important to the relationship between positive emotion and life satisfaction in Australian adolescents on the basis of Study 1. Study 2 had two groups of participants (a) an experimental group who attended NLC, and (b) a control group of young people who did not attend NLC. The control group for this study were participants from Study 1. That is, the data from Study 1 was also used as the control group data (Time 1) in Study 2.

Study 2 involved a mixed repeated measures design with Time as the within-subject factor. A visual representation of the design for Study 2 can be seen in Table 3.

Table 3

Visual Representation of Design of Study 2 with Time as Within-Groups Factor

	Time 1: Pre-testing (before NLC)	Time 2: Post-testing (directly after NLC)	Time 3: 3 months later (3 months post NLC)
Control Group (<i>n</i> = 62, participants did not attend NLC)	Between 17 th May and 4 th June 2006	Between 26 th July and 10 th August 2006	Between 17 th October and 18 th October 2006
Experimental Group (<i>n</i> = 24, participants attended NLC)	Taken on arrival at NLC, 4 th July, 2006	Taken on departure NLC, 9 th July 2006	Questionnaires posted out 17 th October, 2006

The time frames were chosen in order to allow for investigation of within-group and between-group differences on variables of Life Satisfaction, Positive Affect, Broadened Mindset, and Self-Efficacy. Pre-testing for both groups occurred prior to NLC to establish base-line measures on all of the variables. Post-testing for both groups occurred directly after NLC to examine if any differences existed within- and between- groups following attendance at NLC. Finally, given that past research indicates that good and bad events influence happiness only if the event has occurred in the past two months (Suh, Diener, & Fujita, 1996), both groups were re-tested on all variables three months after NLC to establish if any changes were maintained over time. As seen in Table 3, a number of challenges, including school holidays at Time 2, prevented the control group from being surveyed at exactly the same time as the experimental group. Findings from this study should be interpreted with caution given these testing differences which may have influenced results (i.e., experimental group participants were on holidays for testing Time 1 and Time 2, whereas control group participants were at school during Time 1 and Time 2). It should also be noted that

participants in Grades 11 and 12 for both groups may have been surveyed during an exam period at testing Time 3.

A mixed design ANOVA was conducted to analyse Study 2 data. It was hypothesised that participants in the experimental group would have significantly higher levels of Positive Affect, Life Satisfaction, Broadened Mindset, and Self-Efficacy compared to the control group at testing Time 2 and testing Time 3 as a result of attending NLC. The groups were not expected to differ on these variables at Time 1.

3.3. Method: Study 2

3.1.1. Participants

Study 2 had two groups of participants. Participants from Study 1 provided a control group ($n = 62$) for comparison against the experimental group ($n = 24$). These participants were recruited from St Joseph's Nudgee College, and Lourdes Hill College, both Brisbane independent schools. Time 1 data for this group was the same as the data used for Study 1 of this research project. A total of 47 females and 15 males between the ages of 12 and 18 years ($M = 14.71$, $SD = 1.50$) completed the questionnaires at all three testing times, with an attrition rate of 78%. The majority (61%) of the control sample identified as living in a boarding house situation, including 100% of the male participants, and 35.5% of the female participants.

The experimental group participants were recruited from students who chose to attend the 2006 Rising Generations National Leadership Camp (Rising Generations, 2006). Participants in this group had either been nominated by someone in their community to attend the event, or were self-nominated to attend the event. Eighteen females and 6 males, aged between 14 and 17 years ($M = 15.79$, $SD = 0.78$) completed the questionnaires at all three testing times, with an attrition rate of 48%. Less than half of the sample (41%) reported attending a public school, and 58% reported attending an independent school. The majority of

the sample attended schools in New South Wales (58.3%), followed by Australian Capital Territory (16.7%), Victoria (12.5%), Tasmania (8.3%), and Queensland (4.2%). None of the experimental group participants identified as living in a boarding house situation.

Group comparisons of the means for Age revealed control group participants to be slightly younger, on average, than the experimental group participants.

3.1.2. Measures

Participants completed the same measures as in Study 1. These measures included; a demographics questionnaire; the Positive and Negative Affect Schedule (PANAS, Watson et al., 1988); the Curiosity and Exploration Inventory (CEI, Kashdan et al., 2004); the Inspiration Scale (IS, Thrash & Elliot, 2003); the Meaning in Life Questionnaire (MLQ, Steger et al., 2006); the Satisfaction with Life Scale (SWLS, Diener et al., 1985); and the Generalised Self-Efficacy Scale (GSES, Schwarzer & Jerusalem, 1995).

In Study 2, Cronbach alpha levels ranged for each measure across the three test times for both the control and the experimental group. Control group alpha levels ranged from .74 (Time 1), to .88 (Time 2), to .77 (Time 3) for the PANAS; .88 (Time 1), to .89 (Time 2), to .86 (Time 3) for the combined measure of Broadened Mindset (made up of CEI and IS measures); .84 (Time 1) to .88 (Time 2) to .89 (Time 3) for the SLS; and .61 (Time 1) to .67 (Time 2) to .77 (Time 3) for the GSES. Experimental group alpha levels also ranged for each measure across the test times. Levels ranged from .57 (Time 1), to .89 (Time 2), to .82 (Time 3) for the PANAS; .76 (Time 1), to .85 (Time 2), to .80 (Time 3) for the combined measure of Broadened Mindset (made up of CEI and IS measures); .78 (Time 1) to .80 (Time 2) to .82 (Time 3) for the SLS; and .83 (Time 1) to .85 (Time 2) to .80 (Time 3) for the GSES. Further detail on these measures can be seen in Section 2.1.2. Consistent with Study 1 results, Life Meaning was not seen to correlate with Life Satisfaction using Study 2 data, and was therefore not used for further analysis in Study 2. As such, Cronbach alpha levels were not

calculated for this subscale.

3.1.3. Procedure

Recruitment procedures for participants in the control group were outlined in Study 1 (see Section 2.1.3). When the information sheets and consent forms were distributed for the initial study, parents and students were asked if they would be willing to complete the measures at three testing times. Participants from Lourdes Hill College completed measures at Time 2 (26th July 2006), and Time 3 (18th October) in bulk testing sessions in the school hall for day students, and in study time for the boarding house students. Participants who indicated willingness, but who were unable to attend the testing sessions were mailed a survey in the week following the relevant testing session. Questionnaires were returned to the researcher in a self-addressed envelope. Participants from St Joseph's College Nudgee completed the measures for Study 2 at Time 2 (10th August 2006), and at Time 3 (17th October 2006). Participants from this college who indicated a willingness to complete the measures, but who could not make the additional testing times were personally followed-up by the Director of Boarders, who then forwarded sealed questionnaires to the researcher by mail. At the beginning of all testing sessions, participants were given a brief outline of the study's background and aims, and information on debriefing procedures (i.e., procedures for asking further questions, and receiving written feedback at the end of the study in 2007). Participants were also informed that participation was voluntary and responses to questionnaires would be kept confidential. The schools had similar profiles (both Brisbane-based catholic private schools with day and boarding facilities), and exploratory t-test on Time 1 data revealed no significant differences for males and females on any of the key variables (Positive Affect, Life Satisfaction, Broadened Mindset, and Self-Efficacy for either school). Therefore, data from both schools were combined and analysed to form the control group for Study 2.

Participants in the experimental group were recruited from students who attended the 2006 National Leadership Camp (Rising Generations, 2006). As a part of the camp registration package, information and consent forms for the study were sent home to parents. Parents were asked to return the consent form by mail prior to the child attending the NLC, or to bring it with them and return it during registration procedures. Participants who indicated a willingness to participate in the study completed the initial questionnaires on Day 1 (4th July 2006) of NLC, in a bulk session before the program began. Participants were briefed on the rationale, aims and debriefing procedures before completing the survey. At Time 2 (9th July 2006), on Day 4 of NLC, participants who completed the questionnaires on Day 1 were again asked to complete the questionnaires prior to departing for home. At Time 3 (17th October), participants were sent a questionnaire by mail to their home address. Participants were asked to complete and return to the survey to the University in the envelope provided.

