FLOURISHING
AT SCHOOL

Assessment Manual

June 2017

People Diagnostix

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FLOURISHING AT SCHOOL

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Introduction

The Student Flourishing Profile (SFP) is a multi-dimensional measure of student wellbeing. The aim of the online survey is to provide periodic assessment of student wellbeing. This enables objective assessment of the success of wellbeing interventions and can also be used to benchmark student wellbeing against a normative sample. Feedback can be provided at a whole of school level, year group level, sub-group level (e.g. male/female, EAL/D, Aboriginal), and individual student level. The SFP draws upon positive education principals and is consistent with the NSW Department of Education Wellbeing Framework for Schools (2015) and the Geelong Grammar School Model for Positive Education (2013).

Central to the SFP model is that wellbeing can be developed from a number of sources (or components). The acronym used to describe these components (as first proposed by Martin Seligman, 2011) is PERMA. PERMA stands for positive emotions, engagement, positive relationships, meaningfulness, and accomplishment. The SFP also includes the component of positive health as it is well understood that nutrition, physical activity and sleep play an important role in positive mental health outcomes. With the addition of the positive health dimension, the acronym that is used to describe the SFP model of wellbeing is PERMA-H.

> "Flourishing is the highest state of wellbeing and human development. It refers to living within an optimal range of human functioning, one that connotes goodness, generativity, growth and resilience."
>
> *Cambridge Centre for Health & Wellbeing.*

PERMA-H Components

Positive Emotions: Many studies have shown that positive emotions are frequently accompanied by better life circumstances including stronger relationships and improved physical health. Positive emotions can also assist to mitigate negative emotions caused by stressful events. Regularly experiencing positive emotions can assist individuals to perform at their peak as this tends to facilitate open-minded thinking, creativity and resilience.

Engagement: Engagement (or flow) occurs when an individual becomes completely absorbed in what they are doing to the point he or she loses track of time. It occurs most often when there is a balance between the person's abilities and the challenge at hand. This experience can be highly enjoyable and rewarding and often comes from activities such as sport, music and hobbies.

Positive Relationships: Human beings are designed for social connection. It is important for all people to have positive relationships with peers and family that are based on trust and mutual support. These relationships can create infectious positivity and also help to keep personal problems in perspective. Communication skills are important for giving and receiving social support and maintaining positive relationships.

Meaningfulness: Whether it is linked to family or religion, the work people do or what they contribute to others, having a sense of purpose motivates, inspires and gives life meaning. Studies have shown that a sense of community and purpose are seen by most people as sources of meaning and value. Meaning transcends the self while happiness focuses on giving the self what it wants.

Accomplishment: Achieving personal goals is incredibly satisfying and gives people confidence to pursue other challenges. Setting SMART (specific, measurable, achievable, relevant, and time-bound) goals provides structure in pursuits and increases the likelihood of success. Remaining optimistic despite set-backs is a hallmark of resilience and is important in order to maintain optimal mental wellbeing.

Health: In addition to Seligman's five components of wellbeing, the Student Flourishing Profile also incorporates the important dimension of health. Research has demonstrated that individuals with healthy diets, exercise and sleep habits generally experience greater physical and mental wellness than those with unhealthy lifestyles.

Traditional Psychology versus Positive Psychology

Psychology traditionally has been concerned with the identification and treatment of illness. There are now more than 200 classified forms of mental illness with anxiety and depression being amongst the most common forms. Positive psychology in comparison is concerned with wellbeing and has the goal of helping individuals and communities to flourish. From a public health approach, both traditional psychology and positive psychology are required to keep communities healthy and treat illnesses.

In the public health model of disease prevention, preventative interventions are described as either primary, secondary, or tertiary interventions. In regards to mental health:

The Public Health Model Applied to Mental Health

- → Primary prevention interventions are typically targeted at a whole community.
- → Secondary prevention interventions are targeted at individuals or groups at risk of developing an illness.
- → Tertiary prevention is targeted at people who are distressed or who have developed a mental illness.

The above diagram illustrates how the public health model can be applied to mental health.

The goal of the SFP is to inform school based mental health interventions at the primary prevention level. It is therefore suitable for use across the school community and may reduce the numbers of students requiring assistance at secondary and tertiary prevention levels.

About This Assessment Manual

This assessment manual is to be used in conjunction with the SFP School Summary Report. It describes how the assessment was created, how to interpret the report, and summarises important reliability, validity and normative information.

"The goal of the Student Flourishing Profile is to inform school based mental health interventions at the primary prevention level."

Development of the SFP

The SFP was developed over a two year period with input from psychologists, academics, and school teachers. The PERMA-H model is based on Martin Seligman's well-being theory outlined in his book Flourish (2011). It was also informed by the Geelong Grammar model of positive education (Norrish et al, 2013).

