**New Zealand Adolescents’ Conceptualizations of Wellbeing: A Prototype Analysis**

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**Abstract**

This research investigated New Zealand adolescents’ (aged 11 to 13, *N* = 361) perceptions of wellbeing with three studies. Specifically, we determined the components of wellbeing and aspects that promote wellbeing as per adolescents’ views. We also examined whether these perspectives are aligned with adults’ conceptualizations and popular academic models of wellbeing, whether socioeconomic status impacts how central a component is for adolescents, and whether wellbeing is prototypically organized. Results demonstrate that wellbeing is prototypically organized as central wellbeing components were associated more closely with adolescents’ perception of wellbeing than peripheral components. Contrary to adults’ conceptualizations and popular academic models of wellbeing, adolescents considered enjoyment/having fun, feeling safe, and being kind/helpful as central components of wellbeing and sense of satisfaction as a peripheral component of wellbeing. Socioeconomic status influenced these perceptions of component centrality. Adolescents from low socioeconomic areas consider comfort/being wealthy, being focused, good physical health, good values, and success/achievements as more central for wellbeing than those from high socioeconomic areas. Consistent with the current literature, positive family relationships, positive friendships, and physical activity/sport are the key aspects that promote adolescents’ wellbeing. Overall, researchers and practitioners should consider adolescents’ understanding of wellbeing in designing and application of wellbeing programs.

**Keywords:** adolescents, prototype analysis, wellbeing, well-being, positive education

Adolescence is a critical period characterized by several powerful and rapid physiological, emotional, and psychosocial changes, such as forming an identity and becoming more independent ([De Jager & Strauss, 1998](#_ENREF_12)). Although most adolescents experience these changes without much “storm and stress” ([Eccles et al., 1993, p. 90](#_ENREF_21)), many adolescents are presented with significant challenges related to academics and mental health. Among these challenges are depression, anxiety, school failure, stress, and suicide ([Brooks, Harris, Thrall, & Woods, 2002](#_ENREF_5); [De Jong, Sportel, de Hullu, & Nauta, 2012](#_ENREF_13); [Kelleher, McInerny, Gardner, Childs, & Wasserman, 2000](#_ENREF_34); [Kessler et al., 2005](#_ENREF_35); [Swahn & Bossarte, 2007](#_ENREF_66)). Globally, it is noted that about 20% of children and adolescents are estimated to develop mental illness or difficulties before the age of 14 ([World Health Organization, n.d.](#_ENREF_71)). Adolescents in New Zealand especially rate high on psychological morbidity and the highest on suicide relative to those in the OECD countries ([Organisation for Economic Co-operation and Development, 2009](#_ENREF_48)). These facts are disturbing as research has demonstrated that poor mental health in adolescents pose a considerable burden on the community and leads to educational difficulties ([Busch & Barry, 2007](#_ENREF_6); [Zins, Bloodworth, Weissberg, & Walberg, 2007](#_ENREF_73)). Given the incidence and consequences of ill-being in adolescence, it becomes imperative to understand what constitutes adolescents’ “wellbeing” and what promotes their wellbeing, a key aspect of complete mental health ([Keyes, 2005](#_ENREF_37)).

Complete mental health is not only the absence of pathology but also the presence of wellbeing in individuals, which is to some extent depicted by positive affect, positive evaluations of life, and optimal functioning ([Keyes, 2002](#_ENREF_36), [2013](#_ENREF_38)). A growing body of research has established the importance of studying and promoting wellbeing in adolescents. Besides preventing depression ([Seligman, Ernst, Gillham, Reivich, & Linkins, 2009](#_ENREF_58)), research shows that wellbeing is negatively correlated with undesirable school outcomes such as academic stress ([Resnick, 2000](#_ENREF_52); [Shaheen, Jahan, & Shaheen, 2014](#_ENREF_60); [Zhong, 2009](#_ENREF_72)) and positively correlated with favorable academic and behavioral outcomes such as academic achievement, better learning, improved relationships, greater satisfaction, and engagement ([Dix, Slee, Lawson, & Keeves, 2012](#_ENREF_19); [Lyons, Huebner, & Hills, 2013](#_ENREF_41); [O’Connor, Sanson, Toumbourou, Norrish, & Olsson, 2016](#_ENREF_46); [Seligman et al., 2009](#_ENREF_58); [Suldo, Thalji, & Ferron, 2011](#_ENREF_63); [Suldo & Shaffer, 2008](#_ENREF_65); [Waters, 2014](#_ENREF_68)). Together these findings have partly led to a movement of positive education which asserts that wellbeing should be taught in schools along with academic education as a means to counteract adolescent psychopathology and foster learning and fulfilment ([Green, Oades, & Robinson, 2011](#_ENREF_27); [International Positive Education Network, 2017](#_ENREF_32); [Norrish, 2015](#_ENREF_44); [Norrish, Williams, O’Connor, & Robinson, 2013](#_ENREF_45); [Seligman et al., 2009](#_ENREF_58)). However, any such effort requires consensus over the components or pathways regarding wellbeing, and a match between the perceptions of those who develop (scholars) versus receive these interventions (students) ([Cook, Kilgus, & Burns, 2018](#_ENREF_11); [Hone, Schofield, & Jarden, 2015](#_ENREF_29); [Horner, Blitz, & Ross, 2014](#_ENREF_30)), which is, as yet, lacking in the current research. While experts have devised several theoretical, conceptual, and promotional models of wellbeing ([For example, Diener et al., 2010](#_ENREF_18); [Durie, 1985](#_ENREF_20); [Huppert & So, 2013](#_ENREF_31); [Keyes, 2002](#_ENREF_36), [2005](#_ENREF_37); [Renshaw et al., 2014](#_ENREF_51); [Ryan & Deci, 2001](#_ENREF_54); [Ryff, 1989](#_ENREF_55); [Ryff & Keyes, 1995](#_ENREF_56); [Seligman, 2011](#_ENREF_59); [Suldo & Shaffer, 2008](#_ENREF_65)), much of this knowledge lacks precision for either overlooking or discounting adolescents’ participation in describing their wellbeing ([Anderson & Graham, 2016](#_ENREF_2); [Blaskova & McLellan, 2017](#_ENREF_4); [Casas, 2011](#_ENREF_8); [Sarriera & Bedin, 2017](#_ENREF_57)). Although it is commendable that adults’ conceptualizations of wellbeing have been examined ([e.g., work-life balance, Hone et al., 2015](#_ENREF_29)), limited research has examined adolescents’ conceptualizations of wellbeing.

