EXPLORING PREDICTORS OF POSITIVE TRANSITION: A STUDY OF WELLBEING IN
INTERMEDIATE AND SECONDARY SCHOOLS

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MA PSYCHOLOGY, BA (PSYCHOLOGY HONORS)

A THESIS SUBMITTED TO AUCKLAND UNIVERSITY OF TECHNOLOGY

IN FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

2020

FACULTY OF HEALTH AND ENVIRONMENTAL SCIENCES

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Table of Contents

List of Figures

List of Tables

List of Appendices

Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma of a university or other institution of higher learning, except where due acknowledgment is made.

Gazal Nain Kaur Bharara

April 2020

Research Outputs

Peer-reviewed Journal Publications

Bharara, G. (2019). Factors facilitating a positive transition to secondary school: A systematic literature review. *International Journal of School & Educational Psychology*, *Advanced online publication*, 1–20. http://dx.doi.org/10.1080/21683603.2019.1572552

Bharara, G., Duncan, S., Jarden, A., & Hinckson, E. (2019). A prototype analysis of New Zealand adolescents' conceptualizations of wellbeing. *International Journal of Wellbeing*, *9*(4), 1–25. http://dx.doi.org/10.5502/ijw.v9i4.975

Papers Under Review or in Submission

Bharara, G. & Duncan, S. (in submission). Initial development and validation of the Positive School Transition Readiness Survey (PSTRS).

Bharara, G., Borotkanics, R., Hinckson, E., & Duncan, S. (in submission). A longitudinal study of factors predicting wellbeing during the transition between intermediate and secondary schools.

Bharara, G., Duncan, S., & Jarden, A. (in submission). Exploring predictors of wellbeing in New Zealand adolescents: A cross-sectional study.

Presentations and Associated Publications

Presentations

Bharara, G. (2020). *Adolescents' conceptualizations of wellbeing: Are they different from those of adults and does socioeconomic status have an influence?* Paper accepted for presentation at the 10th European Conference on Positive Psychology at Reykjavik, Iceland. Part of a 60-minute symposium session with Jarden, A., Hone, L., Huang, L., & Jarden, R. Differences in conceptualizations of wellbeing across different populations: How teachers, lawyers, Chinese students, adolescents, and nurses conceptualize wellbeing differently to each other and academics.

Bharara, G. (2019). *Factors involved in the wellbeing of young people.* Invited presentation at the school "Group Scolaire Rugando," Kigali, Rwanda.

Bharara, G. (2019). *Improving wellbeing of young people: A holistic perspective.* Invited presentation at Vivek High School, Chandigarh, India.

Bharara, G. (2017). *Wellbeing to young Kiwis: Is it health, happiness, or security?* Presented at the Auckland University of Technology Postgraduate Symposium, Auckland, New Zealand.

Bharara, G. (2016). *Investigating the positive mental health of adolescents during school transitions*. Proposal presented at the 5th Doctoral Conference organized by the School of Public Health and Psychosocial Studies, Auckland University of Technology, Auckland, New Zealand.

Media output

Findings on adolescent conceptualizations of wellbeing were reported on Health Central NZ on 3 March 2020 with the heading, "*Tweens see family and friends as the surest way towards wellbeing.*"

Findings on adolescent conceptualizations of wellbeing were reported on the Auckland University of Technology News portal on March 3, 2020 with the heading, "*How adolescents define wellbeing.*"

Co-authored Works

Chapters 2 to 6 of this thesis represent five articles that either have been published in peer-reviewed journals or are in preparation for submission. All co-authors have approved the inclusion of the joint work in this doctoral thesis. The percentage contribution of each author is presented below:

Chapter 2: Factors facilitating a positive transition to secondary school: A systematic literature review

Gazal Bharara…………………………………………………………………………100%

Chapter 3: A prototype analysis of New Zealand adolescents' conceptualizations of wellbeing

Gazal Bharara……………………………………………………………………………80%

Scott Duncan………………………………………………………………………………8%

Aaron Jarden………………………………………………………………………………8%

Erica Hinckson……………………………………………………………………………4%

Chapter 4: Initial development and validation of the Positive School Transition Readiness Survey (PSTRS)

Gazal Bharara…………………………………………………………………….....90%

Scott Duncan……………………………………………………………………………10%

Chapter 5: Exploring predictors of wellbeing in New Zealand adolescents: A cross-sectional study

Gazal Bharara……………………………………………………………………………80%

Scott Duncan……………………………………………………………………………15%

Aaron Jarden……………………………………………………………………………5%

Chapter 6: A longitudinal study of factors predicting wellbeing during the transition between intermediate and secondary schools

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Scott Duncan……………………………………………………………………….....9%

Scott Duncan   Aaron Jarden   Erica Hinckson   Robert Borotkanics

List of Abbreviations and Glossary of Symbols

Abbreviation	Definition
%	Percentage
%ile	Percentile
AUT	Auckland University of Technology
AUTEC	Auckland University of Technology Ethics Committee
AWE	Assessing Wellbeing in Education
CI	Confidence Interval
df	Degrees of freedom
GLMM	Generalized Linear Mixed Model
IBM	International Business Machines Corporation
ICC	Intraclass Correlation Coefficient
M	Mean
MCAR	Missing Completely at Random
Md	Median
N	Full sample
n	Subsample
NZ	New Zealand
OECD	Organization for Economic Co-operation and Development
p	Probability value or p-value, for checking the statistical significance
PC	Principal Component
PCA	Principal Component Analysis
phi	Phi coefficient, a measure of association or effect size
PSTRS	Positive School Transition Readiness Survey
r	Effect size; measure of the magnitude
$r_{s\ (rho)}$	Spearman's rank-order correlation coefficient
SD	Standard Deviation
SE	Standard Error
SES	Socioeconomic Status
SPSS	Statistical Package for the Social Sciences
t	t-test statistic; Coefficient divided by its standard error
UK	United Kingdom
US	United States of America
z	Z value; Difference between two scores
z	Z score; Standardized score
α	Cronbach's alpha
$β$	Beta coefficient (or regression coefficient); The degree of change in the outcome variable for every one unit change in the predictor variable
$χ^2$	Chi-square

Glossary of Terms

Term	Definition/Meaning
Affect equilibrium	The presence of positive affect in an individual does not mean the absence of negative affect; therefore, the balance between positive and negative affect is known as affect equilibrium or affect balance, which is a key aspect of subjective/emotional wellbeing (Keyes, 2013).
Being around positive people	In this thesis, this component is defined as the perceived sense of being surrounded by people who are respectful, encouraging, kind, and genuine (Bharara, Duncan, Jarden, & Hinckson, 2019).
Being kind and helpful	Here, this is defined as a perceived act of being understanding and caring toward other people and helping others when they are in difficulty or need (Nickell, 1998; Pommier, 2011).
Composite school	This includes all year levels from 1 to 13 (Ministry of Education, 2019).
Connection with nature/nature	Nisbet, Zelenski, and Murphy (2008) defined this as individual levels of relatedness with the natural world. The concept of nature relatedness "encompasses one's appreciation for and understanding of our interconnectedness with all other living things on the earth" (p. 718). Specifically, in this thesis this construct reflects "feelings and thoughts about one's personal connection to nature" (p. 723), and "a physical familiarity with the natural world, the level of comfort with and desire to be out in nature" (p. 725).
Enjoyment	Perceived enjoyment or having fun in this thesis is described as a general act of having fun in learning and leisure activities and enjoying being with friends and family (Bharara, Duncan, Jarden, et al., 2019; Endicott, Nee, Harrison, & Blumenthal, 1993).
Healthy diet/Diet	Adolescents' perceptions of the consumption of fruit and vegetables and of having breakfast during the last week.
Feeling safe	In this thesis, feeling safe is referred to as adolescents' perceptions of their sense of safety at school and while traveling to and from school (Bear, Gaskins, Blank, & Chen, 2011; Skiba, Simmons, Peterson, & Forde, 2006).
Flourishing	This denotes high or optimal levels of wellbeing, also known as optimum wellbeing. Flourishing has been described as the epitome of mental health (Huppert & So, 2013) and a "syndrome" of positive symptoms (Keyes, 2002).
Ill-being	Here, this is referred to as poor mental health comprising negative psychological states such as depression and anxiety.
Intermediate school	Intermediate school is a school between a contributing primary school and a secondary school. It comprises Years 7 and 8 (students normally aged 11–13 years) (Ministry of Education, 2019).
Involvement in organized activities	This means participation in extracurricular activities (e.g., sport and community activities) that are not part of the normal educational curriculum.
Mental health/positive mental health	The World Health Organization (2001) provided a positive conceptualization of mental health and defined it as "a state of wellbeing in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" (p. 1).
Mindfulness	This means attending to and being aware of the present situation. For adolescents, mindfulness is explained as being attentive, focused, and present in the moment, as opposed to being unfocused and "preoccupied with thoughts about the past or future" (Norrish, 2015, p. 180).
Negative factor/Risk factor	Here, this is known as a factor that is associated with a negative outcome such as depression or anxiety.
Perceived teacher support	This is defined as "the degree to which teachers are perceived as helpful or accepting" (Torsheim, Wold, & Samdal, 2000, p. 197).
Physical activity	The perceptions of the frequency of body movement activities (e.g. walking) and participation in sport.
Positive factors	Positive factor is also known as a promotive factor and "refers to a factor or asset that is associated with a positive outcome" (Lippman et al., 2014, p. 2826).

Positive family relationships	Adolescents' perceptions of having a harmonious and friendly relationship with their family (Fok, Allen, Henry, & People Awakening Team, 2014) and receiving support and care from their family (Zimet, Dahlem, Zimet, & Farley, 1988).
Positive friendships	Adolescents' perceptions of the quality of their relationships with their best friends, based on the aspects of companionship, security, and closeness (Bukowski, Hoza, & Boivin, 1994), as well as the support and care they receive from their friends (Zimet et al., 1988).
Pre-post change/pretransition-post transition change	The way a predictor variable changes after the transition to secondary school relative to before the transition at intermediate school. In other words, this is the difference between a predictor variable's scores before and after the transition.
Primary school	There are two types of primary school in NZ. Full-primary schools cover levels 1 to 8 (students normally aged 5–12 years); contributing primary schools cover levels 1 to 6 (students normally aged 5–10 years). Adolescents in primary schools that are contributing usually attend intermediate schools (Ministry of Education, 2019).
Protective factors	This is described as a factor or asset "that is negatively associated with a negative outcome" such as depression (Lippman et al., 2014, p. 2826).
Purpose	The perceived presence and awareness of clear life goals and achievement of these life goals (Schulenberg, Schnetzer, & Buchanan, 2011).
Resilience	This is the ability to cope with a stressful situation, "the ability to persist in the face of challenges, and to bounce back" to a normal state of functioning and "grow from adversity" (Norrish, 2015, p. 151). Therefore, resilience "maintains a healthy and thriving life despite the natural and inevitable ups and downs that go with it" (p. 172).
School belonging	The "extent to which students feel personally accepted, respected, included, and supported by others in the school social environment" (Goodenow, 1993, p. 80). It means fitting in at school and the sense of psychological membership in the school.
School terms	There are four terms in a NZ school year and the start and finish dates of each term are flexible. Roughly, Term 1 starts in the last week of January and ends in early April (first or second week), and Term 2 extends from the last week of April to the first week of July. Term 3 usually extends from the third week of July to the last week of September. Term 4 begins from the second week of October and continues until 16 or 18 December, depending on the school type (Ministry of Education, 2016).
Secondary school (also called high school or college)	In NZ, secondary school follows intermediate school or full-primary schools and covers Years 9 to 13 (students are normally aged 13–18 years) (Ministry of Education, 2019).
Self-control	This (or trait self-control) is defined as the capacity to "change one's inner responses" (such as emotions) and inhibit "undesired behavioral tendencies (such as impulses) and refrain from acting on them" (Tangney, Baumeister, & Boone, 2004), p. 275).
Self-efficacy	This is a person's global belief in their ability to perform or behave in a way that allows them to achieve something. Schwarzer, Bäßler, Kwiatek, Schröder, and Zhang (1997) defined self-efficacy as a "global confidence in one's coping ability across a wide range of demanding or novel situations" (p. 71).
State-integrated schools	These schools receive funding from the government but have a special religious character (Ministry of Education, 2016).
State schools (or public schools)	These schools are owned and funded by the government and the education in state schools is free. These schools are more popular and have larger enrolments in NZ as compared to private schools, which charge fees per year/term (Ministry of Education, 2016).
Strength use and knowledge	It is the perceived understanding and usage of strengths. Strengths are "characteristics that allow a person to perform well or at their personal best" (Wood, Linley, Maltby, Kashdan, & Hurling, 2011, p. 16).
Unsuccessful school transitions	These are school transitions that are related with negative indicators (such as low academic performance and poor mental health).
Wellbeing	In this thesis, wellbeing is a multidimensional concept that integrates psychological, social, schooling, physical, spiritual, and demographic components (Bharara, Duncan, Jarden, et al., 2019).

Thesis Abstract

The transition from intermediate to secondary school is a defining period for many adolescents. This phase of life requires adolescents to adapt to an unfamiliar environment at the same time as dealing with the challenges entailed in the onset of puberty. Most research suggests that this transition has a negative effect on adolescent mental health, while wellbeing is associated with numerous academic, behavioral, and social benefits for adolescents. However, there is limited information on the way adolescents experience positive transitions and, specifically, on positive factors associated with wellbeing during the transition from intermediate to secondary school. The overall aim of this thesis was to explore the predictors of positive transitions from intermediate to secondary school in New Zealand (NZ) adolescents, using wellbeing as an indicator of transition success. Five studies were conducted to achieve this aim in two distinct but related phases: the preparatory phase and the exploratory phase. The preparatory phase comprised three studies that a) determined priority variables for predicting wellbeing (Studies 1 and 2) and b) developed a survey to assess the predictor variables (Study 3). The exploratory phase comprised a cross-sectional study (Study 4) and a longitudinal study (Study 5) that investigated the associations between the predictor variables and wellbeing.

Study 1, a systematic review, identified the empirical research on the facilitators of a positive transition to secondary school. Several distinct social, school, psychological, physical, spiritual, and demographic factors were found to be associated with academic or school-specific outcomes (e.g., academic achievement or school adjustment). The review revealed that no study examined predictors of wellbeing across the transition from intermediate to secondary school and that less than 10% of studies focused on wellbeing during other types of school transition. Study 2 addressed the lack of evidence in the transition literature concerning wellbeing and added greater precision to the conceptualization of wellbeing, utilizing a unique methodology of prototype analysis. The perspectives of adolescents in ethnically and socioeconomically diverse intermediate schools ($N = 361$) were obtained regarding the components of wellbeing and aspects that build wellbeing. The adolescents considered enjoyment/having fun, feeling safe, and being kind and helpful as central components of wellbeing. The centrality of components varied as a function of socioeconomic status (SES): adolescents from low SES regarded good physical health, comfort/being wealthy, being focused, good values, and success/achievements as being more important for wellbeing than adolescents from high SES. Positive family relationships, positive friendships, and physical activity/sport were perceived as the key pathways to wellbeing. The findings in the first two studies were combined to select the predictor variables. Study 3 developed and validated a novel survey with brief subscales to collectively and rapidly assess the predictor variables.

Informed by the findings of the preparatory phase, the exploratory phase examined the associations of predictor variables with adolescent wellbeing, using self-report surveys across two sub-studies. Study 4 explored the characteristics and determinants of global wellbeing, school wellbeing, domain-specific wellbeing, and component wellbeing in an ethnically diverse sample of 471 Year 8 adolescents aged 11 to 14 years from eight NZ intermediate schools. Four schools were high SES, two schools were middle SES, and two schools were low SES. Most of the Year 8 adolescents evaluated their wellbeing positively; however, females reported lower satisfaction with their health and lifestyle behaviors than males. Being a Pacific Islander and female, and reporting higher feelings of safety, enjoyment, knowledge and usage of strengths, school belonging, physical activity, self-efficacy, positive family relationships, positive friendships, connection with nature, mindfulness, and being around positive people, were all significantly and independently associated with wellbeing (after adjustment for psycho-socio-spiritual, physical, demographic, and school factors).

Study 5 applied a two-wave longitudinal design to examine the associations of wide-ranging predictor variables with changes in global wellbeing, school wellbeing, domain-specific wellbeing, and component wellbeing in NZ adolescents across the transition from intermediate to secondary school ($n = 191$). The results showed significant declines in global wellbeing and small improvements in school wellbeing and component wellbeing across the transition from intermediate to secondary school. There were small but significant improvements in adolescent perceptions of positive family relationships, positive friendships, teacher support, feelings of safety, self-efficacy, school belonging, being kind and helpful, and being surrounded by positive people after the transition to secondary school as compared to before the transition. Higher perceptions of feelings of safety, school belonging, self-control, purpose, strength use and knowledge, being around positive people, enjoyment, mindfulness, and physical activity in females before the transition were associated with improved wellbeing in distinct dimensions across the transition from intermediate to secondary school. In comparison, changes in self-efficacy predicted transition-related changes in all the dimensions of wellbeing.

These novel findings advance our understanding of the positive factors that predict wellbeing in the transition from intermediate to secondary school. Specifically, this thesis establishes the importance of several psychological, social, school, physical, and spiritual factors that are implicated in changes in multiple dimensions of wellbeing associated with this transition. It is hoped the findings in this thesis will stimulate further research and inform the development of holistic interventions and programs aimed at enhancing adolescent wellbeing and positive transitions.

CHAPTER 1: INTRODUCTION

Overview

This thesis explores factors that predict positive transitions between NZ intermediate and secondary schools, using wellbeing as an indicator of transition success. The overarching research question of this thesis is: Which factors predict wellbeing in NZ adolescents during the transition from Year 8 at intermediate school to Year 9 at secondary school? The thesis addresses this research question in two phases. The preparatory phase a) determines the predictor variables of this research (Chapters 2 and 3), and b) develops a novel survey to assess the predictor variables collectively (Chapter 4). Informed by the findings of the preparatory phase, the exploratory phase examines the cross-sectional and temporal associations of several psychological, social, school, physical, spiritual, and demographic predictor variables with varied dimensions of wellbeing before and across the transition from intermediate school to secondary school (Chapters 5 and 6).

This first chapter introduces the background of the study, reflecting on the concerns and experiences of adolescents who are involved with secondary school transition, and why the transition from intermediate to secondary school is especially difficult from a theoretical and research perspective. In addition, it discusses the negative effect of school transition on adolescents, particularly on their mental health; the need to focus on enhancing wellbeing during this stage; positive psychology and positive education approaches; and NZ and overseas policies with regard to wellbeing and positive school transition. The rationale of the thesis is explained and a statement of purpose is stated, followed by the significance and delimitations of this research. This chapter concludes with a synopsis of the thesis structure.

Background

School transitions have been a matter of considerable concern and interest in both international and national research and practice literature (McGee, Ward, Gibbons, & Harlow, 2004). The transition to secondary school has been described as "treacherous" (Mizelle & Irvin, 2000, p. 57), "traumatic and turbulent" (Hawk & Hill, 2004, p. 11), and "one of the most difficult" in the educational career of an adolescent (Zeedyk et al., 2003, p. 67). In particular, the transition from intermediate to secondary school is identified by many scholars as being disruptive because adolescents are required to make many simultaneous adjustments (Akos & Galassi, 2004b; Alspaugh, 1998; Blyth, Simmons, & Carlton-Ford, 1983; Hawk & Hill, 2004; McGee et al., 2004). The transition requires adolescents to adapt to an unfamiliar social and academic environment in the secondary school that is procedurally larger, more impersonal, and diverse than that of an intermediate school (Akos & Galassi, 2004b; Blyth et al., 1983). Further, Blyth et al. (1983) noted that the first school transition (e.g., from primary to intermediate school) leaves adolescents "vulnerable rather than strengthened for the second transition" (p. 16). There is evidence that negotiating several school transitions is predictive of greater risk of maladjustment and low scholastic achievement (Hawk & Hill, 2004; Schwerdt & West, 2013; Simmons, Burgeson, Carlton-Ford, & Blyth, 1987). Therefore, adolescents undergoing the transition from intermediate to secondary schools are prone to experiencing school adjustment and achievement issues because they make two school transitions (from primary to intermediate and from intermediate to secondary).

In NZ, more than 50,000 adolescents transition from primary school to intermediate school (Years 7 and 8) each year, and about half of that number move on to Year 9 at secondary school (Ministry of Education, 2018b).[1] Even with prospects of new friendships and freedom in the new setting, research suggests that NZ adolescents are often worried about transitioning to secondary school (Cox & Kennedy, 2008). Many of them experience declines in academic achievement, engagement, and self-esteem, and become negative toward school, learning, teachers, and subjects through the secondary school transition (Cox & Kennedy, 2008; Durling, Ng, & Bishop, 2010; Gibbs & Poskitt, 2010; Ministry of Education, 2010). A difficult transition to secondary school is associated with an increased school dropout rate (McGee et al., 2004), suspension (Durling et al., 2010), depression (Newman, Newman, Griffen, O'Connor, & Spas, 2007; West, Sweeting, & Young, 2010), and anxiety (Akos & Galassi, 2004b). The negative short-term and long-term influence of poor transitions includes flattening academic trajectories and mental health

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[1] In NZ, there are two types of primary schools: contributing and full-primary. Contributing schools cover Years 1 to 6, and full-primary schools cover Years 1 to 8. Most adolescents from contributing primary schools attend intermediate schools that cover two levels, Year 7 and Year 8. Thus, intermediate schools can be differentiated from full-primary schools, which cover year levels 1 to 8. Intermediate school adolescents, who are normally aged 11 to 13 years, mostly attend secondary schools or colleges that cover levels 9 to 13. See the Glossary of Terms for more information on NZ school types and terms.

issues (Evans, Borriello, & Field, 2018). These concerns and negative outcomes are possibly a result of a mismatch between the social-organizational context of the new school and the developmental needs of adolescents (Eccles & Midgley, 1989).

The transition from intermediate to secondary school coincides with the average age for the onset of puberty, which could further exacerbate the turmoil and stress experienced during this critical life stage (Anderson, Jacobs, Schramm, & Splittgerber, 2000; Borman, Rozek, Pyne, & Hanselman, 2019). The developmental changes related to puberty—such as forming an identity and becoming more independent—present adolescents with significant mental health challenges (Kessler et al., 2005). According to Ministry of Health (2016a), mental disorders such as anxiety and depression are among the top 10 leading causes of health loss in five- to fourteen-year-olds. Relative to their international counterparts, NZ adolescents have the highest prevalence of teenage suicide (Organization for Economic Co-operation and Development, 2009). In 2014, the annual economic cost of the burden of serious mental illness (including addiction) in NZ was an estimated $17 billion, nearly 7% of Gross Domestic Product (Royal Australian and New Zealand College of Psychiatrists, 2016). The costs of the poor mental health of NZ adolescents are substantial, causing a considerable burden on families and the wider society (Malatest International, 2016). These facts paint a bleak picture for intermediate school adolescents undergoing difficult developmental and systematic transitions, and underscore the need for strengthening focus on adolescent wellbeing during the transition to secondary school. Research now shows that effective intervention at key points is a more cost-effective and promising means of altering the trajectories of adolescents than remedial and preventive programs (Fox et al., 2015).

Previous studies have identified the potential of the secondary school transition period for delivering interventions that improve the adaptation of adolescents to secondary school and subsequently, their mental health (Rice, Frederickson, Shelton, et al., 2011; Riglin, Frederickson, Shelton, & Rice, 2013). The successful navigation of this transition sets in motion a range of behavior patterns that are favorable for an adolescent's future (Rutter, 1989; Vitaro & Tremblay, 2008). Research has suggested that adolescent wellbeing should be a potential target for school transition interventions because of its link with a key indicator of positive school transition: academic achievement. The initial levels of adolescents' wellbeing in Years 6 to 8 is predictive of higher grades one year later (Riglin et al., 2013; Suldo, Thalji, & Ferron, 2011). In fact, wellbeing during adolescence is predictive of academic achievement, competence, civic engagement, and volunteering more than a decade later (O'Connor, Sanson, Toumbourou, Norrish, & Olsson, 2016). Thus, wellbeing is an essential indicator of positive school transition (Riglin et al., 2013).

While being in good wellbeing is critical for every adolescent, several strands of emerging evidence indicate that wellbeing is a multidimensional construct—more than simply the absence of disease—and comprises positive emotion, positive psychological functioning, and positive social functioning (Keyes, 2013). This conceptualization is akin to Mason Durie's (1985) comprehensive model of wellbeing, Te Whare Tapa Whā. Durie provided a Māori perspective of health and wellbeing and compared wellbeing or "hauora" (Māori perspective of health and wellbeing) with the four walls of house or "whare". He recognized four dimensions of wellbeing, as shown in Figure 2-1: taha tinana (physical wellbeing), taha hinengaro (psychological wellbeing), taha wairua (spiritual wellbeing) and taha whānau (social wellbeing) (Durie, 1985). The empirical research describes several facets of wellbeing, such as physical wellbeing, domain-specific wellbeing (e.g., family, education, and leisure), social wellbeing (Centers for Disease Control and Prevention, 2019), and a global or restrictive perspective of subjective or emotional wellbeing (e.g., happiness, life satisfaction, and affect balance) (Lampropoulou, 2018). Understanding wellbeing for adolescents is even more complex, as it needs to include school wellbeing, in addition to wellbeing in various life domains, such as education and family (Ben-Arieh, Casas, Frønes, & Korbin, 2014). Thus, any attempt to study the overall wellbeing of adolescents must consider its many dimensions.