3.1.4. Data Screening

Data sets from all three testing times were screened separately for both groups. For the control group, 95 questionnaires were received at Time 1, 91 at Time 2, and 74 at Time 3. Cases with incomplete data across all three testing periods were removed ($n = 31$). Cases that were outside of the age range at the second or third time of testing were also removed ($n = 1$). This left 63 cases in the control group available for further analysis. For the experimental group, 54 questionnaires were received for analysis at Time 1, 50 at Time 2, and 26 at Time 3. Cases with incomplete data across all three testing periods were removed ($n = 29$). This left 25 cases in the experimental group available for further analysis.

Following the above screening procedures, minimal missing data existed from individual questionnaire items. No patterns emerged from the missing data, and items were replaced with sample means (Tabachnick & Fidell, 2007). Existence of univariate and multivariate outliers were considered via histograms and Mahalanobis distance. Using $z >$

3.29 (Field, 2005) as a criterion, two cases ($n = 1$ for experimental group, $n = 1$ for control group) were examined as potential outliers. Both cases were seen to be outliers on the majority of variables across the three testing times, and hence were removed from the analysis. Evaluation of Mahalanobis distances for all cases revealed that all values were within expectations according to their chi squared ceiling values (Field, 2005). Thus, no multivariate outliers were identified. Following these screening procedures, a total of 62 cases were available to be analysed as the control group, and 24 cases were available to be analysed for the experimental group.

Both sets of data were examined for assumptions of normality. Data from both groups did not meet the assumption of normality. Using the Kolmogorov-Smirnov statistic, experimental group data variables of Positive Affect Time 2, and control group data variables of Life Satisfaction Time 2, Life Satisfaction Time 3, and Positive Affect Time 2 were seen to violate this assumption (Field, 2005). These variables were positively skewed and showed peaked distribution. In attempt to reduce skewness and kurtosis of the variables, the data were transformed using a log 10 transformation. This transformation did not improve the normality of any variables, and caused the majority of the previously normal variables to have a non-normal distribution. As the transformation elicited minimal effect on the normality statistics, the data were retained in its original form for both repeated measures and attrition analyses, and the results interpreted with caution.

Linearity was assessed via inspection of the residual plots for each of the cases in the analysis. There was no unusual dispersion or definite patterns in residual scores, hence supporting assumptions of linearity and homogeneity for each data set separately. Multicollinearity of variables was considered, and as no correlations were above .90 singularity of variables was evident.

After checking assumptions of homogeneity for each data set separately, assumptions

for homogeneity of group variances were considered via Levene's Test of Equality of Error Variance for the repeated measures analysis. Positive Affect at Time 2 and Self-Efficacy at Time 2 violated this assumption. Field (2005) stated that Brown and Forsythe's (as cited in Field) F-ratios can be used as an alternative when the homogeneity of variance assumption has been violated. As such, Brown and Forsythe's F-ratios were used when examining results involving these two variables.

Power calculations for the repeated measures analysis were considered via Mauchly's Test of Sphericity. Field (2005) stated that Mauchly's test should be non-significant (i.e., $p > .05$) to assume the condition of sphericity has been met. Sphericity assumptions were met for the four variables of Life Satisfaction, Positive Affect, Broadened Mindset, and Self-Efficacy for both groups.

3.2. Results: Study 2

3.2.1. Descriptive Statistics

Descriptive Statistics for the control group on the key variables measured across three test times are shown in Table 4. The descriptive statistics for the experimental group are shown in Table 5. According to Kline's (1999) .80 criterion for alpha coefficients, the majority of measures showed acceptable internal consistency. However, consistent with Study 1 results, co-efficient alpha values for Self-Efficacy in the control group were lower than those observed in previous studies (see Scholz et al., 2002). Additionally, alpha coefficients for Positive Affect (at Time 1) for the experimental group were lower than those found in previous research (see Watson et al., 1988). Consequently, the results for these variables were interpreted with caution. For the control group, means for all four of the variables appeared similar at Time 1 and Time 3. Experimental group data showed a less consistent pattern of results, with the means markedly varying across the three test times.

3.2.2. Correlation Matrixes for Control and Experimental Groups

Correlations for all variables at each test time can be seen in Table 5 and Table 6, for the control and experimental groups respectively. As shown in Table 5, for the control group, strong inter-correlations were evident for key variables across the three test times. For example, Life Satisfaction Time 1 had a strong significant correlation with both Life Satisfaction Time 2, and Life Satisfaction Time 3 ($p < .01$). Life Satisfaction was also seen to have significant relationships with Broadened Mindset, and Positive Affect over time. While a number of the variables were significantly intercorrelated for the control group, such trends were not seen with the experimental group data. For example, Life Satisfaction did not correlate with Positive Affect or Broadened Mindset at any of the three testing times. The small group sample size (as well as other factors including a population of boarding house students, and only a Queensland sample) may have contributed to these results, as moderate intercorrelations were found for Positive Affect for the experimental group; however these correlations were not statistically significant.

3.2.3. Repeated Measures Analysis

The aim of Study 2 was to investigate the effect of NLC (Rising Generations, 2006) on participants levels of Life Satisfaction, Positive Affect, Broadened Mindset, and Self-Efficacy. A mixed design ANOVA was conducted to assess between- and within- group effects, so that differences between control and experimental groups could be assessed over time.

For Life Satisfaction, main effects were found for Time, $F(2, 39.92) = 3.94, p < .05$, and for Group, $F(1, 1111.24) = 12.29, p < .01$. Results also showed a significant Time by Group interaction, $F(2, 44.15) = 18.97, p < .05$. An independent sample t -test was conducted to examine the mean differences for Life Satisfaction for each group at each testing time. Results showed that the experimental group had significantly higher means compared to the

Table 4

Control Group Descriptive Statistics for Life Satisfaction, Positive Affect, Broadened Mindset, and Self-Efficacy Variables at Time 1, Time 2, and Time 3 (n= 62)

Measure	<i>M</i>	<i>SD</i>	Items	Score Range
Time 1				
Life Satisfaction	24.21	6.50	5	6-35
Positive Affect	32.11	5.78	10	19-44
Broadened Mindset	53.71	9.63	12	29-74
Self-Efficacy	29.31	3.09	10	21-36
Time 2				
Life Satisfaction	24.14	6.52	5	8-35
Positive Affect	33.40	5.96	10	21-49
Broadened Mindset	53.87	10.23	12	28-74
Self-Efficacy	28.97	2.78	10	21-35
Time 3				
Life Satisfaction	24.43	6.77	5	7-35
Positive Affect	34.26	5.00	10	19-44
Broadened Mindset	53.90	9.82	12	31-37
Self-Efficacy	28.98	3.79	10	20-37

Note. For all variables, higher scores indicate higher levels of Life Satisfaction, Positive Affect, Broadened Mindset, or Self-Efficacy, respectively.

Table 5

Experimental Group Descriptive Statistics for Life Satisfaction, Positive Affect, Broadened Mindset, and Self-Efficacy Variables at Time 1, Time 2, and Time 3 (n=24)

Measure	<i>M</i>	<i>SD</i>	No. Items	Score Range
Time 1				
Life Satisfaction	27.54	4.87	5	17-35
Positive Affect	38.00	4.26	10	30-45
Broadened Mindset	60.46	7.21	12	46-73
Self-Efficacy	31.83	3.41	10	26-40
Time 2				
Life Satisfaction	30.63	3.76	5	19-35
Positive Affect	45.08	5.60	10	27-50
Broadened Mindset	67.54	8.90	12	46-84
Self-Efficacy	32.88	4.14	10	24-40
Time 3				
Life Satisfaction	28.50	3.55	5	16-28
Positive Affect	38.25	6.38	10	29-50
Broadened Mindset	63.21	7.84	12	49-79
Self-Efficacy	33.60	3.50	10	26-39

Note. For all variables, higher scores indicate higher levels of Life Satisfaction, Positive Affect, Broadened Mindset, or Self-Efficacy, respectively

Table 6.
Correlation Matrix for the Control Group on the variables Life Satisfaction, Positive Affect, Broadened Mindset and Self-Efficacy over Time (n = 62)