In view of this background, the primary purpose of this study was to investigate 11 to 13-year-old New Zealand adolescents’ perceptions of the components of wellbeing and pathways to wellbeing. Understanding adolescents’ perspectives may be an essential aspect to enhance the precision of the concept of wellbeing and the overall acceptability, and perhaps effectiveness, of wellbeing focused interventions.

# Literature Review

**Research on Conceptualizations and Definitions of Wellbeing**

The concept of wellbeing is elusive as presently there is no global or agreed upon definition ([Baker, Green, & Falecki, 2017](#_ENREF_3); [Diener & Seligman, 2004](#_ENREF_17)). Several definitions of wellbeing exist in the academic literature ([Diener, 2009](#_ENREF_15); [Diener, Scollon, & Lucas, 2003](#_ENREF_16); [Hone, Jarden, Schofield, & Duncan, 2014](#_ENREF_28); [Huppert & So, 2013](#_ENREF_31); [Westerhof & Keyes, 2010](#_ENREF_70)) that differ, in part, due to the variations in researchers’ philosophical tradition. [Norrish et al. (2013)](#_ENREF_45) stated that explanations of wellbeing can be characterized as having components of a hedonic approach (affective aspects or feeling good), a eudaimonic approach (psychological aspects or functioning well), or more recently a holistic and social approach (comprising components of both hedonic and eudaimonic tradition i.e. feeling good, functioning well, and social wellbeing). Informed by these approaches, several models have been proposed that denote distinct conceptualizations of wellbeing ([Diener et al., 2010](#_ENREF_18); [Hone et al., 2014](#_ENREF_28); [Huppert & So, 2013](#_ENREF_31); [Keyes, 2005](#_ENREF_37); [Seligman, 2011](#_ENREF_59)). For example, some components listed in [Keyes (2005)](#_ENREF_37) model, such as social growth, positive affect, and personal growth, are not mentioned in Diener and colleagues’([2010](#_ENREF_18)) model. Similarly, [Seligman (2011)](#_ENREF_59), identified five components of wellbeing in his PERMA model (positive emotion, engagement, relationships, meaning and purpose, and accomplishment), whereas [Huppert and So (2013)](#_ENREF_31) extended the PERMA model to include ten components of wellbeing (such as components similar to PERMA being positive relationships and positive emotions, and components different such as self-esteem, emotional stability). The model of 12 positive psychology building blocks for adolescents, on the other hand, is composed of four core components of belief-in-self, belief-in-others, emotional competence, and engaged living ([Renshaw et al., 2014](#_ENREF_51)). Compounding such academic disagreements, making a choice among wellbeing models is a dilemma for educators and psychologists. To define wellbeing with greater accuracy, there have been a few empirical attempts at examining lay conceptions of wellbeing ([Anderson & Graham, 2016](#_ENREF_2); [Hone et al., 2015](#_ENREF_29); [Soutter, O’Steen, & Gilmore, 2012](#_ENREF_62)).

A majority of research on the lay conceptualizations of wellbeing have either been conducted on affluent Caucasian adult samples or utilized a narrow methodology. [Hone et al. (2015)](#_ENREF_29) demonstrated that New Zealand 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. Similarly, [Soutter et al. (2012)](#_ENREF_62) found evidence that having resources, being independent, relating well with teachers, functioning effectively in assessment-related activities, and striving towards scoring credits were most important for 17 to 21-year-olds understandings of wellbeing. However, they utilized purely qualitative strategies under the umbrella framework of their own Student Wellbeing Model. In another study, [Anderson and Graham (2016)](#_ENREF_2) examined wellbeing perceptions of children and adolescents (aged 6 to 18) by asking participants to rank two pre-defined concepts of wellbeing. Although the authors found support for ‘recognition’ and ‘participation’ as important components, their study was limited by their chosen methodology as the survey format restricted choice between two academic concepts of wellbeing and a free-response format was not employed to capture adolescents’ views. In sum, researchers have not studied school-going adolescents’ perceptions of wellbeing utilizing a person centric approach allowing free responses. In the next section, research on pathways to wellbeing is discussed.

**Pathways to Wellbeing**

Less attention has been paid to enhancing adolescents’ wellbeing in schools ([International Positive Education Network, 2017](#_ENREF_32); [Norrish, 2015](#_ENREF_44)), or obtaining adolescents’ views about ways to enhance wellbeing. In the context of wellbeing promotion, some programs have been developed specifically for adolescents that contain many components to build wellbeing. One example of such a program is the Geelong Grammar School’s Positive Education model that is designed to promote positive purpose, positive relationships, positive emotion, positive health, positive engagement, and positive accomplishment ([Norrish, 2015](#_ENREF_44)). While [Seligman et al. (2009)](#_ENREF_58) have developed the Strath Haven Positive Psychology Curriculum to strengthen relationships, meaning, positive emotions, and character strengths, a multi-component Wellbeing Promotion Program focusses upon building hope, strengths, gratitude, optimism, and kindness in schools ([Suldo, Savage, & Mercer, 2014](#_ENREF_64)). Further information regarding the ways of improving wellbeing come from government frameworks. For example, [Aked, Marks, Cordon, and Thompson (2008)](#_ENREF_1) discussed five communal ways to enhance wellbeing: taking notice, being active, connecting with others, learning, and giving. In terms of lay conceptualizations of pathways to wellbeing, New Zealand adults perceive physical activity, nurturing relationships, interests/hobbies, and eating healthily as central components of wellbeing ([Hone et al., 2015](#_ENREF_29)). However, an examination of adolescents’ perceptions of ways to improve wellbeing, which could have meaningful theoretical and practical advantages, is warranted.