One of the benefits of assessing wellbeing using PERMA-H is it assists understanding of how individual components contribute to overall wellbeing. We refer to these as the "pillars" of good mental health (see video on the right). After much research we believed that most elements could be broken down further to provide even richer information on these wellbeing components. This allows for more precise interventions aimed at improving wellbeing.

For example, the component of engagement really is about the experience of the flow state as proposed by Csikszentmihalyi (2008). Flow is characterised by complete absorption in a task to the point an individual loses track of time and is oblivious to his or her surroundings. It has been well researched that the flow state most often occurs when i) an individual is completing a skill based task where they are using their highest character strengths, and ii) there is a good balance between the difficulty of the challenge and the skill of the individual. Therefore we included a survey scale for "Strengths Known" and "Balance" to better understand the presence (or absence) of the antecedents for individuals to experience the flow state. For similar reasons the components of "emotions", "meaningfulness",

Video: What is Mental Health?

"accomplishment" and "health" were broken down into sub-scales.

Item Development

Survey items were informed by a thorough review of existing measures that could be linked to PERMA components. The majority of these surveys were created for adults and therefore new items were developed to increase suitability and reading level for adolescents as young as 11 years old.

All rating scales were created on a 7-point likert-type scale. A 7-point scale was preferred over a 5-point scale as it increases the amount of response variance, particularly important given the likelihood of more positive responses on many of the scales.

For some PERMA-H components that are likely to change more frequently (e.g. experience of positive and negative emotions), students are instructed to reflect back purely on the previous week. For more stable PERMA-H elements (e.g. self-efficacy, sense of purpose), students are asked for a level of agreement based on how they are in general.

The survey items were reviewed for grammar, readability and applicability to the relevant constructs by a number of psychologists, academics and teachers before being tested with students.

Survey Refinement

The SFP was made available to schools across Australia through the "Flourishing at School" study in the first half of 2016. The aim of the study was to reduce the survey items and to develop an understanding of the factor structure, reliability and validity of the survey instrument. 14 schools representing all states in Australia (except the Northern Territory) participated in the study.

7,323 students responded to at least one of the two survey batteries in the study, with 4,523 students completing both surveys. The large sample size provided an excellent basis for a rigorous analysis of reliability and validity. This sample also forms the basis of the initial normative sample for the SFP (for comparative purposes).

Based on a factor analysis the initial survey item pool of 84 items was reduced to 58 items. Each scale has at least three items to ensure the construct is adequately captured, and to ensure a high level of reliability.

Interpreting the SFP School Summary Report

This section of the Assessment Manual will introduce you to key information to ensure accurate interpretation of the SFP School Summary Report.

Percentiles

The SFP School Summary Report makes use of percentiles to break down information into digestible chunks to develop an understanding of the current state and for comparison against a normative sample. A percentile expresses the percent of other scores that are less than the data point of interest. For instance a percentile score of 50 would mean that the score in question was higher than 50% of all scores.

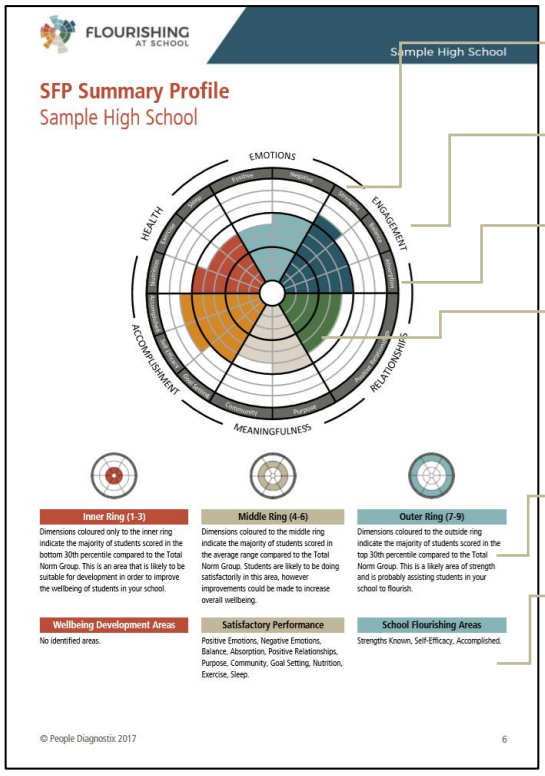
Table: SFP Scaled Scores, Percentiles and Descriptors

Scaled Score	Percentile	Descriptor
9	91-99	Above average
8	81-90	
7	71-80	
6	61-70	Average
5	41-60	
4	31-40	
3	21-30	Below average
2	11-20	
1	1-10	

The SFP School Summary report commonly uses scaled scores between 1 and 9 in order to group scores into distinct groups. In general terms, the higher the scaled score, the better the score on a particular scale. The table above illustrates the percentile range and descriptor attached to each scaled score.

