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Character strengths and wellbeing in adolescence: Structure and correlates of the Values in Action Inventory of Strengths for Children

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ABSTRACT

The structure of character strengths among adolescents and their relation with wellbeing have received little systematic attention. This study examined the dimensions underlying the Values in Action (VIA) Character Strengths defined by Peterson and Seligman (2004) and assessed their associations with measures of subjective wellbeing. High school students (N = 501, aged 15–18) completed a series of questionnaires online, including a widely used strength measure the VIA-Child (also referred to in the literature as the VIA-Youth, Park & Peterson, 2005). Five strength factors – Temperance, Vitality, Curiosity, Interpersonal Strengths, and Transcendence – were obtained, and Temperance, Vitality, and Transcendence were independently associated with wellbeing and happiness. Implications for the study of character in adolescence, including gender differences and measurement issues, are discussed.

1. Introduction

For nearly one decade, the Positive Psychology movement has investigated the character strengths that allow individuals and communities to thrive. Integral to this research has been a focus on positive character development. By delineating strengths of character researchers have hoped to enhance our understanding of well-being, happiness, and optimal functioning in adolescence (Park, 2004b). The present study attempts to advance research on the measurement of character strengths and virtues in adolescence through investigation of the structure and correlates of character strengths in a high school sample.

Positive psychology's model of character strengths is embodied by the Values in Action (VIA) classification, developed by Peterson and Seligman (2004). This classification organises 24 character strengths under six rationally derived virtue classes: Wisdom and Knowledge (curiosity, love of learning, judgment, creativity, perspective); Courage (bravery, industry, integrity, zest); Humanity (love, kindness, social intelligence); Justice (citizenship, fairness, leadership), Temperance (forgiveness, modesty, prudence, self control), and Transcendence (appreciation of beauty, gratitude, hope, humour, spirituality). The VIA Inventory of Strengths questionnaire (VIA-IS) was created to measure these 24 strengths among adults. The VIA-IS demonstrates strong cross-cultural consistency (Park, Peterson, & Seligman, 2006; Seligman, Steen, Park, & Peterson, 2005) and appears to be a comprehensive classification of positive characteristics that goes beyond the Big Five personality traits – Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism (Haslam, Bain, & Neal, 2004). For example, character strengths have been found to remain robust predictors of life satisfaction after the Big Five were statistically controlled (Park & Peterson, 2006).

The VIA strengths have also been measured in younger people, with the development of the VIA-Y (Dahlsgaard, 2005) and the VIA-Youth (Park & Peterson, 2005). The VIA-Youth is an adaption of the VIA-IS for children and adolescents aged between the ages of 10 and 17 years. The VIA-Youth has undergone considerable psychometric testing by its authors, who purport it to possess reliable internal consistency, stability, and validity (Park & Peterson, 2006). The VIA-Youth has also been adapted for use in German (Weber, Ruch, Park, & Peterson, 2008) and South African (Van Eeden, Wissing, Dreyer, Park, & Peterson, 2008) samples. Like the VIA-Youth, the VIA-Y was also developed for use for 10–17 year olds, and although shorter, contains analogous items (Dahlsgaard, 2005).

The VIA-Youth is part of a battery of positive psychology questionnaires to be found on the University of Pennsylvania's "Authentic happiness" website, where it is renamed the 'VIA-Child'. This website has over 1,865,000 registered users, making it one of the most widely used and popular measures of character strengths in youth. It is therefore important for the properties of the VIA-Youth to be widely examined and validated across samples.