Variable Name	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. <i>Life Satisfaction T1</i>	1.00	.43**	.28*	.36**	.72**	.45**	.40**	.31*	.71**	.31*	.31*	.20
2. <i>Positive Affect T1</i>		1.00	.49**	.24	.44**	.64**	.44**	.22	.36**	.38**	.46**	.31*
3. <i>Broad Mindset T1</i>			1.00	.20	.30*	.56**	.53**	.41**	.28*	.46**	.61**	.23
4. <i>Self-Efficacy T1</i>				1.00	.23	.37**	.10	.28*	.19	.38**	.24	.32*
5. <i>Life Satisfaction T2</i>					1.00	.46**	.58**	.34**	.73**	.29*	.42**	.33*
6. <i>Positive Affect T2</i>						1.00	.47**	.40**	.44**	.56**	.59**	.34**
7. <i>Broad Mindset T2</i>							1.00	.29*	.48**	.41**	.64**	.24
8. <i>Self-Efficacy T2</i>								1.00	.35**	.37**	.39**	.61**
9. <i>Life Satisfaction T3</i>									1.00	.37**	.48**	.35**
10. <i>Positive Affect T3</i>										1.00	.55**	.40**
11. <i>Broad Mindset T3</i>											1.00	.45**
12. <i>Self-Efficacy T3</i>												1.00

Note: * = $p < .05$, ** $p < .001$

Table 7.
Correlation Matrix for the Experimental Group on the variables Life Satisfaction, Positive Affect, Broadened Mindset and Self-Efficacy over Time (n = 24)

Variable Name	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. <i>Life Satisfaction T1</i>	1.00	.21	.06	.39	.63**	-.16	.03	.38	.85**	.28	.21	.20
2. <i>Positive Affect T1</i>		1.00	.39	.36	.21	.54**	.22	.18	.27	.68**	.54**	.26
3. <i>Broadened Mindset T1</i>			1.00	.10	.18	.46*	.56**	-.12	.05	.20	.52**	-.04
4. <i>Self-Efficacy T1</i>				1.00	.56**	.13	-.24	.44*	.40	.49	.10	.63**
5. <i>Life Satisfaction T2</i>					1.00	.19	.14	.45*	.77**	.30	.12	.54**
6. <i>Positive Affect T2</i>						1.00	.70**	.22	-.01	.38	.56**	.31
7. <i>Broadened Mindset T2</i>							1.00	.45**	.15	.22	.66**	.06
8. <i>Self-Efficacy T2</i>								1.00	.60**	.45*	.00	.64**
9. <i>Life Satisfaction T3</i>									1.00	.40	.20	.48*
10. <i>Positive Affect T3</i>										1.00	.48*	.52**
11. <i>Broadened Mindset T3</i>											1.00	.25
12. <i>Self-Efficacy T3</i>												1.00

Note: * = p<.05, **p<.001

control group at Time 1, $t(84) = -2.27, p < .05$; Time 2, $t(82) = -4.57, p < .01$; and Time 3, $t(84) = -2.7, p < .01$.

To further examine the nature of the Time by Group interaction for Life Satisfaction, post hoc paired sample t -tests were conducted on both control and experimental group data. Field (2005) recommended conducting paired t -tests with a Bonferroni correction when post hoc tests were unable to be computed in SPSS. Under these guidelines, six t -tests were conducted with $.05/6$, or 0.008 , as the adjusted alpha level. For the control group, paired sample t -test results revealed no significant differences between the means at any of the three test times ($p > .008$). For the experimental group, means for Life Satisfaction increased significantly between Time 1 and Time 2, $t(23) = -3.9, p < .008$, and decreased significantly between Time 2 and Time 3, $t(23) = 3.6, p < .008$. No significant difference existed between means at Time 1 and Time 3, $t(23) = -1.8, ns$. These results show that Life Satisfaction levels increased significantly for the experimental group after attending NLC; however these gains were not maintained over time. A graphical representation of the marginal means for Life Satisfaction across time for both groups can be seen in Figure 2.

For Positive Affect, significant main effects were found for Time, $F(2, 321.90) = 21.90, p < .01$, and Group, $F(1, 2680.23) = 42.26, p < .01$. A significant Time by Group interaction was also evident, $F(2, 276.08) = 18.97, p < .01$. Independent t -test revealed the experimental group to have significantly higher means compared to the control group at Time 1, $t(84) = -4.5, p < .01$; Time 2, $t(84) = -8.30, p < .01$; and Time 3, $t(84) = 3.1, p < .01$. Paired sample t -test results (using 0.008 adjusted alpha level) for the control group revealed no significant differences for Positive Affect between Time 1 and Time 2, $t(61) = -2.02, p < ns$, or between Time 2 and Time 3, $t(61) = -1.3, p < ns$. However, results showed a significant increase in mean scores for the control group between Time 1 and Time 3, $t(61) = -2.8, p < .008$. These results suggest that control group Positive Affect levels increased

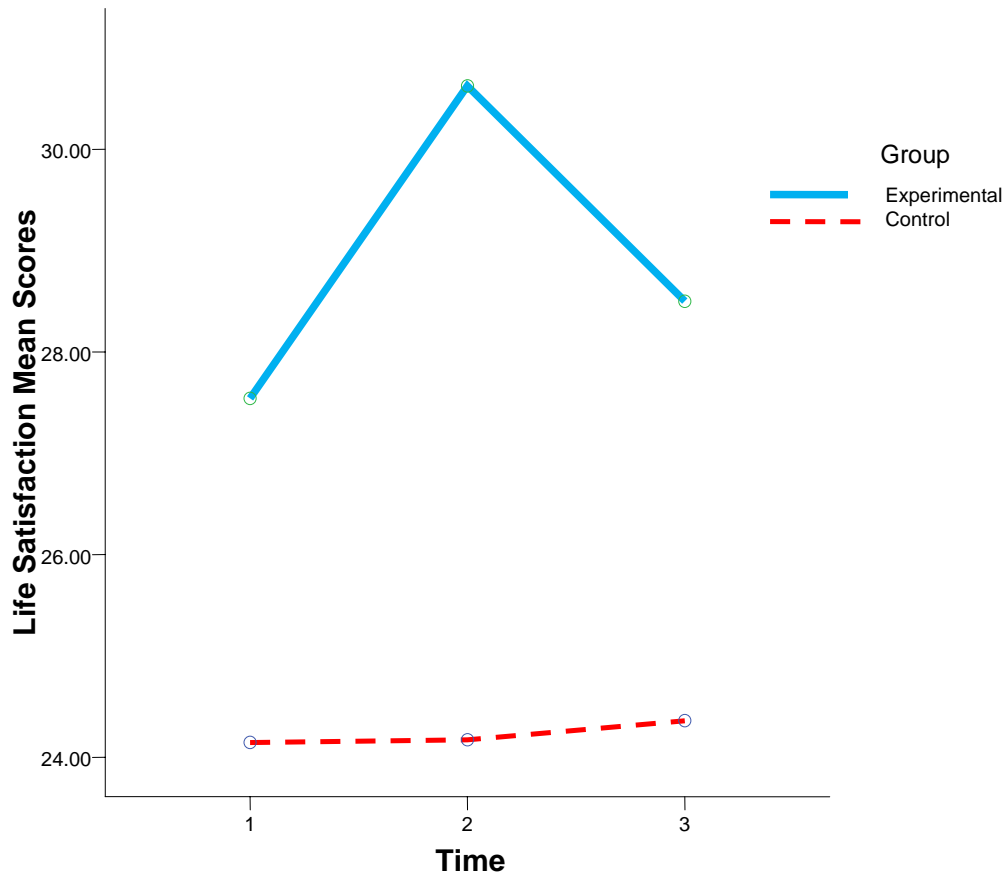


Figure 2. Group Means for Life Satisfaction at Time 1, Time 2, and Time 3.

significantly over the three month time frame. Additionally, findings for the experimental group showed a significant increase in means between Time 1 and Time 2, $t(23) = -7.15, p < .008$, and a significant decrease in means between Time 2 and Time 3, $t(23) = 5.0, p < .008$. No significant difference in means existed between Time 1 and Time 3, $t(23) = -.26, ns$. These results mirror those obtained for Life Satisfaction. That is, levels of Positive Affect increased significantly for experimental participants after attending NLC, however, such gains were not maintained three months later. Positive Affect mean scores for experimental and control groups across the three test times can be seen in Figure 3.