Interpretation of Specific Report Pages

SFP Summary Profile (Page 6)



Summary profile

SFP dimension name

SFP scale name

This represents a school median scaled score of "5"

Scaled score descriptors

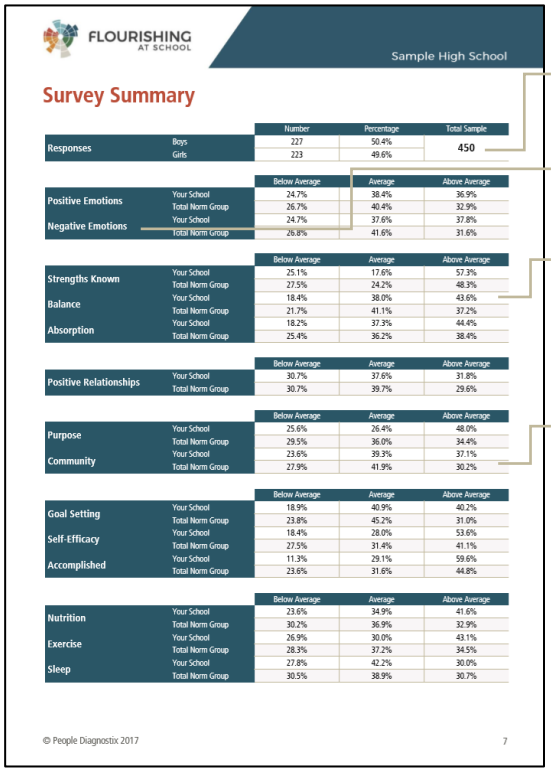
Summary of median scaled scores that are in bottom 30th percentiles, 31st-70th percentiles, and 71st-99th percentiles

This page provides a snapshot of how your school has performed overall in comparison to the normative sample.

Scaled scores represented in the profile are the median scaled scores (between 1-9) obtained by students who completed the SFP survey.

The more colour present in the summary profile, the greater the level of wellbeing of the majority of students at your school.

Survey Summary (Page 7)



Total number of students who completed the survey

SFP scale name

This summarises the wellbeing of students at your school

This summarises the wellbeing of students in the normative sample (for comparison purposes)

This page provides a brief overview of the wellbeing of students in your school relative to the total norm group.

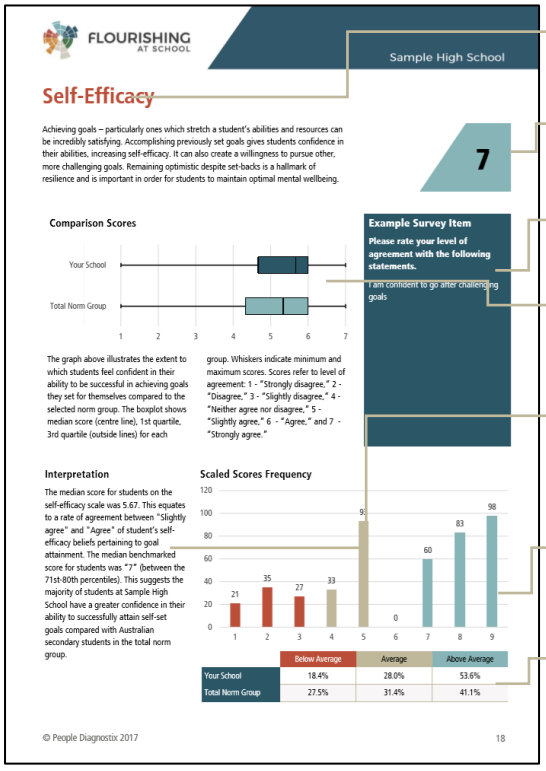
"Below Average" scores are the percentage of students scoring below the 30th percentile on each scale.

"Average" scores are the percentage of students scoring in the 31st to 70th percentiles.

"Above Average" scores are the percentage of students scoring above the 70th percentile.

Use the "Total Norm Group" scores for each scale to see how the wellbeing of students at your school compare to secondary students in general.

Individual Scale Summary (Pages 9-22)