**Importance of Adolescents’ Wellbeing Perceptions**

There are numerous ways in which lay understanding of wellbeing can inform theory and application of wellbeing in schools. Adolescents’ perceptions of the central components of wellbeing may possibly guide current wellbeing research/models, and potentially free the scholars from the confusion that currently exists in the wellbeing literature. Consequently, this advancement may enhance the precision with which wellbeing is assessed which has remained haphazard due to the lack of consensus in wellbeing components ([Hone et al., 2015](#_ENREF_29)). For example, experts typically utilize self-report instruments to assess wellbeing, and it is likely that adolescents’ responses to the questions correspond to their conceptualization of wellbeing. With regards to the application of wellbeing, adolescents’ conceptualizations could be an essential aspect to increase the social validity and/or success of school interventions considering the “contextual fit” and “precision education” propositions ([Cook et al., 2018](#_ENREF_11); [Horner et al., 2014](#_ENREF_30); [Marchant, Heath, & Miramontes, 2012](#_ENREF_42)). [Horner et al. (2014)](#_ENREF_30) defined contextual fit as the match between the components of an intervention and the needs and perceptions of those who experience the intervention. This premise contends that the quality of intervention is affected by how well these are valued, accepted, and even embraced by individuals in a certain setting, which is usually an outcome of an agreement in the perceptions of the implementers and those receiving the intervention ([Horner et al., 2014](#_ENREF_30); [Marchant et al., 2012](#_ENREF_42)). To elaborate, the key components of the wellbeing interventions should be precise and tailored to students’ needs and perceptions ([Cook et al., 2018](#_ENREF_11); [Horner et al., 2014](#_ENREF_30)). How well a program is received, or the social validity/acceptability of interventions, therefore, eventually depends on the opinions of students who are directly affected by the program ([Marchant et al., 2012](#_ENREF_42)). Overall, it is potentially misleading for experts to define adolescents’ wellbeing without considering adolescents’ say in defining wellbeing ([also see, Hone et al., 2015](#_ENREF_29)). The present study attempts to address this gap by investigating adolescent’s conceptualizations of wellbeing utilizing a prototype analysis approach.

**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](#_ENREF_25)), gratitude ([Lambert, Graham, & Fincham, 2009](#_ENREF_39)), forgiveness ([Kearns & Fincham, 2004](#_ENREF_33)), infidelity ([Weiser, Lalasz, Weigel, & Evans, 2014](#_ENREF_69)), and love and commitment ([Fehr, 1988](#_ENREF_24)). This method assumes that 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 and sufficient criteria ([Rosch, 1975](#_ENREF_53)). Prototype approach helps in identifying a “fuzzy collection” of the central components of a concept (also called prototypes) by means of ranking rather than identifying critical components ([Lambert et al., 2009, p. 1195](#_ENREF_39)). For a comprehensive review of the strategy, read [Fehr (1988)](#_ENREF_24) and [Kearns and Fincham (2004)](#_ENREF_33). Driven primarily by this unique mixed-method approach, this study has drawn inspiration from the Hone and colleagues’ ([2015](#_ENREF_29)) adults’ conceptualizations of wellbeing research. In their study, they demonstrated that wellbeing is prototypically organized in adults,which is one reason we chose to use prototype analysis. In addition, the current differences between the academic models of wellbeing also indicate that the components of wellbeing are not fixed ([Hone et al., 2015](#_ENREF_29)), and that wellbeing may be prototypically organized in adolescents as well. This strategy also seemed suitable relative to other strategies as we intended to determine the central components of wellbeing via a systematic and person-centric approach. [Rosch (1975)](#_ENREF_53) listed two essential conditions of prototype analysis method reflected in the present study: a) the participants should be able to list the features of the concept and rate which components are more central to the concept b) the centrality rating of the components should influence the participants’ perceptions of the concept. The prototype analysis research has also pointed out that these conditions should be tested on different groups of participants, thus, the procedure and structure of this research was similar to other studies ([Fehr, 1988](#_ENREF_24); [Fehr & Russell, 1984](#_ENREF_25); [Hone et al., 2015](#_ENREF_29); [Kearns & Fincham, 2004](#_ENREF_33); [Lambert et al., 2009](#_ENREF_39); [Weiser et al., 2014](#_ENREF_69)).

**The Present Study**

The main research question of the study was: What are the perceptions of New Zealand adolescents (aged 11 to 13 years) about the 1) central components of wellbeing and 2) pathways to wellbeing?

We subsequently examined whether the perceptions aligned with the popular academic models and adults’ conceptualizations of wellbeing. We also hypothesized that wellbeing will be prototypically organized in adolescents, and socioeconomic status will influence adolescents’ perceptions of the centrality of the components. This research is unique because to date no study has utilized a prototype analysis strategy to investigate adolescents’ wellbeing conceptions. As per the recommendations of some researchers, we compared the wellbeing perceptions of socioeconomically distinct groups for the first time ([Anderson & Graham, 2016](#_ENREF_2); [Hone et al., 2015](#_ENREF_29); [Soutter et al., 2012](#_ENREF_62)).

**Methods**

**Overview of Studies**

We conducted three studies to address the aims of the research. In Study 1, participants listed the components and pathways regarding wellbeing in a free-response format. A different sample of participants rated the centrality or importance of the components in Study 2. In Study 3, central components of wellbeing were hypothesized to be related more closely to the perception of wellbeing than the peripheral components in the third sample of adolescents. The first two studies addressed the primary question of the research. Specifically, Study 1 fully addressed the question about pathways and the second study provided the centrality ratings of the components. Whether wellbeing was prototypically organized in adolescents was determined by all three studies combined. The comparisons between the wellbeing perceptions of two socioeconomic groups were undertaken throughout these studies. The first study included qualitative data and the remaining were quantitative.

The recruitment process involved emailing the schools in Auckland, New Zealand with a study invite as per convenience, though preference was given to the school type (state intermediate schools with grades 7 and 8) and decile (1 and 10). In New Zealand, school decile (also known as school socioeconomic decile) is a key measure of the schools’ students’ socioeconomic status relative to other schools. Decile 1 draws the highest proportion of students from low socioeconomic areas whereas Decile 10 draws the highest proportion of students from high socioeconomic areas ([Education New Zealand, 2018](#_ENREF_22)). Two intermediate schools were agreeable to participate in the study located in ethnically and socioeconomically diverse regions. A personal meeting was held with school principals of these schools to provide them with the study information and material. The schools provided with different classes for participant recruitment in each study. From each class that was offered for a certain study, we recruited only those students who agreed to participate. Note that there was no overlap in participants for studies 1, 2 and 3.