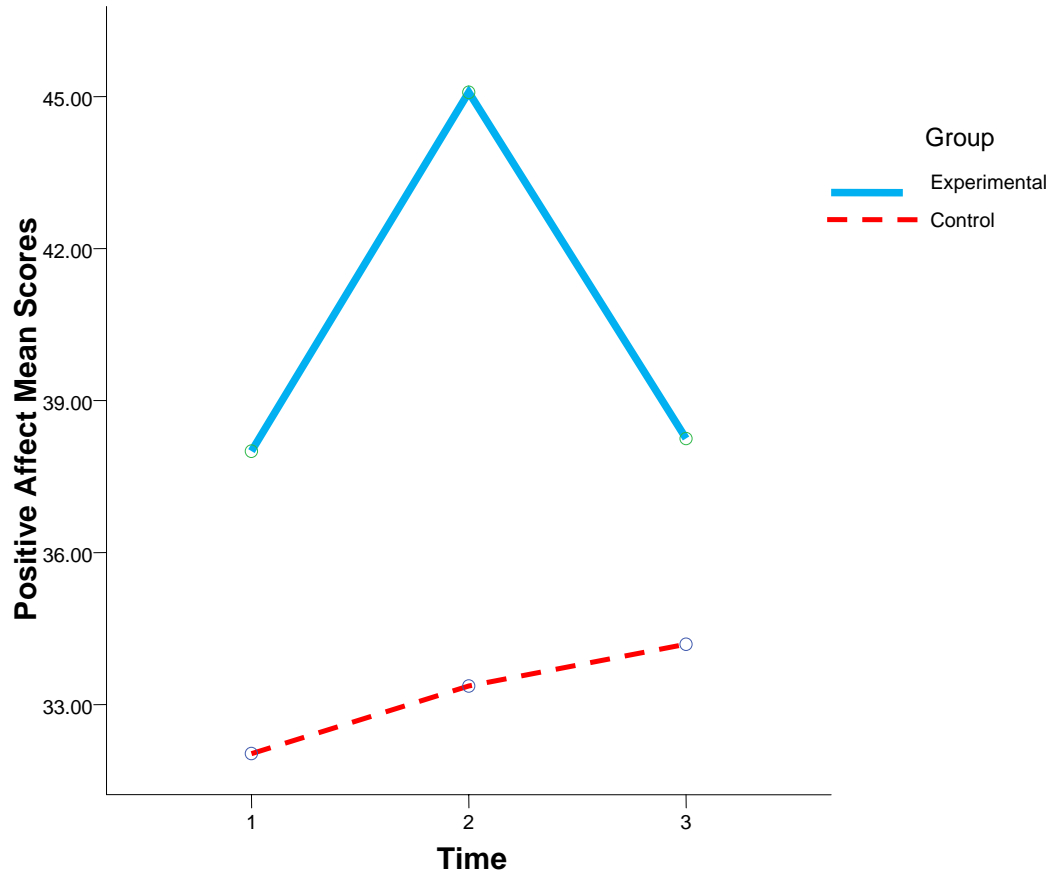


Figure 3. Group Means for Positive Affect at Time 1, Time 2, and Time 3.

Results of the repeated measures analysis for Broadened Mindset revealed a significant main effect for Time, $F(2, 230.23) = 6.40, p < .01$, as well as for Group, $F(1, 5096.20) = 26.20, p < .01$. Similar to Life Satisfaction and Positive Affect results, a Time by Group interaction was also seen for Broadened Mindset, $F(2, 208.07) = 5.87, p < .01$. Independent t -test results showed the experimental group to have significantly higher means compared to the control group at Time 1, $t(84) = -3.1, p < .01$; Time 2, $t(84) = -5.76, p < .01$; and Time 3, $t(84) = -4.16, p < .01$. For the control group, paired sample t -tests revealed no significant mean differences for Broadened Mindset at any of the three testing times ($p > .008$). However, experimental group results showed a significant increase in mean scores

between Time 1 and Time 2, $t(23) = -4.5, p < .008$, and a significant decrease in mean scores between Time 2 and Time 3, $t(23) = 3.05, p < .008$. No significant difference was found between Time 1 and Time 3, $t(23) = -1.3, ns$. These findings suggest that whilst attendance at NLC improved levels of Broadened Mindset for a short period of time, these gains were not maintained over a 3 month period. Graphical representation of the Broadened Mindset means for both groups across the three test times can be seen in Figure 4.

The final repeated measures analysis was conducted on the Self-Efficacy variable. Results showed no significant main effect for Time, $F(2, 8.77) = 1.46, ns$. However, a main effect was found for Group, $F(1, 705.90) = 31.87, p < .01$. A significant Time by Group interaction was evident, $F(2, 19.92) = 3.31, p < .05$. Consistent with results obtained for the other key variables, independent t -test results indicated that the experimental group had significantly higher means compared to the control group at all three testing times; Time 1, $t(84) = -3.3, p < .01$; Time 2, $t(84) = .02, p < .01$; and Time 3, $t(84) = -5.19, p < .01$. Results suggest that while the experimental group had significantly higher means than the control group for Self-Efficacy for all test times, no significant change in mean scores occurred for either group over time. Unlike results for Life Satisfaction, Positive Affect, and Broadened Mindset variables, the Self-Efficacy variable did not change over time for the experimental group. The group means for Self-Efficacy over time are shown diagrammatically in Figure 5.

