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Girls' diminishing wellbeing across the adolescent years

Grace Skrzypiec, Helen Askill-Williams

Abstract

The chapters in this book investigate promoting wellbeing and positive mental health from a range of perspectives. One such perspective is the influence of gender on positive mental health, and the potential for gender differences to inform, and be impacted by, the design and implementation of mental health promotion initiatives. Accordingly, this chapter reports results from three questionnaires about wellbeing and positive mental health which we administered to 1,930 students aged 10 to 15 in eight South Australian schools. Males were more likely than females to report that they were flourishing, had a positive outlook and had a positive emotional state. In contrast, females were more likely to report that they were languishing and had moderate, rather than flourishing, mental health. Furthermore, as the females in the study grew older, they reported less positive mental health. The study suggests that females in the upper-middle school years warrant special attention to adequately address their social and emotional needs. The invaluable information from this study can be used to inform future initiatives to promote students' wellbeing and positive mental health.

Introduction (word count: 3,767)

Gender differences between school students have been extensively studied in a range of domains, such as students' interest and academic achievement in so-called non-traditional subjects (e.g., maths and science; sport). The relatively recent emergence of policies and practices that aim to promote student wellbeing and positive mental health through school-based initiatives has also generated gender-related research interest. For example, in a longitudinal study, Løhre, Moksnes and Lillefjell (2014) assessed factors that may promote or adversely affect girls' and boys' school wellbeing. The authors found that boys who experienced necessary academic help from teachers were two to three times more likely to report positive wellbeing compared to other boys. For girls, perceived loneliness at school demonstrated a strong and negative association with school wellbeing. Løhre et al. concluded that there may be gender differences in predictors of students' school wellbeing that health promoting strategies need to take into account, such as academic support for boys and strategies to reduce perceived school-loneliness for girls.

Konu and Lintonen's (2006) early study of 8,285 primary and secondary students in Finland found that girls and younger students within each grade rated their wellbeing more positively, except that boys had fewer symptoms than girls. Similarly, a study of gender differences in 11,387 grades five to seven students in Iceland, by Palsdottir, Asgeirsdottir and Sigfusdottir (2012), found that boys reported significantly less wellbeing than girls. Interestingly, not finding the subjects 'fun' fully mediated the relationship between gender and wellbeing.

In contrast, Jerdén, Burell, Stenlund, Weinehall and Bergström's (2011) study of 1,046 Swedish students in grades seven to nine found that the proportion of girls reporting good wellbeing was lower than boys; girls showed lower health-related empowerment; and self-rated health declined between the seventh and ninth grade. A high self-rated health in grade nine was, in girls, predicted by positive school experiences in seventh grade and, in boys, by a good mood in the family. Meanwhile, González-Carrasco et al. (2016) undertook a one-year follow-up study with 940

Spanish adolescents to explore changes in their subjective wellbeing.. The authors found a decrease in subjective wellbeing as students grew older, with the decrease for girls being more marked.

Different results were found by Mahon, Yarcheski and Yarcheski (2005), who examined gender differences in happiness and the relationship between happiness and several health variables, such as perceived health status, clinical health, and wellness. Their sample consisted of 151 early adolescent boys and girls in grades seven and eight. The authors found no gender differences in happiness, although there were different patterns of relationships between happiness and the health related variables when boys and girls were analysed separately. Particularly, the magnitude of the relationship between happiness and wellness was far stronger for boys than for girls.

From the above brief review it can be seen that different perspectives exist about potential influences of gender on wellbeing, or as Evans (2015) has pointed out, potentially differential impacts of school-based social-emotional programs on different genders, which need to be accounted for in universal, targeted and indicated interventions to promote students' wellbeing. Therefore, we were interested in investigating more completely any differences, as assessed by a range of measuring instruments, in young adolescent students. Accordingly, we set out to answer the following research questions:

1. What is the wellbeing of middle-school students as measured by diverse measuring instruments?
2. Is there any difference between the wellbeing of male and female middle-school students?
3. Does wellbeing change as students grow older?

Measuring Wellbeing

Our first challenge was to determine how wellbeing should be measured. A systematic review by Kwan and Rickwood (2015) identified 184 published articles, covering 29 different wellbeing

measures, but none of those measures were designed specifically for young people. While researchers agree with the notion that wellbeing is multi-dimensional (O’Hare & Gutierrez, 2012), there is no agreement about the number and type of those dimensions. Advice from González-Carrasco et al. (2016) is that multiple-item, domain-based scales are more sensitive than single-item scales. Lau and Bradshaw (2010) suggested that various dimensions of wellbeing all contribute to **subjective wellbeing**, which, they argued is the essence of wellbeing. Aligned with this, Keyes (2006) identified two types of wellbeing-hedonic and eudemonic-which combined can indicate whether a person is flourishing or languishing. A combination of functioning effectively and feeling good about oneself is considered flourishing (Diener et al., 2009), while “Languishing is a state that lacks positive functioning and has an emphasis on the individual merely existing from day to day” (Liddle & Carter, 2010, p.9). Young people are **flourishing** when they show high levels of *hedonia* (emotional wellbeing) and *eudaimonia* (social and psychological wellbeing). Conversely, young people are **languishing** when levels of *hedonia* and *eudaimonia* are low. If not flourishing or languishing, young people are otherwise moderately mentally healthy.