Ethical approvals were gained from the university’s ethical committee. The potential participants and their parents were given separate sheets informing them about the study’s aim, importance, and procedure with other significant ethical details two weeks prior to each study. The studies were judged to involve minimal risk, so the parent consent was not sought but the participants’ assent was taken electronically before each study. The participation in the study was by voluntary inclusion only and the parents could withdraw their children from participating in the study at any time or the students could withdraw on their own. University-branded pens were given to all the participants as incentives.

The data in the studies were collected utilizing separate anonymous surveys. The findings of Study 1 informed the Study 2 survey and the findings of Study 2 informed the Study 3 survey. All surveys were managed in-person within the school hours and the data were collected electronically on the SurveyMonkey software. The web link and instructions to access the surveys were mentioned in the participant information sheets and were also verbally stated on the day of administration. A registration system was used to collect participants’ demographic information and assent before they accessed the surveys.

## 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 that promote wellbeing. To fulfil the aim, participants were first asked to write as many wellbeing components as they could recollect. Second, they were asked to list all the aspects that they thought fostered their wellbeing. Both the questions utilized an open-ended response format. There was no time limit, though students generally completed their responses in about 20 minutes.

### Participants.

The sample comprised 125 adolescents (65 boys and 60 girls) from two Auckland intermediate schools. Thirty eight percent of participants were from a socioeconomically low decile school (i.e. 48 from Decile 1) and 62% from high decile school (i.e. 77 from Decile 10) and were from grade 7 (46%) and grade 8 (54%) aged 11(39%), 12 (55%) and 13 (6%). Approximately 53% of the sample was New Zealand European. The remaining participants were Māori (indigenous people, 11%), Pacific Islanders (18%), or Asian (7%). An additional 4% of participants reported that they belonged to the African/Middle Eastern ethnic group. Approximately 7% of participants indicated that they were of mixed ethnicity.

## Procedure.

Participants were given the following verbal and on-screen instructions in their respective schools within the school hours (adapted from [Fehr & Russell, 1984, Study 6](#_ENREF_25); [Hone et al., 2015](#_ENREF_29)):

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: feelings of disappointment, 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 word wellbeing to someone who does not know about wellbeing and answer the following question: What, in your opinion, are the components of wellbeing? List as many as you can.

After the participants answered the above question, they answered an additional question:

“What, in your opinion, enhances your wellbeing? Specifically, which are those factors in your life or particularly at your home, school, and society that 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)](#_ENREF_24), two broad steps of analysis were undertaken, similar to prototype analysis research ([Fehr & Russell, 1984](#_ENREF_25); [Hone et al., 2015](#_ENREF_29); [Kearns & Fincham, 2004](#_ENREF_33); [Lambert et al., 2009](#_ENREF_39); [Weiser et al., 2014](#_ENREF_69)). Note that these steps were assumed separately for components and pathways. The first step involved identifying and extracting monolexemic linguistic units which were distinct and easily recognizable, such as component responses “happy”, and “joyful” and pathway responses “family” and “pets”. When participants used a phrase, judgement 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 only separated 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. Another perspective taken into regard for organizing data was combining identical units as one and noting down their frequencies. For example, all “games” and “watching movies” 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, overall. As an outcome, a total of 551 component linguistic units were reduced to 203 after deleting for 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 component category. Single unique words were formed into independent categories. For example, the linguistic unit “being happy” was allocated to the category “being happy”. Items 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, similar meaning words 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 a broader category of “pet ownership and attachment”. Responses such as “beach”, “sunny”, 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 authenticity of responses. For example, the unit “belief in your abilities” was categorized as “belief in your abilities”. Responses such as “feel safe”, “being loved”, and “trying new things” were categorized as is.

Besides following a conservative categorizing approach (simultaneously avoiding for redundancy), literature was comprehensively reviewed to assign similar units together and keep the non-similar ones separate, thereby following a balanced approach. For instance, responses about pathways that included activities adolescents engage in their free time such as “dance”, “cooking”, and “reading” were headed under the category “hobbies/doing things that interest you”. Although an activity such as dance may potentially enhance wellbeing, a broad categorizing approach was applied on a strategic account of locating key breadth strategies from an application point of view. However, instead of collapsing pathway responses such as ‘Netflix’, “computer games”, “watching movies” to the category of hobbies/doing things that interest you, a new category of “entertainment” was created. Some components were broad to be approached as a component category, thus necessitating 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 having a physical dimension such as “active and healthy” and “being healthy and fit”. For instance, [Singletary et al. (2014)](#_ENREF_61) in their study with 13-year-olds demonstrated that “young people perceive being healthy to mean being physically healthy”.

Since the participants were schoolchildren, spelling errors were apparent, along with partial word responses. Also, similar replies in terms of meaning and structure were noticed in the same response (such as “happy, excited, joyful”). Therefore, an estimated 50% of linguistic units were either associated semantically or linguistically that were classed to the same component or pathway category to avoid repetition. Judgement calls were validated by the third and fourth authors of this study and any discrepancies were resolved through discussion. Various responses were idiosyncratic: i.e., 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 components by their perceived centrality to wellbeing). Similarly, pathway categories listed by less than 2% of the sample (47) were excluded from further analysis ([Hone et al., 2015](#_ENREF_29)).

### Results.

Table 1shows 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 than 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 then good physical health (34%). Some components came to mind less than others. For example, being focused (2.4%), contentment/peace (3.2%), and being grateful (3.2%) were the least listed components. Table 1 also depicts the percentage of participants that listed each component in low and high school deciles. Both socioeconomic groups frequently listed being happy as a wellbeing component. 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 1 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. For the listing percentage of the pathway categories, see Table 2. More than half of the adolescents considered positive family relationships (60%) and positive friendships (55%) enhance their wellbeing. While about 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%), entertainment (16%), socializing, and around positive people (13% each), pet ownership and attachment, and being kind/helpful (14% each). The mean score of the participants’ listing percentage was 10.8. With respect to the school environment, teacher support and involvement (7%) also appeared in the text together with learning (8%), school belongingness (9%), and achievement (10%). The components travel (7%), laughter/humor (7%), and relaxation (7%) had a similar listing percentage. The remaining components had a listing lower than 7%. Both school decile groups frequently listed positive family relationships, positive friendships, and physical activity/sport as important 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](#_ENREF_29); [Kearns & Fincham, 2004](#_ENREF_33); [Weiser et al., 2014](#_ENREF_69)). The responses across participants were rather inconsistent and no component was listed by all 125 participants.