SFP Scale name

School median scaled score

Example scale question

Student raw scores compared to norm group

Raw score and scaled score interpretation

Number of students who received specific scaled scores for this scale

Comparison of scaled scores with norm group

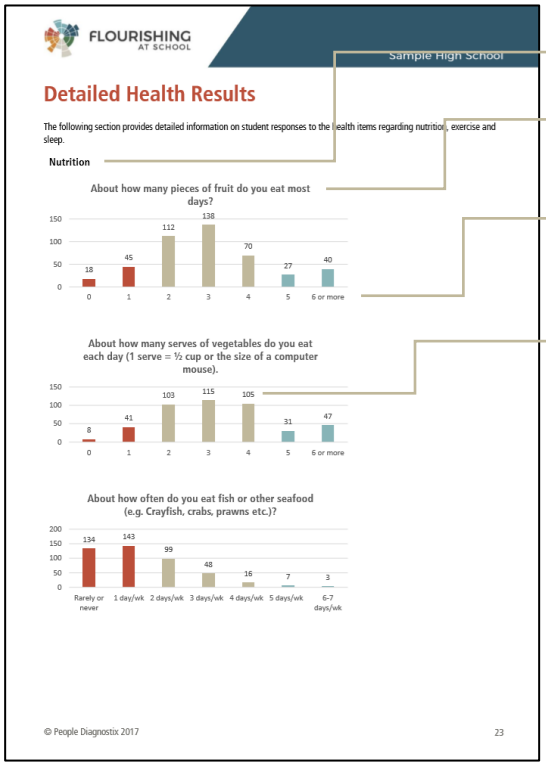
This page provides an overview of the wellbeing of students in your school relative to the total norm group on one of the 14 SFP scales.

The box and whiskers chart illustrates the range of scale raw scores obtained by students at your school in comparison to the total norm group.

The bar chart illustrates the number of students who have received specific scaled scores for this scale.

The table illustrates the clustered scaled scores obtained by students at your school in comparison to the total norm group.

Detailed Health Results (Pages 23-29)



SFP scale name

Scale question

Answer choices available to survey question

Number of students who have selected this response

This page provides an overview of how students at your school have responded to specific questions in the "Health" dimension (Nutrition, Exercise and Sleep scales).

This can be useful to identify specific areas to target for intervention and to track the successfulness of these interventions.

The Nutrition, Exercise, and Sleep scales have been constructed in a different way to the other scales and therefore this level of feedback may prove more useful than the scale summary information alone.

Readability Statistics

Counts	Words	875
	Characters	4021
	Sentences	77
Averages	Words per Sentence	11.4
	Characters per Word	4.5
	Syllables per Word	1.5
Reading Ease	Flesch Reading Ease	71.5
	Flesch-Kincaid Grade Level	6.1

Readability Scores

Each readability test bases its rating on the average number of syllables per word and words per sentence. The following sections explain how each test scores the SFP's readability.

Flesch Reading Ease test

This test rates text on a 100-point scale. The higher the score, the easier it is to understand the document. For most standard documents the score ideally should be between 60 and 70.

The formula for the Flesch Reading Ease Score is: 206.835 – (1.015 x ASL) – (84.6 x ASW)

Where:

ASL = average sentence length (number of words divided by the number of sentences).

ASW = average number of syllables per word (the number of syllables divided by the number of words).

Flesch-Kincaid Grade Level test

This test rates text on a U.S. school grade level. For example, a score of 8.0 means an eighth grader can understand the document. For most documents, the ideal score is between 7.0 to 8.0.

The formula for the Flesch-Kincaid Grade Level score is: (0.39 x ASL) + (11.8 x ASW) – 15.59

Where:

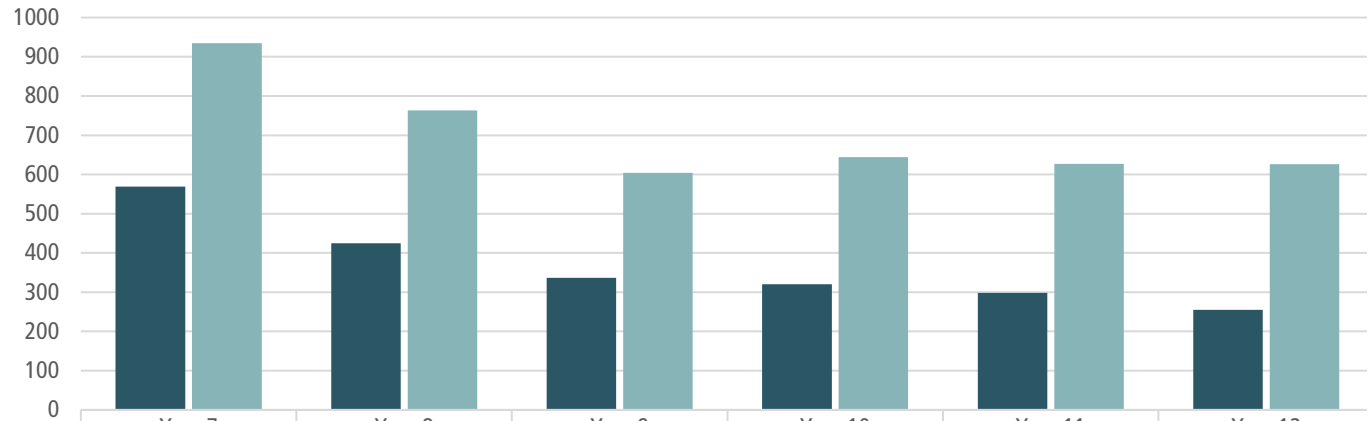
ASL = average sentence length (number of words divided by the number of sentences).