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With the advent of measures such as the VIA-IS and the VIA-Youth it has become possible to investigate the empirical structure of character strengths. The six theoretical virtue classes may not correspond to the actual covariation of the strengths, and there is some evidence that they do not map directly onto laypeople's implicit theories of positive character (Haslam et al., 2004). To date, four published studies (see Table 1) have examined the factor structure of the VIA-IS (Brdar & Kashdan, 2010; Macdonald, Bore, & Munro, 2008; Peterson, Park, Pole, D'Andrea, & Seligman, 2008; Shryack, Steger, Krueger, & Kallie, 2010), none of them supporting a six-factor solution. Instead they have found evidence of three- and four-factor (Shryack et al., 2010), four-factor (Brdar & Kashdan, 2010; Macdonald et al., 2008), and five-factor solutions (Peterson et al., 2008). In addition to the lack of consensus on the number of factors, there is also disagreement on the composition of those factors. Whether the same structure holds for adolescents as for adults is also uncertain. Confirmatory and exploratory factor analyses using a South African version of the VIA-Youth suggested that the VIA-Youth is more homogeneous or uni-dimensional than multi-dimensional (Van Eeden et al., 2008). Two other studies conducted with adolescent samples using the VIA-Y (Dahlsgaard, 2005) and the VIA-Youth (Park et al., 2006) have converged on four-factor structures but they have yet to be replicated.

Just as important as the structure of character strengths is their association with meaningful correlates. One of the most important of these is "subjective wellbeing" (SWB), which consists of emotional responses (i.e., high levels of positive and low levels of negative affect) judgments of overall life satisfaction (Diener, 2000). In adults, hope, zest, gratitude, love, and curiosity have all been found to be robustly associated with life satisfaction (Park, Peterson, & Seligman, 2004; Peterson, Ruch, Beerman, Park, & Seligman, 2007; Shimai, Otake, Park, Peterson, & Seligman, 2006), while the intellectual strengths of creativity, judgment, and love of learning (as well as modesty and appreciation of beauty) show weak correlations with life satisfaction (Park, 2004b).

Similar associations with happiness and life satisfaction have been found for youth with Park and Peterson (2006) also finding hope, love, gratitude and zest to be robustly linked to life satisfaction. This finding held for both those students who completed the VIA-Youth in a paper-and-pencil version (Sample 1: $N = 250$), and those who completed the questionnaire online through the 'Authentic happiness' portal (Sample 2: $N = 736$; Park & Peterson, 2006). Hope and optimism have also been shown to predict life satisfaction in adolescents with cognitive disabilities (Shogren, Lopez, Wehmeyer, Little, & Pressgrove, 2006) emphasising the value in targeting these strengths in positive educational programs for youth. Finally, the strengths of prudence and teamwork appear to contribute more to life satisfaction for children and adolescents than for adults, whereas curiosity and spirituality may contribute more to life satisfaction for adults than youth (Park, 2004b).

Lastly, gender may influence the endorsement of certain strengths over others, with girls tending to score higher than boys on some strengths (i.e., appreciation of beauty, kindness, love, fairness, gratitude, perspective and spirituality; Park, 2004a; cf. Linley et al., 2007). Gender differences on measures of normal personality, such as the Big Five traits, reveal that women typically score higher on Agreeableness, Conscientiousness and Neuroticism (McCrae, 2002) yet little research has focused upon young people. Further exploration into the role gender plays in the endorsement of strengths and wellbeing in youth would aid understanding of how these gender differences may change over the lifespan.

Table 1
Number and labels of virtue dimensions from selected publications.

Authors and date	Instrument	Extraction method	Dimensions	Labelled dimensions
Dahlsgaard (2005)	VIA-Y	Principal components analysis	4	Temperance Intellect Transcendence Gregariousness
Park and Peterson (2005)	VIA-Youth	Principal components analysis	4	Conscientiousness Openness Agreeableness Theological strengths
Park and Peterson (2006)	VIA-Youth	Factor analysis	4	Temperance Other-directed Intellectual Theological strengths
Peterson and Seligman (2004)	VIA-IS	Principal components analysis	5	Restraint Interpersonal Intellectual Emotional Theological strengths
Peterson, Park, Pole, D'Andrea, and Seligman (2008)	VIA-IS	Principal components analysis	5	Interpersonal Fortitude Cognitive Temperance Transcendence
MacDonald et al. (2008)	VIA-IS	Principal components analysis	4	Niceness Intellect Positivity Conscientiousness
Brdar and Kashdan (2010)	VIA-IS	Factor analysis	4	Interpersonal Fortitude Vitality Cautiousness
Shryack et al. (2010)	VIA-IS	Principal components analysis	3	Intellectual Interpersonal Temperance
			4	Intellectual Social Transcendence Temperance