Method

Sampling

Students were recruited from a variety of educational jurisdictions (public, independent and catholic schools), from an all boys and an all girls school and from schools located in low, medium and high socio-economic (SES) areas (see Table 1).

INSERT TABLE 1

Instruments

Flourishing

The Flourishing Scale, “provides a good assessment of overall self-reported psychological well-being” (Diener et al. 2009 p. 260). The Flourishing Scale includes items that tap into dimensions of wellbeing identified as important in the literature by researchers such as Ryff (1989), Seligman and Csikszentmihalyi (2000) and Ryan and Deci (2000). The positively phrased items cover meaning and purpose, supportive and rewarding relationships, engagement and interest, contributing to the wellbeing of others, competency, self-acceptance, optimism and being respected. The Flourishing Scale has been validated and has good psychometric properties (Silva & Caetano, 2013).

Mental Health Continuum

Keyes (2002) described a complete model of mental health, where flourishing is the presence of mental health and languishing is the absence of mental health. In Keyes’s view, mental health and mental disorder are separate states of functioning. Just as a mental disorder requires the fulfilment of several criteria, so too, argued Keyes (2006), the presence of mental health must satisfy a set of requirements. Keyes (2006) developed the Mental Health Continuum to determine whether an individual is flourishing, languishing or has moderate mental health. The scale comprises three subscales, namely social, psychological and emotional wellbeing. Keyes surmised that the emotional wellbeing scale provides a measure of hedonia, while the social and psychological subscales together provide a measure of eudaimonia.

The 14-item (short form) of Mental Health Continuum has good internal consistency (>.80) as well as discriminant validity in adults (Keyes et al. 2008; Lamers, Westerhof, Bohlmeijer, ten Klooster, & Keyes, 2010) and adolescents (Keyes, 2005).

Stirling Child Wellbeing Scale

Liddle and Carter (2010) also acknowledged the need to differentiate mental health and mental illness by using a positive measure of healthy functioning to assess wellbeing rather than relying on a deficit-based understanding of mental health. Using an approach based in positive psychology,

they developed the Stirling Children's Wellbeing Scale that contained items that were positively worded and were suitable for children aged 8-15.

Comprising 12-items, the Stirling Children's Wellbeing Scale assesses emotional and psychological wellbeing and the level of a child's Positive Emotional State as well as Positive Outlook. Liddle and Carter (2010) found that the scale showed good internal and reliability. The scale also includes a social desirability subscale of three items.

Data Analysis

We employed parametric and non-parametric tests, using SPSS v22 and MPlus v7, to analyse data. On all questionnaire items the amount of missing data was less than 5%, which according Schafer (1999) is inconsequential. We used nonparametric statistical tests that did not assume that the data was normally distributed to test for gender differences.

The eight items from the Flourishing Scale were summed (following Diener et al.'s method) to obtain a total Flourishing score for each student. Flourishing scores ranged from 8 to 56. While Diener et al. do not stipulate any cut-off values to indicate "flourishing", a person that selected "agree" for each item would have a total Flourishing score of 40. We determined that a score above this cut-off would be a good indicator of flourishing.

In the second measure, following Keyes's scoring method for the Mental Health Continuum, students were classified as flourishing if they experienced at least one of the three symptoms of emotional wellbeing and at least six of the eleven symptoms of positive functioning "almost every day" or "every day". Participants were considered to be languishing if they experienced at least one of the three symptoms of emotional wellbeing and at least six of the eleven symptoms of positive functioning "once or twice" or "never". Students who were neither languishing nor flourishing were classified as moderately mentally healthy.

In the third measure, following Liddle and Carter's (2010) instructions, students' responses were summed to create a total Stirling Children's Wellbeing score. Scores ranged from 12 to 60. We adopted Liddle and Carter's (2010) assessment that scores less than 30 are indicative of poor mental health.

Results

A sample of 1983 middle-school students completed the questionnaires. Of these, 53 (2.7%) were discarded because they had not been completed appropriately or had more than 50% of missing responses, leaving a sample of 1930. There were significantly more males (54%) than females in the sample¹. There were more students from junior secondary school (Years 8, 9 & 10) than Years 10 and 11. Nearly one third (31.2%) of the sample were in Year 8 and about one quarter (26.3%) were in Year 9. Only 14.7% of participants were under 13 years of age, while 10.2% were over 15. Three quarters (75.1%) of the sample were aged 13-15 years. The average age of participants was 13.9 years (S.D. = 1.3). Students from low SES were underrepresented and students from middle SES backgrounds were over-represented, when compared to Australian demographic statistics (ABS, 2008).

Psychological Flourishing

The mean Flourishing (Diener et al. scale) score for all students in the sample was 41.6 (S.D. = 8.1) and the median was 42. Over half (55.3%) of the participants had a Flourishing score of 41 or higher and were therefore were flourishing.

As evident from Figure 1, males were more likely than females to have high Flourishing scores². Using the (arbitrary) cut-off of 41, more males than females were classified as flourishing i.e. 59.8% vs 50.9%

¹ ($\chi^2(1) = 12.0, p < .001$)

² Mann-Whitney U-Test, $Z = -3.9, p < .000, E.S.(r) = 0.09$

INSERT FIGURE 1

The gender difference was consistent³ even when controlling for SES (which was significantly associated with Flourishing scores⁴) and school (which was not significantly associated with Flourishing scores⁵). As shown in Figure 2, the median Flourishing score for males was 43, while for females it was 41. However, the effect size of the male and female difference was small, at less than 0.10.