Adolescents' competencies and strengths in overcoming transition-related stress are considered one way by which school transition may positively influence wellbeing and school transition adjustment (Shoshani & Slone, 2013). However, most research is still centered on studying the transition from a negative 'traditional' psychology perspective by understanding and evaluating psychopathology and deficits, or by focusing on the suffering end of the wellbeing continuum (see Figure 1-1 for a graphic representation of the wellbeing continuum, depicting the difference between traditional and positive psychology). While unsuccessful transitions and mental ill-being have been studied extensively, the assessment and examination of positive school transition and adolescent wellbeing has been minimal (Shoshani & Slone, 2013). Similarly, Lippman et al. (2014) emphasized that most research in psychology tends to focus on risk factors of ill-being, rather than on identifying factors that build adolescent wellbeing. Unsuccessful transitions to secondary school have been associated with numerous risk factors, such as lack of parent and peer support (Newman et al., 2007) and low self-esteem (McGee et al., 2004). While the factors that need to be avoided to allow a positive school transition (e.g., problem behavior) are clear (Darmody, 2008; Rice, Frederickson, Shelton, et al., 2011), without clarity around which positive factors matter, it is difficult for programs to encourage the positive goals of wellbeing promotion and transition success in the adolescent population.
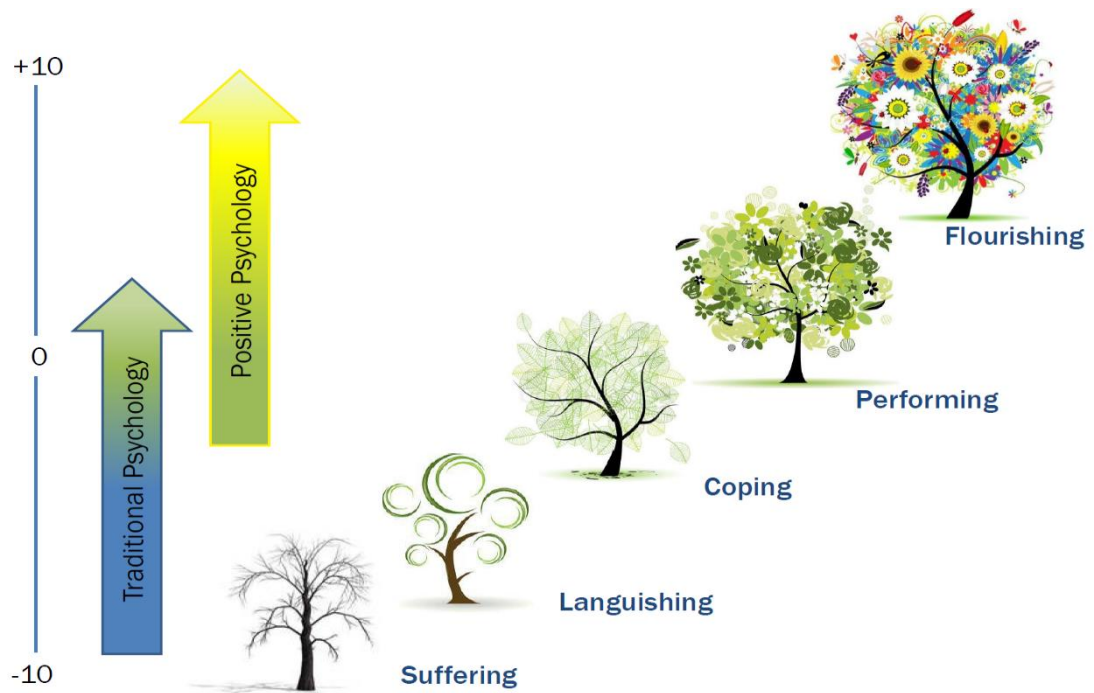
Figure 1-1. The Wellbeing Continuum; Source: Institute of Positive Education (2016)

Following the work of many psychologists (e.g., Carl Rogers, Abraham Maslow, Martin Seligman, Mihaly Czikszentmihalyi, and Christopher Peterson), positive psychology was founded as a new domain of psychology in 1998. It brought a shift in focus from pathology and deficit-oriented approach to understanding, identifying, and building skills and potentials that can help people to live more satisfying, fulfilling, and happier lives (Froh, 2004; Seligman & Csikszentmihalyi, 2000). This change in direction is in line with the school transition research that has identified, in recent years, the positive factors that facilitate transition experience. School environment and teacher support have both been implicated in promoting positive school transitions (Lester & Cross, 2015); thus, identifying the role of schools in enabling wellbeing (Waters, 2014). This prospect has led to many scholarly movements over the past few decades, such as positive education (Norrish, 2015). The paradigm of positive education, which means applying principles of positive psychology in education (Green, Oades, & Robinson, 2011), is particularly important for this research. From a positive education perspective, identifying ways to help adolescents to achieve high levels of overall wellbeing during the transition between intermediate and secondary school is necessary for helping them to cope well with the transition-related adversity.

Improving the transition to secondary school and adolescent wellbeing have become a focus of governments both in NZ and internationally (Department of Education and Training, 2016; Education Review Office, 2012a, 2015c, 2016a; McLellan & Galton, 2015; Ministry of Health, 2016b). For example, the Prime Minister's 2012 "Youth Mental Health Project" aimed to promote the resilience and psychosocial wellbeing of adolescents (12–19 years), among others (Ministry of Health, 2016b). Likewise, an Australian review identified the following priority interventions:

the transition to secondary school, school-based health and wellbeing, and mental health promotion (Fox et al., 2015). In addition, the educational curriculum in NZ has been refined to recognize wellbeing as a key learning outcome (Ministry of Education, 2007) and wellbeing has been recognized as being vital for positive transitions in NZ (Education Review Office, 2012a).

Both the Agenda for Children and the Youth Development Strategy Aotearoa recommend understanding wellbeing by utilizing a strengths-focused approach and focusing on the bigger picture, rather than on isolating factors (Ministry of Youth Development, 2004). It has been stressed that adolescents should be given opportunities to participate in conceptualizing their wellbeing and decision making around wellbeing (Education Review Office, 2013, 2015a, 2015c; Education Services Australia, n.d.), so that the components of interventions meant to promote wellbeing align with their views. However, the Science Advisory Committee (2011) noted that a strong evidence base is required for devising effective interventions that build adolescent wellbeing related to the transition process.

In sum, the literature indicates that the transition from intermediate to secondary school can be daunting for adolescents. Given that adolescence is also a period of opportunities, exploring the positive factors that allow adolescents to experience wellbeing in different dimensions through this period is critical for devising positive school transition interventions. According to the recommendations from the government and contemporary research, addressing this issue requires applying a comprehensive perspective and strengths-focused positive education approach, as well as incorporating views of adolescents about wellbeing.

Thesis Rationale

There were five main reasons for undertaking this research: (1) the significance of the transition between intermediate and secondary school in adolescent wellbeing; (2) gaps in the literature on positive school transitions; (3) the limited success of previous wellbeing interventions; (4) the important role of schools in building adolescent wellbeing; and (5) personal professional experiences. These are discussed further in the following paragraphs.

As noted earlier, the transition from intermediate to secondary school is a defining period for adolescents as they are required to make many simultaneous adjustments and are more susceptible to experiencing mental ill-being during this phase. While the literature has revealed poor behavioral and academic outcomes for adolescents who face difficulty during a transition period (Hawk & Hill, 2004; McGee et al., 2004), the overall levels of wellbeing in adolescents have shown promise in ameliorating their transition-related experiences (O'Connor et al., 2016; Suldo et al., 2011). It is surprising, given the well-documented short-term and long-term benefits of wellbeing for adolescents, that little research has investigated the factors that foster wellbeing in adolescents. Rather, most previous studies have focused on evaluating and remediating pathology

in this area. Although some literature examines the predictors of wellbeing, the review conducted for this thesis found there was no study focusing on the associations around the transition from intermediate to secondary school (Bharara, 2019).

Owing to the significant gaps in the existing knowledge regarding the influences on transition-related wellbeing, the Science Advisory Committee's report suggested that existing initiatives to ease the transition (e.g., life-skills development interventions) have had only limited success. The components of interventions for promoting positive outcomes (e.g., positive mental health and wellbeing) for children and adolescents were often based on minimal evidence and derived from narratives and unsubstantiated claims. As the prevention of ill-being is more effective than remediation in adolescence, it argued that a strong evidence base is required for encouraging effective transitions (2011). Identifying the factors associated with wellbeing during the secondary school transition is essential for designing evidence-informed practice.

The fourth reason for carrying out this research was based on the important role of schools in enabling wellbeing (Education Review Office, 2016a; Waters, 2014). Norrish (2015) reasoned that wellbeing needs to be embedded in the educational curriculum because it underpins successful learning, accomplishment, and relationships. The Education Review Office (2012a) suggested integrating learning and wellbeing approaches as a route to effective secondary school transitions; Bott et al. (2017) suggested that learning is closely intertwined with wellbeing. Nonetheless, most schools have not realized the importance of communicating the knowledge and skills required for adolescent wellbeing along with their academic learning. There is almost no overlap of what parents want for their children and what schools teach (Norrish, 2015). In two studies, the Education Review Office (2015a, 2015c) evaluated how well 68 secondary schools and 159 primary schools promoted wellbeing, based on discourse analysis, discussions (with school leaders, parents, adolescents, etc.), and analyses of curriculums. Eighteen of these secondary schools did not promote wellbeing adequately. Although nearly 48% of the primary schools (comprising 92 full-primary, 56 contributing, and 11 intermediate schools) had developed a positive culture and supported adolescents, they were not certain about the presence of a strong relationship between wellbeing and learning. Schools that had been effective in promoting wellbeing had focused on assimilating wellbeing throughout their actions and processes in their school culture and curriculum (including school values, vision, learning areas, and key competencies), and had sought the views and ideas of adolescents (Education Review Office, 2016b).

The adolescents in well-placed schools thought they were capable, had good relationships, and found school worthwhile (Education Review Office, 2015c). In contrast, the studies noted that adolescents in Years 7 and 8 did not achieve and experience wellbeing at the same level as adolescents in Years 1 to 6 because the schools had not balanced wellbeing and academics in

previous years (Education Review Office, 2015a). NZ schools face challenges in promoting adolescent wellbeing because of utilizing strategies of "fixing" and "blaming", rather than "restorative practices" (Education Review Office, 2015c, p. 26). Therefore, the current research was essential to generate the knowledge crucial for improving adolescent wellbeing and healthy transitions, with the intention that intermediate and secondary schools could utilize this knowledge.

Finally, this enquiry had its origin in my professional experience as a school counseling psychologist. While working with intermediate and secondary school adolescents, many adolescents (without special needs or problem behaviors) revealed during one-to-one counseling sessions that they were unhappy and dissatisfied with their lives, and had concerns about relationships. The teachers perceived the adolescents as being less engaged in academics and there were more discipline issues during Years 7 and 8 than at other year levels. Many adolescents in the intermediate school years tended to behave in ways that prevented them from realizing their full potential. Thus, my counseling experience with adolescents has been consistent with the findings of the existing wellbeing and transition research. In summary, there are many gaps in the positive school transition and wellbeing literature that represent a challenge for researchers, school practitioners, and policymakers in devising effective interventions and policies for successful transitions; this research intended to fill these gaps.

Originality and chapter-specific justifications
The present thesis, unlike the distress-centred studies, understands school transition from a positive education standpoint and aims to gain insight into positive factors that may predict a positive transition from intermediate to secondary school. While studying negative factors is important for avoiding negative outcomes in life, focusing on positive factors is crucial for improving positive development (Lippman et al., 2014). This thesis uses wellbeing as an indicator of positive transition from intermediate to secondary school, whereas previous researchers have utilized school-specific indicators of transition success, such as academic achievement (Maltais, Duchesne, Ratelle, & Feng, 2017). Understanding school transition from a positive education perspective means focusing on what ensures wellbeing (rather than on what impedes wellbeing or causes mental ill-being) during the arduous phase of moving from intermediate to secondary school.

The present thesis is original because to date, no national or international longitudinal evidence has focused on the predictors of wellbeing during the transition from intermediate to secondary school (Bharara, 2019). In the NZ context; much of the existing information has been anecdotal and has focused on the transition from primary to secondary school, with relatively small sample sizes (Cox & Kennedy, 2008; McGee et al., 2004). While a cross-sectional study has considered several social and school factors that predict comprehensive aspects of emotional wellbeing

(Lampropoulou, 2018), this thesis comprehensively examines a wide range of psychological, social, school, physical, spiritual, and demographic factors that may potentially be linked to varied dimensions of wellbeing during the transition from intermediate to secondary school, by incorporating a longitudinal design. Evans, Borriello, et al. (2018) recommended exploring a wide range of factors to examine the influence of secondary school transition on positive outcomes such as wellbeing, utilizing a longitudinal design. Comprehensive frameworks of wellbeing emphasize understanding wellbeing from a multidimensional viewpoint (Ben-Arieh et al., 2014; Keyes, 2013). However, the limited existing research has presented only a unidimensional perspective of wellbeing, excluding a more coherent model (Owen, Parker, Astell-Burt, & Lonsdale, 2018; Waters, Lester, & Cross, 2014). Predictors of wellbeing have been examined as individual units within a unique realm (e.g., social or psychological) during other types of transition (Lester & Cross, 2015; Shoshani & Slone, 2013).

The present thesis also makes unique contributions to knowledge in a series of studies. First, this thesis aligns the approach of positive psychology in positive school transition, presenting a working definition of positive school transition in Chapter 2. This definition helps to identify elements that can be fundamental in the successful navigation of school transition. Underpinned by Durie's model of wellbeing (Durie, 1985), this chapter also presents a new conceptual framework of positive school transition to organize and interpret the findings of this research into psychological, social, school, physical, spiritual, and demographic factors. Despite the substantial growth in the literature focusing on secondary school transition over the last two decades, there is less clarity with regard to the academic meaning of the construct of "transition success." While scholars have generally agreed that positive school transition is multidimensional (Rice, Frederickson, Shelton, et al., 2011), there has been little consensus on the assessment of positive school transition, which has been measured by different aspects such as academic performance (Ng-Knight, 2015). As a primary aim, Chapter 2 of this thesis offers a systematic review of the factors that facilitate a positive transition to secondary school and highlights the factors associated with academic indicators of positive school transition (e.g., academic achievement), in addition to wellbeing. This review is important because, to my knowledge, there has been no review of positive secondary school transition literature focusing on the keywords "factors" or "predictors" in its search strategy.

To address gaps in the transition literature regarding wellbeing and to add greater precision to the conceptualization of wellbeing, Chapter 3 outlines NZ adolescents' conceptualizations of wellbeing, using a unique strategy of prototype analysis. Although wellbeing is a nebulous concept and considering adolescents' conceptions is crucial for defining wellbeing; there has been no study to date that has examined the perspectives of adolescents in NZ intermediate schools as regards what defines and promotes wellbeing, per se. The evidence on the factors that improve wellbeing has rarely included adolescents' perspectives. There is also a dearth of information as

to whether socioeconomic status (SES) influences adolescent conceptualization of wellbeing. The national evidence suggests low SES tends to compound transition-related difficulties for adolescents (McGee et al., 2004). Thus, for the first time, Chapter 3 examines whether NZ adolescents' conceptions of components of wellbeing vary as a function of SES.

The predictor variables of this research are, in a substantial way, an integration of the factors that facilitate the academic indicators of positive transition and improve wellbeing as per adolescents' perspectives. Based on the recommendations of government and the extant research on unifying learning and wellbeing (Education Review Office, 2012a; Suldo et al., 2011), this integration is useful in answering the main research question.

In consideration of the participant burden, Chapter 4 of this thesis devises and validates a novel Positive School Transition Readiness Survey (PSTRS). This survey includes several brief subscales to tap predictor variables in a collective, efficient, and rapid manner in subsequent work. The validation process includes tests of alpha reliability ($N = 471$), test–retest reliability ($n = 121$), and a Principal Component Analysis (PCA).

Chapter 5 of this thesis is a cross-sectional study that characterizes the dimensions of wellbeing and demonstrates the factors associated with wellbeing in Year 8 intermediate school adolescents in NZ. While it is already known that secondary school adolescents in NZ evaluate their wellbeing positively (Clark et al., 2013), there is a relative dearth of literature regarding the presence and determinants of wellbeing in Year 8 intermediate school adolescents here. Similarly, little is known about changes that occur in wellbeing between different school settings in NZ.

Chapter 6 depicts the patterns of changes in various dimensions of wellbeing and shows the alterations in several psycho-socio-spiritual, school, physical, and demographic predictor variables during the secondary school transition. This chapter addresses the main research question of this thesis and makes an original contribution to knowledge by examining the temporal associations between several predictor variables and changes in the dimensions of wellbeing during the transition from intermediate to secondary school in NZ. As the transition to secondary school requires a period of adjustment over time (Anderson et al., 2000; McGee et al., 2004), Term 2 of Year 9 was chosen to assess positive school transition for several reasons. First, in the first year of secondary school, adolescents can be more susceptible to experiencing difficulties related to the transition than during other years. Second, while their transition concerns during Term 1 of Year 9 are likely to be reduced because of the additional support they receive from teachers and peers during this time, these anxieties can reappear and persist through the rest of Year 9 (Bagnall, Skipper, & Fox, 2019). Finally, their transition anxieties can be aggravated during Terms 3 and 4 of Year 9 because of academic assessment pressure. Research in the UK has shown that adolescents' perceived levels of anxiety at the beginning of secondary school is

similar to their perceptions of anxieties at the end of their first year (Riglin et al., 2013). The Glossary of Terms at the start of this thesis contains information about NZ school terms.

In summary, the present research was designed and undertaken because of gaps in the existing school transition and wellbeing literature, as well as the importance of wellbeing in adolescents, the role of schools in enabling their wellbeing, and my professional experiences. It was anticipated that the factors that predict the wellbeing of adolescents during the transition from intermediate to secondary school would determine the ease with which they moved from one school to another. This thesis views the transition process from a positive education and comprehensive perspective and makes many new contributions to knowledge. Each study conducted in this thesis was underpinned by logical justifications.

Statement of Purpose and Research Questions

Guided by the positive education approach, this thesis examines the predictors of positive transitions from intermediate to secondary school in a comprehensive manner, utilizing wellbeing as an indicator of transition success. The overarching research question of this thesis is: Which factors predict wellbeing in NZ adolescents during the transition from Year 8 at intermediate school to Year 9 at secondary school? To answer this question, five sub-questions span the preparatory phase (Chapters 2–4) and exploratory phase (Chapters 5 and 6). The phases of the research are shown in Figure 1-2.

The purpose of conducting the preparatory phase was twofold:
   a) Selection of the predictor variables: These were selected from a systematic literature review of the factors facilitating a positive transition to secondary school (see Chapter 2) and an empirical investigation of adolescent conceptualizations of wellbeing (see Chapter 3).
   b) Survey development: Informed by these predictor variables, a new survey was developed and validated to assess the putative predictors quickly and efficiently (see Chapter 4).

The exploratory phase of this research examined the associations of selected predictor variables with the wellbeing of adolescents in NZ intermediate schools (see Chapter 5); studied changes in wellbeing and potential predictors across the transition to secondary school; and tested and observed factors that improved wellbeing over the course of transition from intermediate to secondary school (see Chapter 6).

The key objectives of the series of studies in this research were as follows:
Preparatory phase:
   1. To systematically review the positive school transition literature, with a focus on:
      • factors that facilitate a positive transition to secondary school.

2. To investigate conceptualizations of wellbeing in Year 7 and Year 8 NZ adolescents in state intermediate schools, by:

   - exploring the perceptions of NZ adolescents in state intermediate schools with regard to the components of wellbeing
   - identifying the aspects that build wellbeing, as per the NZ adolescent perceptions.

3. To develop and validate a survey with brief subscales for assessing the predictor variables.

Exploratory phase:

4. To examine the associations of the main demographic, psychological, school, social, physical, and spiritual factors with global, school, domain-specific and component wellbeing in Year 8 adolescents at NZ intermediate schools.

5. To examine the demographic, psychological, school, social, physical, and spiritual factors that predict global, school, domain-specific and component wellbeing during the transition from intermediate to secondary schools in NZ adolescents, by:

   - examining the temporal associations between the pretransition perceptions of Year 8 adolescents at NZ intermediate schools regarding the demographic, psychological, social, school, physical, and spiritual factors and changes in their global, school, component and domain-specific wellbeing during the secondary school transition
   - examining the temporal associations of the changes in several demographic, psychological, social, school, physical, and spiritual factors with changes in global wellbeing, school wellbeing, domain-specific wellbeing, and component wellbeing during the secondary school transition.

Within the frameworks suggested by Creswell (2003), this research used a sequential mixed-methods approach. It has been underpinned by the philosophical notions of pragmatism but broadly, it reflects a post-positivist worldview. The quantitative method was the primary data obtainment approach and most data were numeric.

Chapter 1: General introduction

Preparatory Phase Part A (Chapters 2 & 3)

Chapter 2: Factors facilitating a positive transition to secondary school: A systematic literature review

| Conceptual framework of positive school transition | Factors affecting secondary school transition |

Which factors does the literature show facilitate positive transition to secondary school?

Chapter 3: A prototype analysis of NZ adolescents' conceptualizations of wellbeing

| Components of wellbeing and pathways to wellbeing | Influence of SES on the component centrality of wellbeing |

What do intermediate adolescents think wellbeing is? What do they think builds their wellbeing?

Preparatory Phase Part B (Chapter 4)

Chapter 4: Initial development and validation of the Positive School Transition Readiness Survey

| Steps in survey development | Alpha reliability, test-retest reliability, PCA |

How can the predictor variables be measured in a brief, collective, and efficient way without overburdening adolescents?

Exploratory Phase (Chapters 5 & 6)

Chapter 5: Exploring predictors of wellbeing in NZ adolescents: A cross-sectional study

| Characterize wellbeing dimensions and study gender-related differences | Cross-sectional predictors of wellbeing |

Which factors predict global, domain-specific, school, and component wellbeing in Year 8 intermediate school adolescents (before the secondary school transition)?

Chapter 6: A longitudinal study of factors predicting wellbeing during the transition between intermediate and secondary schools

| Changes in wellbeing and predictor variables | Temporal associations of predictor variables with wellbeing changes |

Which factors predict changes in global, domain-specific, school, and component wellbeing across the transition from intermediate to secondary

Chapter 7: General discussion

| Contributions, implications, and limitations | A comprehensive model of positive school transition |

Figure 1-2. Overview of the thesis with key research questions and flow of studies

Significance of this Research

The primary contribution of this thesis is the development of a holistic model of factors that predict overall wellbeing of adolescents during the transition from intermediate to secondary school transition and, therefore, may improve their secondary school transition experience (see Figure 7-1). The evidence generated in each chapter addresses gaps in the positive school transition and wellbeing literature, particularly regarding conceptualization, measurement, temporal patterns, and associations. The epidemiological knowledge contained within this thesis may provide new directions for future research. In addition, this thesis presents a preliminary and general measure of positive school transition that may help in identifying vulnerable adolescents in a timely fashion and inform positive transition interventions. School leaders and practitioners can utilize the new evidence base in their profession for improving the wellbeing of adolescents and secondary school transitions. This knowledge will be particularly useful for the candidate in her future professional endeavors.

The predictors of wellbeing change during the transition from intermediate to secondary school (see Figure 7-1) can serve as the basis for intermediate and secondary school interventions and policies aimed at enhancing adolescent transition success and wellbeing (including positive education programs). Interventions utilizing these factors are likely to be well received by adolescents, as most of these factors align with adolescent views of wellbeing. Since the generated knowledge could result in the development of effective, evidence-informed transition and wellbeing programs, this research may contribute to the enhanced overall wellbeing of adolescents during the transition from intermediate to secondary school. This may eventually have other benefits for participants and the community as well, such as favorable educational and health outcomes and less cost to society (e.g., lower rates of behavioral disorders) (Busch & Barry, 2007). Study-specific contributions and the significance of this research are discussed within the respective chapters, as well as in Chapter 7.

Study Delimitations

- This investigation was carried out from a social science and psychological perspective; therefore, most of the information was collected using self-report measures. The use of objective measures was beyond the scope of this research; accordingly, the data resulting from this research is limited to subjective reports.
- The aim of this research was to understand the perceptions of adolescents; therefore, the data were not obtained from parents or teachers. While data from secondary informants could have verified the adolescents' responses, it was not practical to do this in the present research. In addition, it was assumed that adolescents are capable and honest when sharing their thoughts and the data from secondary informants could be less precise. Other

research has noted that the perspectives of adolescents are more valuable than those of parents or other adults when examining adolescent wellbeing (Lippman et al., 2014).

- Participants of this research were limited to adolescents in Years 7 and 8 in NZ state intermediate schools and Year 9 in secondary schools. The data from Year 7 adolescents were collected in Chapter 3 only to allow generalization of the findings from the conceptualizations of wellbeing to the entire intermediate school population. While this research planned to recruit participants from low-socioeconomic schools, the focus of this research was not on specific groups such as Māori or children with special needs. All adolescents who consented to participate from a certain year level were recruited, irrespective of their demographic characteristics or learning needs.

- As is common in most educational psychology research, the predictor variables (except demographics) in this research were considered continuous variables.

- While the term wellbeing is perceived in diverse ways in different areas of psychology and health, in this thesis, wellbeing is understood, from a positive psychology perspective, to comprise multiple positive components.

- Because positive mental health is a broad concept, this thesis limits itself to the understanding of wellbeing—a key aspect of positive mental health (World Health Organization, 2001).

- Owing to the constraints of time and research, this research demonstrates the short-term predictors of wellbeing change through the transition from intermediate to secondary school.

- This research is limited to presenting a broad view of the key predictors of positive school transition and does not intend to amplify the information on all these factors.

The exclusion criteria were as follows:

- Adolescents from Year 8 in full-primary, state-integrated, composite and private schools were excluded because fewer students continue Year 8 in these schools than in state intermediate schools (Ministry of Education, 2018b).

- The two schools that were part of the prototype analysis study (see Chapter 3) were not invited to participate in the remaining studies, as the participants from these schools were already primed to the aspects that define and promote wellbeing.