Three components appeared most frequently in the text: being happy, being kind/helpful and good physical health. Some of these results are consistent with the Soutter and colleague’s ([2012](#_ENREF_62)) study who demonstrated feeling well (equivalent to the components feeling good and being happy in the present study), relating well (good relationships in the present study), and having possessions (comfort/being wealthy in the present study) as components of wellbeing for 17 to 21-year-olds. Another important observation was adolescents listing of “feeling safe” in the present and previous research ([Anderson & Graham, 2016](#_ENREF_2)).

Table 1

Study 1 wellbeing components arranged by Study 2 centrality ratings

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Study 1 | Listing percentage |  |  | Study 2 |  |
| Component | Frequency | % low decile | % high decile | % total Participants | 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 | 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 | 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 | 9.09 | 5.60 | 5.58 | 2.98 |

**Figure 1**

Pathways to wellbeing

(Colored, online only)



**Table 2**

Pathways to Wellbeing

|  |  |  |
| --- | --- | --- |
| **Component** | **Occurrence (*n*)** | **% participants** |
| *Positive family relationships* | 75 | 60.0 |
| *Positive friendships* | 69 | 55.2 |
| *Physical activity/sport* | 42 | 33.6 |
| *Hobbies/doing things that interest you* | 38 | 29.6 |
| *Nature* | 21 | 16.8 |
| *Entertainment* | 20 | 16.0 |
| *Being kind/helpful* | 20 | 13.6 |
| *Pet ownership and attachment* | 17 | 13.6 |
| *Socializing* | 17 | 12.8 |
| *Around positive people* | 18 | 12.8 |
| *Eating healthily* | 15 | 12.0 |
| Achievement | 12 | 9.60 |
| School belongingness | 11 | 8.80 |
| Learning | 10 | 8.00 |
| Good physical health | 10 | 8.00 |
| Travel | 9 | 7.20 |
| Laughter/humor | 9 | 7.20 |
| Relaxation | 9 | 7.20 |
| Being happy | 9 | 7.20 |
| Perceived teacher support | 9 | 7.20 |
| Being encouraged | 8 | 6.40 |
| Having fun | 7 | 5.60 |
| Being at home | 6 | 4.80 |
| Being loved | 6 | 4.80 |
| Healthy environment | 5 | 4.00 |
| Technology | 7 | 4.00 |
| Feeling safe | 4 | 3.20 |
| Trying new things | 4 | 3.20 |
| Community | 5 | 3.20 |
| Work enjoyment | 4 | 3.20 |
| Presents/surprises | 5 | 3.20 |
| Religion | 4 | 3.20 |
| Group membership | 3 | 2.40 |
| Being respected/valued | 3 | 2.40 |
| Positive thinking | 3 | 2.40 |
| Appreciation | 3 | 2.40 |
| Perceived social support | 3 | 2.40 |

Components of wellbeing not previously identified were also evident. For example, components being kind/helpful, good values, good temperament/behavior, being focused, and enjoyment/having fun are unique to the 11 to 13-year-old’s concept of wellbeing and not specified in the current academic models. The non-appearance of these components in academic models suggests that adolescents have a broad characterization of wellbeing.

Both socioeconomic groups substantially listed being happy, good physical health, and being kind/helpful as components of wellbeing. However, the listing percentages of some components such as good physical health, enjoyment/having fun, and being respectful greatly varied. Specifically, low socioeconomic group recollected good physical health considerably less than the high socioeconomic group whereas high socioeconomic group did not list enjoyment/having fun as much as the low socioeconomic group. Hence, some influence of socioeconomic status 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, many ‘behaviors’ 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 hedonic, eudaimonic, physical, social, and spiritual aspects in adolescents’ perception of wellbeing comparable to [Durie (1985)](#_ENREF_20) Te Whare Tapa Whā model of health.

The most listed pathway to wellbeing was positive family relationships followed by positive friendships and physical activity/sport. These findings resonate with wellbeing promotion models such as the Geelong Grammar School model ([Norrish et al., 2013](#_ENREF_45)). The government frameworks that identify five evidence-based pathways to wellbeing ([Aked et al., 2008](#_ENREF_1); [Mental Health Foundation of New Zealand, 2018](#_ENREF_43)) are also reflected in the current study in the following ways: Connect (similar to positive friendships, positive family relationships, and socializing in the current study), Give (similar to being kind and helpful), Be active (similar to physical activity/sport), Take Notice (similar to nature), and Keep Learning (similar to hobbies/doing things that interest you, learning, trying new things). Surprisingly, adolescents did not list some of the recent pathways to wellbeing (e.g., mindfulness and gratitude) as discussed by wellbeing researchers. For example, [Norrish (2015)](#_ENREF_44) discusses the robust influence of mindfulness programs and gratitude exercises on adolescents. Perhaps, adolescents were uninformed about the power of these abstract concepts in transforming their life, and thus, they focused more on *tangible pathways to wellbeing*, which are clear-cut and straightforward to their understanding, rather than *intangible pathways to wellbeing*.

## 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 was to their concept of wellbeing and their judgments were examined for agreement. Impact of socioeconomic decile on wellbeing components’ centrality ratings was also examined.

### Participants.

The sample was comprised of 122 intermediate school students (65 boys and 57 girls) from grade 7 (39%) and grade 8 (61%) of age 11 (32%), 12 (57%) and 13 (11%). Thirty four percent participated from low decile school (42) and 66% (80) 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 reports of Māori European, Pacific Māori or Pacific European).

### 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](#_ENREF_29)):

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 intra-class correlation coefficient 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 (26 components were treated as cases and 122 participants as items) which also indicated an exceptionally high internal consistency of the ratings (α = 0.964). Spearman’s rank correlation coefficient was computed to examine the relationship between Study 1 listing percentage and Study 2 centrality ratings. A Mann-Whitney test was also conducted to examine whether school decile influences the mean centrality ratings of 26 components.