INSERT Figure 2

There was an interaction effect of age and gender⁶ and of age and year level⁷. Generally, females were more likely to have lower Flourishing scores with increasing age and females in the upper years of middle-school had lower Flourishing scores than females in the lower years of middle-school (see Figure 3).

INSERT Figure 3

Stirling Child Wellbeing Scores

Total Stirling Child Wellbeing scores ranged from 12 to 60 and the mean was 42.1 (S.D. = 8.6).

Half (50%) of the scores fell between 39 and 49 (inclusive). A small proportion (8.4%) of students had scores less than 30, indicating poor mental health.

³ F(1) = 12.2, p < .000, E.S.(r) = 0.08

⁴ F(1) = 25.6, p < .000

⁵ F(1) = 1.7, p > .05; E.S.(r) = 0.08

⁶ F(5) = 4.6, p < .001

⁷ F(4) = 4.1, p < .003

More males than females had high scores on the Stirling Child Wellbeing Scale⁸ (see Figure 4). This suggested that males were more likely to be experiencing wellbeing than females. Using the cut-off score of 30, 12.0% of females compared to 5.2% of males were experiencing poor mental health.

INSERT Figure 4

Stirling Child Wellbeing by Gender and Year Level

Males were more likely to have higher Stirling Child Wellbeing scores than females and females' scores were more likely to be lower in the upper years of middle-school than the lower years of middle-school⁹ (see Figure 5).

INSERT Figure 5

The Positive Outlook subscale of the Stirling Child Wellbeing Scale

Experiencing a Positive Outlook varied significantly between males and females and between students in different year levels. As shown in Figure 6, males were more likely than females to report experiencing a Positive Outlook “quite a lot of the time” or “all of the time” (66.9% vs 52.4%)

INSERT Figure 6

Positive Outlook by Gender and Year Level

⁸ F(1) = 37.5, p < .000, E.S.(r) = 0.15

⁹ F(4) = 9.3, p < .000

There was an interaction effect of year and gender¹⁰ (see Figure 7). Students in the lower years were more likely than students in the upper years of middle-school to have a positive outlook, particularly females in Year 6, but reversing to males in subsequent Year levels.

INSERT Figure 7

The Positive Emotional State subscale of the Stirling Child Wellbeing Scale

A positive emotional state was more likely to be experienced by males than females (58.3% vs 45.8%), “quite a lot of the time” or “all of the time”, as shown in Figure 8.

INSERT Figure 8

Positive Emotional State by Gender and Year Level

Experiencing a positive emotional state varied significantly between males and females and between students in different year levels. There was an interaction effect of year and gender¹¹ (see Figure 9). Males were more likely than females to have a positive emotional state. Students in the lower years were more likely than students in the upper years of middle-school to have a positive emotional state, particularly females.

INSERT Figure 9

Mental Health Continuum

Nearly half (48.5%) of participants were classified as flourishing, a small proportion (8.0%) were considered to be languishing, while the remainder (43.5%) were considered to have moderate mental health, according to Keyes’ Mental Health Continuum. Figure 10 shows that males were

¹⁰ $F(4) = 5.0, p < .000$

¹¹ $F(4) = 7.2, p < .000$

more likely than females to be flourishing, while females were more likely to be languishing or to have moderate mental health compared to males¹².

Flourishing: As shown in Figure 10, males (59.7%) were more likely than females to report experiencing wellbeing “almost every day” or “every day” (47.8%)¹³. These findings are consistent with the scores from Diener et al.’s Flourishing scale.

Languishing: Nearly twice as many females (8.1%) than males (4.4%) reported that their experience of wellbeing during the past month was “never” or “once or twice”¹⁴.

Moderate Mental Health: A larger proportion of females (44.0%) than males (36.0%) reported they were not languishing or flourishing, and therefore had moderate mental health¹⁵.

INSERT Figure 10

Mental Health continuum: Flourishing by Gender and Year Level

Students’ gender *and* year level were associated with the likelihood of flourishing, languishing or having moderate mental health¹⁶. Males and students in the upper years of middle-school were more likely to flourish, while females in the lower years of middle-school were more likely to be flourishing than females in the upper years of middle-school. This is similar to the abovementioned findings from Deiner et al.’s Flourishing scale.

An analysis of males’ scores only found that the likelihood of flourishing was not significantly different from year to year¹⁷. A similar analysis for females found that the likelihood of flourishing

¹² Mann Whitney U, $Z = -5.7$, $p < .000$, E.S.(r) = 0.14

¹³ $\chi^2 (1) = 25.2$, $p < .000$, E.S. (Cramer’s V) = 0.12

¹⁴ $\chi^2 (1) = 11.4$, $p < .000$, E.S. (Cramer’s V) = 0.08

¹⁵ $\chi^2 (1) = 12.0$, $p < .000$, E.S. (Cramer’s V) = 0.08

¹⁶ $F(4) = 5.6$, $p < .000$

¹⁷ $\chi^2 (4) = 8.7$, $p > .05$, E.S. (Cramer’s V) = 0.10

decreased significantly in Years 8-10¹⁸. As shown in Figure 11, 40.0% of the Year 10 females were flourishing compared to 87.4% of the Year 6 females. These findings suggest that females' sense of mastery/competency as well as satisfaction with life could be declining through the middle years, although since this is cross-sectional data, a longitudinal study is needed to conform this suggestion.