Thesis Structure

This thesis incorporates distinct chapters adapted from manuscripts for publications. Chapters 2 to 6 are a series of studies written as articles that are either already published or are under preparation for submission to journals. As noted earlier, the chapters span the preparatory (Chapters 2–4) and exploratory phases (Chapters 5–6). The preparatory phase is further divided into Parts A and B. Part A includes Chapter 2, which systematically reviews factors that facilitate a positive transition to secondary school and Chapter 3, which utilizes a prototype approach to

investigate adolescent conceptualizations of wellbeing in NZ. Part B of the preparatory phase includes Chapter 4, which develops and validates a survey to assess the predictor variables. Following the preparatory phase, the exploratory phase covers Chapters 5 and 6. Chapter 5 is a cross-sectional study that explores the predictors of wellbeing in Year 8 adolescents at NZ intermediate schools before the transition to secondary school. Chapter 6 uses a two-wave longitudinal design to examine the temporal associations between pretransition predictors and changes in these predictors with changes in wellbeing during the transition from intermediate to secondary school. In short, Chapters 2 to 6 present studies that inform, measure, and examine factors that predict adolescent wellbeing related to the transition. Chapter 7 discusses the contributions, general implications, limitations, and future directions for research of each of these studies and the whole thesis. Figure 1-2 (earlier section) shows the key research questions and the focus and flow of the studies.

As the chapters in this thesis are stand-alone manuscripts, some unavoidable duplication of information occurs (e.g., introduction, procedure, and participants). This research used an online assessment tool to collect wellbeing data. This assessment was devised by the candidate's mentor, Dr Aaron Jarden, Associate Professor in the Centre of Positive Psychology at the University of Melbourne. This survey has been provided as a supplement (see Appendix G) and is available on the following web link as well: https://www.awesomeschools.com/. While the survey used for measuring wellbeing in this thesis (Jarden, Walker, & Quinlan, 2015) and the assessment available on the Assessing Wellbeing in Education (AWE) link are identical, the term AWE may be absent in the measures sections of Chapters 4 to 6, as per the advice of the mentor because of his disaffiliation with the AWE company. While at the initial stages of this research it was intended for the data to be collected using AWE, it was not possible because of practical considerations. To present the thesis as a coherent whole, each manuscript is preceded by a preface that describes the linkages between the manuscripts and the motivation behind the study.

PREPARATORY PHASE: PART A

SELECTION OF PREDICTOR VARIABLES
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CHAPTER 2: FACTORS FACILITATING A POSITIVE TRANSITION TO SECONDARY SCHOOL: A SYSTEMATIC LITERATURE REVIEW

Preface

This chapter was conceived by recognizing the lack of consensus regarding indicators of positive school transition and the scarcity of findings related to factors that may improve the transition experience. An initial glimpse of the positive school transition literature revealed that there is substantial variability in the way researchers define positive school transition. In addition, it indicated that most school transition research has focused on poor transitions, negative outcomes of transitions, and adolescent concerns about school transitions. Therefore, this chapter provides a working definition of positive school transition and systematically reviews the factors that facilitate a positive transition to secondary school. In addition, this chapter documents a conceptual framework of positive school transition to aid in organizing and interpreting the findings related to predictor variables in this research. Since secondary school transitions occur at different ages in different countries, this review selected studies based on a broad age range from 10 to 15 years, rather than the type of transition.

A preliminary systematic review was conducted in July 2016 and later updated in 2018. The prior search included "mental health" and "depression" as the related keywords for wellbeing in recognition that positive psychology is a relatively new discipline and the records related to wellbeing were limited. The prior search was relatively broad than the later search in an effort to expand the results for potential priority predictor variables related to positive school transition at an earlier stage of the research. The search strategy was later updated with the removal of the keywords, depression and mental health (see Table 2-2), to exclude records related to unsuccessful school transitions or/and illbeing. Although mental health is considered one of the key indicators of positive school transition, it was observed that many studies, in essence, focused on negative side of the mental health continuum and examined protective factors or/and anxiety or depression (rather than wellbeing or positive mental health) (Evans, Borriello, et al., 2018).

A considerable number of factors revealed in this chapter were associated with academic indicators of transition success. Therefore, this review in Part A of the preparatory phase offered an opportunity to integrate the factors that enhance academic success with the factors that build wellbeing (see Chapter 3), to help with selecting the predictor variables of this research. The full paper from this chapter has been published in the International Journal of School and Educational Psychology (see the permission in Appendix H). This chapter has been slightly adapted for the purpose of this thesis.

Abstract

A positive transition to secondary school is pivotal to adolescents' mental health and success. However, school transition research has mainly focused on transition-related adversities rather than adolescent wellbeing and adaptation. While the disturbing consequences of a difficult school transition are known, little attention has been paid to the key breadth factors that enable adolescents to thrive during the school move. A systematic review was undertaken to determine the factors that predict a positive transition to secondary school. A novel conceptual framework of positive school transition, based on a positive education paradigm, was proposed to group the findings. School ecology, organized activity involvement, spirituality, character strengths, self-efficacy, feeling safe, personality, physical fitness, and birth order are some of the relatively less-researched aspects in the transition literature that were found to be significantly associated with a positive transition to secondary school, besides other popular school and social support factors. The results from the present review can stimulate and inform future research investigating the correlates or causes of a successful transition to secondary school. Improved understanding of the facilitators of positive transition will inform the invention and application of school transition programs.

Introduction

The transition to secondary school is a significant and defining period for adolescents, as this stage coincides with the onset of puberty and requires them to adapt to an unfamiliar environment (Anderson et al., 2000; Education Review Office, 2012a; Killebrew, 2017; Rens, Haelermans, Groot, & Brink, 2017). Previous research has shown that the developmental changes associated with puberty are linked with many adverse academic, psychological, social, and behavioral outcomes, including school failure and mental illness (Brooks, Harris, Thrall, & Woods, 2002; Kelleher, McInerny, Gardner, Childs, & Wasserman, 2000; Kessler et al., 2005); ostensibly, adolescents aged 10 to 15 years are most likely to face these challenges (Education Review Office, 2012a). For example, Simons-Morton, Crump, Haynie, and Saylor (1999) indicated that mental disturbance and delinquent behaviors escalate as adolescents enter secondary school. Beyond the individual-level impacts, it is sensible to focus on 10- to 15-year-olds because mental ill-being poses a considerable burden on society (Rens et al., 2017). Issues associated with this stage of adolescence may also perpetuate the anxiety accompanying the change of school.

While most adolescents are excited about the new secondary school experience, with its increased freedom and friendships, they can be anxious about the academic burden involved, peer approval, bullying by seniors, and having multiple teachers and less teacher scaffolding (Department of Education, 2013; Hanewald, 2013; Hawk & Hill, 2004; Killebrew, 2017; Mizelle & Irvin, 2000; Rens et al., 2017). A large body of evidence has found that an adolescent's level of difficulty during the transition to secondary school is strongly linked with negative outcomes (Benner, 2011; Hanewald, 2013; Rens et al., 2017; Waters, Lester, Wenden, & Cross, 2012). These can include dropping out of school (McGee et al., 2004); experiencing discipline problems (Weldy, 1990), depression (Newman et al., 2007), or anxiety and loneliness (Benner & Graham, 2009); or declines in achievement and academic performance (Alspaugh, 1998; Barone, Aguirre-Deandreis, & Trickett, 1991; Rice, 2001), school attendance, self-image, future achievements (Ashton, 2008; Barone et al., 1991; Dinham & Rowe, 2009; West et al., 2010), and wellbeing (Benner, 2011). In fact, the highest frequencies of discipline referrals and school dropouts occur during this transition phase (Donegan, 2008). Following a sample of 100 adolescents transitioning from Year 8 at primary school into secondary school, a 2010 study by the Ministry of Education noted that NZ teachers had more concerns about deteriorations in adolescent's behavior and progress after the secondary school transition than when the same adolescents had been in primary school (Ministry of Education, 2010). Another study with a sample of over 2,000 Scottish adolescents demonstrated that difficult transitions at age 11 predicted psychological distress two and four years later (West et al., 2010). Even though some adolescents may feel well-adjusted in the early weeks at secondary school, transition problems can occur and recur throughout the first year of secondary school (Ministry of Education, 2010).

While the transition to secondary school occurs at different ages in different countries (and sometimes even within the same country), the same pattern of decline in achievement has been reported for any type of transition (McGee et al., 2004). Some countries have a three-tier school system (e.g., NZ and the US), where a majority of students attend intermediate schools between primary and secondary schools and make two transitions. In other countries, such as Australia, secondary schools follow full-primary schools (usually covering Years 1–6 or 7) (Corsi-Bunker, n.d.; Department of Foreign Affairs and Trade, n.d.; McGee et al., 2004; Ministry of Education, 2009). Grade organization (the number of school years accommodated by a school) within these schools also varies within and across countries (McGee et al., 2004). In the US, the transition to secondary school occurs at 13 or 14 years of age (Murdock, Anderman, & Hodge, 2000), while in the UK it happens at age 11 (Rice, Frederickson, Shelton, et al., 2011). In NZ, adolescents move to secondary school (which usually covers Years 9–13) at the age of 12 or 13 years, after spending Years 7 and 8 at an intermediate school (Ministry of Education, 2009). Regardless of the type of transition, the change of school invariably affects attainment (McGee et al., 2004). There is also some evidence that adolescents who make a transition twice (from primary to intermediate and intermediate to secondary, as in NZ) experience an achievement drop twice (Alspaugh, 1998). Therefore, transition appears to be a catalyst for lack of success and fulfilment in adolescents, particularly in NZ due to its three-tier system.

The reported declines in adolescents' academic performance and motivation are not solely a function of puberty but also the change of school (Eccles & Midgley, 1989), and the interaction between these periods can result in a high level of complexity for NZ adolescents. At least 20% of young New Zealanders have experiences that lead to long-lasting unfavorable consequences, particularly depression (Science Advisory Committee, 2011). A NZ Youth Health Survey reported that 38% and 28% of secondary school female and male adolescents, respectively, experienced a depressed mood most of the day and 21% and 10%, respectively, had thought about committing suicide in the previous year (Clark et al., 2013). Further, the Ministry of Education (2010) found that the transition from intermediate to secondary school was disconcerting for all adolescents and for 10% of them, this phase was academically and socially arduous. This finding is significant, as around 25,000 adolescents make this transition every year (Ministry of Education, 2018b).

Part of what makes school transition difficult are the striking organizational and social discontinuities between intermediate or primary school settings and secondary school (Anderson et al., 2000). Secondary schools are larger, less protective, more impersonal, and more academically demanding than primary schools (Ng-Knight, 2015). Since the systematic transition to secondary school occurs at the same time as the developmental transition resulting from puberty (Anderson et al., 2000), adolescents have to negotiate more transition events simultaneously, which raises the likelihood of negative consequences for them such as declines

in grade point average (GPA) and reduced extracurricular participation (Simmons et al., 1987). To avert these negative outcomes, focusing on enhancing positive outcomes for this age group becomes imperative.

Given the challenges and concerns associated with adolescence and school transition, the secondary school transition phase should be a leverage point for targeted programs that ensure a positive transition and strengthen adolescent wellbeing (Benner, 2011; McIntosh & White, 2006; Rice, Frederickson, Shelton, et al., 2011; Riglin et al., 2013). The evidence suggests that the successful navigation of the transition phase promotes adolescent wellbeing and success (Rutter, 1989; Vitaro & Tremblay, 2008). Thus, school transition is not only a period of abrupt change and vulnerability but also offers a window of opportunity to enable adaptation (Ng-Knight, 2015). An exploratory study of the perspectives of school leaders, educators, and adolescents in NZ revealed that the middle school years (Years 7–10) of schooling, in particular, are a significant point of intervention for later scholastic success (Durling et al., 2010). Transition researchers have argued that programs for supporting positive transition need to be grounded in a comprehensive, whole-school approach to be effective (Anderson et al., 2000; Rice, Frederickson, Shelton, et al., 2011). However, the question remains: what is needed to develop extensive programs that not only reduce harmful outcomes but also encourage achievement and wellbeing across transitions?

Generally, there are two elements of an effective transition program: support and preparedness (Anderson et al., 2000). Preparedness to transition is usually an outcome of competencies that are central to wellbeing, whereas support underpins wellbeing (Symonds, 2015). For example, McGee et al. (2004) showed that the secondary school transition is characterized by a period of adaptation that varies as per the needs and skills of adolescents. While ample literature exists on the significance of social, emotional, and informational support from parents, peers, and teachers in easing the transition experience, much less is known about the individual competencies or skills that boost positive transition (Anderson et al., 2000; Hanewald, 2013; Rens et al., 2017; Rice, Frederickson, Shelton, et al., 2011; Shoshani & Slone, 2013). For example, McGee et al. (2004) concluded that school transition programs in NZ manage the social aspects of transition well. Prior visits, orientation programs, and peer-support programs are common; however, these programs have shown little success (McGee et al., 2004; Science Advisory Committee, 2011), perhaps because of a lopsided focus on support. In their sample of adolescents from Christchurch schools, Hawk and Hill (2004) found that many adolescents lacked the competencies and skills that may be crucial for coping with the adversity related to the transition and the successful navigation of the secondary school transition. Further, there is a mismatch between the way positive transitions look and the aspects that are suggested to promote positive school transitions, with a key difference pertaining to the lack of focus on building competencies in the latter (Education Review Office, 2012a; Ministry of Education, 2010). There are barely any positive initiatives in place that also focus on "preparing" adolescents to cope with transition, since much

of the area-specific findings are scattered. Further, very few studies have examined the broad factors that promote a positive transition to secondary school and primarily, what is meant by "positive school transition" is also unclear.

Positive transition: Explaining school transition from a positive education perspective

Despite the extensive literature available on the transition from intermediate to secondary school, there is an absence of a uniform definition of positive transition. Although scholars agree that positive school transition is a multidimensional construct that measures how effectively adolescents adapt to another school, no consensus exists on the criteria of this assessment (Ng-Knight, 2015). For example, divergent criteria have been proposed for measures of unsuccessful transition, such as poor mental health (Chung, Elias, & Schneider, 1998), reduced school commitment (Hirsch & Rapkin, 1987), and declines in academic attainment (Chung et al., 1998; Rosenblatt & Elias, 2008). Indicators of positive school transition are reported as behavioral and academic adjustment, school bonding (Ng-Knight, 2015), academic achievement and engagement (Hanewald, 2013; Zendarski, Sciberras, Mensah, & Hiscock, 2016), mental health (Evans, Borriello, et al., 2018), and wellbeing (Riglin et al., 2013). While some of these indicators are usually based on a disease-based paradigm and, in part, focus on the vulnerabilities of adolescents (Chung et al., 1998; Ng-Knight, 2015), a small number of recent efforts have tried to understand transition from a strengths perspective. For example, Tuckwiller and Dardick (2015) examined transition in secondary school children with disabilities, utilizing a framework based on positive psychology. Similarly, Higgins (2015) utilized a strengths focus in an exploratory, mixed-method sequential study and determined four factors, common to the stakeholders, that assisted adolescents with learning support needs, as well as their parents and teachers, during the transition from primary to secondary schools. These were taking accountability for the process of transition, building meaningful relationships, strategic knowledge and practice, and provision of timely support. Even though these themes might not be designated targets for transition-related programs, the influence of positive psychology in understanding transition is evident.

Drawing on the strengths-focused literature, this review explains positive school transition from a positive education perspective. Green et al. (2011, para 2) defined positive education as "applied positive psychology in education." Positive psychology is the scientific study of factors that enable people and societies to live a productive, satisfying, and thriving life (Peterson, 2006; Seligman, 2011a; Seligman & Csikszentmihalyi, 2000). Seligman and Csikszentmihalyi (2000) asserted that while a great deal is known about pathology and remedying mental illness, major advances in the prevention of difficulties have mostly arisen from fostering strengths and systematically building competencies. There is evidence that individual resources act as a buffer against adversity and enable individuals (including adolescents) to flourish (Proctor et al., 2011; Seligman & Csikszentmihalyi, 2000; Seligman, Schulman, DeRubeis, & Hollon, 1999; Shoshani

& Slone, 2013; Taylor, Kemeny, Reed, Bower, & Gruenewald, 2000); thus, understanding transition from a positive perspective is a promising approach.

Bott et al. (2017) defined positive education as the integration of academic learning with the education of strategies that promote wellbeing and prevent ill-being. By enhancing adolescent wellbeing along with best-practice learning and teaching, schools are believed to foster positive relationships in adolescents, improve academic engagement, and increase positive emotions (Norrish, 2015). Furthermore, equipping adolescents with the tools they need to flourish makes them resilient and prepares them to overcome challenging situations. This notion of resiliency can explain why some adolescents suffer and others remain immune to transition-related stress (Symonds, 2015). Unfortunately, however, attempts at recognizing the synergy between positive school transition and positive education are scarce. Only recently have positive psychology practitioners provided a workable definition of post-school positive transitioning as a collection of "strengths and virtues that enable individuals and communities to thrive when undertaking the process or period of change from one state or condition to another" (Brown, 2017, n.p.). Similarly, here, positive school transition is referred to as knowledge and factors that enable adolescents to thrive while making a move from one school to another. There are two notable features of this definition: a) a key criterion for measuring positive school transition is adolescent wellbeing, and b) certain factors facilitate adolescent wellbeing and success.

Meaning of wellbeing and a conceptual framework of positive school transition
A dominant feature of positive school transition is wellbeing, which is a key aspect of complete mental health. It is a well-known fact that complete mental health is more than the absence of pathology and it includes positive states of wellbeing in individuals (Keyes, 2005; Suldo & Shaffer, 2008). The concept of wellbeing is vague. There is no consensus around a single precise definition of wellbeing and hundreds of dimensions of wellbeing exist in the literature. For instance, a review identified 196 different dimensions of wellbeing with some of the themes as global wellbeing, psychological wellbeing, social wellbeing, and physical wellbeing (Linton, Dieppe, & Medina Lara, 2016). While there is substantial heterogeneity across the definitions and dimensions of wellbeing, there is general agreement in the majority of the present scholarly work that wellbeing is a multidimensional concept (Durie, 1985; Huppert, Baylis, & Keverne, 2005; Keyes, 2013) characterized by positive emotions toward one's life (i.e., happiness, life satisfaction, and affect equilibrium), positive psychological functioning, and positive social functioning. This definition encompasses the current understanding of wellbeing as comprising aspects of emotional wellbeing (or hedonic/subjective wellbeing) and psychological and social wellbeing, conjointly referred to as eudaimonic wellbeing (Huppert & So, 2013; Keyes, 2007, 2013; Norrish, Williams, O'Connor, & Robinson, 2013; Westerhof & Keyes, 2010). This explanation integrates the social, psychological, and emotional wellbeing components (Keyes, 2013). However, these components are not consistent in popular wellbeing models (Hone, Jarden,

Schofield, & Duncan, 2014) that have also not captured aspects that are central to lay individuals conceptualizations of wellbeing (Bharara, Duncan, Jarden, et al., 2019; Hone, Schofield, & Jarden, 2015). Besides, the current models of wellbeing are deficient because of the lack of focus on spiritual and physical dimensions. For example, while Keyes (2005) emphasized social, psychological and emotional aspects in his model, he did not stress the role of physical wellbeing.

In contrast, Mason Durie introduced a holistic model of wellbeing, Te Whare Tapa Whā, the Māori (indigenous people of New Zealand) perspective of wellbeing. Durie (1985) explained cogently that wellbeing or "hauora" (the Māori perspective of health and wellbeing in NZ) is a comprehensive concept that is composed of not only psychological and social dimensions but also physical and spiritual dimensions. He compared hauora with the four walls of a house (whare) and defined the four cornerstones of wellbeing as "taha tinana" (physical wellbeing), "taha hinengaro" (psychological wellbeing), "taha wairua" (spiritual wellbeing) and "taha whānau" (social wellbeing). He said that social wellbeing denotes close, harmonious relationships and physical wellbeing means looking after the body. While psychological wellbeing comprises both thoughts and feelings, spiritual wellbeing means spiritual awareness and "is not synonymous with regular church-going or strong adherence to a particular denomination" but "implies a communion with the environment; land, lakes, mountains, reefs [which] have a spiritual significance" (Durie, 1985, p. 483). Figure 2-1 illustrates Durie's model of wellbeing.
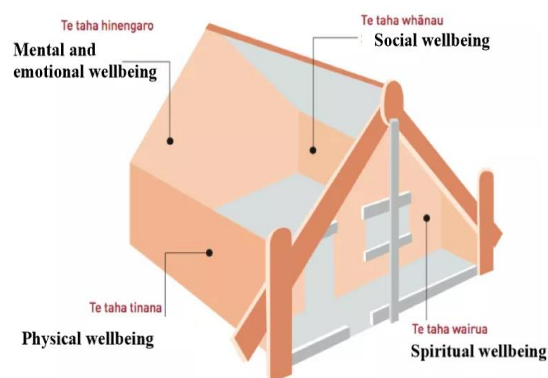
Figure 2-1. Te Whare Tapa Whā; adapted from the Ministry of Education (1999)

A model that is often used in school transition research is Bronfenbrenner's Development Ecological Model, which focuses primarily on the contexts in which adolescents operate, rather than on their strengths. This model suggests that the different environments surrounding an individual simultaneously act upon the person and interact to influence and shape their

development over time. These nested systems are presented in a hierarchical order based on importance and influence. Whilst the effects of the environmental context have been emphasized, this model has been criticized for ignoring the central role of individual competencies and skills that may allow people to cope effectively with an adverse situation and even thrive during critical times. Instead of empowering individuals by exploring what they can do to realize their optimum potential and deal effectively with difficult transitions in life, this model focuses on many external factors at several levels and therefore, is less feasible from an implementation perspective. For example, categorizing factors that facilitate positive transitions in hierarchical order is difficult and considering each environmental factor that may affect an individual's development may not be practical for devising interventions (Christensen, 2016). Similarly, Benner (2011) analyzed the phase of secondary school transition with the developmental lens of the life course paradigm, which also focuses on individuals' settings rather than their skills.

Since there was no suitable model for the relationship between school transition and wellbeing, and a host of factors can improve positive school transition (Rice, Frederickson, Shelton, et al., 2011), a comprehensive conceptual framework of positive school transition is presented in the current study. This framework is underpinned by Durie's model of wellbeing. Specifically, six factors—social, psychological, spiritual, school, physical, and demographic—are proposed to facilitate positive transition. Relative to Durie's model of wellbeing, the term *social* is used in place of family and the psychological factors encompass behavioral aspects as well as thoughts and feelings. School and demographic factors are included, in recognition of their potential impact on successful adaptation to a new school (Education Review Office, 2012a), as well as their relevance to adolescents.

A review reported that there is little differentiation between dimensions and predictors of wellbeing (Linton et al., 2016). For instance, some components of theoretical and conceptual models of wellbeing such as positive family relationships are also understood as aspects of fostering wellbeing. Having positive family relationships is a predictor of wellbeing (Lampropoulou, 2018), but popular academic models of wellbeing also list positive relationships as one of the key components (Hone et al., 2014). This overlap between factors that define versus promote wellbeing is in part due to the ambiguity prevailing in the concept of wellbeing. The likely causes of this ambiguity are the differing definitions of wellbeing and variability in the dimensions of wellbeing, as discussed earlier (Linton et al., 2016). Owing to the lack of agreement in the definition of wellbeing, there are no definite criteria, as yet, to disentangle predictors and dimensions of wellbeing. Therefore, the conceptual framework of this research is aligned with the conceptualization of wellbeing for organizing the predictors of positive school transition. Although Te Whare Tapa Whā is the model of four dimensions of wellbeing (Durie, 1985), it has also been equated with Five Ways to Wellbeing: Connect, Be Active, Take Notice, Keep Learning, and Give (See Mackay, Egli, Booker, & Prendergast, 2019). One way to separate

predictors and dimensions of wellbeing is to conduct research in a rational and objective manner and to ensure that the measure of wellbeing is independent of its expected predictors. For example, if a measure of physical activity is assessing an individual's perceptions of participation in sport, the wellbeing measure should assess one's satisfaction with general health.

Overall, this section has discussed the meaning and models of wellbeing and presented a conceptual framework of this thesis that can help in organizing and interpreting factors that predict positive school transitions. In the next section, the relevance of wellbeing as a criterion of positive transition is discussed.

Wellbeing as an indicator of positive school transition

There are three main arguments in favor of the pertinence of wellbeing as an indicator of positive school transition. A high level of wellbeing (or flourishing) in adolescents has both short-term and long-term positive behavioral and academic implications, such as better stress management, school satisfaction, school success, relationships, and educational attainment (Dix, Slee, Lawson, & Keeves, 2012; Forrest, Bevans, Riley, Crespo, & Louis, 2013; Norrish, 2015; O'Connor et al., 2016; Suldo et al., 2011; Suldo & Shaffer, 2008). Adolescents with high wellbeing are more engaged in schoolwork, earn higher grades, and are more connected with teachers than those who have less wellbeing (Forrest et al., 2013). In addition, wellbeing has positive associations with the school-specific indicators of positive transition, such as academic achievement (O'Connor et al., 2016). Capitalizing on this information, the conceptual framework of this study borrows considerably from wellbeing science, which forms the basis of positive education (Bott et al., 2017).

Using wellbeing as the indicator of positive transition is meaningful in the NZ context as well (Education Review Office, 2016a). A report by the Education Review Office (2015c) highlighted the importance of focusing on adolescent wellbeing in secondary school. The Education Review Office (2012a) affirmed that an adolescent's reaction to school transition depends on their personal resources and coping skills. It is clear that the Education Review Office (2012a) aspects of positive transition and their desired outcomes for wellbeing (2015c) share some similarities (see Table 2-1). For example, the desired outcomes for wellbeing, "feeling safe and secure" and "sense of belonging," are comparable to the aspects of positive transition, "physically and emotionally safe" and "feeling of belonging to the new school." Similarly, "connection to the school, family, friends, and the community" is similar to the aspect of positive transition, "positively connected to peers and teachers." The aspects of positive transitions outlined in the Education Review Office (2012a) report are not based on empirical research but rather, on the evaluation of previous reports. The scientific value of these transition aspects could be determined by empirical studies of factors that may improve positive school transitions.