1.1. The present study

The aim of the current study was to examine the structure of character strengths, the relationship between strengths and subjective wellbeing, and gender differences in strengths in a large Australian high-school sample, using the VIA-Child (VIA-Youth; Park & Peterson, 2005). Participants completed three questionnaires: the VIA-Child and two different measures of happiness and SWB. The study is original in being one of the first to examine character strengths, wellbeing, and the relationships between them among adolescents using this set of measures in an Australian school context.

2. Method

2.1. Participants

Participants were students ($N = 501$; 272 males, 229 females) from an Australian private school that has implemented a Positive Education programme across its school community. Students were from Years 10, 11 and 12 (aged 15–18). Year 10 students participated as part of a course requirement, while students in Years 11 and 12 participated on a voluntary basis. The research project was approved by the school and parental permission was obtained. Participants were fully anonymous.

2.2. Measures

The VIA-Child (VIA-Youth; Park & Peterson, 2005). The VIA-Child is a 198-item self-report measure of character strengths that

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is suitable for children and adolescents aged 10–17 years and is based on the VIA classification of strengths (Peterson & Seligman, 2004). It uses a 5-point scale to measure the degree to which respondents endorse statements about their strengths (i.e., 1 = *not like me at all* to 5 = *very much like me*). The VIA-Child includes 7–9 items per strength, one-third of which are reverse scored, and takes 40–45 min to complete. Three of the 24 scales showed less than acceptable reliability in the present study (appreciation of beauty = 0.60, self-control = 0.48 and social intelligence = 0.68).

Authentic Happiness Inventory (AHI; Peterson, 2005). The AHI measures three constituents of happiness: (i) pleasure (or positive emotion); (ii) engagement; and (iii) meaning, as defined by Seligman's (2002) theory of Authentic Happiness. Its 24-items, rated on a scale from 1 to 5, takes approximately 10 min to complete.

Personal Wellbeing Index-School Children (PWI-SC; Cummins & Lau, 2005). The PWI-SC is a seven-item self-report questionnaire intended for primary and secondary school children that uses a 10-point scale to measure the degree to which participants rate their happiness in seven quality-of-life domains: standard of living, health, life achievement, personal relationships, personal safety, community-connectedness, and future security.

2.3. Procedure

The VIA-Child and AHI were accessed and completed electronically through a portal on authentichappiness.com, a website associated with the University of Pennsylvania Positive Psychology Center. The measures were completed by Year 10 students during class time or during house study time under supervision. Year 11 and 12 students completed the measures in their own time. Individualised feedback was provided upon completion of each measure. The PWI-SC was completed as a pen and paper test in class (Year 10) or in the student's own time (Year 11 and 12).

3. Results

3.1. Descriptive statistics

Table 2 presents the sample sizes, mean scores, standard deviations, ranges, and internal consistencies of the PWI-SC, AHI and VIA-Child. Less than half of the students who completed the VIA-Youth also completed the measures of SWB, due to time constraints (Year 10) or unwillingness to complete further questionnaires following the VIA-Youth. Reliabilities of the two SWB measures were very good, as were most of the VIA-Child scales. There was a strong positive correlation between the two measures of SWB (PWI-SC and AHI), $r = 0.70$, $p < 0.001$. There were no significant differences in gender on the PWI-SC, $t(178) = 0.39$, $p > 0.05$, or the AHI, $t(180) = -0.61$, $p > 0.05$. In the overall sample ($N = 501$), gratitude was endorsed most strongly, followed by humour, curiosity, citizenship and appreciation of beauty. Spirituality was endorsed the least.