INSERT FIGURE 11

Mental Health Continuum: Languishing by Gender and Year Level

The proportion of male and female students that were languishing varied across year levels and by gender. The proportion of female students languishing rose steadily across the year levels, changing from 4.4% in Year 7 to 11.8% in Year 10. (No Year 6 females reported languishing.) For males, the proportion who were languishing was lowest in Year 7 (2.7%) and greatest in Year 8 (5.5%). Chi-square analyses of the data for males found the likelihood of languishing did not vary significantly from year to year¹⁹ but there was an increased probability of languishing for females in the upper years of middle-school²⁰.

Mental Health Continuum: Moderate Mental Health by Gender and Year Level

Male and female students differentially reported moderate mental health across the year levels. With the exception of Year 6, in every year level females were more likely than males to have moderate mental health (see Figure 12). An analysis of the data of males suggested that the likelihood of having moderate mental health did not vary substantially for males from year to year²¹. However, for females the likelihood of having moderate mental health increased after Year 6²².

INSERT FIGURE 12

¹⁸ χ^2 (4) = 58.2, $p < .000$, E.S. (Cramer's V) = 0.27

¹⁹ χ^2 (4) = 3.3, $p > .05$, E.S. (Cramer's V) = 0.06

²⁰ χ^2 (4) = 12.6, $p < .05$, E.S. (Cramer's V) = 0.12

²¹ χ^2 (4) = 5.5, $p > .05$, E.S. (Cramer's V) = 0.08

²² χ^2 (4) = 35.0, $p < .000$, E.S. (Cramer's V) = 0.21

Discussion

This chapter has reported three measures that conceptualise wellbeing in different ways. The results suggest that nearly two thirds of the students were flourishing using Diener et al.'s Flourishing Scale. Although the median scores for both females and males were in the "flourishing range", there was an indication that some females, particularly those in the upper years of middle-school were not flourishing as much as the males. The findings suggest that males were more likely than females to feel competent, masterful and to be functioning optimally. Meanwhile, using Liddle and Carter's Stirling Child Wellbeing scale, males were more likely than females to show signs of wellbeing, with a greater proportion of males than females reporting a positive outlook and a positive emotional state.

Gender differences of this kind are not an uncommon finding in mental health and wellbeing studies. For example, recent unpublished results from Scotland using the Stirling Child Wellbeing Scale also indicated a trend for more girls than boys to report poor mental health (P. Davidson, 8/4/2014) and research by Green, McGinnity, Meltzer, Ford and Goodman (2005) of 11 to 15 year olds in the UK found emotional disorders were higher in girls (4.1%) than boys (3%). Another study of the status of girls in Indiana, USA, by Kuter and Deom (2013) reported that daily feelings of sadness or hopelessness were more likely to be conveyed by females than males. The Indiana study also found that the percentages of girls reporting this disposition increased from grade six to grade eight or nine and then decreased.

While it would be speculative to explain the decline in wellbeing across the middle years without further research, Liddle and Carter (2010) provided some insights worthy of consideration in this regard. They suggested that some items capturing self-acceptance used in wellbeing scales require "a level of abstract introspection that is not established at the younger ages" (p. 14), and argued that a sense of self-acceptance is dependent more on external than internal factors at a young

age. Children's self-acceptance is therefore associated with a desire for possessions and qualities that others are observed to have. As children grow, and begin to detach from their dependence on parents and family, they form their identities and develop a more integral sense of self. Using this understanding of child development, Liddle and Carter suggested that children respond to self-acceptance questionnaire items differently to adolescents. Children's responses are prone to ceiling effects as they are more likely to respond positively to these items.

Liddle and Carter (2010) also suggested that older students are more likely to understand the questions and respond more appropriately. This could be one reason why the wellbeing scores of our participants in lower middle-school were consistently higher than participants in upper middle-school. However, this reason would not explain the decline in wellbeing we found amongst females in Years 9 and 10. Liddle and Carter proposed that the decrease in wellbeing with age "has an intuitive logic", since pressures to perform academically, socially and independently increase during adolescence. Further research would be needed to investigate the complexities of growing up and the impact of the various pressures teenagers face as they progress through secondary school.

The third measure used in this study, namely Keyes' Mental Health Continuum, provided results consistent with the first two scales. This consistency in findings and the versatility of the Mental Health Continuum to measure both flourishing and languishing, in addition to moderate mental health, suggests that the Mental Health Continuum could be a preferred measure of young people's subjective wellbeing.

Having determined that females in the upper-years of middle-school are less likely to be flourishing, measures to improve the wellbeing of females in middle-school are required. More research is needed to determine and address the factors influencing the decline in wellbeing amongst adolescent females in the upper middle-years. This could involve investigations which identify the influential factors that differ between males and females and which could be then be targeted in evidence-based interventions.

The findings from this study can only be generalised with caution, since the selection of study participants was not random.