Table 2-1. Aspects of positive transitions and outcomes for wellbeing

Aspects of positive transitions (Education Review Office, 2012a)	Desired outcomes for wellbeing (Education Review Office, 2015c)
• Feeling of belonging to a new school • Positively connected to peers and teachers • Physically and emotionally safe • Involvement of families • Teachers understand students' culture and identity • Teachers know students' strengths and show interest • Understanding and commitment • Making progress • Sense of purpose • Learning is interesting and fun • Opportunities to try new things • Responsive curriculum and challenging learning	• Sense of belonging • Connection to school, family, friends, and the community • Safe and secure at school • Nurtured and cared for by teachers at school • Achievement and success • Resilience • Social and emotional competence • Physically active • Included, involved, engaged and making positive contributions • Confident in their identity and optimistic about the future

Factors facilitating a positive transition to secondary school

The idea of positive school transition implies that some factors help adolescents to move through the period of transition with ease. However, much school transition research has focused on risk factors for maladjustment rather than on protective factors (Shoshani & Slone, 2013). Barriers to positive school transition, such as problem behavior, gender, pubertal status, and low academic achievement, have been identified (Darmody, 2008; Rice, Frederickson, Shelton, et al., 2011). A wealth of school transition literature has widely analyzed distress, difficulties and concerns related to transition (Akos & Galassi, 2004b; Forrest et al., 2013; Newman et al., 2007; Smith, 2013; Weiss, 2001) rather than wellbeing. Even though some studies have examined or discussed the facilitators of transition (Killebrew, 2017; Lester & Cross, 2015; Madjar & Chohat, 2017) and/or have taken a positive psychology perspective (Higgins, 2015; Tuckwiller & Dardick, 2015), they have either taken a piecemeal view of these factors (Lester & Cross, 2015; Madjar & Chohat, 2017; Ng-Knight, 2015; Ng-Knight et al., 2016; Serbin, Stack, & Kingdon, 2013; Waters, Cross, & Shaw, 2010; Xia, Fosco, & Feinberg, 2016) or studied transition in late adolescents or adults (Chen & Page, 2016; Martinez, Martin, Liem, & Colmar, 2012; O'Connor et al., 2016) or a disability population (Higgins, 2015; Tuckwiller & Dardick, 2015; Zendarski et al., 2016). While a recent study reviewed the features and interventions that contribute to a positive transition, its search strategy primarily focused on the participation of children in the transition process, rather than on the comprehensive factors that ensure positive school transition (Rens et al., 2017). Similarly, while Hanewald (2013) presented a creditable review of the difficulties related to transition from primary to secondary school, the emphasis of the search was not on factors that promote a positive transition to secondary school. In sum, there was a need to review the factors that enhance the school transition experience.

Hence, the aim of the present review was to identify empirical research on the facilitators of positive transition to secondary school systematically, with wellbeing as the key criterion of

evaluating positive transition. Six factors (social, psychological, spiritual, school, physical, and demographic) were utilized to interpret and organize the disparate findings. Taking a positive education perspective, only factors that promoted the school transition experience were reviewed.

Methods

The literature search was performed on the following electronic databases: PsycINFO, ERIC, CINAHL, MEDLINE (via EBSCO) and SCOPUS using a combination of keywords: "school transition", "wellbeing", "secondary school", "adolescent", and "factors". Since wellbeing is a relatively new concept, related keywords ("happiness" and "satisfaction") were used in the search, along with other measures of positive transition, namely "academic achievement" and "adjustment" (see Table 2-2). Search strategies were devised with the help of experts with database-searching skills and the searches were peer reviewed. The search results were not limited by any criteria.

The articles were eligible for evaluation if they examined predictors, determinants, factors, or facilitators of successful transition to secondary school. Other inclusion criteria were related to the publication date (2000–2018), sample age (10–15 years), country of origin (OECD member countries), study design (quantitative), and language (English). Further, only articles published in peer-reviewed journals were considered for evaluation. Studies that did not meet the inclusion criteria were excluded. For example, qualitative studies were excluded on the grounds of less generalizability, less objectivity, and small samples. In addition, the articles that examined mental ill-being or indicators of unsuccessful transition were not included. Studies regarding programs and interventions were excluded, as these were not relevant to the purpose of the current study. Studies involving gifted children, immigrants, or special-needs children were eliminated because of their focus on specialized groups. In recognition that different countries have different school systems (e.g., there is more school mobility in NZ than in other countries), greater emphasis was given to the age range, rather than the type of transition. In other words, all studies evaluating secondary school transition with the relevant sample age were included, to expand the search results. Citations in the identified literature were scanned to identify further potential studies.

A substantial part of the current study was conducted and reported as per the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) statement (Liberati et al., 2009).

Table 2-2. Literature search strategy

Main search item	Related keywords	Combination of search items
School transition	School change, school entry, high school entry	"school transition*" OR "school change" OR "school ent*" OR "highschool ent*" **AND**
Wellbeing	Well-being, flourish, happiness, satisfaction	Wellbeing OR flourish* OR "well-being" OR happiness OR satisfaction OR "academic achievement" OR "academic performance" OR bonding OR adjustment
Secondary school	Middle school, junior high school, high school, intermediate school	"Intermediate school" OR "middle school" OR "junio?r high school" OR "secondary school" **AND**
Adolescent	teenager, student, young person	Adolescent OR teen* OR student OR "young person" OR "young people" **AND**
Predictors	Factors, determinants, variable, role	Factor OR determinant OR variable OR role OR predict*

Analyses

The articles were evaluated in three stages, as per the eligibility criteria. In the first stage, each database was searched and 555 records were identified. To narrow these search results, duplicates were eliminated, followed by articles published before the year 2000 and/or in a language other than English. The second stage involved screening the titles and abstracts of the remaining records and excluding those that did not meet the inclusion criteria, such as studies focusing on disabilities, distress, interventions, adults, older adolescents, qualitative analysis, and early childhood transition. Following the second assessment, the full texts of the retained studies were assessed for eligibility in Stage 3 ($N = 37$). Due to ineligibility or disparity between the title and the text (e.g., studies that examined depression, rather than wellbeing as declared in the title), 15 more studies were excluded, leaving 22 articles in the final sample. Figure 2-2 illustrates the stages of analysis.
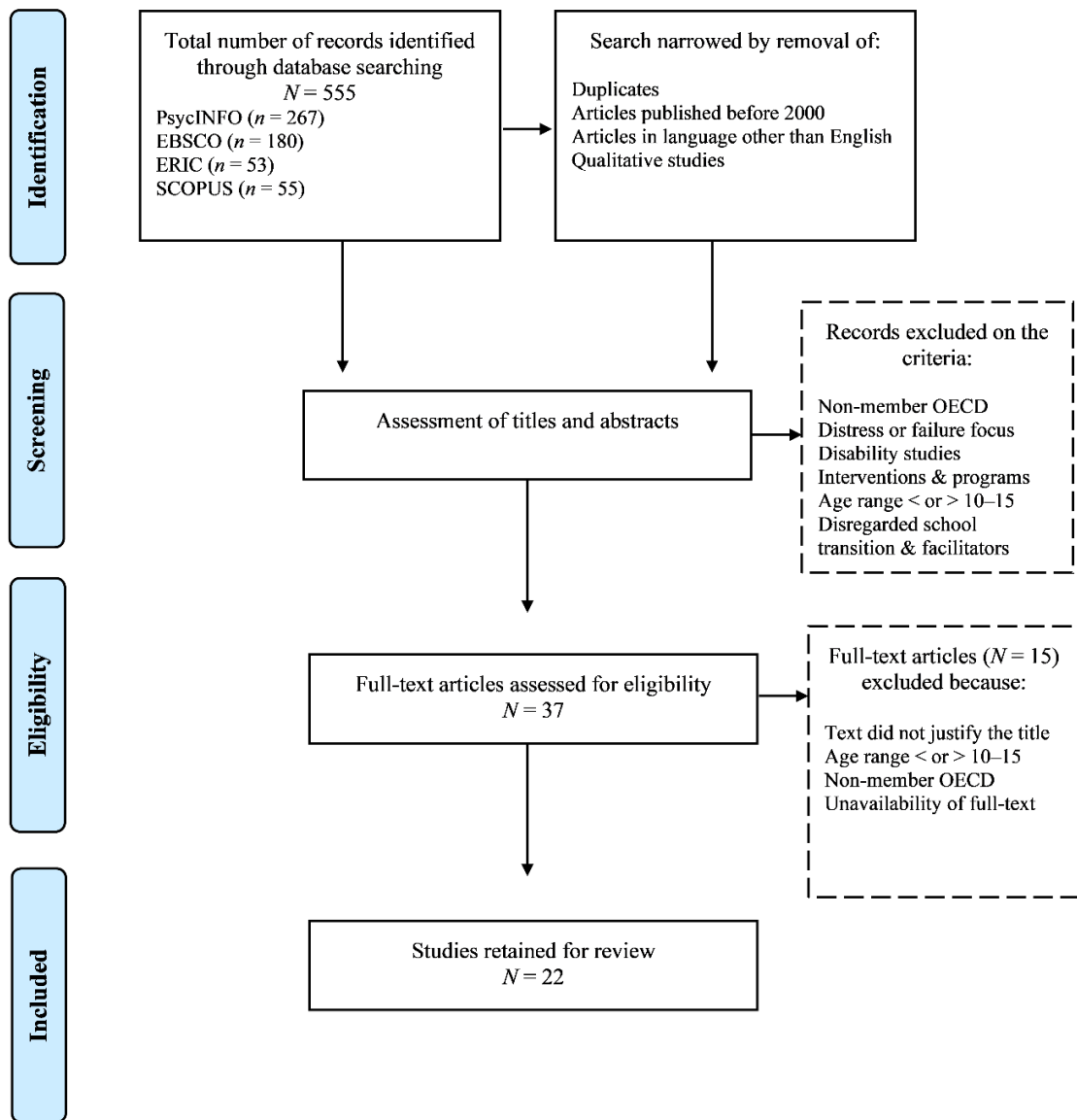
Figure 2-2. Stages of analysis

The characteristics of the studies were assessed systematically and deductively, and data regarding the study's focus, sample, design, measures, analysis, and findings were extracted and compiled into a table. The number of citations each article received, together with the quality of peer-reviewed journals in which they were published, was checked. A narrative approach was utilized to identify and aggregate the predictors of positive school transition under the conceptual framework.

Risk of bias in the studies was only assessed at outcome level, utilizing checklists from two tools: the Quality Assessment Tool for Observational Cohort and the Cross-Sectional Studies and Critical Appraisal Skills Programme Cohort Study (Critical Appraisal Skills Programme, 2018; National Heart Lung and Blood Institute, 2014). While the guidance from these assessment tools was combined for the purpose of evaluating bias in the sample, most of the criteria for quality rating were obtained from the tool for observational studies. In total, 12 criteria were deemed

integral (e.g., clearly defined research question, sample representativeness, sample size justification, repeated assessment, loss to follow-up, measures, and timeframe). Each of these criteria was assigned a response (yes/no/other) that depicted whether a study satisfied the requirements of quality. Numerical ratings were not assigned to responses for reasons of subjectivity; only an overall marker was assigned for quality. If a study met nine or more criteria, it received a good rating. A fair rating was assigned when five to eight criteria were fulfilled and studies that met only four or fewer criteria received a poor rating. A rating of "poor" generally indicated a considerable risk of bias in a study, whereas "fair" and "good" ratings indicated moderate and less risk of bias, respectively. The risk of bias was evaluated by the candidate only.

Results

The search yielded 555 results, of which 22 studies met the inclusion criteria and were reviewed. Table 2-3 displays the characteristics (authors, year, theme, sample, type of school transition, country, design, quality, measures, statistical analysis, and outcome facilitators) of these 22 studies. Only six longitudinal studies examined the transition from intermediate to secondary school and the remaining studied the transition from primary to secondary school or junior high school. The bulk of studies identified in the review came from the US (13) and the remaining were from Australia (2), Canada (2), Israel (2), Italy (2), and the UK (1). The design of most of the studies was longitudinal (18), with the data drawn from either field research or archives and large projects. While the sample sizes were diverse, surveys were utilized frequently to collect the data. With respect to the positive transition indicator, only two of them examined wellbeing (9.09%); the remainder studied either academic achievement, school adjustment, or school involvement. Within the 22 studies, there was substantial variation with respect to the facilitators of transition, some of which were related to peers (5), family (4), teachers (2), and extracurricular activities (2). Figure 2-3 illustrates the facilitators of positive school transition integrated within the conceptual framework of social, school, spiritual, psychological, physical, and demographic factors. The quality rating of the studies was as follows: good, 5; fair, 15; and poor, 2. Table 2-4 provides information regarding the procedure of bias assessment.

Table 2-3. Characteristics of the studies

Author and year	Theme	Sample size (*N*) final W	Age (years)	Transition & Year level	Design (quality)	Measure	Statistical analysis	Country	Outcome facilitators	Google scholar article citations (as of Dec 2018)
Aikins, Bierman, and Parker (2005)	Friendship characteristics, friendship quality, self-system characteristics, and adjustment	111	*M* 12.4	Elementary to junior high school; 6 to 7	Longitudinal (F)	Questionnaires	SEM	US	*Social skills and friendship quality* predicted transition adjustment.	135
Akos and Galassi (2004a)	Gender, race, and psychosocial adjustment (transition difficulty and school connectedness)	173, 320	NS	High school and middle school; 6 and 9	NS (P)	Questionnaire	ANOVA	US	*Gender* was significant for school connectedness in both transitions, but a significant difference for race was observed only in transition difficulty.	180
Benner, Boyle, and Bakhtiari (2017)	Personal characteristics (gender and parent education level), support from family, school, and friends, academic outcomes, and socioemotional adjustment	252	*M* 14.4–15.6	Middle to high school; 8 to 9	Longitudinal (F)	Surveys and school records	Repeated-measures ANOVA, ANCOVA, and path analyses SEM	US	*Friend support and school belonging* were positively associated with socioemotional functioning. School belonging increased school engagement.	6
Bohnert, Aikins, and Arola (2013)	Organized activity involvement, social adjustment, peer status, and depression	151	12–14	Middle to high school; 8 to 9	Longitudinal (F)	Questionnaires and sociometric procedures	Multiple regression and mediation models	US	*Organized activity involvement* was associated with less distress and having more friends.	27
Hair and Graziano (2003)	Big five personality traits, self-esteem, achievement, and adjustment	244	NS	Middle to high school; 5 to 8	Longitudinal (F)	Self-ratings, teacher ratings, and school records	Multivariate regression models and SEM	US	*Personality traits* were positively related to academic success and adjustment.	135
Kingery and Erdley (2007)	Peer acceptance, quality and quantity if friends, adjustment, and school involvement	146	*M* 11.1–11.7	Elementary to middle school; 5 to 6	NS (F)	Questionnaires, sociometric rating scale, and limited nomination procedures	Repeated-measures MANOVA and regression	US	*Peer acceptance, friendship quality and quantity* positively predicted school involvement.	128
Kingery, Erdley, and Marshall (2011)	Peer acceptance, friendship quantity, academic achievement, self-esteem, and adolescents' adjustment	365	*M* 11.2–11.8	Elementary to middle school; 5 to 6	Longitudinal (G)	Questionnaires, scales, and student files	Hierarchical regression analyses and repeated-measures MANOVA	US	*Peer acceptance* was positively related to academic achievement.	218

Author and year	Theme	Sample size (*N*) final W	Age (years)	Transition & Year level	Design (quality)	Measure	Statistical analysis	Country	Outcome facilitators	Google scholar article citations (as of Dec 2018)
Lester and Cross (2015)	Mental and emotional wellbeing, and school climate (safety, social relationships, and school connectedness)	1800	11–14	Primary to secondary school; NS	Longitudinal (F)	Questionnaires	Regression	Australia	*Peer support, feeling safe at school, and school connectedness* were protective of mental and emotional wellbeing. *Teacher connectedness* was protective of emotional wellbeing.	37
London and Castrechini (2011)	Physical fitness and academic achievement	1325, 1410	NS	NS; 4 to 7 and 6 to 9	Longitudinal (F)	Physical fitness test, and other standardized tests	HLM	US	*Physical fitness* was a predictor of academic achievement.	136
Longobardi, Prino, Marengo, and Settanni (2016)	Student–teacher relationships, school adjustment, and problem and prosocial behaviors	122	13–15	Middle to high school; 8 to 9	Longitudinal (F)	Questionnaires	Correlational and regression analyses	Italy	*Perceived teacher closeness* increased academic achievement, whereas perceived conflict with teachers significantly predicted conduct problems.	30
Madjar and Chohat (2017)	Self-efficacy, engagement, and mastery goal orientation	128	11–12	Elementary to middle school; 6 to 8	Longitudinal (P)	Surveys	SEM (path analysis)	Israel	*Self-efficacy* (social aspects) predicted behavioral and emotional engagement after the transition.	6
Maltais et al. (2017)	Learning climate, parental attachment, academic competence, gender differences, and anxiety	627	*M* 11.8	Elementary to middle school; 6 to 7	Correlational (F)	Surveys	Latent structural modeling	Canada	*Attachment security to the mother* predicted academic competence.	7
Riglin et al. (2013)	Psychological functioning, academic attainment, and school liking	202	*M* 11.3–11.8	Secondary school; 7	Longitudinal (F)	School records and questionnaires	Cross-lagged models	UK	*School liking* significantly predicted academic attainment.	44
Rogers, Guyer, Nishina, and Conger (2017)	Sibling support, birth order, sibling gender, and school commitment	444	*M* 12.6–15.6	Middle to high school; 7 to 10	Longitudinal (F)	Questionnaires	Confirmatory factor analyses, latent growth curve analyses, and SEM	US	*Sibling support* positively predicted school commitment. *Having an older brother* moderated this relationship.	1
Roosa et al. (2012)	Family and individual strengths, risk factors, and academic success	711	*M* 10.4	Elementary to junior high school; 5 to 7	Longitudinal (G)	Surveys	SEM	US	*Having positive family role models and a parent with a high school education* was associated positively with academic performance. *Gender* predicted academic success.	35

Author and year	Theme	Sample size (*N*) final W	Age (years)	Transition & Year level	Design (quality)	Measure	Statistical analysis	Country	Outcome facilitators	Google scholar article citations (as of Dec 2018)
Schneider, Tomada, Normand, Tonci, and Domini (2008)	Social support, school bonding, and academic motivation	434	*M* 9.9–11	Elementary to middle school; 5 to 6	Longitudinal (F)	Questionnaires	Repeated-measures ANOVA and multiple regression analyses	Italy	*Parental social support* enhanced academic motivation and school bonding.	45
Schwartz, Cappella, and Seidman (2015)	Extracurricular participation and school performance (or grades)	554	*M* 11.3	Elementary to middle school; 5 or 6–7 and 8	Longitudinal (F)	Survey	Exploratory factor analysis and mixed model (random plus fixed effects)	US	*Extracurricular participation* (specifically athletic and community participation) was positively associated with academic performance.	12
Sebanc, Guimond, and Lutgen (2014)	Friendship quality, academic achievement, mastery goal orientation, and bilingual status	114	*M* 11.2	Elementary to middle school; 5 to 6	Longitudinal (G)	Surveys	ANOVA and SEM	US	*Bilingual status* positively predicted academic achievement, while friendship quality did not predict achievement.	6
Serbin et al. (2013)	Family resources, gender, academic performance, supportive parenting, social skills, spelling ability, delinquency, and attention problems	127	*M* 10.9	Elementary to secondary school; 7 to 8	Longitudinal (G)	Standardized measures, questionnaires, and school records	Hierarchical regression	Canada	Low family resources influenced academic performance negatively. *Parental support* consistently predicted better post-transition academic performance.	45
Shoshani and Slone (2013)	Character strengths, wellbeing, school performance, school achievement, and social functioning	417	*M* 12.6	Elementary to middle school; 7 to 8	Longitudinal (F)	Questionnaires and teacher reports of GPAs	Bivariate correlations and multiple regression analyses	Israel	*Character strengths* were a strong predictor of academic attainment, performance, social functioning, and subjective wellbeing.	116
Waters et al. (2010)	School ecology and school connectedness	5159	12–14	Secondary school; 8 to 9	NS (G)	Survey	Multi-level regression analyses	Australia	*School ecology*, SES, and built-in environment were significantly associated with school connectedness.	39
Xia et al. (2016)	Family climate, school attachment, academic success, school adjustment, and academic self-regulation	979	*M* 11.3–14.9	Middle to high school (Year 6 through 9)	Longitudinal (F)	Questionnaires	Cross-lag SEM	US	*Academic self-regulation* strongly predicted academic success and *school attachment* was positively associated with school adjustment.	15

Abbreviations: W, Wave; ANCOVA, analysis of covariance; ANOVA, analysis of variance; HLM, hierarchical linear modeling; MANOVA, multivariate analysis of variance; SEM, structural equation modeling; NS, not specified; *M*, mean.
Study quality rating: (P), Poor; (F), Fair; (G), Good.

Table 2-4. Assessment of risk of bias in studies

Author and year	Research question (clearly defined)	Sample (clearly defined)	Participation rate of at least 50%	Sample representativeness	Sample size justification	Exposure assessed prior to outcome	Exposure levels	Sufficient timeframe	Measures*	Repeated assessment	Loss to follow-up 20% or less	Controlled confounders	Quality rating*
						Criteria							
Aikins et al. (2005)	Yes	Yes	Yes	NR	No	Yes	No	Yes	Yes	Yes	Yes	No	Fair
Akos and Galassi (2004a)	No	Yes	Yes	Yes	No	No	CD	NA	No	NA	NA	NR	Poor
Benner et al. (2017)	Yes	Yes	NR	No	No	Yes	Yes	No	Yes	Yes	No	Yes	Fair
Bohnert et al. (2013)	Yes	No	NR	No	No	Yes	No	Yes	Yes	Yes	No	No	Fair
Hair and Graziano (2003)	Yes	Yes	NR	Yes	No	Yes	NR	Yes	No	Yes	No	Yes	Fair
Kingery and Erdley (2007)	Yes	Yes	Yes	No	No	Yes	CD	Yes	No	Yes	Yes	NR	Fair
Kingery et al. (2011)	Yes	Yes	Yes	No	No	Yes	CD	Yes	Yes	Yes	Yes	Yes	Good
Lester and Cross (2015)	Yes	No	Yes	No	No	Yes	No	Yes	No	Yes	Yes	Yes	Fair
London and Castrechini (2011)	Yes	Yes	NR	Yes	No	CD	NR	Yes	Yes	Yes	NR	Yes	Fair
Longobardi et al. (2016)	Yes	No	NR	No	No	Yes	No	Yes	Yes	Yes	No	No	Fair
Madjar and Chohat (2017)	No	No	Yes	CD	No	Yes	No	Yes	No	Yes	No	No	Poor
Maltais et al. (2017)	No	Yes	NR	Yes	No	CD	No	No	Yes	Yes	NR	Yes	Fair
Riglin et al. (2013)	Yes	No	NR	No	No	Yes	No	No	Yes	Yes	No	Yes	Fair
Rogers et al. (2017)	Yes	Yes	Yes	No	No	CD	No	Yes	No	Yes	Yes	Yes	Fair
Roosa et al. (2012)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Good
Schneider et al. (2008)	Yes	No	Yes	NR	No	Yes	No	Yes	No	Yes	Yes	Yes	Fair

	Criteria												
Author and year	Research question (clearly defined)	Sample (clearly defined)	Participation rate of at least 50%	Sample representativeness	Sample size justification	Exposure assessed prior to outcome	Exposure levels	Sufficient timeframe	Measures*	Repeated assessment	Loss to follow-up 20% or less	Controlled confounders	Quality rating*
Schwartz et al. (2015)	Yes	Yes	No	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Fair
Sebanc et al. (2014)	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Good
Serbin et al. (2013)	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Good
Shoshani and Slone (2013)	Yes	Yes	NR	CD	No	Yes	No	Yes	Yes	Yes	Yes	NR	Fair
Waters et al. (2010)	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Good
Xia et al. (2016)	Yes	Yes	No	No	No	CD	No	Yes	Yes	Yes	No	Yes	Fair

* Measures rating based on four sub-criteria: clear description, reliability, validity, and objectivity.

CD, cannot determine; NR, not reported; NA, not applicable.

*Quality Rating: Poor (1–4 Yes); Fair (5−8 Yes); Good (9–12 Yes).