ASW = average number of syllables per word (the number of syllables divided by the number of words).

Demographics

In order to reduce common methods variance in the Flourishing at School study, participating students were asked to complete all SFP items and additional surveys on separate occasions approximately one week apart. To create survey batteries of similar length, the SFP Health scales of Nutrition, Exercise and Sleep were administered in the second survey battery. Student level demographic information was only recorded in the first survey battery. Therefore student level demographic information reported here is for the SFP PERMA scales. School level demographics are reported for all SFP scales.

Sex and Cohorts

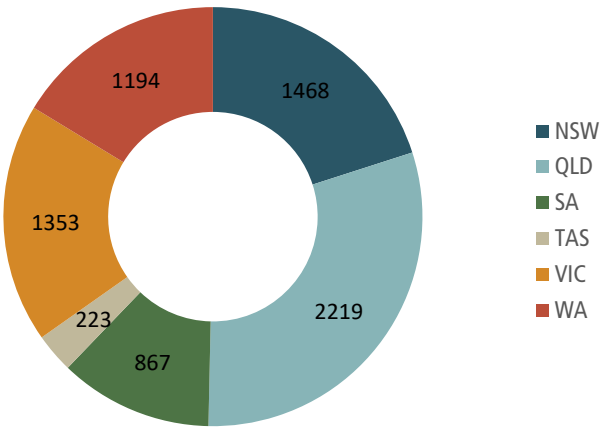


	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12
Boys	569	425	337	320	298	255
Girls	935	763	604	644	627	626

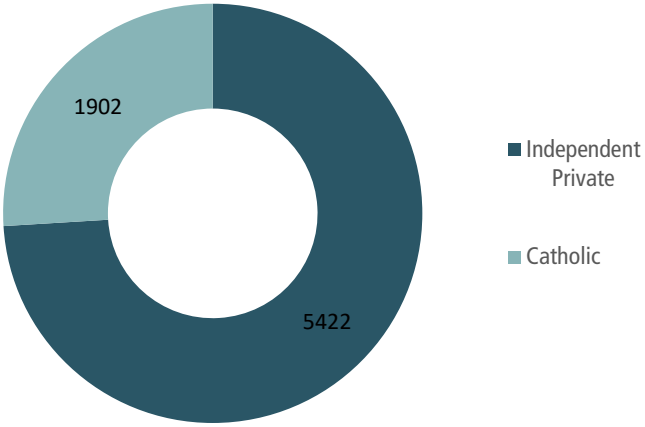
English as an Additional Language or Dialect (EAL/D) and Aboriginal or Torres Strait Islander (ATSI)