### Results.

Table 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 (*rs (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 1 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 low socioeconomic group considered the following components as more central for wellbeing than high socioeconomic group: *being focused* (8.00, 7.00, p = 0.00500, r = 0.260), *comfort/wealthy* (7.50, 6.00, p = 0.00400, r = 0.260), *good physical health* (10.00, 8.00, p = 0.00100, r = 0.300), *good values* (10.00, 8.00, p = 0.00500, r = 0.250), and *success/achievements* (9.00, 8.00, p = 0.00400, r = 0.260). As per the [Cohen (1988)](#_ENREF_10) criteria ([as cited in Pallant, 2013](#_ENREF_49)), good physical health was associated with a ‘medium’ effect size.

***Discussion.***

Adolescents perceive some wellbeing components as more central than others, thereby fulfilling the first condition for ascertaining a concept’s prototypical structure. For example, enjoyment and being kind/helpful received higher ratings than the absence of sadness and comfort/being wealthy components, which were less prototypical of wellbeing. Some disparities were apparent in Study 1 and Study 2 data that could be attributable to the distinct cognitive processes associated with listing and rating components ([Fehr, 1988](#_ENREF_24)). The way we recall something requires different heuristics than rating a predetermined list, which is consistent with the prototype research ([Kearns & Fincham, 2004](#_ENREF_33)). 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 socioeconomic status mostly have parallel perceptions about wellbeing components with unique variations regarding certain aspects, such as comfort/being wealthy.

## Study 3: Impact of Component’s Centrality on Perception of Wellbeing

The first two studies fulfilled the first condition of prototype analysis procedure and Study 3 tested the second and final condition: Whether components’ centrality has an impact on participants’ understanding of wellbeing? We hypothesized that (if wellbeing is prototypically organized) central components must 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 New Zealand 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 grade 7 and 59% from grade 8. Participants were of different ethnic backgrounds including Māori (12%), Pacific (17%) and New Zealand European (55%). Some reported themselves as Asian (11%) and others as African/Middle Eastern (2%). The remaining identified themselves as of mixed ethnicities (3%). Age of the participants was 12 (58%), 11 (28%) and 13 (14%) years.

**Figure 1.** Components’ ranking correlation between Study 1 (listing phase) and Study 2 (centrality phase)

Colored: online only



### Procedure.

For 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 the ratings lower than this value were considered peripheral (See Table 1 for reference). Even though essential for the current study, the authors acknowledge that centrality is continuous and such demarcation is artificial ([Lambert et al., 2009](#_ENREF_39)). 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. 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 counsellor 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 school work. 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 eleven-point scale (0 = extremely poor match to 10 = extremely good match).

### Analysis.

The generalized linear mixed model was used to quantify the associations between centrality/decile and 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 IBM 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 significant (p = 0.0370). The Decile × Centrality (central or peripheral) interaction was also significant (p = 0.0300). In other words, the central scenario was more closely associated with the representation of wellbeing than peripheral scenario. The association between the selection of the scenarios and component centrality was moderated by school decile. Table 3 shows the descriptive statistics for the two scenarios.

**Table 3**

Descriptive statistics for the imaginary wellbeing scenarios as per school decile

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| School decile | Scenario | N | M | SD | Md | Interquartile range |
| High decile | Sam (central) | 72 | 8.25 | 1.42 | 8.00 | 1 |
| Laura (peripheral) | 72 | 7.07 | 1.92 | 7.00 | 3 |
| Low decile | 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 also show that both low and high socioeconomic decile participants rated the central scenario higher than the peripheral scenario. Because the school decile moderated the relationship between the selection of the scenario and centrality, it seems apparent that central components of wellbeing and decile-specific perceptions are not mutually exclusive.

**General Discussion and Implications**

This is one of the first studies that systematically determined 11-13-year-olds’ perspectives of components and pathways regarding wellbeing via prototype analysis and examined 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.

**Is Wellbeing Prototypically Organized in Adolescents?**

Wellbeing is prototypically organized in adolescents. In other words, some components of wellbeing are considered more central than others. For example, enjoyment is more central to adolescents’ concept of wellbeing than a sense of satisfaction. Participants could freely list, and rate wellbeing components and components’ centrality significantly affected their perception of wellbeing. Hence, the research fulfilled the two conditions stated by [Rosch (1975)](#_ENREF_53) in demonstrating a concept’s prototype structure. The finding extends to a body of work with New Zealand’s workers that is evidence of the prototypical structure of wellbeing ([Hone et al., 2015](#_ENREF_29)). Having a prototype structure of wellbeing entails that wellbeing assessment should take into regard a “fuzzy” ([Lambert et al., 2009, p. 1195](#_ENREF_39)) presence or absence of central components instead of requiring components with an all or none phenomena (for e.g., Keyes, 2005 model require diagnosis of wellbeing with a necessary and sufficient criteria).

**Do Adolescents’ Perceptions of Wellbeing Components Correspond with Academic Models and New Zealand Adults’ Conceptualizations?**

Since wellbeing is prototypically structured, adolescents’ wellbeing conceptualizations include central components such as being happy, enjoyment/having fun, and feeling good, and peripheral components, such as comfort/being wealthy and contentment/peace. These results suggest that adolescents’ perceptions of central components of wellbeing are quite distinct than New Zealand adults’ wellbeing perceptions (which are good physical health, work-life balance, feeling valued, and good relationships) ([for a review read Hone et al., 2015](#_ENREF_29)). Based on social acceptability and contextual fit of interventions, therefore, wellbeing practitioners should be careful about the selection of elements of their interventions for adolescents ([Horner et al., 2014](#_ENREF_30); [Marchant et al., 2012](#_ENREF_42)). For example, researchers have cautioned wellbeing researchers against overgeneralizing the inferences drawn from research on adults to adolescents ([Blaskova & McLellan, 2017](#_ENREF_4)).