Discussion and Implications

Much of the school transition research has examined transition-related difficulties or factors that impede transition (Shoshani & Slone, 2013). Far less research has focused on factors that promote a positive school transition. Guided by a positive education perspective, this systematic review aimed to identify the facilitators of a positive transition to secondary school. This examination illuminated the overarching facilitators of school transition in addition to identifying the lack of intermediate school transition literature in relation to wellbeing. The findings were effectively categorized into a comprehensive conceptual framework for positive school transition (see Figure 2-3).
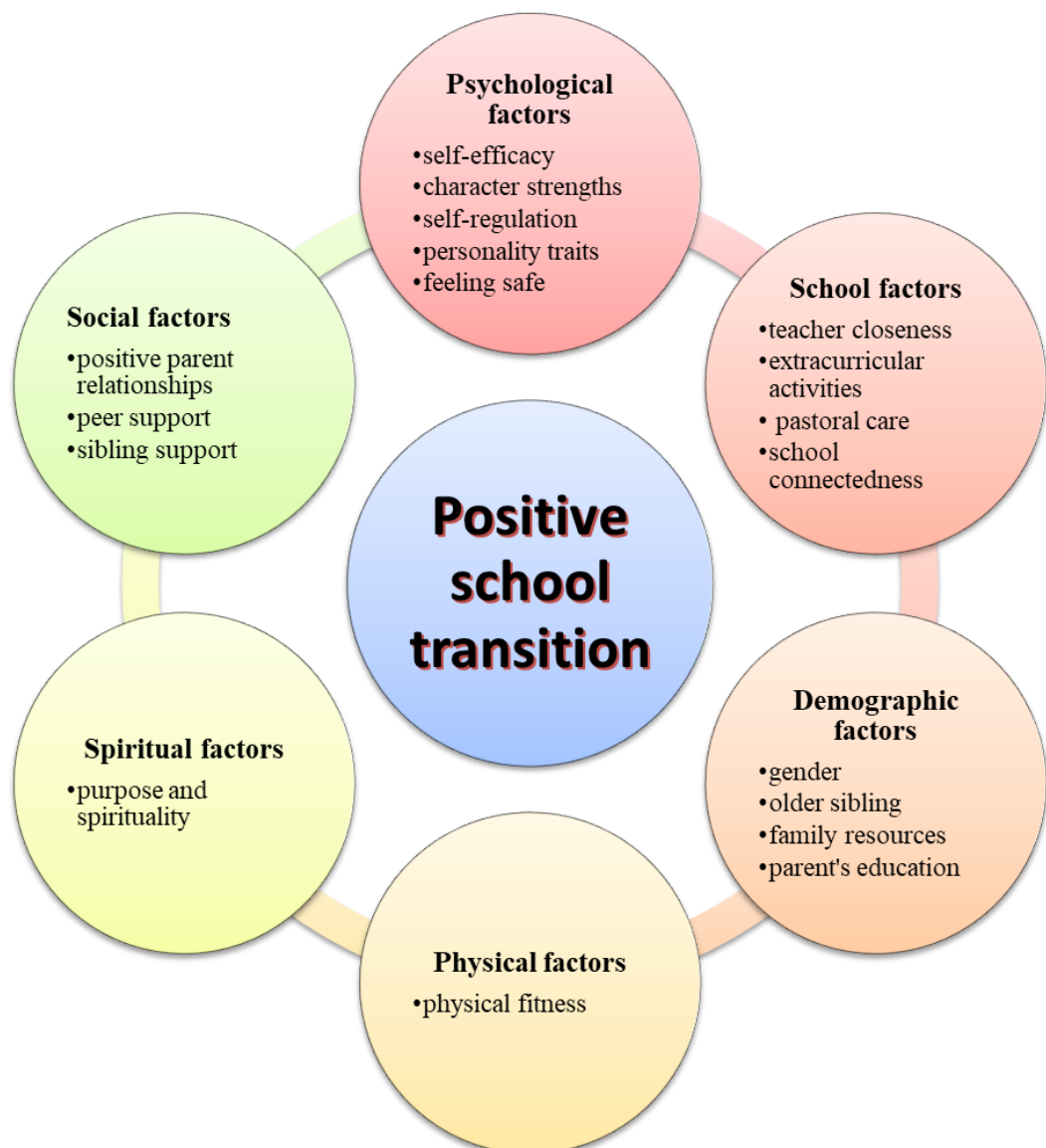
Figure 2-3. Factors influencing a positive transition to secondary school, based on the literature review

Social factors

While the distress-focused literature showed that reduced social support results in poor health outcomes such as depression (Newman et al., 2007), the current review found evidence that positive relationships are robust facilitators of transition success for adolescents. In fact, social factors were the most researched factors in the transition literature and the relationships with peers and family (including parents and siblings) were central in this regard. In terms of family relationships, Schneider et al. (2008) determined the significance of parents' support for greater school bonding and academic motivation. Furthermore, positive family role models, supportive parenting, and perceived attachment security to the mother promoted adolescents' academic competence and performance over the course of school transition (Maltais et al., 2017; Roosa et al., 2012; Serbin et al., 2013).

A primary explanation of these outcomes is that familial support not only inoculates adolescents against negative outcomes such as emotional problems (Duchesne, Ratelle, Poitras, & Drouin, 2009) but also strengthens them to better tolerate stressful events such as school transition (Hanewald, 2013). The relationships with the peer group were found to facilitate school success as well. For example, Kingery and Erdley (2007) demonstrated that peer acceptance and quality of friendships, as well as their quantity, predicted school involvement in American early adolescents. Similarly, Aikins et al. (2005) found the role of social skills and friendship quality salient in successfully adjusting to school post transition. Although friendship quality predicted goal-mastery orientation, quality of friendships and quantity of friends did not predict academic achievement (Kingery et al., 2011; Sebanc et al., 2014). However, peer acceptance positively correlated with academic achievement through school transition (Kingery et al., 2011) and negative friendship quality lowered academic achievement (Sebanc et al., 2014). A comparison of family and peer support showed that family support is more essential than peer support for adolescents' school bonding and academic motivation (Schneider et al., 2008), which is one of the interesting findings of this review. While support from friends did not promote school bonding and motivation across school transition (Schneider et al., 2008), it bolstered mental and emotional wellbeing in adolescents in Australia (Lester & Cross, 2015) and socioemotional functioning of adolescents in the US (Benner et al., 2017).

Support from siblings was the least researched in the transition literature. Only one empirical study demonstrated the positive association of sibling support with school commitment across intermediate to secondary school transition (Rogers et al., 2017). In sum, social factors such as support from parents, peers (more than friendship quality and quantity), and siblings are salient predictors of school-specific indicators of positive school transition equivalent to existing empirical evidence (Hanewald, 2013). Future research is recommended to investigate further the role of older siblings in enhancing wellbeing during the transition.

Psychological factors

The research on the psychological factors promoting positive transition was limited. One study each was found showing the value of five psychological variables during school transition: self-efficacy, self-regulation, personality traits, feeling safe, and character strengths. In a longitudinal study in Israel, Madjar and Chohat (2017) proved that self-efficacy or belief in one's abilities is central to school engagement after school transition. Moreover, various studies have shown an association of adolescent's self-efficacy with many positive outcomes such as wellbeing, learning, and motivation (Schunk & DiBenedetto, 2014). In another longitudinal study of transition from intermediate to secondary school, academic self-regulation was recognized as a significant facilitator of academic achievement and adjustment (Xia et al., 2016). Similarly, possessing personality traits of agreeableness and openness facilitated achievement and adjustment in school (Hair & Graziano, 2003). Parenthetically, it is noteworthy that self-regulation has been hypothetically related to self-control, which has also been previously associated with life satisfaction, academic success (Boals, Vandellen, & Banks, 2011), emotional wellbeing (Ronen, Hamama, Rosenbaum, & Mishely-Yarlap, 2016), and national prosperity (Science Advisory Committee, 2011). A temperance strength, self-regulation, also strongly and positively predicted subjective wellbeing, school performance, and achievement, whereas intellectual and interpersonal strengths resulted in cognitive achievement and social functioning, respectively, at school (Shoshani & Slone, 2013). Finally, adolescents' intrinsic feelings of safety at school enhanced their mental and emotional wellbeing over time (Lester & Cross, 2015). Developing programs and interventions that reinforce these skills can mentally toughen adolescents to deal with the transition.

Spiritual factors

Other character strengths essential for positive transition were transcendence (e.g., spirituality and purpose), which were strong predictors of adolescent's subjective wellbeing and emotional adjustment to school (Shoshani & Slone, 2013). Some of these strengths, such as "spirituality," which has been defined as engaging in "meaningful reflection and introspection" (Norrish, 2015, p. 267), have numerous positive outcomes for adolescents (Moore & Lippman, 2005), such as improved coping ability and academic learning (Kim & Esquivel, 2011). Similarly, having a positive purpose, defined as "believing in and serving something greater than the self, and deliberately engaging in activities for the greater good" (Norrish, 2015, p. 255), was found to be crucial for wellbeing. A lack of purpose or meaning in life was positively related to psychological distress but negatively related to life satisfaction and resilience (Schulenberg, Smith, Drescher, & Buchanan, 2016). Not only "possessing" these strengths is linked with wellbeing (Oppenheimer, Fialkov, Ecker, & Portnoy, 2014; Shoshani & Slone, 2013), "using" personal strengths is also related with widespread benefits such as vitality, positive affect, wellbeing, greater self-esteem, and less stress (Wood et al., 2011), although these benefits of "strength use" are yet to be

investigated during transition. Overall, only one study (Shoshani & Slone, 2013) stressed the importance of spiritual variables as crucial for promoting a positive transition.

It is interesting to note, however, that the relationship of some popular psychological variables with positive school transition has been overlooked in the literature. For example, even though many scholars have advocated that mindful adolescents (either through temperament or training) experience greater wellbeing (Huppert & Johnson, 2010), how this psychospiritual variable, mindfulness, influences positive transition is still unknown. Considering this limitation, a useful avenue for future research would be exploring the impact of popular spiritual variables on wellbeing during the transition.

Physical factors

There are well-documented benefits of physical activity, good sleep and a healthy diet (Brand & Kirov, 2011; Kulkarni, Swinburn, & Utter, 2015; Moore & Lippman, 2005). However, in the current systematic review, only one variable appeared under the broad spectrum of physical health. In a study in the US, physical fitness predicted higher academic achievement in adolescents across school transition, which suggests the significance of possessing good overall physical health for transition success (London & Castrechini, 2011). While insufficient activity, sleep deprivation and an unhealthy diet have been related to unfavorable health outcomes (Moore & Lippman, 2005), it is surprising that there have not been any studies that have shown associations of these exclusively with wellbeing. Thus, researchers are advised to test empirically whether aspects of physical health may improve the transition to secondary school.

School factors

School factors have been researched extensively in the transition success literature. Specifically, perceived student–teacher relationships, school connectedness, and participation in extracurricular activities were identified as essential predictors of transition success. In addition, school ecology and climate (specifically feeling safe at school) were equally important predictors of a successful transition. In a study of the transition from Year 8 to Year 9, Longobardi et al. (2016) ascertained that perceptions of greater closeness to the teacher led to higher academic achievement over the course of school transition. Greater support from the teacher has also been accounted for in higher amounts of enjoyment, curiosity and effort in schoolwork (Moore & Lippman, 2005). Further, extraneous support from the teacher encouraged adolescents' academic involvement and achievement (Lester & Cross, 2015).

Another vital facilitator of positive transition is school connectedness. Lester and Cross (2015) established that connectedness with school strongly predicted wellbeing over the course of school transition in Australian adolescents. School belonging was also significant in increasing school engagement (Benner et al., 2017). Several scholars have discussed the power of school connectedness in contributing to better academic, behavioral, and mental health outcomes in

general (Hanewald, 2013; Waters et al., 2010). One study discussed the contribution of school ecology to school connectedness, with schools' pastoral care and the presence of graffiti enhancing adolescents' sense of connectedness to their school (Waters et al., 2010). There is also some evidence that liking one's school improves adolescents' academic attainment over time (Riglin et al., 2013). Interestingly, the evidence suggests that active engagement in extracurricular activities (especially in sporting, academic, and community-based activities) positively affects the academic performance and school adjustment of adolescents (Bohnert et al., 2013; Schwartz et al., 2015). Therefore, it is germane to note the significance of these school factors in fostering positive transitions.

Demographic factors

Five studies found that demographic factors (e.g., gender, birth order, race, family resources, and parents' education) were significant in determining adolescents' reaction to school transition. For example, the transition to secondary school in the US was found to affect boys' school functioning more negatively than that of girls (Benner et al., 2017). This could indicate that boys have greater difficulties than girls do in adjusting to a more academically demanding environment. However, boys were generally found to be more connected to their school after the transition to secondary school (Akos & Galassi, 2004a). Gender differences were also observed in academic performance (Serbin et al., 2013) and self-efficacy (Madjar & Chohat, 2017). Girls have been found to achieve better grades than boys across the transition to junior high school (Roosa et al., 2012), as well as feeling more connected to their school than boys after the transition to intermediate school. However, in one study, no differences in adjustment across transition were observed by gender (Kingery et al., 2011).

While low family income influenced academic performance negatively (Serbin et al., 2013), having a parent with at least high school education correlated positively with academic performance (Roosa et al., 2012). In a NZ context, a lower SES of adolescents lead to a decline in achievement and reading scores (McGee et al., 2004; Nicholson & Gallienne, 1999). Lower SES families in NZ were also less likely to attend prestigious schools and more likely to change schools because of lack of a permanent family home or work for parents (Hawk & Hill, 2004; Wylie & Chalmers, 1999). Together, these studies have significant implications for Māori and Pacific Island students in NZ who attend low-socioeconomic schools (Nicholson & Gallienne, 1999). Nevertheless, the way SES influences wellbeing during school transition is unknown. In relation to the transition to intermediate school, being bilingual had inconclusive results; one study showed that bilingual status predicted higher grades (Sebanc et al., 2014) and another showed no significant association with academic performance (Roosa et al., 2012).

Race has been associated with some difficulties in adolescents who are transitioning from intermediate school to secondary school, with Latinos in the US finding the transition more

challenging than Caucasian and African-American adolescents (Akos & Galassi, 2004a). Having an older sibling, specifically a brother, has been found to provide a buffer against this stress by promoting school commitment (Rogers et al., 2017). Thus, demographic variables deserve scientific attention to clarify their contribution to adolescent wellbeing during the transition.

Appraisal of bias

The quality assessment process revealed that the majority of studies (15) in this review had a moderate risk of bias. Most studies clearly defined the research question, study population, and measures. Given that a substantial number of studies were longitudinal in nature, self-report surveys were employed to collect data, which precluded objectivity in assessment. In addition, while studies reported reliability estimates relevant to their samples, about 86% did not report the validation of the measure. Some studies had attempted to make the study more objective by gathering parents', teachers', and friends' reports.

Another aspect that could have created bias in the research findings was the absence of exposure levels. For example, independent variables that could have been measured categorically (e.g., with categories low, high, and medium) were instead measured as continuous variables. The absence of categorical levels reduced the credibility of the associations generated between the outcomes and the predictors because the precise amount of variable that yielded an outcome (e.g., *how much* physical fitness or friendship quality) was uncertain (National Heart Lung and Blood Institute, 2014). Furthermore, some of the studies used dated data to examine their research question (Rogers et al., 2017; Schwartz et al., 2015). This reduced the rigor and reliability of the findings because, for example, the researcher had no control over the way the data were collected and the results may not have held true in the current scenario. Nonetheless, some of the strengths of these studies were repeated assessments, lower attrition rates, and allowing sufficient time to track the phenomenon of transition.

Summary of the findings, implications, and directions

In summary, perceived social support (parent support, peer acceptance, and sibling support) and school factors (perceived teacher support and school belonging) were found to be positively associated with transition success, consistent with previous reviews (McGee et al., 2004; Rens et al., 2017). Adolescents' involvement in extracurricular activities and school ecology contributed to positive transition as well. In general, social and school factors have been extensively investigated in the transition research; hence, they need to be reinforced in transition programs. While physical fitness, spirituality, and psychological factors (temperance, intellectual, interpersonal strengths, and having an agreeable and open personality) significantly predicted positive transition, only a limited number of studies had explored their significance in transition success. Similarly, the influence of demographic factors (e.g., having an older sibling) on positive transition has been barely assessed in the literature. Gender differences have been observed in

studies; however, future research should verify the relationship between gender and wellbeing during school transition. Furthermore, no conclusive results were found for the significance of bilingual status in positive school transition. Compounding these gaps, a correlational evaluation of the role of physical, psychological, spiritual, and demographic factors in transition success is warranted in future.

This review relied on the wellbeing theory to devise a novel conceptual framework to collate, organize, connect, integrate, and interpret the disparate findings on the broad facilitators of positive school transition. The findings suggested that besides external support from family, peers, and teachers, aspects that are personal to adolescents (e.g., feeling safe, physical fitness, character strengths, and self-efficacy) also support the transition to secondary school. This study not only provides empirical support for previous studies on perceived social support and some school factors (e.g., school belonging and teacher support), it also made some fresh contributions. To the best of my knowledge, no study has previously highlighted the significance of physical, spiritual, and psychological facilitators of school transition *on a comprehensive basis*. These facilitators represent valuable resources to prepare adolescents for transition and thus, may aid in realizing the objective of school transition programs. The preliminary findings of this study are a practical and all-inclusive guide for policymakers and school practitioners when devising extensive school transition programs, at least until transition and wellbeing researchers have developed a more solid model of transition success based on empirical research.

Limitations in the literature and directions for future research

The search made it apparent that the transition from intermediate to secondary school has received comparatively less attention than the transition from primary to secondary school. The reasons for this paucity of information could be either the non-existence of an intermediate school system in several countries or simply that researchers have discounted this cardinal phase of transition. Moreover, most research came from the US and researchers from other countries have only marginally studied the facilitators of positive transition. Surprisingly, no study from NZ appeared in the database. There were also no studies that examined wellbeing predictors over the course of the transition from intermediate to secondary school. Only two studies examined wellbeing during other types of school transition (Lester & Cross, 2015; Shoshani & Slone, 2013), which is a potential limitation of the current investigation, as wellbeing was regarded as an indicator of transition success. Second, the number of studies that were excluded in the initial stages of analysis were not computed and recorded. Another limitation is that only the candidate was responsible for data extraction, evaluation, selection, and quality assessment, which might pose a bias in the results. Even though the outcome at every stage was re-examined to ensure objectivity, the findings of the current study should be interpreted in light of these limitations, in addition to the potential bias in the reviewed studies.

Scholars in various parts of the world are advised to pay more attention to intermediate school transition and adolescents' wellbeing during this phase, as ignoring it can lead to life-altering consequences for adolescents. A greater understanding of the factors that enhance adolescent wellbeing during the transition from intermediate to secondary school would aid in imparting timely education to adolescents and their families regarding what could help with their successful transition. This enterprise would not only buffer adolescents against any negative influences but also make them independent in coping with future challenges.

Conclusion

The transition to secondary school is a crucial period for adolescents, as it not only defines their adaptation to their future school but also affects their overall wellbeing, which can have significant implications. Employing a positive education perspective, this review found further support for the role of social and school factors in school-specific or academic success and in facilitating a positive school transition. Some evidence regarding the value of largely unexplored psychological, physical, demographic, and spiritual factors was found to facilitate the transition to secondary school as well. There are significant gaps in the literature on the transition from intermediate to secondary school; research regarding the aspects that might enhance adolescents' wellbeing during this stage is particularly limited. It is hoped that the findings from this research will encourage and inform empirical studies and subsequently, positive school transition programs. Implementing comprehensive transition programs during the crucial period of secondary school transition can prepare adolescents in advance for the transition and thereby, ensure a smooth transition to secondary school.

CHAPTER 3: A PROTOTYPE ANALYSIS OF NZ ADOLESCENTS' CONCEPTUALIZATIONS OF WELLBEING

"Understanding the perspectives of children and youth is an important task in conceptualizing positive development. In addition, measuring positive and protective factors requires input from children and youth to ensure that the ideas, wording, response categories, and data collection methods employed are appropriate for use by children" (Lippman et al., 2014, p. 2852).

Preface

The above quotation articulates, in part, the motivation behind this study. There is a growing global and domestic recognition that adolescents must have a say in their wellbeing models, programs, and policies (Education Review Office, 2013; Education Services Australia, n.d.). However, most theoretical, conceptual, and promotional models of wellbeing are based on studies conducted on adults and little is known about the way adolescents define wellbeing and what they think promotes their wellbeing, especially in NZ. Placing adolescents as active research participants was also fundamental because the review of existing transition literature in Chapter 2 revealed significant gaps in knowledge regarding factors that facilitate wellbeing during the secondary school transition. Since in this research wellbeing is an indicator of positive school transition, it was logical to gain better clarity of adolescent understanding of wellbeing. The current study investigates NZ adolescents' meaning and sources of wellbeing, as well as the way adolescents' wellbeing conceptualizations vary as a function of SES. This chapter discusses how adolescent views are similar to, and different from, those of NZ lay adults' and academics' understandings of wellbeing. This chapter is the second of two studies that were undertaken with the intention of informing the predictor variables of this research. In addition, it provided the opportunity to develop more precise components of the survey instrument in Chapter 4, Part B of the preparatory phase. This chapter comprises the manuscript that is published in the International Journal of Wellbeing (Bharara, Duncan, Jarden, et al., 2019).

Abstract

This research investigated NZ adolescents' (aged 11 to 13, $N = 361$) perceptions of wellbeing from a prototype perspective. Specifically, three studies examined what constitutes and promotes wellbeing, whether adolescents' perspectives are aligned with adults' conceptualizations and academic models of wellbeing, whether SES influences adolescents' conceptualization, and whether wellbeing is prototypically organized. Results showed that wellbeing is prototypically organized, as some components are more central to the concept of wellbeing and others are more peripheral. Contrary to lay adults' conceptualizations and popular wellbeing models, adolescents consider enjoyment/having fun, feeling safe, and being kind/helpful as central components of wellbeing, and sense of satisfaction as a peripheral component of wellbeing. Furthermore, low-SES adolescents consider comfort/being wealthy, being focused, good physical health, good values, and success/achievements more central for wellbeing than high-SES adolescents. Consistent with the current literature, positive family relationships, positive friendships, and physical activity/sport were the most frequently reported pathways to wellbeing among adolescents. Overall, researchers and practitioners should consider adolescents' understanding of wellbeing in the development of wellbeing assessments and interventions.

Introduction

Over the last two decades, adolescent wellbeing has received increasing attention at macro and micro levels (Andresen, Bradshaw, & Kosher, 2019; Rees & Dinisman, 2015). The United Nations (1989) has declared wellbeing is a basic right for adolescents and that their views must be obtained in all matters that affect them. Both national and international governments, as well as adolescent wellbeing scientists, have emphasized the importance of greater participation of adolescents in conceptualizing wellbeing and considering adolescents' conceptions in wellbeing models, programs, and policies (Ben-Arieh, 2005; Ben-Arieh et al., 2014; Bourke & Geldens, 2007; Casas, 2011; Education Review Office, 2013, 2015c; Education Services Australia, n.d.; Fattore, Mason, & Watson, 2007; Ministry of Youth Development, 2004).

A lack in consensus over the conceptualizations of wellbeing is a potential impediment to the progress, as well as the precision, of wellbeing science. Researchers conceptualize wellbeing in distinct ways (Hone et al., 2014) and perceptions of adolescents are likely to differ to adults' (Fattore et al., 2007; Gilman & Huebner, 2003). Such differences in perspectives among researchers, adults and adolescents about wellbeing conceptualizations has significant implications for assessment and intervention (Ben-Arieh et al., 2014; Bourke & Geldens, 2007; Casas, 2011; Chaplin, 2009; Fattore et al., 2007). For example, school or positive education interventions have often been unsuccessful, potentially due to disparities between experts' and adolescents' notions (Bott et al., 2017; Cook, Kilgus, & Burns, 2018). Understanding adolescents' meaning and sources of wellbeing is therefore a critical question worthy of empirical investigation. Although adolescents are willing and capable to contribute (Andresen et al., 2019; Fattore et al., 2007; Sarriera & Bedin, 2017), extant wellbeing research has traditionally shown a bias towards adults. There is an inadequate understanding of what constitutes and promotes wellbeing for adolescents.

Wellbeing has been defined as individuals' evaluations and perceptions of the quality of their lives (Keyes, 2013), yet researchers have usually disregarded or discounted adolescents' perceptions regarding their own wellbeing (Casas, 2011). There are limited studies on adolescents' wellbeing, particularly in comparison to the extensive literature available on adults (Ben-Arieh, 2005; Blaskova & McLellan, 2017; Camfield, Streuli, & Woodhead, 2010; Casas, 2011). While there have been some emerging research efforts at obtaining adolescents' views of wellbeing in developed countries (Rees & Dinisman, 2015), to date, no study has examined the wellbeing conceptions of 11- to 13-year-olds in NZ. In addition, the scant empirical research in other countries is largely qualitative in nature (Chaplin, 2009; Crivello, Camfield, & Woodhead, 2009; Fattore et al., 2007). Due to the absence of quantitative evaluation of adolescents' wellbeing perspectives, it is unknown how the components of wellbeing may be arranged in adolescents' perceptions (i.e., which components are the most or least significant). Whether adolescents' components of wellbeing vary as a function of SES is also yet to be investigated empirically.

For the first time in New Zealand, the current study primarily aims to investigate the components of and pathways to wellbeing as per the perceptions of adolescents (aged 11 to 13) from low and high SES, utilizing a mixed-method approach. This study also provides a better understanding of how adolescents' conceptions of wellbeing are similar to, or different from, those of adults and researchers. Since adolescents are advisers of research work, understanding their perspectives may enable us to develop more accurate components of our assessment measures and frameworks of our cross-sectional and longitudinal studies. Understanding adolescents' conceptions may also help to enhance the overall precision, acceptability, and effectiveness of wellbeing interventions targeting this population. We first address the existing literature regarding academic and lay perceptions of wellbeing.

Research on conceptualizations and definitions of wellbeing

The concept of wellbeing is elusive. Presently, there is no global or agreed-upon definition of wellbeing (Baker, Green, & Falecki, 2017; Diener & Seligman, 2004). Several definitions of wellbeing exist in the academic literature (Diener, Scollon, & Lucas, 2003; Hone et al., 2014) that differ, in part, due to the variations in researchers' philosophical tradition. Researchers have theorized wellbeing as having components of the hedonic approach, comprising positive emotions toward one's life (i.e., happiness, life satisfaction, and affect equilibrium), the eudaimonic approach (comprising positive psychological and social functioning), and the current holistic approach, which integrates emotional/subjective, psychological, and social wellbeing (Keyes, 2013; Norrish et al., 2013).

Informed by these approaches, many academic models of wellbeing have been proposed that denote different conceptualizations of wellbeing (see Figure 3-1) (Diener et al., 2010; Durie, 1985; Keyes, 2005; Renshaw et al., 2014; Ryff, 1989; Ryff & Keyes, 1995; Seligman, 2011b; Westerhof & Keyes, 2010). For example, some components listed in Keyes (2005) model, namely social growth, positive affect, and personal growth, do not feature in Diener et al.'s (2010) model. Similarly, Seligman (2011b) identified five components of wellbeing in his PERMA model (positive emotion, engagement, relationships, meaning and purpose, and accomplishment), whereas Huppert and So (2013) proposed 10 components of wellbeing (including positive relationships, positive emotions, self-esteem, and emotional stability). One model of 12 positive psychology building blocks for adolescents is composed of four core components: belief-in-self, belief-in-others, emotional competence, and engaged living (Renshaw et al., 2014). Compounding such academic disagreements, making a choice among wellbeing models may present educators, psychologists, and researchers with a dilemma.