To examine whether gender influences the endorsement of the 24 character strengths, independent sample *t*-tests were conducted using the VIA-Child scores. Table 3 presents the alpha values (α), means, standard deviations, *t*-scores, significance levels and effect sizes (η^2) for the VIA strengths. Females rated themselves significantly higher than males on seven of the 24 character strengths. The strengths of "kindness and generosity" and "appreciation of beauty" achieved a moderate effect size ($\eta^2 > 0.4$).

Table 2
Sample sizes, means, standard deviations, minimums, maximums and internal consistency reliabilities (α) on the PWI-SC, AHI and VIA-Child.

Measure	*N*	Male	Female	*M* (*SD*)	Min–Max	α
PWI	180	103	77	74.58 (12.38)	0–100	0.84
AHI	182	104	78	3.15 (0.59)	0–5	0.93
VIA-Child	501	272	229	3.58 (0.41)	0–5	0.48–0.87

3.2. Strengths and SWB

To examine which strengths predict SWB, the AHI and PWI-SC scores were separately regressed onto the VIA-Child scores. For the PWI-SC, the total variance explained by the model was 62%, $F(24,155) = 10.53$, $p < 0.001$. Nine of VIA-Child strengths made a significant contribution to the model. Table 3 presents the standardised Beta (β) coefficients and significance levels. "Hope, optimism and future-mindedness" made the strongest contribution to the model, uniquely explaining 20% of the variance in PWI-SC scores. For the AHI, total variance explained by the model was 72%, $F(24,157) = 16.55$, $p < 0.001$. Six of VIA-Child strengths made a significant contribution to the model. "Hope, optimism and future-mindedness" again made the strongest contribution to the model, uniquely explaining 18% of the variance in AHI scores.

3.3. The structure of character strengths

To examine the covariation structure of VIA-Child strengths, the strength scales were subjected to Principal components analysis (PCA). Five components with eigenvalues exceeding 1 were found, explaining a total of 64% of the variance, and inspection of the scree plot also supported a five-component solution.

To aid in the interpretation of these five components, oblimin rotation was performed, on the assumption that character strengths are likely to be correlated. Based on the highest loading items, the five components were named: 1. Temperance, 2. Vitality, 3. Curiosity, 4. Interpersonal Strengths, and 5. Transcendence (see Table 4). These components were only modestly associated with the six virtue classes: the Curiosity component overlapped substantially with the VIA Wisdom virtue class and the Transcendence component overlapped with the VIA Transcendence class but otherwise overlaps were weak. All strengths had acceptable communalities (between 0.43 and 0.73). The correlations between components ranged from 0.20 to 0.37. Female students rated themselves significantly higher than males on Interpersonal strengths $t(499) = 4.49$, $p < 0.001$ and Vitality strengths, $t(499) = 2.68$, $p < 0.005$.

3.4. VIA-Child components and SWB

To explore which of the more economical set of VIA components predict SWB, the two SWB measures were separately regressed on the component scores. For the PWI-SC, the total variance explained by the model was 41%, $F(5174) = 23.65$, $p < 0.001$ (see Table 5). Higher levels of Temperance, Vitality, and Transcendence strengths were associated with greater SWB, and higher levels of Curiosity strengths with lower SWB (when other strengths were statistically controlled). For the AHI, total variance explained by the model was 53%, $F(5176) = 40.07$, $p < 0.001$: Temperance, Vitality, and Transcendence were again positively associated with happiness, but in this analysis the negative Curiosity effect did not reach significance. No effects gained or lost significance when gender was added as a predictor in either regression analysis.

4. Discussion

The current study revealed evidence for five distinct underlying components, suggesting that adolescents vary along five intuitively

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Table 3
Internal consistency reliabilities (α), means, standard deviations, gender differences (t scores, significance and effect sizes) of the VIA-Child strengths, and associations with life satisfaction (PWI-SC) and Happiness (AHI; standardized beta (β) coefficients and significance).