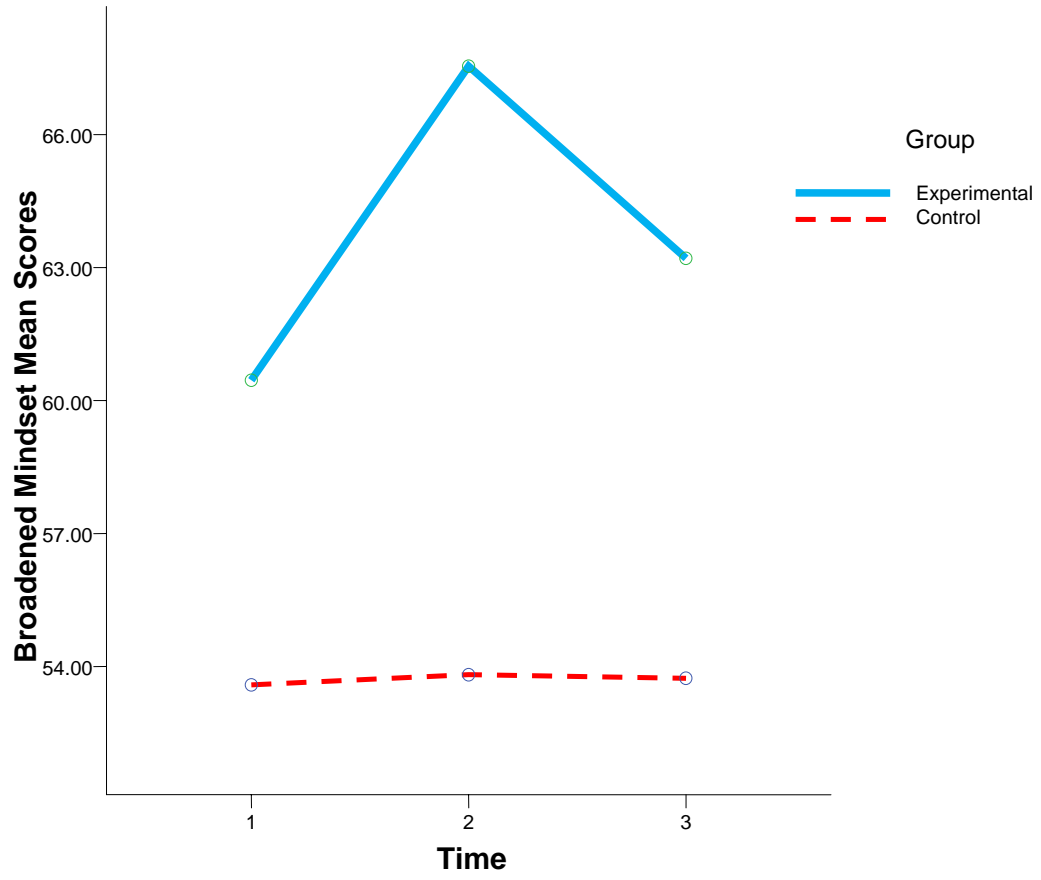


Figure 4. Group Means for Broadened Mindset at Time 1, Time 2, and Time 3

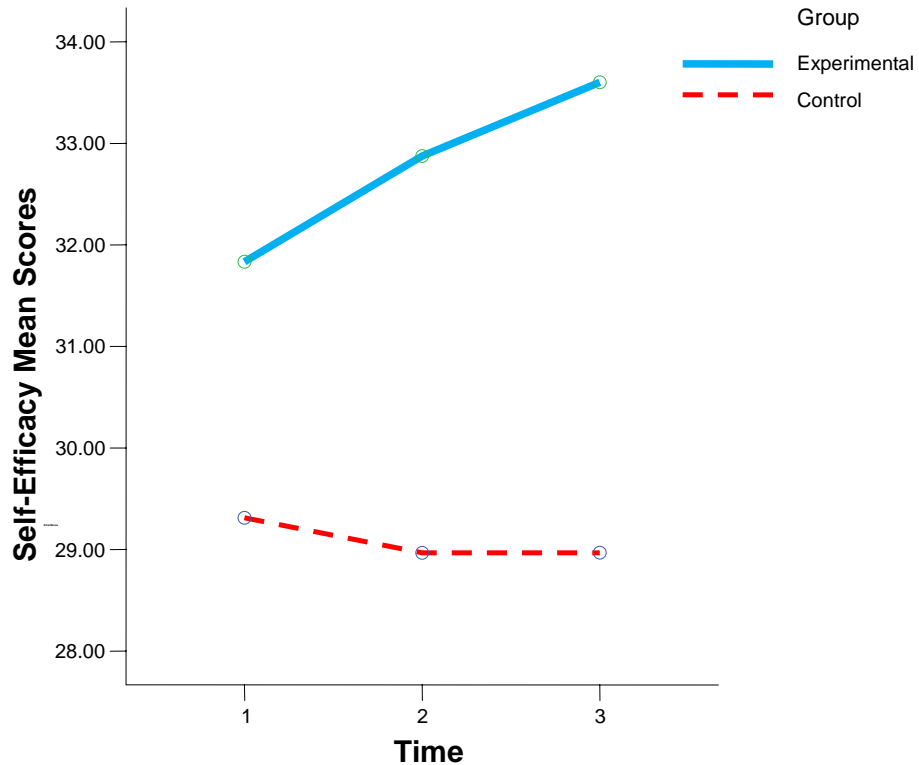


Figure 5. Group Means for Self-Efficacy at Time 1, Time 2, and Time 3

3.2.4 Attrition Analysis

An attrition analysis was conducted to gain further insight into the nature of the data collection at Time 3 for the experimental group participants. Attrition analysis involved using experimental group data from Time 1. Forty-nine cases were available for analysis after data screening procedures (see Section 2.1.4). A new variable of “Attrition” was created by coding participants into two groups. Participants coded in Group 1 completed measures at all three testing times, while participants coded into Group 2 did not complete the measures at all three testing times. Descriptive statistics for the two groups in the attrition analysis can be seen in Table 8.

Table 8

Descriptive Statistics for Attrition Analysis (Group 1 = remained in the study at Time 3; Group 2 = did not remain in the study at Time 3)

Measure	Group 1		Group 2	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Life Satisfaction	27.54	4.87	26.44	4.56
Positive Affect	38.00	4.26	38.31	7.02
Broadened Mindset	60.46	7.21	62.76	7.27
Self-Efficacy	31.83	3.41	32.80	3.04

Note. $N = 24$ (Group 1); $N = 25$ (Group 2)

Independent *t*-tests were conducted in order to establish if there were any significant differences between the groups on the variables Life Satisfaction, Positive Affect, Broadened Mindset, and Self-Efficacy. No significant group differences were found for Life Satisfaction, $t(47) = .82, ns$; Positive Affect, $t(39.84) = -.20, ns$; Broadened Mindset, $t(47) = -1.11, ns$; nor Self-Efficacy, $t(47) = -1.05, ns$. This indicates that for all four key variables at the initial test time, no significant differences existed between means for participants who stayed in the study in Time 3, compared to those who did not stay in the study at Time 3.

3.3. Discussion: Study 2

Study 2 examined the effect of a youth development program on participants' levels of Life Satisfaction, Positive Affect, Broadened Mindset, and Self-Efficacy. The

experimental groups' performance was compared to a control group of adolescents from Queensland who did not attend the NLC leadership program. The study involved examining between-groups and within-group differences on the key variables over three testing times to gain further insight into relationships between positive emotion and adolescent psychological well-being (as measured by Life Satisfaction in this study).

In Study 2, it was hypothesised that participants who attended NLC (i.e., the experimental group) would have higher levels of Life Satisfaction, Positive Affect, Broadened Mindset, and Self-Efficacy at Time 2 and Time 3 compared to the control group. The groups were not expected to differ on these variables at Time 1. However, contrary to expectations, between-group results from the repeated measures analyses showed the experimental group to score significantly higher than the control group on variables Life Satisfaction, Positive Affect, Broadened Mindset, and Self-Efficacy at all three time frames. Given the non-equivalent baseline measures of the two groups, it is difficult to comment on the between-group differences with any confidence. Consequently, the focus of this discussion will be on the within-group changes that occurred for both groups over time.

For Life Satisfaction, the control group showed no significant changes in mean scores over the 3 month period. However, experimental group data showed levels of Life Satisfaction increased significantly between Time 1 (pre-NLC) and Time 2 (directly post-NLC), and decreased significantly between Time 2 (directly post-NLC) and Time 3 (3 months post-NLC). No significant difference between means were observed between Time 1 (pre-NLC) and Time 3 (3 months post-NLC), suggesting that whilst levels of Life Satisfaction were influenced in the short-term after attending NLC (i.e., at Time 2), these gains were not maintained over time. These data are consistent with Brickman and Campbell's (1971) "hedonic treadmill" theory, which proposes that people have a brief reaction to good and bad events, but in time return to neutral emotional set points. Research

by Brickman, Coates, and Janoff-Bulman (1976, as cited in Diener et al., 1999) supports the hedonic treadmill concept with feelings of life satisfaction. Brickman et al.'s research examined lottery winners, and found that lottery winners were not significantly happier than a control group. The current results appear to be congruent with previous research indicating that Life Satisfaction is a stable construct over time (Trzcinski & Holst, 2006).

Additionally, within-group data were examined for Positive Affect. In contrast to the variable Life Satisfaction, the control group's means scores for Positive Affect showed a significant increase between Time 1 (pre-NLC) and Time 3 (post-NLC). This finding is of interest, as it is the only variable for the control group to have changed significantly over time. This result provides support for Fredrickson and Joiner's (2002) "upward spiral" concept of positive emotion. Effects of positive emotion accumulate and compound and one experience of positive emotion can be used to predict future experiences of positive emotion. This finding is unexpected; however, in Study 1 for example, Positive Affect was shown to be a predictor of Life Satisfaction through the mediating variables of Broadened Mindset and Self-Efficacy. It is therefore interesting to observe that a corresponding increase in Life Satisfaction was not evident for the control group between Time 1 and Time 3. Further research is warranted to explore the nature of these relations, although limitations of the data set, including small sample sizes and unequal group numbers, plus significant demographic differences, may help to explain the inconsistent results. The data sets typically showed non-normal distributions and consequently all of the result should be interpreted with caution. Further, the restricted time frames for data collection may have influenced the current results. While efforts were made to test control participants on the same day, this was not always possible. Time frames for data collection with the experimental group were also less than optimal, with only four days separating Time 1 and Time 2. Moreover, measures at Time 2 were not taken at exactly the same time for each group due to school holidays. Consequently,

the validity of the data set at each time frame may have been compromised. In future, it is recommended that these factors be more stringently controlled. Specifically, future studies should have a matched sample design, with a national sample, in order to gain a deeper understanding of how these variables might influence Life Satisfaction, and in turn, psychological well-being.