KEYES	HUPPERT & SO	DIENER et al.	SELIGMAN et al.
Positive relationships	Positive relationships	Positive relationships	Positive relationships
Positive affect (interested)	Engagement	Engagement	Engagement
Purpose in life	Meaning	Purpose and meaning	Meaning and purpose
Self-acceptance	Self-esteem	Self-acceptance and Self-esteem	–
Positive affect (happy)	Positive emotion	–	Positive emotion
–	Competence	Competence	Accomplishment/ Competence
–	Optimism	Optimism	–
Social contribution	–	Social contribution	–
Social integration	–	–	–
Social growth	–	–	–
Social acceptance	–	–	–
Social coherence	–	–	–
Environmental mastery	–	–	–
Personal growth	–	–	–
Autonomy	–	–	–
Life satisfaction	–	–	–
–	Emotional stability	–	–
–	Vitality	–	–
–	Resilience	–	–

Figure 3-1. Four different academic conceptualizations of wellbeing in Hone et al. (2014)

There have been empirical attempts to define wellbeing with greater accuracy by examining lay conceptions of wellbeing (Anderson & Graham, 2016; Chaplin, 2009; Fattore et al., 2007; Hone et al., 2015; Soutter, O'Steen, & Gilmore, 2012). Research on the lay conceptualizations of wellbeing has been conducted with affluent Caucasian adults or late adolescents (Hone et al., 2015; Soutter et al., 2012). Hone et al. (2015) demonstrated that NZ adults conceptualize wellbeing as good mental health, physical health, good relationships, work-life balance, and feeling valued. While the methodology of this study was systematic, the sample was predominantly European. Soutter et al. (2012) found that having resources, being independent, relating well with teachers, functioning effectively in assessment-related activities, and striving toward scoring credits were reported as the most important components for 17- to 21-year-olds' understanding of wellbeing.

More recently there has been a growth in qualitative studies on the perceptions of children and adolescents (Rees & Dinisman, 2015). In their study, Anderson and Graham (2016) asked 6- to 18-year-olds to rank two pre-defined concepts of wellbeing. Although the authors found support for recognition and participation as important components, the study was limited by their chosen

methodology, as the survey format restricted choice to two academic concepts of wellbeing and a free-response format was not employed to capture adolescents' views. Chaplin (2009) used an interview method and identified sports, hobbies, achievements, material things, and pets and people as what constitutes and promotes wellbeing of American adolescents (aged 8 to 18). Another qualitative study by Fattore et al. (2007) utilized task-oriented strategies to explore views of 8- to 15-year-olds in Australia and reported themes of agency, feeling secure, and a positive sense of self, and concrete themes of relationships, material resources, home, and physical environment. These authors also highlighted the need to study variations in perceptions across socioeconomic groups. While the above studies were conducted in developed countries, Crivello et al. (2009) examined children's and adolescents' wellbeing components in developing countries (e.g., Ethiopia and Peru), some of which were being joyful, wearing clean clothes, and having electronic goods. Overall, the literature signifies that wellbeing is a comprehensive concept characterized by several components that may vary as a function of a person's experience, age, and country. In the next section, we move beyond conceptualizations of wellbeing and review the research on pathways to wellbeing.

Pathways to wellbeing

Less attention has been paid to obtaining views of adolescents about ways to enhance wellbeing and involving them in the creation of promotional models and programs of wellbeing (Casas, 2011). In the context of wellbeing promotion of adolescents, the Geelong Grammar School's whole-school positive education model is focused on fostering positive purpose, positive relationships, positive emotions, positive health, positive engagement, and positive accomplishment within the school (Norrish, 2015). The Strath Haven Positive Psychology Curriculum program aims to strengthen relationships, meaning, positive emotions, and character strengths (Seligman, Ernst, Gillham, Reivich, & Linkins, 2009), while a 10-session Wellbeing Promotion Program focuses upon building hope, strengths, gratitude, optimism, and kindness in schools (Suldo & Savage, 2016). Public health messaging aimed to improving wellbeing has also come from government frameworks. For example, Aked, Marks, Cordon, and Thompson (2008) suggested Five Ways to Wellbeing: taking notice, being active, connecting with others, learning, and giving. Investigating pathways to wellbeing among NZ lay adults, Hone et al. (2015) found physical activity, nurturing relationships, interests/hobbies, and eating healthily as the most frequently reported. An examination of NZ adolescents' perceptions of ways to improve wellbeing is warranted, to address the lack of existing empirical data on this topic, which could have meaningful theoretical implications and practical advantages for organizations and individuals working with adolescents.

Importance of adolescents' wellbeing perceptions

Adolescents' understanding of wellbeing can inform the theory and application of wellbeing in schools. Adolescents' views may be useful in refining or validating researchers' models of

wellbeing and enhance the precision with which wellbeing is assessed (Bourke & Geldens, 2007). A greater understanding of adolescents' conceptualizations of wellbeing may also improve the efficacy of school interventions considering the "contextual fit" and "precision education" propositions (Cook et al., 2018; Horner, Blitz, & Ross, 2014). Precision education supports the idea that the key components of interventions should be tailored to individuals' needs and perceptions (Cook et al., 2018). Horner et al. (2014) defined contextual fit as the match between components of an intervention and the needs and perceptions of those who experience the intervention. How well a program is received or valued in a certain setting, or the social validity/acceptability of school interventions, is likely to depend on the opinions of adolescents who are directly affected by the program (Marchant, Heath, & Miramontes, 2012). It is potentially misleading for researchers to define adolescents' wellbeing without considering adolescents' viewpoints. The present study attempts to address this gap by investigating adolescents' conceptualizations of wellbeing, utilizing a prototype analysis methodology (Rosch, 1975).

A prototype analysis perspective

Prototype analysis is a mixed-method approach that has been established as an effective method of analysis for natural language categories, such as happiness, fear (Fehr & Russell, 1984), gratitude (Lambert, Graham, & Fincham, 2009), forgiveness (Kearns & Fincham, 2004), infidelity (Weiser, Lalasz, Weigel, & Evans, 2014), love and commitment (Fehr, 1988), and wellbeing (Hone et al., 2015; Jarden, Sandham, Siegert, & Koziol-McLain, 2018). This method assumes some components are more important or central to a concept and others are less important or peripheral. In a prototype approach, thus, all components of a concept are not equally representative of that concept, contrary to a classical view where category membership is determined by necessary, sufficient, and fixed criteria (Rosch, 1975). A prototype approach helps in identifying a "fuzzy collection" (Lambert et al., 2009, p. 1195) of the central components of a concept (also called *prototypes*) rather than identifying critical components(Lambert et al., 2009, p. 1195). For a comprehensive review of the strategy, read Fehr (1988) and Kearns and Fincham (2004).

Driven primarily by this approach, this study has drawn inspiration from Hone et al.'s (2015) research. They demonstrated that wellbeing is prototypically organized, using a sample of NZ teachers and lawyers. In addition, the current differences between different academic models of wellbeing indicates the components of wellbeing are not fixed (Hone et al., 2015) and "the boundaries of the notion of well-being are elastic" (Ben-Arieh et al., 2014, p. 3). Rosch (1975) listed two essential conditions of the prototype analysis method reflected in the current study: a) the participants should be able to list the features of the concept and reliably rate which components are more central to the concept, and b) the centrality rating of components should influence participants' perceptions of the concept.

The present study

The main research question of the present study was: What are the perceptions of NZ adolescents (aged 11 to 13 years) about the 1) components of wellbeing and 2) pathways to wellbeing? We also hypothesized that a) wellbeing will be prototypically organized in adolescents, and b) differing SES will be associated with adolescents' perceptions of the centrality of the components. We subsequently examined whether NZ adolescents' perceptions aligned with popular academic models and NZ adults' conceptualizations of wellbeing.

Methods

Overview of studies

Three studies were conducted to address the above aims. In Study 1, participants listed the components and pathways regarding wellbeing in free-response format. In Study 2, a different sample of participants rated the centrality (or importance) of the components generated in Study 1. Study 3 tested the hypothesis that central components of wellbeing were related more closely to perceptions of wellbeing than the peripheral components on a third sample of adolescents. The effect of socioeconomic differences was examined in all three studies.

Recruitment process for all studies and ethical considerations

The recruitment process involved emailing schools in Auckland, NZ with a study invitation. We used convenience sampling technique for recruitment, though preference was given to the school type (state intermediate schools with Years 7 and 8) and school socioeconomic decile. In New Zealand, school decile is a key measure of the school students' SES. Decile 1 draws the highest proportion of students from low-socioeconomic backgrounds, whereas Decile 10 draws the highest proportion of students from high-socioeconomic backgrounds (Ministry of Education, 2018a). Two state intermediate schools agreed to participate in the study: one Decile 1 and the other Decile 10. These schools were located in ethnically and socioeconomically diverse regions. The schools provided different classes for participant recruitment. From each class that was offered, we recruited only those students who assented to participate. There was no overlap in participants of the three studies and the participants of all three studies were recruited from the same schools. The data for Study 1 were collected between 7 May and 6 June 2017, for Study 2 between 25 June and 28 June 2017, and for Study 3 between 27 July and 31 July 2017.

Ethical approvals for all the procedures and materials were obtained from the Auckland University of Technology Ethics Committee (AUTEC; see Appendix A, Appendix B, and Appendix C). A meeting was held with the principals of participating schools to inform them about the study aims. The potential participants and their parents were given separate sheets informing them about the study's aim, importance, and procedure about two weeks prior to each study. The studies utilized anonymous surveys and involved minimal risk so parental consent was not sought; however, participants' assent was taken electronically before each study. A

registration system was used to collect participants' demographic information and assent. Participation in the study was by voluntary inclusion only and the parents could withdraw their children from participating in the study, or the students could leave on their own. University-branded pens were given to all the participants of each study as incentives.

Study 1: Free Listing and Compilation of Prototypic Wellbeing Components and Pathways to Wellbeing

The aim of the first study was to compile a list of wellbeing components and aspects aimed at enhancing wellbeing. Participants were first asked to list as many wellbeing components as they could think of. Second, they were asked to list all the aspects they thought fostered their wellbeing (i.e., their pathways to wellbeing). Both the questions utilized an open-ended response format.

Participants

The sample comprised 125 adolescents (65 boys and 60 girls) aged 11 (39%), 12 (55%) and 13 (6%) from Year 7 (46%) and Year 8 (54%) from two Auckland schools. Thirty-eight percent of participants were from a low-decile school (48 from Decile 1) and 62% from a high-decile school (77 from Decile 10). Approximately 53% of the sample was NZ European. The remaining participants were Māori (indigenous people, 11%), Pacific Islanders (18%), Asian (7%), and African/Middle Eastern (4%). Approximately 7% of participants indicated they were of mixed ethnicity.

Procedure

The survey was managed in-person by the candidate within school hours. Participants followed a web link on their school computers to register for the survey and provided their demographic details and assent. Those who submitted the registration form could subsequently access the electronic survey presented on the SurveyMonkey platform (SurveyMonkey, 2019). They were given the following verbal, and then on-screen, instructions in their respective schools (adapted from Fehr & Russell, 1984, Study 6; Hone et al., 2015):

> This is a study on what young New Zealanders of your age think of when they think of the word *wellbeing*. For example, if you were asked to list the components of fear, you might write: possible danger occurs, heart beats wildly, eyes open wider, the person runs as fast as they can. Similarly, if you were asked to write the components of sadness, you might write: becoming quiet and lazy, crying. In the current study, we are not interested in fear or sadness, but in the characteristics of wellbeing. Imagine that you are explaining the concept wellbeing to someone who does not know about wellbeing and answer the following question: What, in your opinion, are the components of wellbeing? There is no time limit. List as many as you can.

After the participants answered the above question, they answered an additional question on the same screen:

> What, in your opinion, enhances your wellbeing? Specifically, which factors in your life or particularly at your home, school, and society help in improving your wellbeing?

Analysis

A list of verbatim responses was prepared, only correcting for spelling. Adhering to the coding procedure outlined in Fehr (1988), two broad steps of analysis were undertaken, similar to prototype analysis research (Fehr & Russell, 1984; Hone et al., 2015; Kearns & Fincham, 2004; Lambert et al., 2009; Weiser et al., 2014). Note that these steps were assumed separately for components and pathways regarding wellbeing. The first step involved identifying and extracting monolexemic linguistic units that were distinct and easily recognizable, such as component responses "happy" and "joyful" and pathway responses "family" and "pets." When participants used a phrase, judgment was deemed necessary to decide whether a phrase conveyed one or multiple thoughts. For example, the responses "others don't put you down" or "joy in basic luxury such as running water" were judged to convey one thought and noted as individual linguistic units, whereas the responses "completing something or doing something right" and "having help when needed and treated well by others" were judged to convey two thoughts and retained as distinct components. Phrases were separated only in terms of meaning; the unit largely remained original.

The linguistic units preceded by attributive words, such as "lots of energy," were coded as a single item. For data organization, identical units were combined as one and their frequencies were noted. For example, all "games" responses were written only once in the list, with the frequency besides them. An elaborate reading of the text with a combined usage of word-frequency tools (tools that identify the number of times each word occurs in the text) facilitated unit identification. As an outcome, 551 component linguistic units were reduced to 203 after deleting duplicates, yielding an average of 4.40 components per participant (approximately 4.60 for high-decile school participants and 4.00 for low-decile school participants). For pathways, 565 linguistic units were reduced to 188, with each participant generating an average of 4.52 linguistic units (4.54 for low-decile group and 4.50 for high-decile group).

After mapping out the linguistic units and preparing separate lists for components and pathways, the units were allocated to a category. Single unique words were formed into independent categories. For example, the linguistic unit "being happy" was allocated to the category "being happy." Items that were similar in grammatical form and conveying the same meaning were classified under one category. Classifying similar units together aided in avoiding redundancy. For example, "being happy" and "happiness" were treated as a single component category. Also, words with similar meaning, such as "cheerful" and "joyful," were assigned to the same category

of "being happy." Concerning pathways, "my pets," "playing with my dog," and "having animals" were categorized under the pathway category of "pet ownership and attachment." Responses such as "beach" and "rain and sunlight make me feel warm and cozy" were collapsed into the category "nature." Responses were classified verbatim to depict adolescents' exact thoughts and maintain the authenticity of responses. For example, the unit "belief in your abilities" was categorized as "belief in your abilities." Responses such as "being loved" and "trying new things" were categorized as reported.

Besides following a conservative categorizing approach, a balance was maintained by combining similar units and keeping the non-similar ones separate. For instance, responses about pathways that included activities such as "dance," "cooking," and "reading" were headed under the category "hobbies/doing things that interest you." Although an activity *dance* may potentially enhance wellbeing, a broad categorizing approach was applied for locating key breadth strategies from an application point of view. However, instead of collapsing pathway responses such as "Netflix," "computer games," and "watching movies" to the category of "hobbies/doing things that interest you," a new category of "digital entertainment" was created. Some components necessitated examination of the adjoining words in the response. For example, the unit "healthy" was judged to be a part of the category "good physical health," as it followed or preceded the words with a physical dimension, such as "active and healthy" and "being healthy and fit." We have published the raw data online so readers can examine our judgments (Bharara, Duncan, & Jarden, 2018a, 2018b).

Since the participants were schoolchildren, an estimated 50% of linguistic units were associated either semantically or linguistically and were classed into the same component or pathway category. Judgment calls were validated by the third and fourth authors of this study and any discrepancies were resolved through discussion. Various responses were idiosyncratic; that is, they were mentioned by only one participant. Any component category that was listed by less than 2% of the sample (39 components) was discarded from further analysis to reduce the burden on Study 2 participants (who had to rank the centrality of these components). Similarly, pathway categories listed by less than 2% of the sample (47) were excluded from further analysis (Hone et al., 2015).

Results

Table 3-1 shows the 26 components of wellbeing sorted by Study 2 centrality ratings. The table displays the frequency of components (the number of times each component occurred in the text) and the participants' listing percentage of the components. Note that how frequently each component occurred in the text was different compared to the percentage of participants that mentioned a component. More than 70% of the sample listed being happy as a component of wellbeing, followed by being kind/helpful (35%), and good physical health (34%). Being focused

(2.4%), contentment/peace (3.2%), and being grateful (3.2%), were the least listed components. Table 3-1 also depicts the percentage of participants that listed each component from low- and high-decile schools. Both socioeconomic groups listed being happy as their most frequently reported component of wellbeing. While the low-decile school participants listed being kind/helpful second (56%), the component moved into third place for the high-decile school's participants (22%).

Figure 3-2 shows a word cloud that illustrates the 37 pathway categories of wellbeing. The size of the text in the figure is based on the participants' listing percentage. More than half of the adolescents thought that positive family relationships (60%) and positive friendships (55%) enhance their wellbeing. While 34% of the participants listed physical activity/sport, 30% listed hobbies/doing things that interest you as important pathways to wellbeing. Other important pathways were nature (17%), digital entertainment (16%), pet ownership and attachment (14%), being kind/helpful (14%), socializing, being around positive people (13% each), and healthy diet (12%). The mean of the participants' listing percentages was 10.8%. Both socioeconomic groups frequently listed positive family relationships, positive friendships, and physical activity/sport as pathways to wellbeing.

Table 3-1. Study 1 wellbeing components arranged by Study 2 centrality ratings

Component	Study 1 Frequency	Listing percentage % low decile	% high decile	% total participants	Study 2 Centrality rating	SD (s)
Being happy	130	70.8	74.0	72.8	9.03	1.51
Enjoyment/having fun	19	20.8	7.79	12.8	8.80	1.53
Feeling good	22	14.7	19.5	17.6	8.65	1.48
Feeling safe	20	10.4	13.0	12.0	8.63	1.76
Good mental health	14	8.33	11.7	10.4	8.47	1.73
Being kind/helpful	54	56.4	22.1	35.2	8.36	1.89
Belief in your abilities	7	4.12	6.49	5.60	8.25	1.74
Being respectful	19	27.0	5.19	13.6	8.23	1.93
Being respected/encouraged	9	6.25	6.49	6.40	8.21	1.72
Positive attitude/optimism	11	2.08	11.7	8.00	8.17	1.79
Self-confidence	7	2.08	7.79	5.60	8.12	1.94
Good values	5	2.08	3.90	3.20	8.07	2.04
Being grateful	4	2.08	3.90	3.20	8.02	2.06
Good relationships	26	12.5	13.0	12.8	7.95	2.29
Excitement	18	12.5	15.6	14.4	7.95	1.96
Good physical health	50	22.9	40.3	33.6	7.80	2.37
Good temperament/behavior	21	16.7	14.3	15.2	7.77	2.00
Success/achievements	7	4.12	6.49	5.60	7.75	2.27
Feeling calm and relaxed	9	6.25	6.49	6.40	7.74	1.90
Contentment/peace	4	0.00	5.19	3.20	7.70	1.92
Sense of satisfaction	9	2.08	9.09	6.40	7.15	2.08
Energetic	15	10.4	13.0	12.0	7.12	2.46
Being focused	3	0.00	3.90	2.40	6.75	2.33
Being expressive	6	4.12	5.19	4.80	6.57	2.34
Comfort/being wealthy	8	2.08	7.79	5.60	6.11	2.99
Absence of sadness	8	0.00	9.09	5.60	5.58	2.98

Figure 3-2. Adolescents' pathways to wellbeing

Discussion

Many responses were reduced to a limited number of components and pathways, comparable to the results of other prototype studies (Hone et al., 2015; Kearns & Fincham, 2004; Weiser et al., 2014). Three components appeared most frequently in the text: being happy, being kind/helpful, and good physical health. Only 5.6% of adolescents in the current study listed comfort/being wealthy as a component of wellbeing. These results are partially different to prior studies (Chaplin, 2009; Fattore et al., 2007). Another important observation was adolescents' listing of "feeling safe" in the present research, and in previous research (Anderson & Graham, 2016; Fattore et al., 2007). Components of wellbeing not discussed in the current academic models were evident; for example, being kind/helpful, good physical health, feeling safe, and enjoyment/having fun. The non-appearance of these components in academic models suggests that adolescents may have a different characterization of wellbeing.

Both socioeconomic groups frequently listed being happy, good physical health, and being kind/helpful as components of wellbeing. However, the listing percentages of some components varied. For example, the low-socioeconomic group mentioned good physical health considerably less than the high-socioeconomic group, whereas the high-socioeconomic group did not list enjoyment/having fun as much as the low-socioeconomic group. Hence, some influence of SES in the recall of wellbeing components was evident, which was further tested in Study 2.

Overall, the prototype of wellbeing includes beliefs, feelings, and actions. Participants listed cognitive states, mindsets, and beliefs such as contentment/peace, belief in your abilities, and positive attitude/optimism. Interestingly, actions were perceived as components of wellbeing such as being kind/helpful. Emotive states and feelings were also listed by the participants such as being happy and feeling good. Of importance is the holistic amalgamation of psychological, social, physical, spiritual, and demographic aspects in adolescents' perception of wellbeing, similar to our multidimensional understanding of the concept. This understanding is also comparable to Durie's (1985) Māori model of wellbeing, Te Whare Tapa Whā, which compares hauora (wellbeing) with the four walls of a house (whare) comprising four dimensions, namely taha tinana (physical health), taha hinengaro (mental health), taha wairua (spiritual health), and taha whānau (family).

The most frequently listed pathway to wellbeing was positive family relationships, followed by positive friendships and physical activity/sport, all of which are social and physical components. These findings resonate with wellbeing models such as the Geelong Grammar School model (Norrish et al., 2013), as well as previous research with adolescents on pathways to wellbeing (Chaplin, 2009). The government frameworks that identify Five Ways to Wellbeing (Aked et al., 2008; Mental Health Foundation of New Zealand, 2018) are also reflected in the current study in the following ways: *connect* (similar to positive friendships and positive family relationships),

give (similar to being kind/helpful), *be active* (similar to physical activity/sport), *keep learning* (similar to learning), and *take notice* (similar to nature). Surprisingly, adolescents did not list some pathways to wellbeing (e.g., mindfulness) that have been demonstrated to have a positive effect on wellbeing (Norrish, 2015). This omission suggests adolescents in the current study were uninformed about these pathways and they seemed to be more familiar with *tangible pathways to wellbeing* (e.g., sports, pets), which are clear-cut and straightforward to their understanding, rather than *intangible pathways to wellbeing* (e.g., mindfulness) which are abstract.

Study 2: Centrality Ratings of Wellbeing Components

The objective of Study 2 was to determine the centrality of Study 1 components. If a concept possesses a prototypical structure, the individuals should not only be able to list the components of a concept but also rate how central or peripheral each component is to their concept of wellbeing, with substantial agreement on these ratings. A different group of participants, thus, judged how important or unimportant each component previously identified in Study 1 was to their own concept of wellbeing, and their judgments were examined for agreement. The impact of socioeconomic decile on wellbeing components' centrality ratings was also examined.

Participants

The sample comprised 122 intermediate school students (65 boys and 57 girls) from Year 7 (39%) and Year 8 (61%), aged 11 (32%), 12 (57%), and 13 (11%), from two schools in Auckland. Thirty-four percent of participants were from a low-decile school (42) and 66% (80) were from a high-decile school. Approximately 56% were of European background, 13% were Māori, and 12% were Pacific Islanders. Some participants indicated that they were Asian (7%) or African (2%). About 10% of participants reported that they were of mixed ethnic background (including Māori European, Pacific Māori, or Pacific European). The demographic characteristics of these participants were comparable to the Study 1 sample.

Procedure

Participants filled in the registration details and accessed the online survey. Participants were given the following verbal and on-screen instructions within the school hours (adapted from Hone et al., 2015):

> In a previous study, we asked students of your school level to list the components of wellbeing that came to their mind when they thought of the word wellbeing. On the next page, you will read the responses of the students in our earlier study in alphabetical order. After reading each one, please rate how important or less important you think each component is to your understanding of wellbeing by clicking a number between 0 (an extremely poor component of wellbeing) to 10 (an extremely good component of wellbeing).

Analysis

Two measures provided evidence for the reliability of the means of ratings of 26 components. First, the intraclass correlation coefficient (ICC) was calculated, which is equivalent to the mean of all possible split-half correlations of the 122 judges with respect to 26 components (ICC = .910, $p < .000$, average measures), which showed excellent inter-rater reliability. Second, the data matrix was flipped (treating 26 components as cases and 122 participants as items), which also indicated an exceptionally high internal consistency of the ratings ($\alpha = 0.96$). Spearman's rank correlation coefficient was computed to examine the relationship between Study 1 listing percentages and Study 2 centrality ratings. A Mann-Whitney test was also conducted to examine whether school decile influenced the mean centrality ratings of the 26 components.

Results

Table 3-1 shows the mean centrality ratings of the components in descending order. The correlation between centrality ratings in Study 2 and participants' listing percentage in Study 1 was moderately positive ($r_{s\ (rho)} = 0.522$, $p < .01$ one-tailed). Nearly half of the components were listed frequently and given high centrality ratings (e.g., being happy), whereas some components that were frequently mentioned in Study 1 received a relatively lower centrality rating in Study 2 (e.g., good physical health). Figure 3-3 shows a scatterplot graph illustrating the relationship between Study 1 and Study 2 component rankings. For example, feeling good was ranked third in Study 2 but fourth in Study 1.