	EAL/D	ATSI
Total	696	132
Percentage	10.87%	2.06%

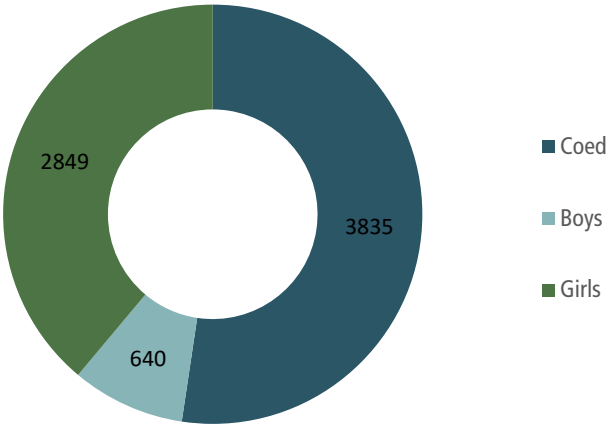
Participating Students by State



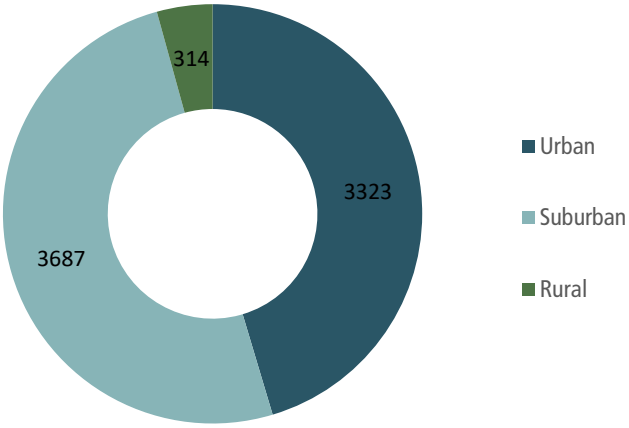
Participating Students by School Sector



Participating Students by School Type

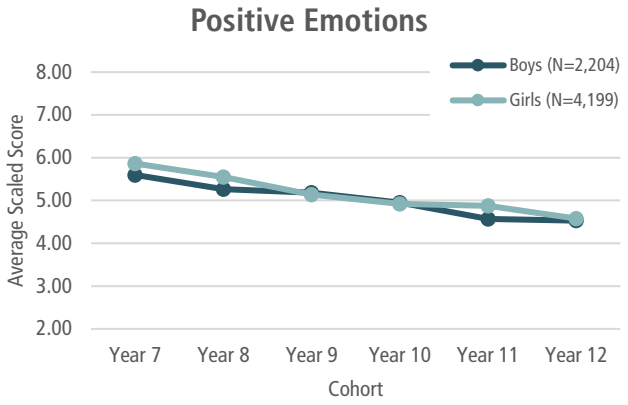


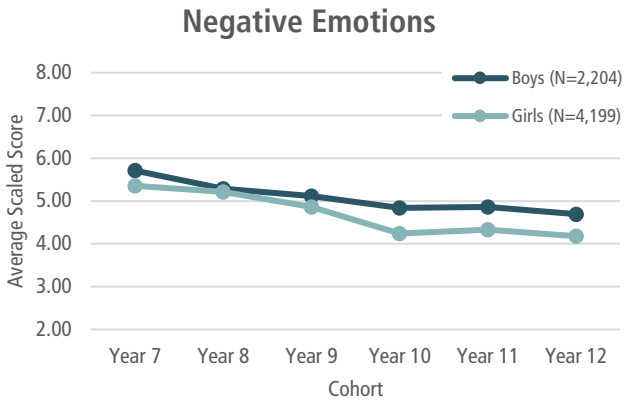
Participating Students by School Location

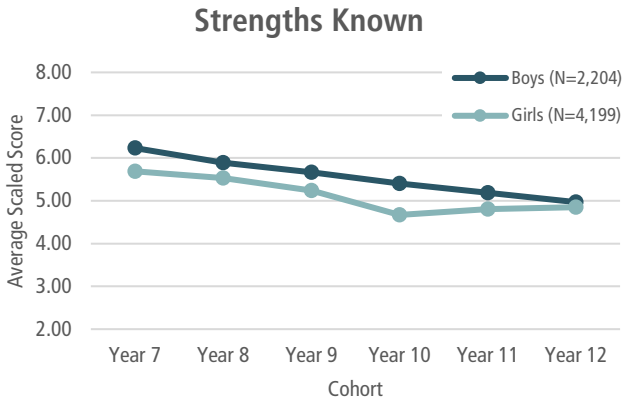


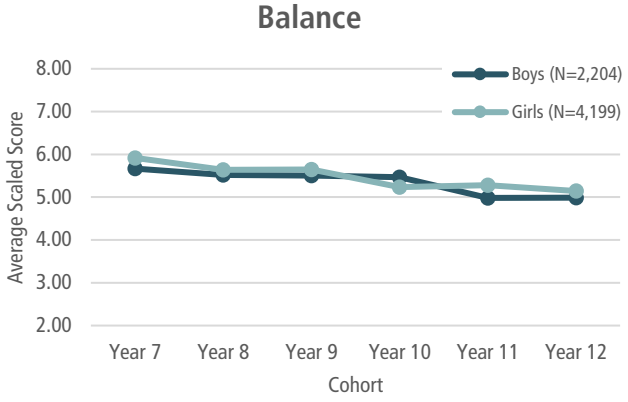
Cohort and Sex Normative Data

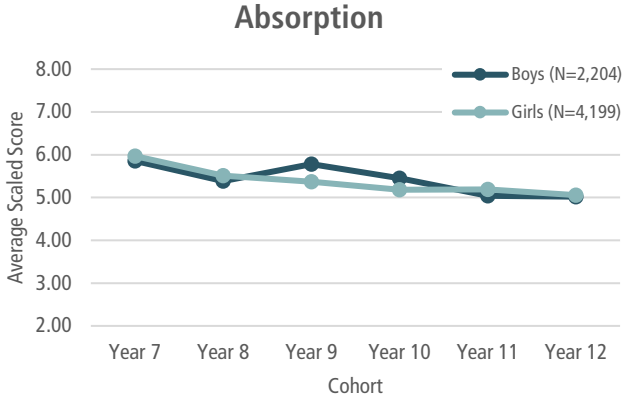
The data contained herein illustrates the average scaled score (percentile groupings 1-9, see page 7 for percentile groups) for the 14 wellbeing scales assessed by the Student Flourishing Profile across cohorts and sex. There is not a large gender difference, however there is a downward trend that can be observed on most scales across year groups.