VIA-Child strengths	α	Males	Females	$t(499)$	η^2	PWI-SC β	AHI β
Wisdom and knowledge							
Curiosity/interest	0.82	3.92 (.69)	3.95 (0.72)	0.37	0.000	0.06	0.16*
Love of learning	0.83	3.65 (0.57)	3.60 (0.57)	1.00	0.002	−0.03	0.08
Judgement/critical thinking	0.78	3.53 (0.65)	3.53 (0.63)	0.10	0.000	−0.21**	−0.20
Creativity/ingenuity	0.84	3.68 (0.77)	3.64 (0.77)	0.56	0.001	−0.15*	−0.11
Perspective/wisdom	0.74	3.55 (0.62)	3.71 (0.58)	2.99**	0.018	−0.06	0.09
Courage							
Bravery/courage	0.83	3.58 (0.67)	3.77 (0.68)	3.18**	0.020	−0.13	−0.12
Industry/diligence/perseverance	0.75	3.39 (0.74)	3.41 (0.77)	0.24	0.000	−0.19*	0.03
Honesty/authenticity/genuineness	0.81	3.54 (0.67)	3.61 (0.69)	1.15	0.003	−0.03	−0.10
Zest/enthusiasm	0.83	3.53 (0.72)	3.61 (0.78)	1.10	0.003	0.19*	0.21**
Humanity							
Capacity to love and be loved	0.81	3.27 (0.57)	3.39 (0.56)	2.48*	0.012	−0.01	0.15*
Kindness/generosity	0.83	3.52 (0.50)	3.73 (0.49)	4.71***	0.043	−0.04	−0.06
Social/emotional intelligence	0.68	3.68 (0.58)	3.75 (0.60)	1.25	0.003	0.06	0.12
Justice							
Citizenship/loyalty/teamwork	0.76	3.86 (0.59)	3.94 (0.57)	1.63	0.005	−0.09	−0.13
Fairness/equity/justice	0.80	3.42 (0.66)	3.62 (0.64)	3.36***	0.022	0.24**	0.12
Leadership	0.85	3.30 (0.76)	3.44 (0.77)	1.91	0.007	0.16*	0.18**
Temperance							
Forgiveness/mercy	0.83	3.37 (0.62)	3.48 (0.61)	1.96	0.008	−0.02	0.06
Modesty/humility	0.80	3.55 (0.69)	3.66 (0.68)	1.88	0.007	0.07	0.04
Prudence/caution	0.71	3.16 (0.70)	3.11 (0.73)	0.71	0.001	0.24**	0.16*
Self-control/self-regulation	0.48	3.41 (0.67)	3.30 (0.66)	1.91	0.007	0.14	0.01
Transcendence							
Appreciation of beauty and excellence	0.60	3.69 (0.79)	4.02 (0.78)	4.62***	0.041	−0.19**	−0.10
Gratitude	0.81	4.06 (0.65)	4.11 (0.63)	0.98	0.002	0.12	0.10
Hope/optimism/future-mindedness	0.84	3.79 (0.70)	3.68 (0.71)	1.69	0.006	0.50***	0.39***
Playfulness/humour	0.77	3.91 (0.75)	4.09 (0.74)	2.62**	0.014	0.08	−0.04
Spirituality/sense of purpose/ faith	0.87	2.85 (1.05)	2.81(1.02)	0.34	0.000	−0.10	−0.09

* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

sensible strength dimensions. These dimensions involved strengths relating to temperance, vitality, curiosity and learning, interpersonal warmth and sensitivity, and transcendence. These dimensions do not correspond to the VIA classification's six virtue classes. The organisation of the 24 strengths into virtue classes has never been replicated, with many adult studies instead finding support for four- and five-factor models (Brdar & Kashdan, 2010; MacDonald et al., 2008; Peterson et al., 2008; Shryack et al., 2010). Studies of strengths in youth, using various different adapted VIA strengths scales (VIA-Y, Dahlsgaard, 2005; VIA-Youth, Park et al., 2006) have converged on four-factor solutions.