Significant differences exist in mean centrality ratings of five components as a function of school decile. Specifically, individuals in the low-socioeconomic group considered the following components more central for wellbeing than the high-socioeconomic group: *being focused* (8.00, 7.00, $p = 0.005$ $r = 0.260$), *comfort/wealthy* (7.50, 6.00, $p = 0.004$, $r = 0.260$), *good physical health* (10.00, 8.00, $p = 0.00100$, $r = 0.300$), *good values* (10.00, 8.00, $p = 0.005$, $r = 0.250$), and *success/achievements* (9.00, 8.00, $p = 0.004$, $r = 0.260$). Good physical health was associated with a medium effect size. The high-socioeconomic group did not consider any component more central than the low-socioeconomic group.
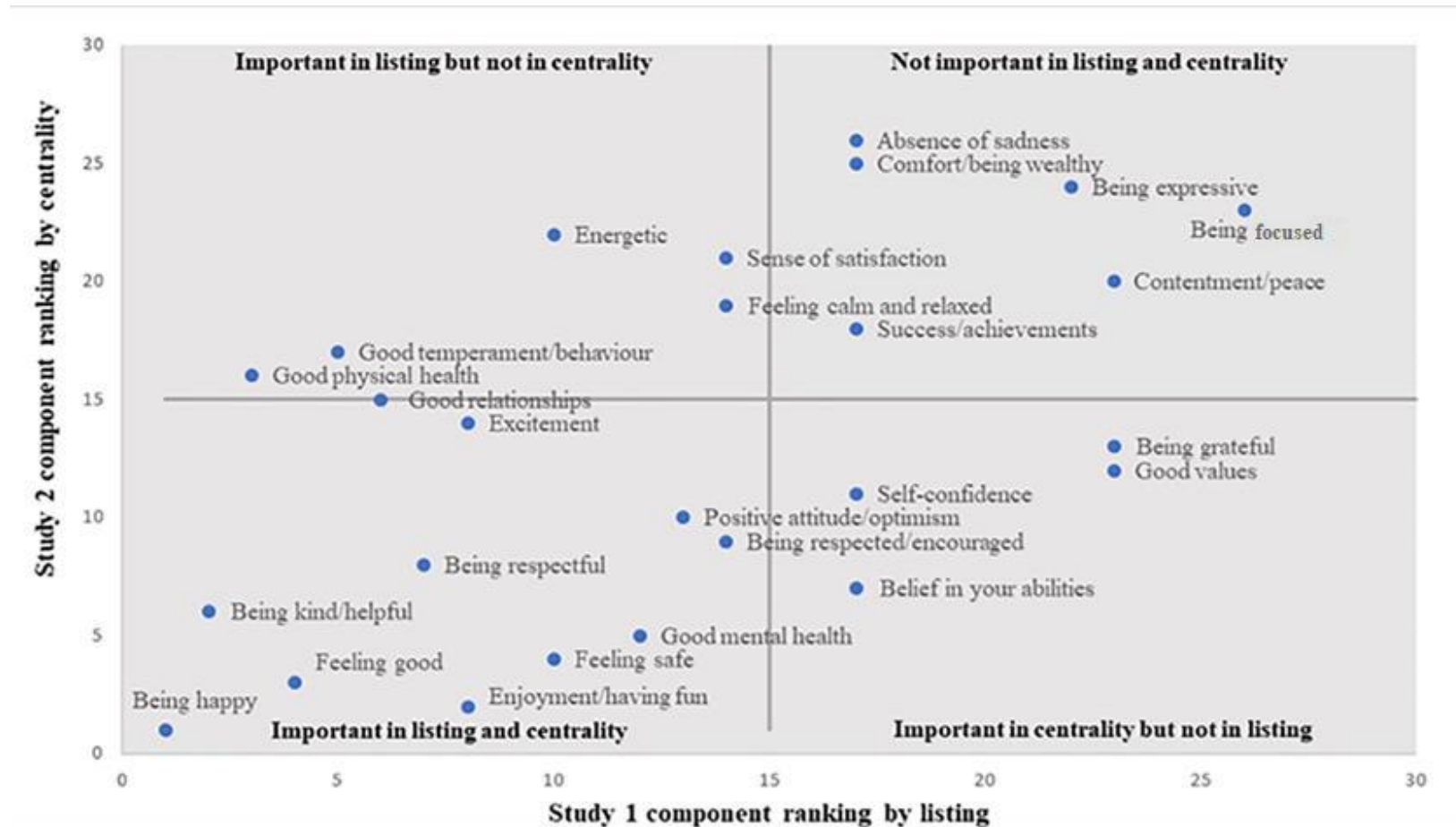
Figure 3-3. Components' ranking correlation between Study 1 (listing phase) and Study 2 (centrality phase)

Discussion

Adolescents perceive some wellbeing components as being more central than others, thereby fulfilling the first condition for ascertaining a concept's prototypical structure. For example, feeling safe, enjoyment/having fun, and being kind/helpful received higher ratings than the components comfort/being wealthy and sense of satisfaction, which are less prototypical of wellbeing. While research has reported economic circumstances and material possessions as a key domain of wellbeing for American adolescents (Chaplin, 2009; Land, Lamb, & Mustillo, 2001) and Australian adolescents (Fattore, Mason, & Watson, 2009), it is noteworthy that possessing material things was less significant for our sample of NZ adolescents; that is, comfort/being wealthy was observed to be a peripheral component.

Some disparities were apparent in Study 1 and Study 2 data which is consistent with other prototype research ((Hone et al., 2015; Kearns & Fincham, 2004). This finding could be attributable to the distinct cognitive processes associated with listing and rating components (Fehr, 1988). Listing items requires different heuristics than rating a predetermined list (Kearns & Fincham, 2004). Finally, school decile significantly impacted the ratings of five components; however, the differences in perceptions were not significant for 21 components. Thus, adolescents with different SES mostly have parallel perceptions about wellbeing components, with unique variations regarding certain aspects, such as good physical health.

Study 3: Impact of Components' Centrality on Perception of Wellbeing

The first two studies fulfilled the first condition of prototype analysis procedure. Study 3 was a validation study conducted to test the second and final condition: Does components' centrality have an impact on participants' perceptions of wellbeing? We hypothesized that (if wellbeing is prototypically organized) central components would be perceived as more representative of the concept of wellbeing than peripheral components. The interaction between school decile and component centrality on the perception of wellbeing was also tested. To address the aim, a different sample was presented with descriptions of two imaginary persons depicting the central and peripheral components of wellbeing identified in Study 2.

Participants

Participants were 114 NZ adolescents (60 boys and 54 girls) from a low-decile (37%, 42) and high-decile (63%, 72) Auckland intermediate school. Approximately 41% of the participants were from Year 7 and 59% from Year 8. Participants were of different ethnic backgrounds, including Māori (12%), Pacific Islander (17%), NZ European (55%), Asian (11%), and African/Middle Eastern (2%). The remaining identified themselves as of mixed ethnicities (3%). Age of the participants was 11 (28%), 12 (58%), and 13 (14%) years. This sample had similar demographic characteristics to the previous samples.

Procedure

In using central and peripheral components of wellbeing in writing the scenarios, a procedure of median split was applied to divide the Study 2 centrality ratings into central and peripheral categories consistent with other prototype analysis studies. Centrality ratings higher than 7.98 (median of the 26 ratings) were considered central, and ratings lower than this value were considered peripheral (see Table 3-1). Even though essential for the current study, the authors acknowledge that centrality is continuous and such demarcation is artificial (Lambert et al., 2009). Based on the median, the participants were presented with two imaginary scenarios describing central (Sam's scenario) and peripheral (Laura's scenario) components of wellbeing in a random manner. Mean centrality scores of central and peripheral components were 8.38 and 7.22 respectively.

> Sam's wellbeing: Sam is *happy* and *feels good*. He is known for his *kindness and helpful nature*. When he is at school, he *believes in his abilities* to accomplish his set goals. When he is not at school, he engages in *fun activities* that he likes for the sake of his *enjoyment*. In general, he *feels emotionally and physically safe* at his school and at his home. What's more, his school counselor recently informed him that he has *good mental health*.

> Laura's wellbeing: Laura is *energetic*. She *does not feel sad*. *Being expressive* by nature, she likes interacting with her classmates during class discussions. She experiences a *sense of satisfaction* when she *focuses* on her schoolwork. Although she is from a *wealthy* family and leads a comfortable life, she finds *contentment and peace* in life's small blessings.

Participants were instructed to rate how closely each scenario matched with their concept of wellbeing by clicking a number on an 11-point scale (0 = extremely poor match to 10 = extremely good match).

Analysis

A generalized linear mixed model (GLMM) was carried out to quantify the associations of centrality and centrality $\times$ decile with perceptions of wellbeing. Since scale variables were utilized with the dependent variable being numeric, the probability distribution was normal. Identity link function was used because the distribution was left-skewed. The analyses were conducted using the IBM Statistical Package for the Social Sciences (SPSS) Statistics 24.0.

Results

The central scenario (Sam's mean = 8.00) was rated higher than the peripheral scenario (Laura's mean = 7.26). The association between centrality and scenario selection was statistically significant (0.737; CI 0.324, 1.150; $p = 0.001$). The Decile $\times$ Centrality (central or peripheral) interaction was also significant (1.204; CI 0.116, 2.293; $p = 0.030$). In other words, the central scenario was more closely associated with the representation of wellbeing than the

peripheral scenario. The association between the selection of the scenarios and component centrality was moderated by school decile. Table 3-2 shows the descriptive statistics for the two scenarios.

Table 3-2. Descriptive statistics for the imaginary wellbeing scenarios as per school decile

School decile	Scenario	N	M	SD	Md	Interquartile range
High	Sam (central)	72	8.25	1.42	8.00	1
	Laura (peripheral)	72	7.07	1.92	7.00	3
Low	Sam (central)	42	7.57	2.66	9.00	5
	Laura (peripheral)	42	7.60	2.27	7.50	4

Discussion

Our findings suggest that wellbeing is prototypically organized in adolescents. Comparisons of the medians in Table 3-2 also show that both low- and high-socioeconomic groups rated the central scenario higher than the peripheral scenario. Because socioeconomic decile moderated the relationship between selection of the scenario and centrality, it seems apparent that central components of wellbeing and decile-specific perceptions are not mutually exclusive.

Discussion and Implications

This is one of the first studies to systematically determine 11- to 13-year-olds' perspectives of components and pathways regarding wellbeing via prototype analysis and examine the influence of socioeconomic decile on these perceptions. The findings may be a guide for those engaged in the assessment and promotion of adolescents' wellbeing in schools.

Is wellbeing prototypically organized in adolescents?

Our study finds that wellbeing is prototypically organized in adolescents. Participants could freely list and rate wellbeing components, and components' centrality significantly affected the perception of wellbeing. Hence, the research fulfilled the two conditions stated by Rosch (1975) in demonstrating a concept's prototype structure. This finding extends on a body of work with NZ workers that is evidence of the prototypical structure of wellbeing (Hone et al., 2015; Jarden et al., 2018). Having a prototype structure of wellbeing suggests wellbeing assessment should take into regard a "fuzzy" (Lambert et al., 2009, p. 1195) presence or absence of central components, instead of requiring components with necessary and sufficient criterion.

Do adolescents' perceptions of wellbeing components correspond with academic models and NZ adults' conceptualizations?

Since wellbeing is prototypically structured, adolescents' wellbeing conceptualizations include central components (e.g., being happy) and peripheral components (e.g., contentment/peace). It

is noteworthy that adolescents' perceptions of central components of wellbeing, comprising being happy, enjoyment/having fun, feeling safe, and being kind/helpful, are quite distinct compared to NZ adults' wellbeing perceptions of good physical health, work-life balance, feeling valued, and good relationships. This finding signifies that elements that are desirable for adults may potentially not be desirable for adolescents. Therefore, wellbeing practitioners should be careful about the selection of elements of their assessment measures and interventions for adolescents (Marchant et al., 2012).

The results were assessed to examine how the central components are aligned with commonly used academic models, which demonstrated partial alignment. Adolescents' prototype of wellbeing is wide ranging (including emotions, behaviors, and cognitive states), and wellbeing experts have also shown consensus over the multidimensional nature of wellbeing (Huppert & So, 2013). Regarding the components of wellbeing, however, some differences were observed. While some central components correspond to the researchers' definitions of wellbeing, others are recognized by researchers as correlates of wellbeing rather than as components. For example, in terms of similarities, components such as being happy and feeling good relate to the positive affect/emotion dimension included in academic models (Huppert & So, 2013; Keyes, 2005; Seligman, 2011b). In contrast, components such as being kind/helpful do not appear as components in academic models but have been shown to correlate positively with wellbeing (e.g., Layous, Nelson, Oberle, Schonert-Reichl, & Lyubomirsky, 2012 studied kindness and wellbeing). Likewise, there is no exclusive focus on components feeling safe and enjoyment/having fun in wellbeing models irrespective of their unique presence in government frameworks of wellbeing (Canadian Institute for Health Information, 2009; Education Review Office, 2015b), and in empirical research with adolescents (Fattore et al., 2007). Adolescents also mentioned "being respected/encouraged" and "being respectful" as components of wellbeing in the current study, mirroring the results of Anderson and Graham (2016). The central component *belief in your abilities* is present in only one model of adolescent wellbeing (Renshaw et al., 2014). Overall, current models do not fully address what adolescents perceive to be wellbeing.

Some aspects normally observed in academic models such as meaning and purpose (Diener et al., 2010; Huppert & So, 2013; Keyes, 2005; Seligman, 2011b) were not listed by adolescents, even using their own language and terminology such as meaning and purpose. Furthermore, while adolescents stated some behaviors as components of wellbeing (e.g., being kind and helpful and being respectful), most measures of wellbeing are cognitive and emotional, and hardly any ask about behaviors. Therefore, we suggest that formulating a broader definition of wellbeing customized to the adolescents' perspectives, as outlined in this research, may be useful (comprising components omitted from academic models, such as enjoyment/having fun, feeling safe, being kind/helpful, being respected, and being respectful). By suggesting a broader definition, we do not imply that experts disregard their own judgments. Instead, we suggest

adolescents' perceptions of wellbeing identified in the current study may help inform researchers' models, which may also clarify the understanding of the concept of wellbeing for researchers.

How do adolescents' perceptions of pathways to wellbeing correspond with current research and academic models?

The most frequently listed pathways to wellbeing identified in this study build upon extant evidence. Positive relationships, physical activity, engaging in hobbies, and being kind/helpful are indispensable aspects of the current wellbeing promotion models and programs (Aked et al., 2008; Norrish, 2015; Suldo & Savage, 2016). These results also correspond to the NZ workers' prototype research and research with adolescents (for a review see Chaplin, 2009; Hone et al., 2015). Eating healthily and socializing activities are significant aspects of the positive health and relationships domains of the Geelong Grammar School positive education model (Norrish, 2015) while the pathway pet ownership and attachment was also found in previous research (Chaplin, 2009). Interestingly, between 12 and 17% of 11- to 13-year-olds listed nature, being around positive people, and digital entertainment as ways to improve wellbeing in Study 1. Government promotional wellbeing framework has given importance to some of these aspects such as nature (Aked et al., 2008), whereas popular promotional models are less likely to emphasize the aspects such as pet ownership and attachment, nature, being around positive people, and digital entertainment. Research suggests contact with nature, including bushwalks and enjoying a day at the beach, enhances the mental wellbeing of adolescents (Sarriera & Bedin, 2017). Research on the effects of digital entertainment on adolescents is mixed. Previous researchers have criticized the use of digital entertainment for adolescents; however, positive psychology researchers have focused on the beneficial effects of digital entertainment (e.g., exposure to programs depicting positive behaviors) on adolescents (De Leeuw & Buijzen, 2016). Similarly, owning pets is beneficial for the wellbeing of adolescents (Purewal et al., 2017). Overall, the pathways digital entertainment, pet ownership and attachment, being around positive people, being kind/helpful, and nature represent useful targets for adolescents' wellbeing promotion in the future.

Does SES influence adolescents' wellbeing perceptions?

SES influences adolescents' perceptions of wellbeing. Both groups showed similar perceptions in the listing phase. However, significant differences were observed in the perceptions in the rating phase. This result indicates wellbeing perceptions of adolescents with different socioeconomic standing are broadly similar, but differences exist in the value given to certain components. For example, the low-socioeconomic group considered five components of 26 (including comfort/being wealthy, and success/achievements) more important for wellbeing than the high-socioeconomic group. Differences in ratings may have surfaced due to adolescents' diverse SES, culture, or overall culture of the school. Additionally, SES moderated the relationship between centrality and perception of wellbeing. Consequently, socioeconomic

groups' unique perceptions should be combined with adolescents' general perceptions in understanding their idea of wellbeing.

Other insights and implications

The examination of adolescents' freely listed responses identified interesting insights regarding their understanding of wellbeing. First, 98% of adolescents listed components relevant to the field of wellbeing and only 2% did not respond or listed aspects unrelated to the concept of wellbeing (as conceptualized by academic researchers). This study demonstrates adolescents' awareness of the concept of wellbeing—specifically, a considerable number of components (551) and pathways to wellbeing (565) were listed. Adolescents mentioned relatively tangible pathways such as family, peers, sports, and pets rather than abstract constructs such as mindfulness. While Norrish (2015) explains the lack of consideration of internal dimensions as adolescents' occasional "narrow thinking" and their focus on "material possessions" (p. 47), the present study shows adolescents' appreciation of deeper aspects such as nature and being kind/helpful. It is possible that adolescents are engaged in mindful activities but cannot give a name to the mental state due to lack of instruction.

Similarly, adolescents listed 14 more pathways than components, demonstrating a greater awareness of the ways to foster wellbeing than of the concept of wellbeing. Whether that awareness is due to adolescents' interest and curiosity in enhancing wellbeing is largely unknown. Possibly, the notion of a component is more abstract than practical ways to foster wellbeing. Awareness reasons could vary, but some effortless awareness at an intuitive level of recognition is evident. Such "intuitive recognition" of the concept "may not be perfect, even though essential before testing or clarifying" (Cloninger, 2004, p. 8) the meaning of the concept. Further empirical research is required to support the notion of intuitive understanding of wellbeing among adolescents.

Secondly, adolescents demonstrated some overlapping perceptions of the aspects that research suggests define and improve wellbeing. Certain components of wellbeing were also listed as pathways to wellbeing such as good physical health. The pathway-component overlap suggests that adolescents are either confused about the ideas of attribute and promotion, or they suppose a relation between aspects that define versus improve wellbeing. The second assumption has some empirical support (Chaplin, 2009). The results show the components mentioned dually varied in frequency. For example, good physical health was listed frequently as a component but less frequently as a pathway. The variation in frequency might theoretically point to the possibility that *adolescents are rather perceptive* in discerning the difference between two intricate concepts. They listed a variety of responses that are characteristic of pathways and components (i.e., some of their pathways were incongruent with their own conception of wellbeing); however, they also

showed some overlap. Thus, in schools, educators may consider promoting the central components of wellbeing not mentioned as pathways (e.g., enjoyment/having fun).

Finally, adolescents' perceptions of wellbeing vary broadly. Though it is noticeable that some components and pathways were collectively stated by a high percentage of adolescents, no component or pathway of wellbeing was mentioned universally. The variability in responses reflects the distinctive characteristics or experiences influencing wellbeing perceptions. Hence, in the future, it will be valuable to consider adolescents' unique worldview together with the commonly perceived aspects of wellbeing. Parallel to the United Nations Educational, Scientific, and Cultural Organization's (2004) curriculum differentiation approach, where a curriculum is modified to match the learning needs of an individual, assessment measures and positive education practices ought to be personalized to fit wellbeing perceptions of adolescents, to pave the way for more precision in application of wellbeing (Cook et al., 2018; Horner et al., 2014).

Limitations and future directions

An open-ended survey was utilized for collecting qualitative data from many individuals at the same time. It is possible the writing ability of some participants affected the length and quality of their responses. Nevertheless, the candidate ensured participants understood the questions and participants were also free to ask for clarification. Secondly, the findings are limited by our subjective opinions and that of participants. For example, the coding of responses was subjective, and how one individual perceives a component of wellbeing may differ from another individual. Thirdly, the effect of ethnicity on adolescents' wellbeing perceptions could not be examined. An important direction for future research, therefore, is to investigate how adolescents' awareness of wellbeing differs across cultures. Finally, we recognize that the sample size of low-decile group was relatively smaller than the high-decile group in all three studies (e.g., Study 1 $n = 48$ for low-decile group and $n = 77$ for high-decile group), which may have potentially underrepresented low-socioeconomic individuals' views. Taking the sample size into account, future research could assess low-socioeconomic group perceptions using a larger sample.

The literature on adolescents' perceptions of wellbeing is relatively inadequate and recent. The present study provides preliminary evidence about the variation in adolescents' prototype of wellbeing as a function of SES. It is essential that further research examines the stability of adolescents' perspectives of wellbeing across countries and also investigates changes over time. As Fehr (1988) posited, it is likely that the prototypic features of a concept may vary with different populations, but the prototypical structure of a concept remains. Another useful direction for future research would be to study adolescents' perceptions of components of wellbeing (e.g., enjoyment/having fun) and the extent to which adolescents' prototype of wellbeing matches with an individual's representation of wellbeing.

Conclusion

This study contributes to an under-investigated area of adolescent wellbeing. Adolescents' perceptions of wellbeing components are partially aligned with popular academic models, but also different from adults' perceptions. Therefore, a broader definition of wellbeing is warranted, tailored to the adolescents' prototypical wellbeing representation (especially incorporating the components enjoyment/having fun, feeling safe, and being kind/helpful). Besides three most listed pathways to wellbeing (positive family relationships, positive friendships, and physical activity/sport), researchers may include activities around hobbies, nature, digital entertainment, pets, kindness, positive people, socializing, and healthy diet in their promotional models. It is imperative that practitioners and researchers consider adolescents' perceptions in designing assessment measures and positive education programs. When devising assessments and policies for low-socioeconomic groups, the components comfort/being wealthy, success/achievements, good physical health, being focused, and good values should be taken into account with adolescents' general conceptualizations of wellbeing.

Final Remarks on Part A of the Preparatory Phase

Based on the findings of Part A, several predictor variables were selected from a positive education perspective for the subsequent work for this current research. An example of applying a positive education perspective in the selection of predictor variables was the exclusion of parent's education from further analysis, a factor that was found to facilitate positive transition to secondary school in Chapter 2. Predictor variables comprised personal resources, strengths, skills, and positive lifestyle behaviors that can be taught to adolescents and encouraged in schools for wellbeing promotion. These variables also comprised demographic factors that may potentially give impetus to the learning of the tools and strategies of wellbeing promotion. Table 3-3 displays these predictor variables organized within a conceptual framework of positive school transition.

Table 3-3. Predictor variables

Demographic factors	Psychological factors	School factors	Social factors	Physical factors	Spiritual factors
• Gender • SES • Ethnicity • Older sibling	• Feeling safe • Strength use and knowledge • Self-control • Self-efficacy • Enjoyment • Being kind and helpful • Hobbies and leisure activities (including digital entertainment)	• Perceived teacher support • School belonging • Involvement in organized activities	• Positive family relationships (including perceived parent support) • Positive friendships (including perceived peer support) • Being around positive people • Socializing activities • Pet ownership	• Sleep duration • Physical activity • Healthy diet • Active transport (travel to and from school)	• Nature or connection with nature • Spirituality • Mindfulness • Purpose

Notes. The predictor variables in purple are informed by adolescents' conceptions of wellbeing; predictor variables in black are informed by the review of the literature.

Four additional variables, namely ethnicity, mindfulness, sleep duration, and active transport, were included in the list of predictor variables as per the empirical importance of these variables for wellbeing. For example, Prendergast, Schofield, and Mackay (2016) concluded that Māori and Pacific adults experience higher wellbeing than European adults. Similarly, they showed that sleeping restlessly almost all the time has serious repercussions on NZ adults' optimal wellbeing. Regarding sleep benefits, a longitudinal study showed that longer sleep duration was associated with better subjective psychological wellbeing in Norwegian and Swiss adolescents (M age = 13.05 ± 1.49 years) (Kalak, Lemola, Brand, Holsboer-Trachsler, & Grob, 2014). While active travel was observed to reduce depression in adolescents in a cross-sectional study (Sun,

Liu, & Tao, 2015), it improved psychological wellbeing in adults in a longitudinal study (Martin, Goryakin, & Suhrcke, 2014). Mindfulness, awareness of the present situation, contributed to life satisfaction in adolescents in the US (Bluth & Blanton, 2014). Whether these findings apply to NZ adolescents is examined in the exploratory phase of this thesis. See the Glossary of Terms for the meanings and definitions of the predictor variables. The understanding of the psycho-socio-spiritual, physical, and school predictor variables in this thesis was influenced by academic definitions, adolescent free responses, and more precisely, through the questions asked to the participants in the survey. Based on the predictor variables depicted in Table 3-3, the next phase demonstrates the development and validation of the PSTRS and its subscales.

As alluded to in Chapter 3, an interesting observation of the study is that there was some overlap between adolescents' ideas of meaning and promotion of wellbeing. For example, in Study 2, being kind/helpful was considered a central component of wellbeing and more than 12% of our sample also listed it as a pathway. This observation has empirical backing from studies of lay people's perceptions of wellbeing (Chaplin, 2009; Hone et al., 2015). Linking this reflection to the transition literature, certain aspects that adolescents thought were central to the meaning of wellbeing, such as feeling safe and self-efficacy, have been shown to facilitate mental wellbeing and school engagement, respectively, during school transitions (Lester & Cross, 2015; Madjar & Chohat, 2017). In line with the empirical evidence and given the connection between adolescents' meaning of wellbeing and the pathways they use to build wellbeing, I believe a potentially useful way of promoting wellbeing during transitions may also be promotion of central components of wellbeing not mentioned as pathways; therefore, 'enjoyment' was also selected as a predictor variable in this thesis.