In contrast to the control group's findings for Positive Affect, the experimental group's data was consistent with previous research. Levels of Positive Affect peaked at Time 2 (directly post-NLC), having increased significantly from the initial measure of Positive Affect at Time 1 (pre-NLC). These results indicate that NLC influenced participant levels of positive emotion, albeit for a short period of time. Congruent with Life Satisfaction results, however, the gains in Positive Affect were not maintained over time. The hedonic treadmill (Brickman & Campbell, 1971) concept may again provide an explanation for these results. For example, research by Silver (1982, as cited in Diener et al., 1999), examining quadriplegics and paraplegics adapting to spinal cord injuries shows that while sadness and fear were the strongest emotions one week after the injury, positive affect predominated over negative affect two months later. Diener et al. (1999) argued that hedonic changes back to set points occur so that we do not remain in either a state of elation or despair.

Consistent with Life Satisfaction results, the repeated measures analyses for Broadened Mindset revealed no significant changes for the control group over time. Further, results for the experimental group on this variable mirrored the results found for both Life Satisfaction and Positive Affect. Broadened Mindset levels increased significantly between Time 1 (pre-NLC) and Time 2 (directly post-NLC), however, this increase was not maintained over time. Given Fredrickson's (1998) premise that broadened cognitions are one of the vehicles by which positive emotions can increase psychological well-being, these findings are not surprising.

Self-Efficacy, the final variable examined, revealed interesting results. In contrast to the Life Satisfaction, Positive Affect, and Broadened Mindset variables, Self-Efficacy revealed no significant changes over time, for either group. These data provide an opportunity for further research, as it implies that despite significant increases in Life Satisfaction, Positive Affect, and Broadened Mindset for the experimental group, there was no corresponding increase in Self-Efficacy scores at Time 2 (directly post-NLC). Thus, the experience of NLC had no impact on Self-Efficacy. According to Bandura (1977), self-efficacy altering experiences involve a sense of mastery, competency, and expectations of personal effectiveness. It therefore appears that the experience of NLC may not have fostered such feelings and expectations in the camp participants. Given that self-efficacy was identified by Catalano et al. (2002) as one of three key constructs playing a role in positive life outcomes for young people, this information will be useful feedback to the NLC program organisers. As self-efficacy has also been described as a dynamic construct, with efficacy judgments changing over time with experience, and the gaining of new information (Gist & Mitchell, 1992), it would be beneficial to identify ways of improving the NLC program to include time for practicing the leadership skills gained, to increase the likelihood that participants feel they can effectively implement such skills when returning to their school and/or home environments.

It should be noted that the current findings for Self-Efficacy do not support the bi-directional relationship between mood and self-efficacy reported in previous research (see Bandura, 1992). Moreover, these results are inconsistent with the findings from Study 1 where Self-Efficacy was seen to play a key mediating role in the relationship between Positive Affect and Life Satisfaction. Reasons for these inconsistencies are not clear, and further examination of the mediational relationship between Positive Affect and Life Satisfaction is warranted. It is possible that the unusually low alpha levels for the Self-

Efficacy variable as reported in Section 2.2.1 (Study 1), and 3.2 (Study 2) may help explain these findings. These alpha levels were lower than those found in earlier research (Schwarzer & Jerusalem, 1995).

While the focus of this discussion is on the within-group changes with time, it needs to be acknowledged that young people who attended the NCL program had significantly higher base-line measures of Life Satisfaction, Positive Affect, Broadened Mindset, and Self-Efficacy as compared to the control group. This suggests two non-equivalent samples, and restricts between-group comparisons. An explanation as to why the groups were different may be that the young people who nominated to attend the camp, due to their previous leadership experiences, or through their 'recognised potential' had naturally higher levels of positive affect than did the young people in the control group. This appears feasible as previous research indicates that high positive affectivity is more likely to be observed in extraverted individuals (Watson, 2000). Further, people with high positive affectivity have more friends, more acquaintances, and are more likely to be involved in social organisations than are people with high negative affectivity (Peterson, 2006). Unfortunately, demographics like extraversion were not measured in the current study, however, this variable provides a direction for future research. Specifically, the role of individual differences in personality in shaping positive affect deserves further investigation. Establishing a control group from the same population would also be of benefit in future research. Given the large between-group differences on base-line data for Life Satisfaction, Positive Affect, Broadened Mindset and Self-Efficacy variables, it is likely that participants may have also differed on other demographic variables such as economic and financial status, or family status. It would therefore be useful to examine such demographics in future research. It would also be of interest to examine the impact of NLC on young people with lower base-line levels of positive affect than those seen in this sample population. Efforts could then be focused on

investigating how to promote positive short-term and long-term change for diverse groups of youths.

Given the current mental health status of young Australians (see Section 1.1.), exploration into the mechanisms by which youth development programs like NLC (Rising Generations, 2006) help create positive emotions in the short-term, and therefore provide an opportunity to promote adolescent well-being in the long-term is worthy of further investigation. According to the Broaden-and-Build Theory (Fredrickson, 1998), experiences of positive emotion allow for an influx and bolstering of personal resources and function as means for growth and development. Thus, despite the experimental group showing elevated baseline levels of all variables at Time 1, results did show a significant increase at Time 2 (directly post-NLC) for three of the variables (Positive Affect, Broadened Mindset and Life Satisfaction). The NLC was clearly a positive experience for the young people involved and hence has the potential to significantly influence the long-term subjective well-being of those who attend. However, it is recommended that research be conducted with a national sample of participants (rather than only Queensland students, as seen in Study 1), and a matched sample for within and between group comparisons for Study 2 in future.

A final limitation of this study was the small and uneven sample sizes. The experimental group had only 24 cases available for analysis at Time 3. An attrition analysis was conducted in an attempt to further understand these results. It was found that no significant differences existed on key variables for participants from the experimental group who remained in the study at Time 3 compared to those who did not remain in the study at Time 3. The retention rate for Study 2 appeared quite high (78% control group, 48% experimental group) compared to rates in previous research. For example, Gillham et al. (2002) reported that attrition rates are a common problem with school and community based programs, and studies usually report retention rates between 20% and 40%. Further, Catalano

et al. (2002) noted a lack of strategies identified in the literature to assist with attrition rates in youth development research. One strategy to improve retention rates might be to contact the participants by phone or email as well as by mail during the final data collection phase.

3.4. Conclusion

This research examined the relationship between positive emotion and subjective well-being in Australian adolescents. Study 1 found that Broadened Mindset and Self-Efficacy partially accounted for the relationship between Positive Affect and Life Satisfaction in a convenience sample of youth. Study 2 examined the effect of a positive youth development program on participants' levels of Life Satisfaction, Positive Affect, Broadened Mindset, and Self-Efficacy. It was found that NLC 2006 had a positive impact on levels of Life Satisfaction, Positive Affect, and Broadened Mindset directly after participating in the NLC (Time 2), although these gains were not maintained over time. It is difficult to draw any concrete conclusions or to generalise the results of this study to other samples of Australian youths due to various limitations (e.g., small sample sizes, attrition rates, and different sample populations). Nevertheless, the current findings show that positive change occurred for Life Satisfaction, Positive Affect, and Broadened Mindset variables following NLC. Such findings are encouraging, particularly given the recent paradigm shift from prevention to health promotion programs in youth development. This shift is congruent with the positive psychology movement, which is concerned with the promotion of what is best among people as opposed to what is most problematic (Seligman & Csikszentmihalyi, 2000). In light of this paradigm shift, it is hoped that future research can focus on establishing the long-term benefits of positive youth programs like NLC on Australian young people. Specifically, it would be beneficial to better understand the mechanisms by which change occurs following the participation in youth programs to ensure any short-term benefits are maintained over time.