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Tables

Table 1: Schools from which participants were recruited

School	SES location		Type		DECD Disadvantage Category*
1. School A	Low SES	Government	Birth – Year 12	coeducational	2
2. School B	Low SES	Government	Year 8 – Year 12	coeducational	3
3. School C	Medium SES	Government	Year 8 – Year 13	coeducational	6
4. School D	High SES	Independent	Reception – Year 12	all boys	NA
5. School E	High SES	Catholic	Reception – Year 12	coeducational	NA
6. School F	High SES	Catholic	Reception – Year 12	all girls	NA
7. School G	High SES	Independent	Year 7 – Year 12	coeducational	NA
8. School H	Medium SES	Independent	Reception – Year 12	coeducational	NA
					*low number indicates high disadvantage

FIGURES

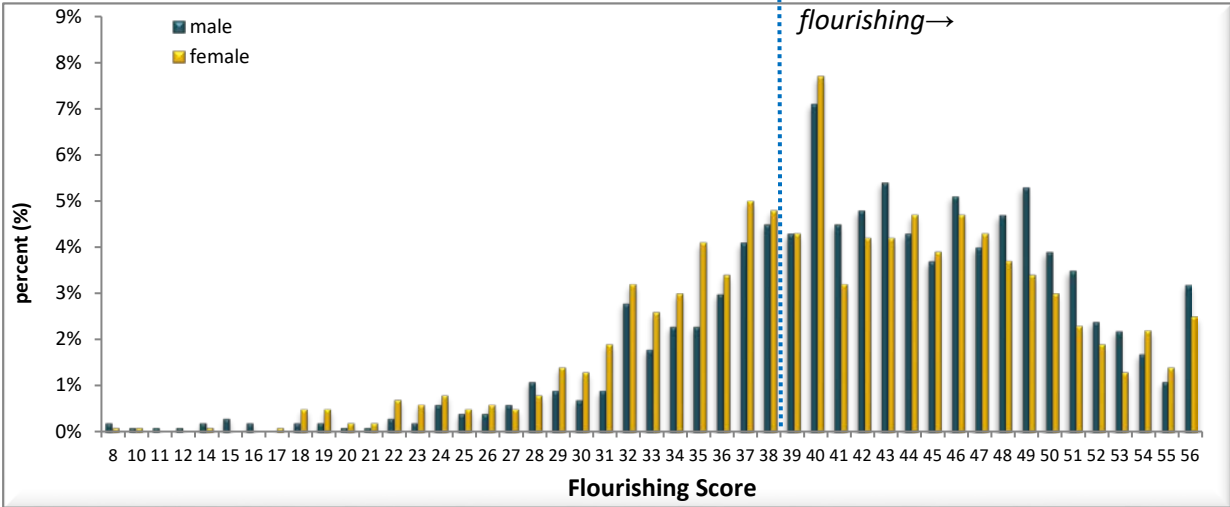


Figure 1 Flourishing (Diener et al.) scores of male and female student participants

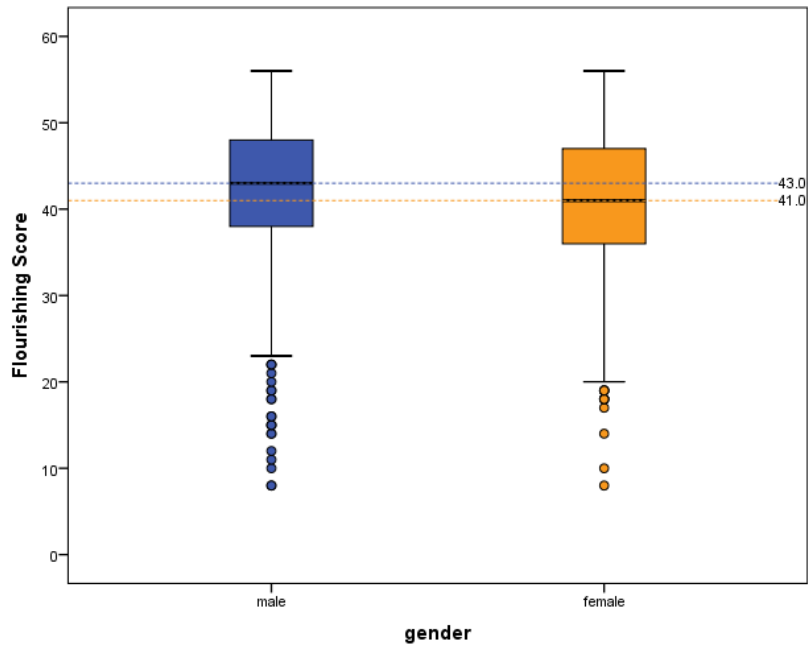


Figure 2 Distribution of Flourishing (Deiner et al.'s scale) scores of males and females