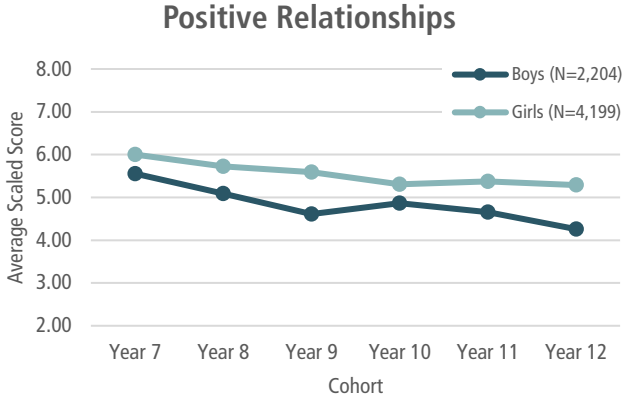




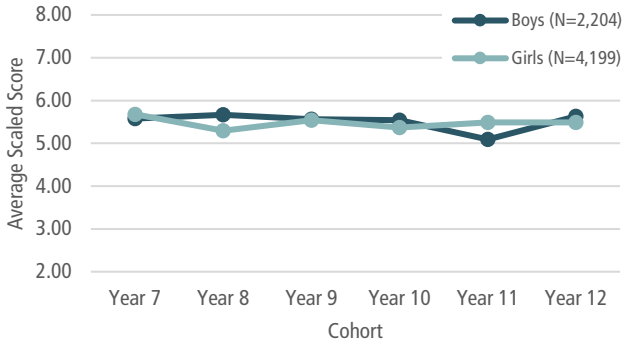




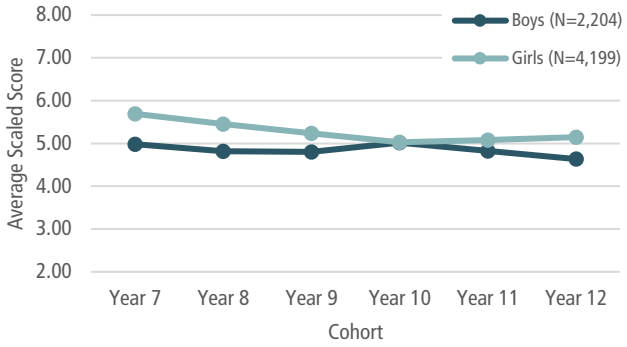




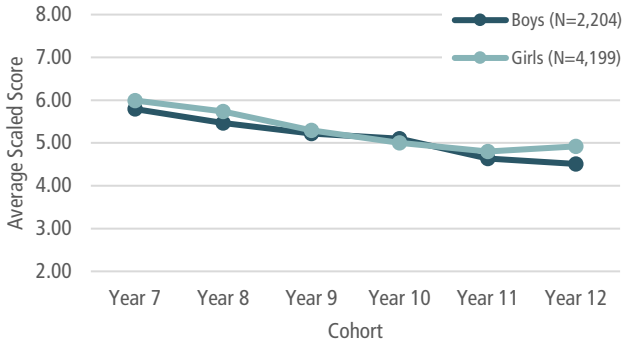
Purpose



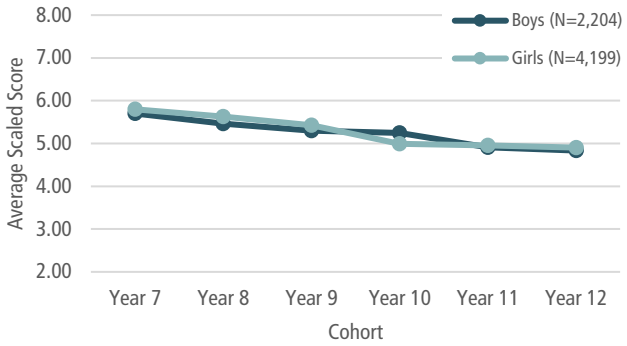
Community



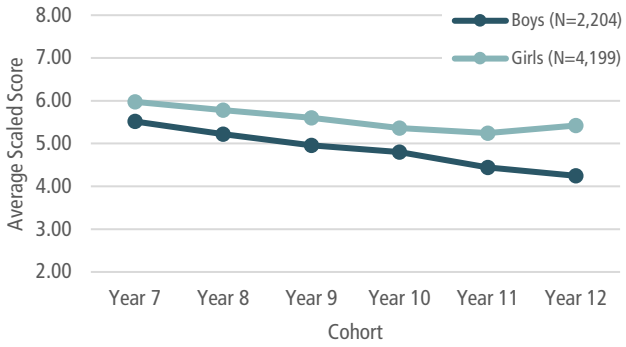
Goal Setting



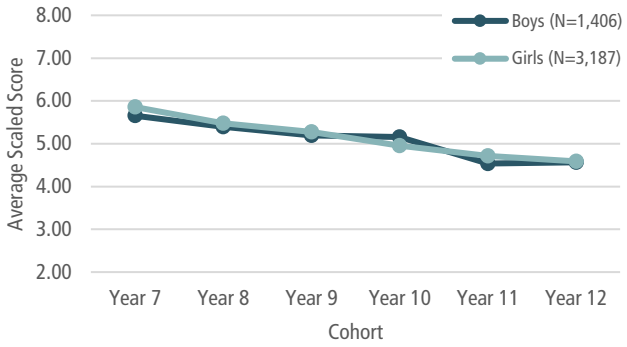
Self-Efficacy



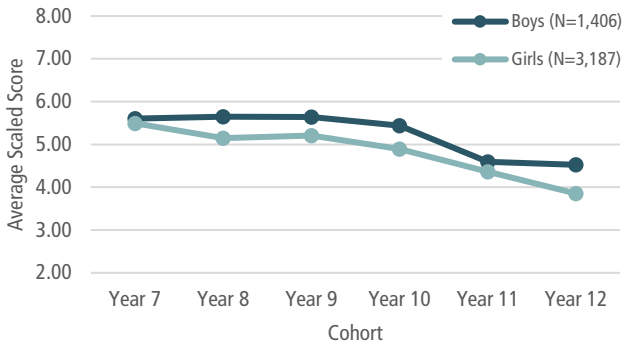
Accomplished



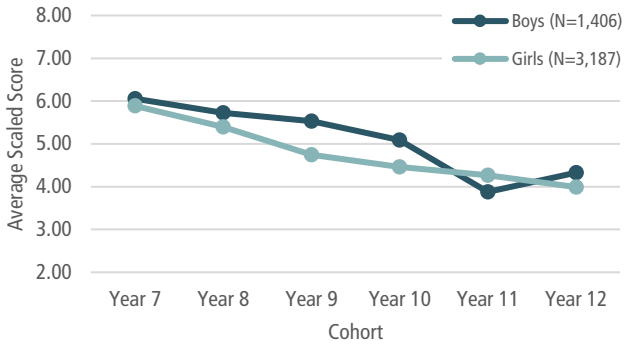
Diet



Exercise



Sleep



Reliability

Reliability for each of the SFP PERMA scales was determined using Cronbach's Alpha. All scales have acceptable or better levels of internal consistency.

The SFP Health scales were constructed to include questions that tap into a variety of research driven areas. For example in the scale of Sleep, there are questions pertaining to both sleep quality *and* quantity. They are not necessarily expected to be correlated. For this reason the Health scales of Nutrition, Exercise and Sleep were not included in this reliability analyses. Individual Health scale item correlations with outcome measures are available by request from People Diagnostix.

Table: Reliability Coefficients of SFP Scales

Dimension	Mean	SD	α
Positive Emotions	4.58	1.07	0.83
Negative Emotions	2.90	1.28	0.84
Strengths Known	5.58	1.02	0.84
Balance	4.91	0.98	0.82
Absorption	4.46	1.18	0.76
Positive Relationships	6.03	0.99	0.87
Purpose	4.31	0.75	0.79