The present study's structure is similar to that found by Park et al. (2006), including a factor reflecting self-control and self-mastery (labelled "Temperance" in both studies), a factor reflecting curiosity, creativity and learning ("Curiosity" vs. Park et al.'s "Intellectual strengths"), and a factor reflecting positive behaviour towards other people ("Interpersonal" vs. Park et al.'s "Other-directed strengths"). The sole difference is that Park et al. obtained a broad factor of positive and spiritual characteristics ("Theological strengths") which in the present study emerged as separate "Vitality" and "Transcendence" factors, the former more extraversion-related and the latter more narrowly spiritual than Park et al.'s factor.

Students' character strengths were strongly associated with their levels of SWB. In particular, hope, caution, zest, and leadership predicted wellbeing on both measures of life satisfaction and happiness. Fairness further predicted greater life satisfaction (PWI-SC; Cummins & Lau, 2005), while curiosity and love further predicted greater happiness. Interestingly, four strengths predicted lower life satisfaction when the other strengths were statistically controlled: judgment, appreciation of beauty, industry, and creativity. These effects are largely consistent with Park's (2004b) review that more intellectual and aesthetic strengths tend to be only weakly linked to SWB among young people.

When these analyses were repeated for the five broad strength components rather than the 24 individual strengths, a simpler and more consistent pattern emerged. Students with higher levels of Temperance, Vitality and Transcendence-related strengths tended to have higher SWB, and those with higher levels of Curiosity-related strengths tended to be slightly less satisfied with life. The findings for Temperance and Vitality are consistent with established links between the Big Five dimensions of Conscientiousness and Extraversion and SWB (e.g., DeNeve & Cooper, 1998), although Transcendence-related strengths do not map onto the Big Five closely. The findings also support the idea that "strengths of the heart" (i.e., Vitality and Transcendence) are more robustly associated with young people's life satisfaction than "cerebral strengths" (i.e., Curiosity). Interpersonal strengths were generally unrelated to SWB, suggesting that although individuals high on such strengths

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Table 4
Component loadings for Five Factor Solution of VIA strengths.

VIA-Child strengths	Five components				
	1	2	3	4	5
1. Temperance					
Caution, prudence and discretion	**0.83**	0.11	0.09	0.02	0.01
Industry, diligence and perseverance	**0.77**	0.17	0.06	0.09	0.13
Self-control and self-regulation	**0.65**	0.04	0.02	0.31	0.01
Honesty, authenticity and genuineness	**0.57**	0.17	0.12	0.30	0.12
Judgment and open-mindedness	**0.50**	0.13	**0.39**	0.22	0.09
Hope, optimism and future-mindedness	**0.42**	**0.39**	0.10	0.16	**0.37**
2. Vitality					
Humour and playfulness	0.34	**0.76**	0.07	0.03	0.08
Leadership	0.21	**0.75**	0.16	0.08	0.12
Bravery and courage	0.06	**0.58**	0.14	0.21	0.05
Perspective (wisdom)	0.13	**0.55**	0.26	0.21	0.03
Zest, enthusiasm and energy	0.19	**0.54**	0.02	0.09	**0.36**
Social intelligence	0.25	**0.47**	0.07	0.30	0.07
3. Curiosity					
Curiosity and interest in the world	0.08	0.08	**0.78**	0.07	0.07
Love of learning	0.19	0.06	**0.75**	0.02	0.05
Creativity, ingenuity and originality	0.08	0.18	**0.71**	0.04	0.06
Appreciation of beauty and excellence	0.17	0.06	**0.66**	0.21	0.16
4. Interpersonal strengths					
Modesty and humility	0.17	0.15	0.02	**0.78**	0.17
Kindness and generosity	0.14	0.12	0.23	**0.69**	0.14
Forgiveness and mercy	0.06	0.08	0.03	**0.60**	0.17
Fairness, equity and justice	**0.40**	0.09	0.04	**0.55**	0.03
Citizenship, teamwork and loyalty	0.29	0.22	0.09	**0.51**	0.01
5. Transcendence					
Spirituality, sense of purpose and faith	0.03	−0.26	0.19	0.05	**0.75**
Capacity to love and be loved	0.01	0.30	−0.21	0.13	**0.70**
Gratitude	0.26	0.13	0.04	0.21	**0.54**

Values in bold represent loadings > 0.35.