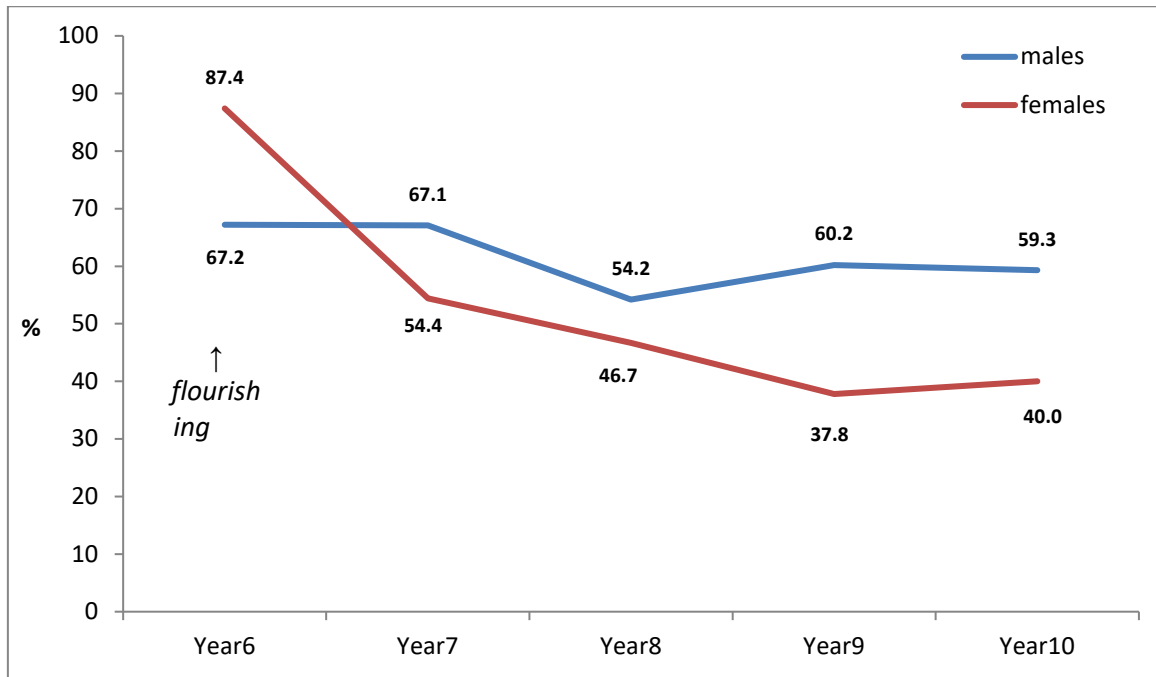


Figure 3: Proportion of male and female students flourishing in each Year level according to Deiner et al.'s Flourishing scale

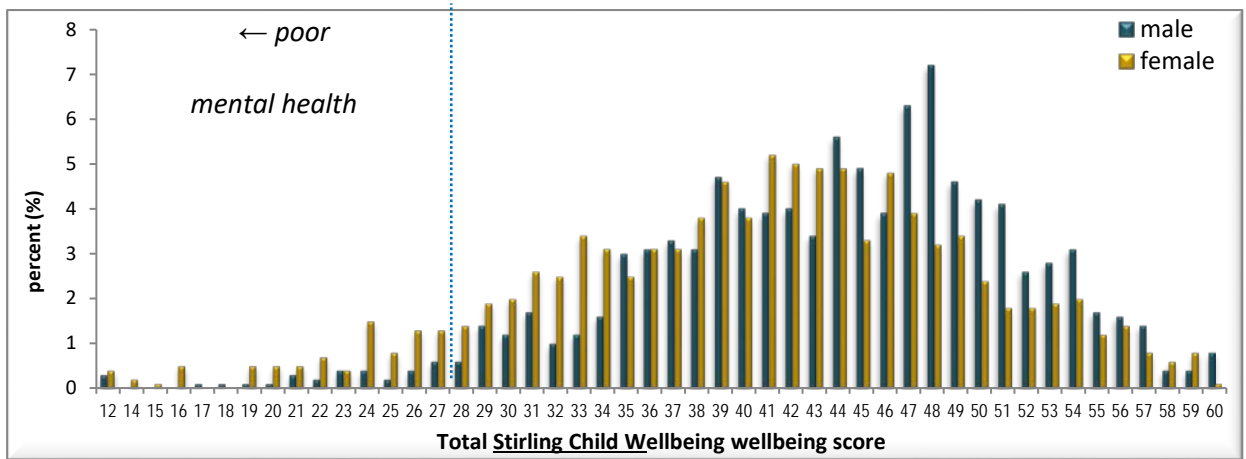


Figure 4 Total Stirling Child Wellbeing scores of male and female students

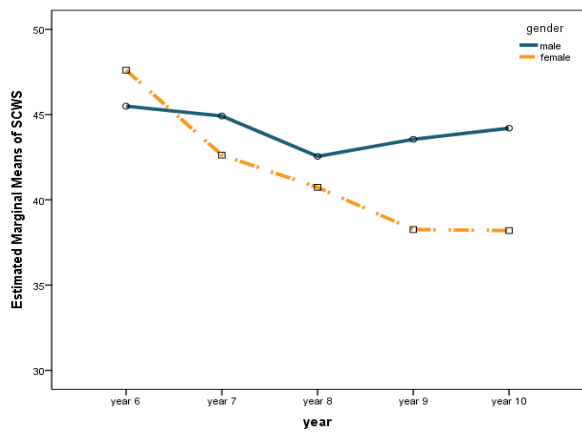


Figure 5 Total Stirling Child Wellbeing wellbeing scores of male and female students by year level