Results were assessed to examine how the central components are aligned with the popular academic models, which demonstrated partial alignment. As adolescents’ prototype of wellbeing is wide-ranging (including emotions, behaviors, and cognitive states), we can say that adolescents consider wellbeing as a multidimensional concept. Even wellbeing experts have shown consensus over the multidimensional nature of wellbeing ([Huppert & So, 2013](#_ENREF_31)). With regards to the components of wellbeing, however, some differences were observed. While some central components correspond to the researchers’ definitions of wellbeing, others are merely recognized as correlates of wellbeing rather than as components. For example, in terms of similarities, components such as being happy, feeling good, and good mental health have support from the hedonic and eudaimonic approaches to wellbeing ([Huppert & So, 2013](#_ENREF_31)). Contrarily, some components such as being kind/helpful have not been recognized as exclusive components in academic models but have been shown to impact wellbeing positively ([for e.g., Layous, Nelson, Oberle, Schonert-Reichl, & Lyubomirsky, 2012 studied kindness and wellbeing](#_ENREF_40)). While kindness has been discussed as a cornerstone of positive relationships in Seligman’s (2011) model, results indicate that adolescents regard kindness and positive relationships as separate components and perceive kindness as more important to their concept of wellbeing. Likewise, feeling safe and enjoyment/having fun components are absent from wellbeing models irrespective of their presence in government frameworks of wellbeing ([Canadian Institute for Health Information, 2009](#_ENREF_7); [Education Review Office, 2015](#_ENREF_23)). Adolescents also mentioned *being respected/encouraged* and *being respectful* as crucial components of wellbeing equivalent to the results of [Anderson and Graham (2016)](#_ENREF_2) study. The domain of respect has a social connotation to it; thus, researchers could further investigate the influence of these social aspects on adolescents’ wellbeing perceptions. The component belief in your abilities was identified to be present in only one model of adolescent wellbeing ([Renshaw et al., 2014](#_ENREF_51)). In sum, current models do not fully address what adolescents perceive to be part of wellbeing.

It is also interesting to note that the aspects normally observed in academic models such as meaning and purpose ([Huppert & So, 2013](#_ENREF_31)) were not listed by adolescents. Furthermore, while adolescents stated some ‘behaviors’ as the components of wellbeing, most measures of wellbeing are cognitive and emotional, and hardly any ask about ‘behaviors’ (such as being kind/helpful). Hence, formulating a broader definition of wellbeing customized to the adolescents’ perspectives as outlined in this research is recommended (comprising of components absent from academic models, such as enjoyment/having fun, feeling safe, being kind/helpful, being respectful, and being respected). However, by suggesting a broader definition we do not imply that experts disregard their own judgments. We are suggesting that adolescents’ perceptions of wellbeing should inform the researcher’s models which may also clarify the understanding of the concept of wellbeing for researchers.

**How Adolescents’ Perceptions of Pathways to Wellbeing Correspond with Current Research and Models?**

Most frequently listed pathways to wellbeing provide further evidence of the relevance of existing strategies in promoting adolescents’ wellbeing. For example, positive relationships, physical activity, engaging in leisure pursuits/hobbies, being kind/helpful are indispensable aspects of the current wellbeing promotion models ([Aked et al., 2008](#_ENREF_1); [Norrish, 2015](#_ENREF_44)) and we further reinforce their significance in promoting wellbeing. These results correspond to the New Zealand workers’ prototype research ([for a review see Hone et al., 2015](#_ENREF_29)). Eating healthily and socializing activities are also significant aspects of the positive health and relationships domains of the Geelong Grammar School positive education model ([Norrish, 2015](#_ENREF_44)). Interestingly, 11 to 13-year-olds frequently listed nature, pet ownership and attachment, being around positive people, and entertainment as ways to improve wellbeing. Government frameworks have given importance to some of these aspects such as nature, whereas popular academic models are less likely to reinforce these aspects in their promotional models. A plethora of research suggests that contact with nature, including bush-walks, being outside in natural environment, and enjoying a sunny day at the beach, therapeutically relaxes body and mind and enhances mental wellbeing ([Sarriera & Bedin, 2017](#_ENREF_57)). Similarly, pet ownership and attachment has shown association with adolescents’ mental, academic, and social benefits ([Purewal et al., 2017](#_ENREF_50)). Research on effects of entertainment such as watching movies and gaming on adolescents has been severely criticized previously, however, positive media psychology researchers have focused on the beneficial effects of digital entertainment on adolescents (e.g., exposing adolescents to programs depicting positive behaviors) ([De Leeuw & Buijzen, 2016](#_ENREF_14)). Also, being surrounded by positive people enhance adolescents’ wellbeing. Thus, these pathways (entertainment, pet ownership and attachment, around positive people, and nature) represent useful targets for adolescents’ wellbeing promotion in the future. The Five Ways to Wellbeing model as a starting point for enhancing wellbeing in schools is recommended.

**Does Socioeconomic School Decile Influence Adolescents’ Wellbeing Perceptions?**

School decile influences adolescents’ perceptions of wellbeing. Whilst the impact of socioeconomic status on adolescents’ wellbeing is known, no study has previously demonstrated its influence on adolescents’ perceptions of wellbeing components. Both groups showed similar perceptions in the listing phase. Significant differences were observed in the perceptions in the rating phase, however. This finding indicates that the wellbeing perceptions of adolescents (belonging to different suburbs with different socioeconomic standing) are broadly similar but some differences exist in the value given to certain components. For example, no differences appeared in rating 21 components, thus indicating considerable similarities in the perceptions of adolescents in these school deciles. Nonetheless, low socioeconomic group considered five wellbeing components (such as, comfort/being wealthy and success/achievements) more important than high socioeconomic group. These differences in ratings may have surfaced due to adolescents’ different socioeconomic status, culture, or overall theme of the school. Additionally, socioeconomic status moderated the relationship between centrality and perception of wellbeing in the third study. Consequently, socioeconomic groups’ unique perceptions should be combined with adolescents’ general perceptions in understanding wellbeing (see Study 3 Discussion section for reference).