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Appendix A

Questionnaire Package



Positive Emotion and Life Satisfaction in Australian Adolescents

Participant Personal Details

Thank you for taking the time to assist with this study. In order to ensure confidentiality of your responses, you are asked to form a unique ID number. Please follow the instructions below, and then place this number at the top of the first page of the questionnaire package.

Please form your unique id number by writing the first initial of your first name, followed by the first four initials of your surname, followed by your date of birth in the space below.

Example:

If your name is John Brown and you were born on 5 August 1985 then your unique id would be:

J **B** **R** **O** **W** **0** **5** / **0** **8** / **8** **5**

Name _____

Date of Birth _____

Your ID number

First initial christian name	First 4 initials surname				Date of Birth (dd/mm/yy)						

School _____

State _____

Gender: M / F (please circle)

Nationality: _____

Email Address: _____

Phone number: _____

Positive Emotion and Life Satisfaction in Australian Adolescents

Thank you for taking the time to assist with this study. In order to ensure confidentiality of your responses, you are asked to form a unique ID number. Please follow the instructions below, and then place this number at the top of the first page of the questionnaire package.

Please form your unique id number by writing the first initial of your first name, followed by the first four initials of your surname, followed by your date of birth in the space below.

Example: If your name is **John Brown** and you were born on **5 August 1985** then your unique id would be:

J
B
R
O
W
0
5
/
0
8
/
8
5

Personal ID number:

First initial christian name	First 4 initials surname				Date of Birth (dd/mm/yy)						

Grade:

--	--

Age:

--	--

 years

Gender:

Male Female

Do you live in a Boarding House situation?: Yes No

CEI
Kashdan, Rose & Fincham, 2004

Using the scale shown below, please respond to each of the following statements according to how you would usually describe yourself. There are no right or wrong answers.

		Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
1. I would describe myself as someone who actively seeks as much information as I can in a new situation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. When I am participating in an activity, I tend to get so involved I lose track of time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I frequently find myself looking for new opportunities to grow as a person (e.g: information, resources)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I am not the type of person who probes deeply into new situations or things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. When I am actively interested in doing something, it takes a great deal to interrupt me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. My friends would describe me as someone who is "extremely intense" when in the middle of something	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Everywhere I go, I am on the look out for new things or experiences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PANAS

Watson, Clark & Tellegen, 1988

This scale consists of a number of words that describe different feelings and emotions. For each item indicate to what extent you have felt this way in the past week.

	Very slightly/ Not at all	A little	Moderately	Quite a bit	Extremely
1. interested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. upset	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. scared	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. proud	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. ashamed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. determined	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. distressed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. strong	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. hostile	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. irritable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. inspired	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. attentive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. afraid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. excited	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. guilty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. enthusiastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. alert	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. nervous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. jittery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IS

Thrash, T. M., & Elliot, A. J. (in press)

Below are four statements, each followed by two questions. The questions concern how often and how deeply/strongly you experience what is described in the statement. Please answer both questions after each statement.

1. I experience inspiration.

	Never						Very often
	1	2	3	4	5	6	7
1a. How often does this happen?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1b. How deeply or strongly (in general)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Something I encounter or experience inspires me.

2a. How often does this happen?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2b. How deeply or strongly (in general)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. I am inspired to do something.

3a. How often does this happen?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3b. How deeply or strongly (in general)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. I feel inspired.

4a. How often does this happen?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4b. How deeply or strongly (in general)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MLQ

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (in press)

Please take a moment to think about what makes your life and existence feel important and significant to you. Please respond to the following statements as truthfully and accurately as you can, and also please remember that these are very subjective questions and that there are no right or wrong answers. Please answer according to the scale below:

	Absolutely untrue	Mostly untrue	Somewhat untrue	Can't say true or false	Somewhat true	Mostly true	Absolutely true
1. I understand my life's meaning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I am looking for something that makes my life feel meaningful.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I am always looking to find my life's purpose.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. My life has a clear sense of purpose.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I have a good sense of what makes my life meaningful.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I have discovered a satisfying life purpose.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I am always searching for something that makes my life feel significant.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I am seeking a purpose or mission for my life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. My life has no clear purpose.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I am searching for meaning in my life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix B

Information Sheet

Positive Emotion and Life Satisfaction in Australian Adolescents

Purpose of the study

We would like to invite you to participate in an experiment designed to investigate the relationship between positive emotion and life satisfaction in Australian youth. This study will benefit participants in that it will enhance our knowledge of factors facilitating positive youth development, which can then be used as a base for developing and implementing positive youth programs. This study is being conducted as part of the requirements for a Doctorate of Health Psychology degree, and will be carried out in the School of Psychology at the University of Southern Queensland (Toowoomba Campus). Lauren Rose can be contacted by email; rosel@usq.edu.au and her supervisor Dr Lorelle Burton can also be contacted by email; burtonl@usq.edu.au

A vast amount of research depicts adolescence as a period of increased vulnerability to mental health problems, both in terms of transient symptomatology and clinically relevant levels of depression and anxiety. Current statistics indicate that 14% of young people between the age of 12 and 17 have a mental health problem. Recent research indicates positive emotions can play a role in increasing psychological wellbeing, so further investigation into relationships between positive emotions and life satisfaction in young people appears warranted. Accordingly, this research is designed to investigate the effect of positive emotions on broadening the mindsets and increasing self-efficacy levels, and thereby improving life satisfaction in Australian youth. This is based on the Broaden-and-Build Theory of Positive Emotions (Fredrickson, 1998). The study has three main aims. The first is to test a model in which the potential mediating roles of breadth of mindset and self-efficacy levels mediate the relationship between positive affect and life satisfaction. The second is to explore the effectiveness of a youth development program that is based on positive psychology principles in increasing positive affect. The third aim is to test the effect of change in positive affect on the other factors in the model longitudinally. The benefits of this research are that enhanced knowledge of factors facilitating positive youth development can then be used as a basis for developing and implementing future youth health programs.

What the study involves

Should you choose to participate in the study, we will ask you to complete a consent form to be returned to your school as soon as possible. At various time intervals over the next 12 months, you will be asked to complete a confidential questionnaire package, which will include;

- A Positive and Negative Affect Scale (to examine levels of positive and negative emotion)
- A Curiosity and Exploration Inventory (to indicate individual differences in recognition, pursuit and integration of novel and challenging experiences and information)
- A Life Satisfaction Measure (to determine an individual's satisfaction with life)
- A Self-Efficacy Measure (to determine individual self-efficacy levels)
- A Meaning of Life Questionnaire (to indicate how much meaning an individual places on their life)
- An Inspiration Scale (to determine if and how deeply one is inspired)

- A general demographic questionnaire (involving name, address, phone number, grade, age, school, residential location, gender etc)

Duration of the Study

The questionnaire will take approximately 20-25 minutes to complete. Participants will be asked to complete the measures at several different intervals during school time between March and September 2006

Debriefing Session

A debriefing session can be arranged at the end of the study (2007) if you would like to know specific results, or have any further concerns or queries. Once all data is collected, results are analyzed and the Doctoral thesis is written, a summary of results will be available from USQ.

Freedom to refuse or withdraw participation in this study

Participation is purely voluntary. All personal details and completed questionnaires will be stored in a locked cabinet in the Department of Psychology.

Contact persons

Any questions you may have regarding the study can be directed to the Chief Investigator, Dr. Lorelle Burton on (07) 46312853 or by emailing burtonl@usq.edu.au or D.Psych student Lauren Rose on rosel@usq.edu.au

Concerns or Complaints

Any concerns of an ethical nature can be directed to the Secretary, USQ Human Research Ethics Committee, (07) 4631 2956

Statement of Approval

This study has received ethical approval from the USQ Human Research Ethics Committee.

Information and Consent Forms

All participants and parents will be given copies of the information sheet and statements of informed consent to keep. Thank you for your assistance and time spent participating in this study.

Appendix C

Consent Form

Positive Emotion and Life Satisfaction in Australian Adolescents

Please read carefully the declarations listed below; ask any questions you wish to about the study, and then print and sign your name in the space provided below.