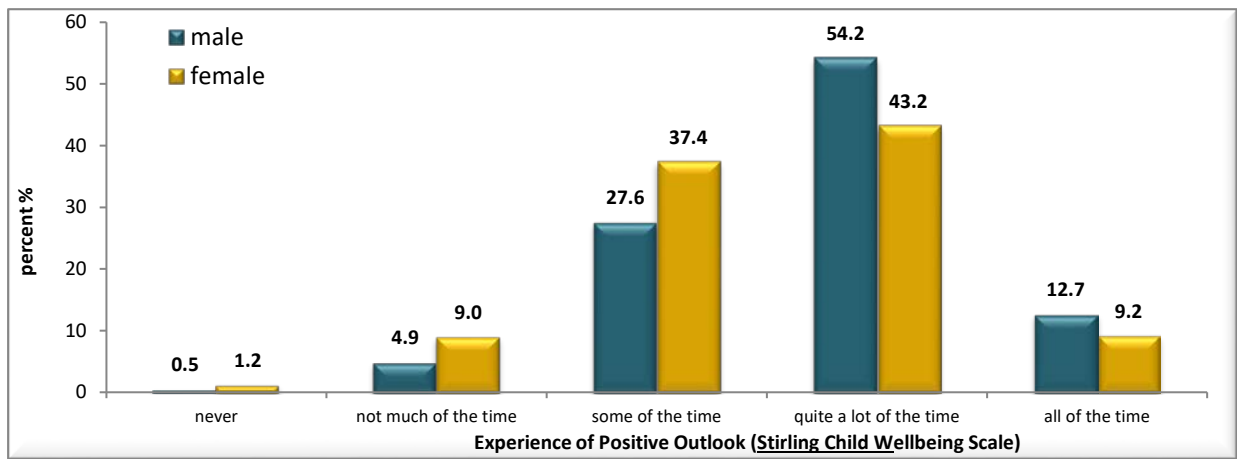


Figure 6 Male and female students' experience of a Positive Outlook

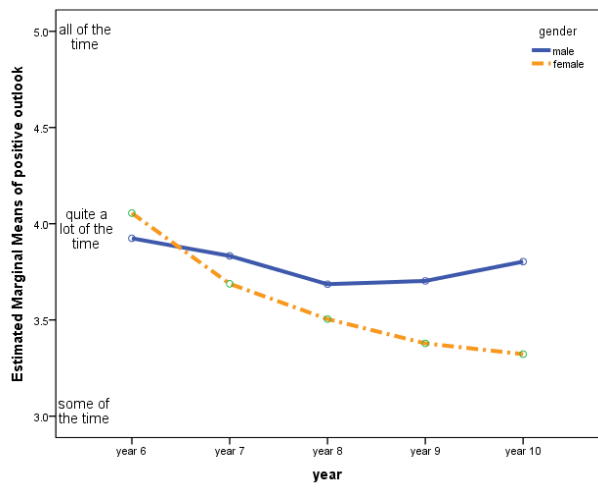


Figure 7 Male and female students' experience of a Positive Outlook by year level

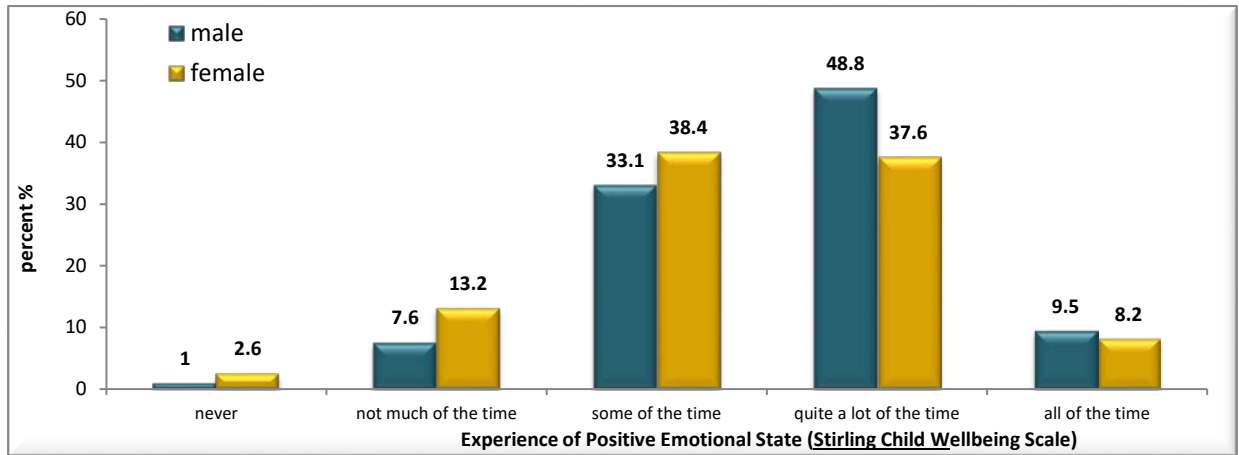


Figure 8 Male and female students' experience of a positive emotional state

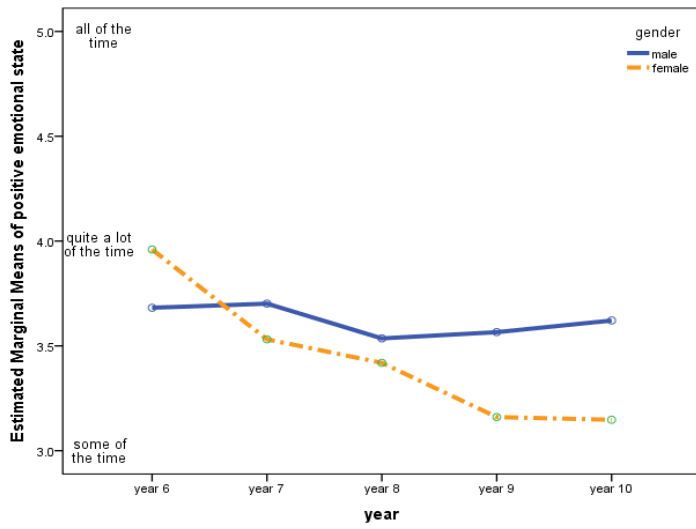


Figure 9 Male and female IB MYP students' experience of a positive emotional state by year level