Table 5
Standardized beta (β) coefficients and significance levels for regressions of wellbeing (PWI-SC) and Happiness (AHI) on VIA-Child components.

VIA-Child component	PWI-SC β	AHI β
Temperance	0.40**	0.36**
Vitality	0.35**	0.41**
Transcendence	0.17*	0.26**
Interpersonal strengths	−0.003	−0.10
Curiosity	−0.19*	0.03

* $p < 0.01$.
** $p < 0.001$.

may have a positive impact on their social environment, other strengths may have a greater impact on their own personal wellbeing.

One strength to emerge as a strong and reliable predictor on both measures of life satisfaction and happiness was hope (fully defined as "hope, optimism and future-mindedness"). Hope serves to connect one optimistically to the future (Park et al., 2004). Further, people who are hopeful are resilient against setbacks (Peterson et al., 2007). The present study supports the previous research suggesting that hope, optimism, and future-mindedness is a consistent predictor of SWB in young people. As such, the explicit teaching of this strength should be considered a pivotal element in any intervention aimed at enhancing happiness and life satisfaction in youth. However, further analysis into exactly which feature of the construct of "hope, optimism and future-mindedness" is important for wellbeing would be useful. Is it the spiritual aspect of hope, the vivacious quality of optimism, and/or the future-minded ability to plan ahead and set goals?

Several gender differences in the endorsement of strengths were apparent. Female students rated themselves higher than male students on seven of the 24 VIA strengths, most notably kindness, appreciation of beauty, fairness, bravery, perspective, humour, and love. When the five strength factors were considered, female students rated themselves higher than males on the Interpersonal and Vitality-related strengths. However, these gender differences were generally modest in magnitude and did not affect the relationship between strengths and SWB. Females did not report higher levels of SWB and gender did not account for any of the associations between strengths and SWB.

This research project is original in being one of very few to examine character strengths, wellbeing, and the relationships between them among adolescents and in an Australian context. However it also has some limitations. There was some variability in the procedure for this study, with some students completing the measures during class time and others completing it on a voluntary basis in their own time. Largely as a result of these variations, many respondents did not complete the wellbeing measures, and those who did not had to be omitted from the predictive analyses. Ideally all participants would have completed all measures.

Confidentiality protections required by the research context precluded the researchers from recording participants' year levels so possible differences between these groups could not be assessed. The VIA-Child questionnaire consisted of a large number of items (200) and the order of questionnaires or scales was not reversed in different versions of the questionnaire. Thus there is the possibility of response fatigue. However, strength dimensions consisted of items that were spread across the questionnaire, and therefore low reliabilities found on three of the dimensions are unlikely to be due to fatigue. Instead, low reliabilities are likely to be due to limitations of their items, and thus future research may be required to develop improved scales.

Another obvious limitation concerns the generalizability of findings. Participants were attendees at an elite Australian private school that had introduced a comprehensive Positive Education programme at the start of the same year. As such it was an atypical sample that was likely to be more conceptually sophisticated in its appraisal of personal strengths and in some respects potentially influenced by the school's educational programme (see Gilman, Huebner, & Furlong, 2009). Future researchers should compare strength and wellbeing findings across schools of different socio-economic backgrounds and cultures. In doing so, they may help to elucidate the impact a "positive" school culture has on students' wellbeing. Finally, future research should build upon Park and Peterson's (2006) work and examine the incremental contributions of character strength dimensions to SWB over and above those of the Big Five, given evidence of the overlap of the respective dimensions (Macdonald et al., 2008).

The present study contributes to our understanding of the structure of character strengths and virtues in adolescence and their relationship to wellbeing. This understanding may assist in the development of positive institutions and effective educational programs for young people.

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