PREPARATORY PHASE: PART B

SURVEY DEVELOPMENT
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Appendices

Appendix A. AUTEC approval for Study 2

AUTEC Secretariat

Auckland University of Technology
D-88, WU406 Level 4 WU Building City Campus
T: +64 9 921 9999 ext. 8316
E: ethics@aut.ac.nz
www.aut.ac.nz/researchethics

30 March 2017
Scott Duncan
Faculty of Health and Environmental Sciences

Dear Scott

Re Ethics Application: **17/60 Towards successful school transitions for all Kiwi kids: A study of wellbeing in intermediate and secondary school children**

Thank you for providing evidence as requested, which satisfies the points raised by the Auckland University of Technology Ethics Committee (AUTEC).

Your ethics application has been approved for three years until 30 March 2020.

As part of the ethics approval process, you are required to submit the following to AUTEC:

- A brief annual progress report using form EA2, which is available online through http://www.aut.ac.nz/researchethics. When necessary this form may also be used to request an extension of the approval at least one month prior to its expiry on 30 March 2020;

- A brief report on the status of the project using form EA3, which is available online through http://www.aut.ac.nz/researchethics. This report is to be submitted either when the approval expires on 30 March 2020 or on completion of the project.

It is a condition of approval that AUTEC is notified of any adverse events or if the research does not commence. AUTEC approval needs to be sought for any alteration to the research, including any alteration of or addition to any documents that are provided to participants. You are responsible for ensuring that research undertaken under this approval occurs within the parameters outlined in the approved application.

AUTEC grants ethical approval only. If you require management approval from an institution or organisation for your research, then you will need to obtain this. If your research is undertaken within a jurisdiction outside New Zealand, you will need to make the arrangements necessary to meet the legal and ethical requirements that apply there.

To enable us to provide you with efficient service, please use the application number and study title in all correspondence with us. If you have any enquiries about this application, or anything else, please do contact us at ethics@aut.ac.nz.

All the very best with your research,

Kate O'Connor
Executive Secretary
Auckland University of Technology Ethics Committee

Cc: gkaur@aut.ac.nz; gazal_aquarian@yahoo.com; aaron@jarden.co.nz

AUTEC Secretariat

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19 June 2017
Scott Duncan
Faculty of Health and Environmental Sciences

Dear Scott

Re: Ethics Application: **17/60 Towards successful school transitions for all Kiwi kids: A study of wellbeing in intermediate and secondary school children**

Thank you for your request for approval of amendments to your ethics application.

The amendment to the data collection protocols, which comprises the wellbeing components generated in survey 1 to be added into survey 2, is approved.

I remind you of the Standard Conditions of Approval.

1. A progress report is due annually on the anniversary of the approval date, using form EA2, which is available online through http://www.aut.ac.nz/researchethics.
2. A final report is due at the expiration of the approval period, or, upon completion of project, using form EA3, which is available online through http://www.aut.ac.nz/researchethics.
3. Any amendments to the project must be approved by AUTEC prior to being implemented. Amendments can be requested using the EA2 form: http://www.aut.ac.nz/researchethics.
4. Any serious or unexpected adverse events must be reported to AUTEC Secretariat as a matter of priority.
5. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the AUTEC Secretariat as a matter of priority.

Please quote the application number and title on all future correspondence related to this project.

AUTEC grants ethical approval only. If you require management approval for access for your research from another institution or organisation then you are responsible for obtaining it. If the research is undertaken outside New Zealand, you need to meet all locality legal and ethical obligations and requirements.

For any enquiries, please contact ethics@aut.ac.nz

Yours sincerely,

Kate O'Connor
Executive Manager
Auckland University of Technology Ethics Committee

Cc: gkaur@aut.ac.nz; gazal_aquarian@yahoo.com; aaron@jarden.co.nz

AUTEC Secretariat

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11 July 2017
Scott Duncan
Faculty of Health and Environmental Sciences

Dear Scott

Re: Ethics Application: **17/60 Towards successful school transitions for all Kiwi kids: A study of wellbeing in intermediate and secondary school children**

Thank you for your request for approval of amendments to your ethics application.

The amendment to the data collection protocols, the components generated in survey b to be added to survey, is approved.

I remind you of the Standard Conditions of Approval.

1. A progress report is due annually on the anniversary of the approval date, using form EA2, which is available online through http://www.aut.ac.nz/researchethics.
2. A final report is due at the expiration of the approval period, or, upon completion of project, using form EA3, which is available online through http://www.aut.ac.nz/researchethics.
3. Any amendments to the project must be approved by AUTEC prior to being implemented. Amendments can be requested using the EA2 form: http://www.aut.ac.nz/researchethics.
4. Any serious or unexpected adverse events must be reported to AUTEC Secretariat as a matter of priority.
5. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the AUTEC Secretariat as a matter of priority.

Please quote the application number and title on all future correspondence related to this project.

AUTEC grants ethical approval only. If you require management approval for access for your research from another institution or organisation then you are responsible for obtaining it.

For any enquiries please contact ethics@aut.ac.nz

Yours sincerely,

Kate O'Connor
Executive Manager
Auckland University of Technology Ethics Committee

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Appendix D. AUTEC approval for Part B of the preparatory phase and exploratory phase of this research

AUTEC Secretariat

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14 August 2017
Scott Duncan
Faculty of Health and Environmental Sciences

Dear Scott

Re Ethics Application: **17/251 Towards successful school transitions for all Kiwi kids: A study of wellbeing in intermediate and secondary school children**

Thank you for providing evidence as requested, which satisfies the points raised by the Auckland University of Technology Ethics Committee (AUTEC).

Your ethics application has been approved for three years until 14 August 2020.

Standard Conditions of Approval

1. A progress report is due annually on the anniversary of the approval date, using form EA2, which is available online through http://www.aut.ac.nz/researchethics.
2. A final report is due at the expiration of the approval period, or, upon completion of project, using form EA3, which is available online through http://www.aut.ac.nz/researchethics.
3. Any amendments to the project must be approved by AUTEC prior to being implemented. Amendments can be requested using the EA2 form: http://www.aut.ac.nz/researchethics.
4. Any serious or unexpected adverse events must be reported to AUTEC Secretariat as a matter of priority.
5. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the AUTEC Secretariat as a matter of priority.

Please quote the application number and title on all future correspondence related to this project.

AUTEC grants ethical approval only. If you require management approval for access for your research from another institution or organisation then you are responsible for obtaining it. You are reminded that it is your responsibility to ensure that the spelling and grammar of documents being provided to participants or external organisations is of a high standard.

For any enquiries, please contact ethics@aut.ac.nz

Yours sincerely,

Kate O'Connor
Executive Manager
Auckland University of Technology Ethics Committee

Cc: gkaur@aut.ac.nz; gazal_aquarian@yahoo.com; Erica Hinckson

AUTEC Secretariat

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22 August 2017
Scott Duncan
Faculty of Health and Environmental Sciences

Dear Scott

Re: Ethics Application: **17/251 Towards successful school transitions for all Kiwi kids: A study of wellbeing in intermediate and secondary school children**

Thank you for providing evidence for the point raised.

The amendment for the inclusion of an additional data collection point is approved.

I remind you of the Standard Conditions of Approval.

1. A progress report is due annually on the anniversary of the approval date, using form EA2, which is available online through http://www.aut.ac.nz/researchethics.
2. A final report is due at the expiration of the approval period, or, upon completion of project, using form EA3, which is available online through http://www.aut.ac.nz/researchethics.
3. Any amendments to the project must be approved by AUTEC prior to being implemented. Amendments can be requested using the EA2 form: http://www.aut.ac.nz/researchethics.
4. Any serious or unexpected adverse events must be reported to AUTEC Secretariat as a matter of priority.
5. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the AUTEC Secretariat as a matter of priority.

Please quote the application number and title on all future correspondence related to this project.

AUTEC grants ethical approval only. If you require management approval for access for your research from another institution or organisation then you are responsible for obtaining it. If the research is undertaken outside New Zealand, you need to meet all locality legal and ethical obligations and requirements.

For any enquiries please contact ethics@aut.ac.nz

Yours sincerely,

Kate O'Connor
Executive Manager
Auckland University of Technology Ethics Committee

Cc: gkaur@aut.ac.nz; gazal_aquarian@yahoo.com; Erica Hinckson

Appendix F. PSTRS and questions asked to the participants for measuring predictor variables

Thank you for taking the time to answer these questions. This is NOT A TEST. There are no right or wrong answers. For all the questions below you should imagine a ladder with steps numbered from 0 at the bottom and 10 at the top and mark the box that best describes you. Please be honest when answering the questions. Your answers will be kept confidential. Your honest answers will help your school do a better job to improve your wellbeing and help you learn!

The following 6 statements ask you about your strengths, that is, the things that you are able to do well or do best. Choose from 0 to 10 where 0 means that you do not at all agree with the statement and 10 means that you strongly agree.

		Do not at all agree										Strongly agree
1.	I know my strengths well.	0	1	2	3	4	5	6	7	8	9	10
2.	I am able to use my strengths in lots of different ways.	0	1	2	3	4	5	6	7	8	9	10
3.	I know the things I am good at doing.	0	1	2	3	4	5	6	7	8	9	10
4.	I achieve what I want by using my strengths.	0	1	2	3	4	5	6	7	8	9	10
5.	I know when I am at my best.	0	1	2	3	4	5	6	7	8	9	10
6.	I am regularly able to do what I do best.	0	1	2	3	4	5	6	7	8	9	10

For the following three statements, indicate on a scale of 0 to 10 that best represent you. Zero means "not at all like me" and 10 means "very much like me".

		Not at all like me										Very much like me
7.	Pleasure and fun sometimes keep me from getting work done. (R)	0	1	2	3	4	5	6	7	8	9	10
8.	I wish I had more self-discipline. (R)	0	1	2	3	4	5	6	7	8	9	10
9.	I am lazy. (R)	0	1	2	3	4	5	6	7	8	9	10

Choose the number for each of the following 6 statements that is most true of you. Zero means "not at all true of me" and 10 means "completely true of me".

		Not at all true of me										Completely true of me
10.	In life, I have clear goals and aims.	0	1	2	3	4	5	6	7	8	9	10
11.	In achieving life goals, I've progressed to complete fulfilment.	0	1	2	3	4	5	6	7	8	9	10
12.	I have discovered a satisfying life purpose.	0	1	2	3	4	5	6	7	8	9	10

13.	Thanks to my resourcefulness, I know how to handle unforeseen situations.	0	1	2	3	4	5	6	7	8	9	10
14.	I can solve most problems if I invest the necessary effort.	0	1	2	3	4	5	6	7	8	9	10
15.	I can remain calm when facing difficulties because I can rely on my coping abilities.	0	1	2	3	4	5	6	7	8	9	10

Read each statement carefully below and indicate how you feel on a scale of 0 to 10. Zero means you "never" feel like this and 10 means you "always" feel like this.

		Never										Always
16.	It seems I am "running on automatic," without much awareness of what I am doing. (R)	0	1	2	3	4	5	6	7	8	9	10
17.	I find myself doing things without paying attention. (R)	0	1	2	3	4	5	6	7	8	9	10
18.	I find it difficult to stay focused on what is happening in the present. (R)	0	1	2	3	4	5	6	7	8	9	10

For the questions below, indicate on a scale of 0 to 10 how often you directly have this experience, and try to disregard whether you feel you should or should not have these experiences. If you are not comfortable with the word God, you can substitute it with any other idea that is divine or holy for you.

		Never										Always
19.	I feel guided by God in the midst of daily activities.	0	1	2	3	4	5	6	7	8	9	10
20.	I feel God's love for me directly.	0	1	2	3	4	5	6	7	8	9	10
21.	I feel God's presence.	0	1	2	3	4	5	6	7	8	9	10

The following statements are about your family, friends, and teachers. Please indicate how true each statement is for you. Zero means "not at all true" and 10 means "extremely true".

		Not at all true										Extremely true
22.	I get the emotional help and support I need from my family.	0	1	2	3	4	5	6	7	8	9	10
23.	I can talk about my problems with my family.	0	1	2	3	4	5	6	7	8	9	10
24.	My family is willing to help me make decisions.	0	1	2	3	4	5	6	7	8	9	10
25.	In our family, there is a feeling of togetherness.	0	1	2	3	4	5	6	7	8	9	10
26.	In our family, we sometimes tell each other about our problems.	0	1	2	3	4	5	6	7	8	9	10
27.	In our family, we lose our tempers a lot. (R)	0	1	2	3	4	5	6	7	8	9	10

		Not at all true										Completely true
28.	My friends really try to help me.	0	1	2	3	4	5	6	7	8	9	10
29.	I can count on my friends when things go wrong.	0	1	2	3	4	5	6	7	8	9	10
30.	I have friends with whom I can share my joys and sorrows.	0	1	2	3	4	5	6	7	8	9	10
31.	Sometimes my friend and I just sit around and talk about things like study, work, and things we like.	0	1	2	3	4	5	6	7	8	9	10
32.	If I have a problem at school or at home, I can talk to my friend about it.	0	1	2	3	4	5	6	7	8	9	10
33.	When I do a good job at something, my friend is happy for me.	0	1	2	3	4	5	6	7	8	9	10
34.	Our teachers are nice and friendly.	0	1	2	3	4	5	6	7	8	9	10
35.	When I need extra help, I can get it.	0	1	2	3	4	5	6	7	8	9	10
36.	Our teachers treat us fairly.	0	1	2	3	4	5	6	7	8	9	10

The next questions are about your school and your involvement in the curricular activities. Check the box that best describes you. Zero means "not at all true" and 10 means "completely true".

		Not at all true										Completely true
37.	I feel proud of belonging to this school.	0	1	2	3	4	5	6	7	8	9	10
38.	Most teachers at this school are interested in me.	0	1	2	3	4	5	6	7	8	9	10
39.	I can really be myself at this school.	0	1	2	3	4	5	6	7	8	9	10
40.	I did not participate in any academic/literary/leadership activity in last two years. (R)	0	1	2	3	4	5	6	7	8	9	10
41.	I did not participate in performance/fine arts in the last two years. (R)	0	1	2	3	4	5	6	7	8	9	10
42.	I did not participate in sport activities other than physical education in school in the last two years. (R)	0	1	2	3	4	5	6	7	8	9	10
43.	I did not participate in any community organizations or vocational clubs during the last two years. (R)	0	1	2	3	4	5	6	7	8	9	10

The following three questions are about your relationship with nature. Please rate the extent to which you agree with each statement below using the scale from 0 to 10. Zero means "do not at all agree" and 10 means "completely agree".

		Do not at all agree										Completely agree
44.	I love spending time outside in nature. (Nature includes plants, animals, and water bodies).	0	1	2	3	4	5	6	7	8	9	10
45.	My relationship to nature is an important part of who I am.	0	1	2	3	4	5	6	7	8	9	10
46.	My ideal vacation spot would be a remote, wilderness (neglected area with bushes) area.	0	1	2	3	4	5	6	7	8	9	10

The following questions are about how you behave or feel towards others in the stated manner. Read the statements carefully and indicate how these statements represent you. Zero means "not at all like me" and 10 means "completely like me".

		Not at all like me										Completely like me
47.	If I see someone going through a difficult time, I try to be caring toward that person.	0	1	2	3	4	5	6	7	8	9	10
48.	When others feel sadness, I try to comfort them.	0	1	2	3	4	5	6	7	8	9	10
49.	I like to be there for others in times of difficulty.	0	1	2	3	4	5	6	7	8	9	10
50.	When given the opportunity, I enjoy helping others who are in need.	0	1	2	3	4	5	6	7	8	9	10
51.	Helping friends and family is one of the great joys in life.	0	1	2	3	4	5	6	7	8	9	10
52.	It feels wonderful to assist others in need.	0	1	2	3	4	5	6	7	8	9	10

Please read each statement below about your safety and mark the response that best shows how much you agree.

		Do not at all agree										Completely agree
53.	I feel safe going to and coming from school.	0	1	2	3	4	5	6	7	8	9	10
54.	I feel safe in the school.	0	1	2	3	4	5	6	7	8	9	10

Read the three questions below and rate the extent to which you enjoyed the following activities in the past week.

		Not at all or never										All the time or always
55.	During the past week, how much of the time have you enjoyed your class work?	0	1	2	3	4	5	6	7	8	9	10

56.	During the past week, how often did you enjoy leisure activities?	0		1	2	3	4	5	6	7	8	9	10
57.	During the past week, how much of the time have you enjoyed talking with or being with friends or relatives?	0		1	2	3	4	5	6	7	8	9	10

Please rate the extent to which people around you display the below behaviors by showing your agreement with the statements. Zero means "do not at all agree" and 10 means "completely agree".

		Do not at all agree										Completely agree
58.	People around me are nice and kind.	0	1	2	3	4	5	6	7	8	9	10
59.	People around me are respectful to me.	0	1	2	3	4	5	6	7	8	9	10
60.	People around me are very encouraging.	0	1	2	3	4	5	6	7	8	9	10
61.	People around me appreciate and value me.	0	1	2	3	4	5	6	7	8	9	10

How often do you do the following activities? Read the labels carefully.

		Never	Once or twice a month	Less than 3 times a week	3–5 times a week	Almost every day (6–7 times a week)
62.	Indoor hobbies (such as reading, drawing, and cooking)	1	2	3	4	5
63.	Outdoor hobbies (such as swimming, horse-riding, hiking, camping, and fishing)	1	2	3	4	5
64.	Entertainment activities (such as listening to music)	1	2	3	4	5
65.	Computer and internet activities (such as playing video games, watching YouTube videos, watching Netflix)	1	2	3	4	5
66.	Sports (such as playing rugby, cricket, and basketball)	1	2	3	4	5
67.	Physical activities (such as walking, jogging, exercise, and yoga)	1	2	3	4	5
68.	Socializing activities (such as hanging out with your friends, going to mall, going out to eat, visiting relatives)	1	2	3	4	5

The following questions are about your diet in the PAST WEEK. Read the labels carefully and check the appropriate box.

		Never	once	twice	3 times	4 times	5 times	6 or 7 times

69.	How many days during the last week did you consume breakfast?	1	2	3	4	5	6	7
70.	How many days in the last week did you have some vegetables (raw, cooked, or canned)?	1	2	3	4	5	6	7
71.	How many days in the last week did you have some fruit (fruit, canned, stewed, or dried, excluding juice)?	1	2	3	4	5	6	7

Note. Items represented with an (R) are reverse coded

Also answer the following 6 questions:

1. During the last week (Monday→Friday), how did you usually *travel to school?*

Days	Car	Walk	Bicycle	Bus
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Other (please specify)				

2. During the last week (Monday→Friday), how did you usually *travel from school?*

Days	Car	Walk	Bicycle	Bus
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Other (please specify)				

3. What time do you normally:
Go to bed on a weekday? _____

Get up on a weekday? _____

4. What time do you normally:
Go to bed on Saturday? _____

Get up on Sunday? _____

Please tick yes or no below:

5. Do you have a pet?

O Yes
O No

6. Do you have an older sibling?

O Yes
O No

Please fill in the information below:

Full name _____

Grade/Year level_____

Age_____

Gender_____

Ethnicity (cultural group that you belong to) – Tick the relevant option below
O African
O Asian
O Māori
O Middle Eastern
O New Zealand European
O Pacific Islander
O Other

Name of your school_____

Items constituting each component

Items	Component
1–6	Strength use and Knowledge
7–9	Self-control
10–12	Purpose
13–15	Self-efficacy
16–18	Mindfulness
19–21	Spirituality
22–27	Positive family relationships
28–33	Positive friendships
34–36	Perceived teacher support
37–39	School belonging
40–43	Involvement in organized activities
44–46	Connection with nature
47–52	Being kind and helpful
53–54	Feeling safe
55–57	Enjoyment
58–61	Being around positive people
62–65	Hobbies and leisure activities frequency
66–67	Physical activity frequency
68	Socializing activities frequency
69-71	Diet
Aggregate items	Readiness for secondary school transition

Appendix G. Wellbeing assessment (AWE)

The following question asks about how happy you felt yesterday on a scale from 0 to 10. Zero means you did not experience the feeling of happiness "at all" yesterday while 10 means you experienced the feeling of happiness "all of the time" yesterday.

		Did not feel happy at all yesterday										Felt happy all of the time yesterday
1.	How happy were you yesterday?	0	1	2	3	4	5	6	7	8	9	10

The following question asks about how worried and anxious you felt yesterday on a scale from 0 to 10. Zero means you did not experience the feeling of worry and anxiety "at all" yesterday while 10 means you experienced the feeling of worry and anxiety "all of the time" yesterday.

		Did not feel worried or anxious at all yesterday										Felt worried or anxious all of the time yesterday
2.	How worried or anxious were you yesterday?	0	1	2	3	4	5	6	7	8	9	10

The following question asks how you generally feel. Please choose one of these.

3.	In general, how happy or unhappy do you usually feel?
	Extremely happy (feeling ecstatic, joyous, fantastic)
	Very happy (feeling really good, elated)
	Pretty happy (spirits high, feeling good)
	Mildly happy (feeling fairly good & somewhat cheerful)
	Slightly happy (just a bit above normal)
	Neutral (not particularly happy or unhappy)
	Slightly unhappy (just a bit below neutral)
	Mildly unhappy (just a little low)
	Pretty unhappy (somewhat "blue", spirits down)
	Very unhappy (depressed, spirits very low)
	Extremely unhappy (utterly depressed, completely down)

The following question asks how worthwhile you feel the things you do in your life are, on a scale from 0 to 10. Zero means you feel the things you do in your life are "not at all worthwhile", and 10 means "completely worthwhile".

		Not at all worthwhile										Completely worthwhile
4.	Overall, to what extent do you feel the things you do in your life are worthwhile?	0	1	2	3	4	5	6	7	8	9	10

The following question asks how satisfied you feel, on a scale from 0 to 10. Zero means you feel "not at all satisfied" and 10 means you feel "completely satisfied".

		Not at all satisfied										Completely satisfied
5.	Overall, how satisfied are you with life as a whole these days?	0	1	2	3	4	5	6	7	8	9	10

Please rate how important and satisfied you are with each life domain. Rate the 5 domains for importance first, then rate the 5 domains for satisfaction.

	Importance											Satisfaction										
	0	1	2	3	4	5	6	7	8	9	10	0	1	2	3	4	5	6	7	8	9	10
6. Family																						
7. Friendships and social life																						
8. Education																						
9. Physical health																						
10. Fun and leisure																						

Read each statement below and then indicate how much the statement represents you.

		Not at all like me										Completely like me
11.	My relationships with other students at school are fantastic.	0	1	2	3	4	5	6	7	8	9	10
12.	I feel good about my appearance.	0	1	2	3	4	5	6	7	8	9	10
13.	I feel like I fit in at my school.	0	1	2	3	4	5	6	7	8	9	10

Read each statement below and then indicate how much the statement represents you.

		Not at all										All of the time
14.	I suffer from headaches, stomach pains, or feel sick at school.	0	1	2	3	4	5	6	7	8	9	10
15.	I get bullied by students at my school.	0	1	2	3	4	5	6	7	8	9	10
16.	I feel sad at school.	0	1	2	3	4	5	6	7	8	9	10

Read each statement below and then indicate how much the statement represents you.

		Not at all well										Completely well
17.	I am able to deal with my problems at school.	0	1	2	3	4	5	6	7	8	9	10
18.	The teachers at my school care about me.	Not at all care 0	1	2	3	4	5	6	7	8	9	Completely care 10

Read each statement below and then indicate how much the statement represents you.

		Not at all like me										Completely like me
19.	I tend to bounce back quickly after hard times.	0	1	2	3	4	5	6	7	8	9	10
20.	I usually come through difficult times with little trouble.	0	1	2	3	4	5	6	7	8	9	10
21.	It does not take me long to recover from a stressful event.	0	1	2	3	4	5	6	7	8	9	10

Read each statement below and then indicate how satisfied you are with each aspect.

		Not at all satisfied										Completely satisfied
22.	In general, how satisfied are you with your health?	0	1	2	3	4	5	6	7	8	9	10
23.	In general, how satisfied are you with your diet?	0	1	2	3	4	5	6	7	8	9	10
24.	In general, how satisfied are you with the quality of your sleep?	0	1	2	3	4	5	6	7	8	9	10
25.	In general, how satisfied are you with your level of physical activity and exercise?	0	1	2	3	4	5	6	7	8	9	10

Read each statement below and then indicate how satisfied you are with each aspect.

		Not at all satisfied										Completely satisfied
26.	In general, how satisfied are you that your school supports and enables student wellbeing?	0	1	2	3	4	5	6	7	8	9	10
27.	In general, how satisfied are you with your role in supporting and enabling student wellbeing?	0	1	2	3	4	5	6	7	8	9	10

Appendix H. Permission for reuse of the published article in the thesis
(as per the publisher requirements)

Appendix I. Pilot study questions and feedback summary (Chapter 4)

Were you able to understand the questions?
11 responses

- ● Yes
- ● No

81.8%

18.2%
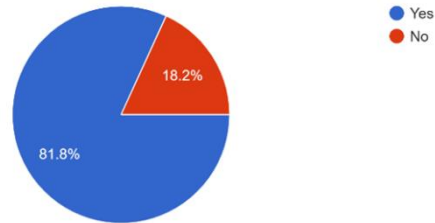
If your answer is yes then go to question 3. If your answer is no to the above question, write which ones were hard to understand (if you can recall)?
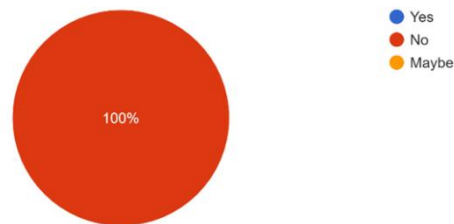2 responses

45

They were all good except the last one about you ethnicity where I thought it could be slightly more specific with what they mean.

Did you skip through any questions without really thinking about the answer?
11 responses

- ● Yes
- ● No
- ● Maybe

100%

If your answer is yes to the above question, then how many approximately?

0

How long do you think the survey was?
11 responses

- ● Very long
- ● Long
- ● Slightly long
- ● Okay and perfect length (it is required!)
- ● Slightly short
- ● Short
- ● Very short

36.4%

9.1%

18.2%

36.4%