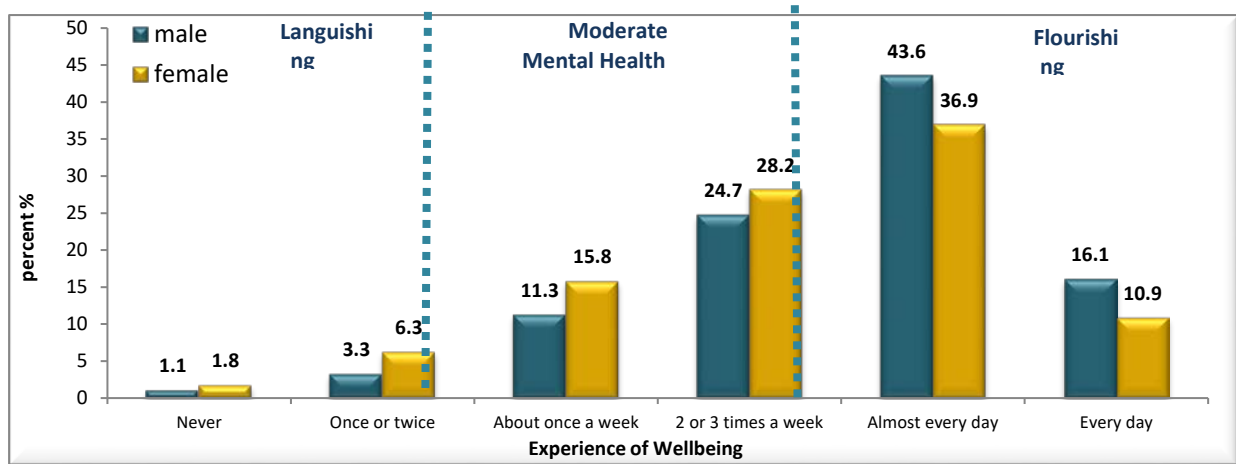


Figure 1 Male and female students' experience of wellbeing (Mental Health Continuum)

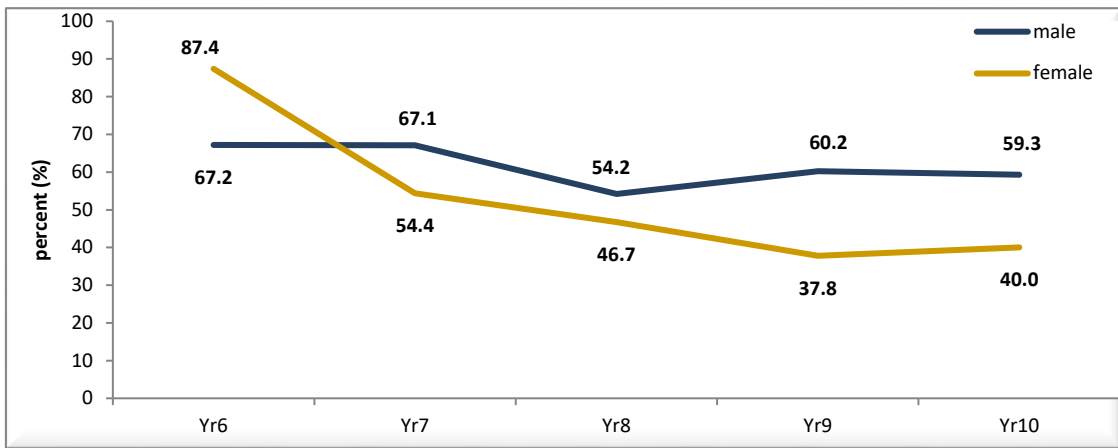


Figure 2 Proportion of males and females flourishing in each year level

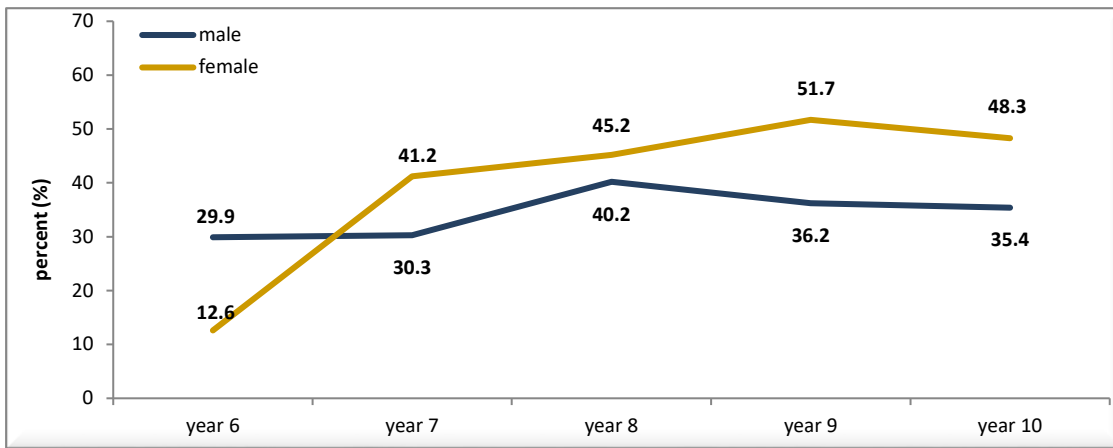


Figure 3 Proportion of males and females with moderate mental health in each year level