I understand that I am being asked to participate in a study that will take approximately 20-25 minutes at a maximum of three time intervals between March and September 2006. At the conclusion of the study (December 2007), I can ask for a debriefing session, and discuss individual results if I wish, by contacting the investigators and asking for an appointment.

In this connection, I...

- 1) Have read and understood the 'Information Sheet' for this study
- 2) The nature of the study has been explained to me
- 3) I understand that the study involves completion of a number of scale measures, as outlined on the Information Sheet pertaining to this study
- 4) I understand that I will not be placed at any risk in the study
- 5) I understand that all research data will be treated as confidential
- 6) Any questions I have asked have been answered to my satisfaction
- 7) I agree that research data gathered for the study may be published as group data only and that I will not be identifiable as a participant
- 8) On these bases, I agree to participate in this study and understand I may withdraw from the study at any time without prejudice; that withdrawing from this study will not engender any negative regard.

Name of participant.....

Signature of participant (or parent/guardian if under 18 years of age).....

Date:

Appendix D
NLC Program 2006

8:00am	Team Meeting/Rehearsals/Set-up		The Chapel	
9:00am	NLC Coaches Depart- Central Station & Sydney Airport	Jan Allen		
10:00am	Arrive & Register	Merryn	The Chapel	
11:15am	Official Opening & Welcome	NLC Team MC: Bec & Teenz	The Chapel	
12:15pm	Lunch <i>Have lunch in councils- speed dating</i>	Steve & Rach	Dining Room	
1:00pm	Leadership Talk- What is leadership?	Bec & Teenz	The Chapel	
2:00pm	Tribal Council Time- <i>Welcome, house keeping & Get To Know You</i>	JMs & AMs	Tribal Areas	
3:30pm	Afternoon Tea		Dining Room	
3:45pm	Leadership Talk- Jonathan Pease	Jonathon Pease	The Chapel	
4:30pm	Tribal Challenge- The Amazing Balloon Race	Steve & Rach	The Oval	
5:30pm	Niani Time	<i>Quiet time</i>	Indoors	
5:50pm	Cabin Meetings	Cabin Leaders	Cabins	
6:15pm	Dinner		Dining Room	
7:00pm	Tribal Council Time <i>Square Support, Leadership Vision Walk, I AM worksheet & Boundary Breaking</i>	JMs & AMS	Tribal Areas	
9:00pm	Supper		Dining Room	
9:15pm	Carlingbaroo	NLC Team	The Chapel	
9:45pm	Cabin Meetings	Cabin Leaders	Cabins	
10:00pm	Cabin Time <i>Student Preparation for bed</i>		Cabins	
10:30pm	Light's Out for students		In your bed!	

DAY 1- Thursday 6th July (Vision)

We can do no great things - only small things with great love.
~Mother Teresa

**Do not follow where the path may lead. Go instead where there is no path and
 leave a trail.**
~Ralph Waldo Emerson

DAY 2- Friday 7th July (Values)

Time	Session	Speaker/ Co-ordinator	Location	Resources/Notes
7:45am	Rise & Shine		Cabins	
8:15am	Breakfast		Dining Room	
8:45am	Energizer & Introduction to theme	Bec & Teenz	The Chapel	
9:00am	Leadership Talk- Robyn Moore	Robyn Moore	The Chapel	
10:00am	Morning Tea & Tribal Council Time <i>De-brief on Robyn & The Community Game</i>	JMs & AMs	Dining Room/Tribal Areas	
11:00am	Leadership Talk- David Koch	David Koch	The Chapel	
12:00pm	Tribal Council Time De-brief on David Koch	JMs & AMS	Tribal Areas/Outside	
12:15pm	Lunch		Dining Room	
1:00pm	The NLC Challenge- Opportunity International	Returning Delegates Kath Fear/Emma Dale	The Chapel	
1:30pm	Tribal Council Time- RG Olympics Preparation	JMs & AMS	Tribal Areas	
3:00pm	Afternoon Tea		Dining Room	
3:15pm	Tribal Challenge- The RG Olympics	JMs & AMS	The Oval	
5:00pm	Cabin Time- Panel Preparation	Cabin Leaders	Cabins	
5:30pm	Words of Wisdom 1	½ JMs	The Chapel	
6:30pm	Dinner		Dining Room	
7:15pm	The Panel	GUY/GIRLS SPILT UP FOR EVENING		
9:15pm	Supper		Dining Room	

9:30pm	Tribal Council Time- <i>Gender Split</i>	JMs & AMs	Find Space	
10:00pm	Carlingbaroo- set in councils	NLC Team	The Chapel	
10:30pm	Cabin Time	Cabin Leaders	Cabins	
11:00pm	Light's Out		In your Bed!	
10:45pm	TEAM MEETING	<i>Everyone</i>	THE CHAPEL	

If you want to be successful, then be governed by your finest thoughts, your highest enthusiasm, your greatest optimism, and your triumphant experiences.

~John C. Maxwell

DAY 3- Saturday 8th July (Resilience)

Time	Session	Speaker/ Co-ordinator	Location	Resources/Notes
6:10am	The Invasion	Brett Murray	Cabins	
6:30am	BOOTCAMP!	Brett Murray	The Oval	
7:30am	Recovery time			
8:00am	Breakfast		Dining Room	
8:45am	Energizer & Introduction to theme	Bec & Teenz	The Chapel	
9:00am	Leadership Talk- Brett Murray	Brett Murray	The Chapel	
10:00am	Morning Tea		Dining Room	
10:15am	Leadership Skills # 1 <i>Select Shops- Students will select one workshop to attend.</i>		Various Venues	
11:20am	Tribal Council Time- Song Fest Preparation Debrief from the Panel, Bootcamp, Brett Murray	JMs & AMs	Tribal Areas	
1:00pm	Lunch		Dining Room	
1:45pm	Leadership Talk- The Hon Bronwyn Bishop MP	The Hon Bronwyn Bishop MP	The Chapel	
2:30pm	Camp Review Rehearsal/Sport & Rec.		The Chapel	
3:15pm	Afternoon Tea		Dining Room	
3:30pm	2006 NLC Revue <i>Community Visit</i>	Steve & Rach	The Chapel	

4:30pm	Free Time			
5:30pm	Words of Wisdom 2	½ JMs	The Chapel	
6:30pm	Dinner		Dining Room	
7:20pm	Tribal Council Time- Boundary Breaking & Tribal Send-off Tidy up council areas	JMs & AMs	Tribal Areas	
8:20pm	Supper		Dining Room	
8:30pm	Song Fest & The Dance Off	Everyone		
10:30pm	Carlingbaroo	Returning Delegates		
11:00pm	Cabin Time / <i>Optional</i> "Warm Fuzzie Time"			
11:45pm	Light's Out		In your bed!	
11:00pm	TEAM MEETING	Everyone!		

The ultimate measure of a man is not where he stands in moments of comfort and convenience, but where he stands at times of challenge and controversy.
~ Martin Luther King Jr.

DAY 4- Sunday 9th July (Service)

Time	Session	Speaker/ Co-ordinator	Location	Resources/Notes
7:30am	Rise & Shine		Cabins	
8:00am	Breakfast Clean & Vacate Cabins		Dining Room	
9:00am	Energizer & Introduction to theme	Bec & Teenz	The Chapel	
9:10am	Leadership Skills #2	JMs & AMs	Tribal Areas	
10:10am	Niani Time "My reflections on NLC"		Own Space	
10:30am	Morning Tea		Dining Room	
10:45am	Ideas Fest & Action Planning	JMs	The Chapel/ Tribal Areas	

12:15pm	Tribal Council Time The Wrap up	JMS & AMs	Tribal Areas	
1:00pm	Lunch		Dining Room	
1:45pm	The Final Session- "FIND A WAY TO SERVE" The last words	Bec & Teenz	The Chapel	
2:30pm	Prepare for departure			
3:00pm	DEPART VENUE		Dining Room	
	TEAM CELEBRATION!			

I don't know what your destiny will be, but one thing I know: the only ones among you who will be really happy are those who have sought and found how to serve.

~Albert Schweitzer