**Other Insights and Implications**

The examination of adolescents’ freely listed responses has led to interesting insights regarding their understanding of wellbeing. Firstly, 98% of adolescents listed components relevant to the field of wellbeing and only two percent did not respond or listed aspects unrelated to the concept of wellbeing. This finding indicates adolescents’ awareness of the concept of wellbeing – specifically a considerable number of components (551) were listed. Moreover, multifarious pathways to wellbeing were listed. It is noteworthy, though, that adolescents mentioned relatively tangible pathways such as relationships with family and peers, sport, pets etc. than intangible constructs such as mindfulness (as discussed in Study 4 Discussion section on page 30*)*. While [Norrish (2015, p. 47)](#_ENREF_44) explains this lack of consideration of internal dimensions as adolescents’ occasional “narrow thinking” and their focus on “material possessions”, the present study has contrary results and shows *adolescents’* *appreciation of deeper aspects* such as nature and being kind/helpful. For example, it is likely that some adolescents are engaged in mindful activities but cannot necessarily give a name to the mental state due to lack of instruction. Therefore, adolescents should be educated about these precious concepts (such as mindfulness) early in life.

Comparison of linguistic units generated for components (551) and pathways (565) implies a similar proposition. Adolescents listed 14 more pathways than components, and thus showed a greater awareness of the ways to foster wellbeing rather than 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. It is also noteworthy that participants were not imparted wellbeing education. 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” adolescents’ meaning of the concept ([Cloninger, 2004, p. 8](#_ENREF_9)). Further empirical research is required, however, to support the notion of intuitive understanding of wellbeing.

Secondly, adolescents demonstrated some overlapping perceptions of the aspects that define and improve wellbeing. Some 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 to detect differentiation between the two or they suppose a relation between aspects that define versus improve wellbeing. The second assumption has some empirical support ([Hone et al., 2015](#_ENREF_29)). The results stipulate that components mentioned dually varied in frequency. For example, good physical health was ‘listed’ frequently as a component but marginally 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, however also showed some overlap. Thus, educators may consider promoting the central components of wellbeing in schools that are not mentioned as pathways. For example, [Froh, Kashdan, Ozimkowski, and Miller (2009)](#_ENREF_26) demonstrated that gratitude intervention enhanced the subjective wellbeing of early adolescents.

Finally, adolescents’ perceptions of wellbeing vary markedly with one another. Though it is remarkable that some components and pathways were collectively stated by a high percentage of adolescents, no component or pathway of wellbeing was mentioned universally (See Study 1 Discussion section and Study section). The variability in responses is indicative of the distinctive characteristics or experiences that may influence 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 [UNESCO (2004)](#_ENREF_67) “curriculum differentiation” approach where a curriculum is “modified to match the learning needs” of an individual, positive education practices ought to be personalized to fit the wellbeing perceptions of adolescents, to pave the way for more precision in education and interventions ([Cook et al., 2018](#_ENREF_11); [Horner et al., 2014](#_ENREF_30)). In addition to personalized ‘one-time external interventions’ with momentary wellbeing gains, schools may also focus on improving adolescents’ wellbeing literacy considering their authentic perceptions, which may be a huge leap forward in making them independent in enhancing their own wellbeing ([Oades & Johnston, 2017](#_ENREF_47)).

**Limitations and Future Directions**

There were several limitations of the study that should be acknowledged. To collect qualitative data, open-ended surveys were utilized rather than other rigorous methods such as interviews or focus groups. It is possible that the writing ability of some students affected the length of their responses. This method was chosen over others as it was more convenient for collecting opinions of many students at the same time. Previous prototype studies have also used an equivalent way of collecting qualitative data. Secondly, the findings of the present study are limited by the subjective opinions of the participants and researchers. For example, the coding of responses and their allocation to component and pathway categories was subjective and pose a potential bias to research. For mitigating this bias, every attempt was made in depicting the true perceptions of adolescents. Responses were coded verbatim, initially two researchers assigned units to categories, and then category allocation was discussed with other researchers. For readers to examine researchers’ judgments, the raw data of the first study has been published online (*due to the reasons of double blind review, we haven’t shared the data link in the manuscript*). Similarly, participants’ responses are also subjective. For example, how one person perceives feeling good could vary from another person’s perception. Therefore, a useful avenue for future research is to explore adolescents’ perceptions of components of wellbeing (e.g., happiness). Thirdly, the effect of demographic factors such as gender or ethnicity on adolescents’ wellbeing perceptions could not be examined. As this study determined, demographic factors may have an influence on the perceptions of wellbeing. An important direction for future research, therefore, is to compare gender-based perceptions of wellbeing and investigate how adolescents’ awareness of wellbeing differ across education levels and culture. While both socioeconomic groups generated virtually comparable linguistic units, we recognize that the sample size of low decile group was relatively smaller than the high decile group in all three studies (Study 1 *n* = 48 low and 77 high; Study 2 *n* = 42 low and 80 high; Study 3 *n* = 42 low and 72 high). This difference may have potentially underrepresented low socioeconomic individuals’ views. Taking the sample size into account, future enquiries could assess low socioeconomic group perceptions on a larger sample.

The research on adolescents’ perceptions of wellbeing is relatively inadequate and recent. The present study provides preliminary evidence about the variation in adolescents’ wellbeing prototype of pathways and components regarding wellbeing as a function of school decile. It is essential that further scholarship examine the stability of adolescents’ perspectives of wellbeing across countries and observe changes over time. As [Fehr (1988)](#_ENREF_24) posited that it is likely that the prototype of wellbeing may vary with different populations but the prototypical structure of wellbeing remains. Another fruitful prospect is to study the extent to which adolescents’ prototype of wellbeing match with an individual’s representation of wellbeing to examine the extent to which interventions need to be modified to suit individual’s requirements.

**Conclusion**

This study contributes to an under-investigated area of adolescents’ wellbeing. The evidence suggests that adolescents’ perceptions of wellbeing components are only partially aligned with popular academic models (some components are common such as feeling good, being happy, and good mental health, and some are omitted from academic models such as enjoyment/having fun, being kind/helpful, feeling safe, being respectful, and being respected). Adolescents’ component perceptions are also different than adults’ perceptions of wellbeing components. Therefore, a broader definition of wellbeing is warranted tailored to the adolescents’ prototypical wellbeing representation. While the three most listed pathways to wellbeing show consensus with academic models and adults’ conceptualizations, researchers can also pay more attention to the importance of nature, positive people, entertainment, and pets in their promotional models for adolescents. It is imperative that practitioners and researchers consider adolescents’ perceptions in designing and implementing wellbeing programs, especially accommodating perspectives exclusive to the socioeconomic groups.

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