Community	5.12	1.13	0.84
Goal Setting	5.21	1.07	0.79
Self-Efficacy	5.08	1.10	0.81
Accomplished	5.45	1.04	0.77
Nutrition	4.21	0.76	NA
Exercise	4.62	1.61	NA
Sleep	4.66	0.92	NA

Table: Interpreting Reliability Coefficients (α)

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Validity

The 14 SFP scales demonstrate good convergent and discriminant validity in the hypothesised direction with established measures of positive psychological states (subjective happiness and life satisfaction), and negative psychological states (positive affect, negative affect, depression, anxiety and stress).

Table: Correlations between SFP Scales and Other Established Scales

SFP Scale	Life Satisfaction	Subjective Happiness	Stress (DASS-Y)	Anxiety (DASS-Y)	Depression (DASS-Y)	Positive Affect (PANAS)	Negative Affect (PANAS)
Positive Emotions	.417**	.467**	-.227**	-.198**	-.298**	.671**	-.205**
Negative Emotions	-.329**	-.385**	.487**	.490**	.475**	-.212**	.729**
Strengths Known	.376**	.347**	-.202**	-.233**	-.272**	.441**	-.261**
Balance	.374**	.349**	-.193**	-.201**	-.270**	.477**	-.247**
Absorption	.235**	.232**	-.087**	-.067**	-.142**	.402**	-.047**
Positive Relationships	.390**	.411**	-.240**	-.256**	-.331**	.385**	-.293**
Purpose	.484**	.422**	-.291**	-.282**	-.361**	.461**	-.340**
Community	.371**	.415**	-.151**	-.157**	-.240**	.493**	-.183**
Goal Setting	.379**	.353**	-.195**	-.197**	-.251**	.515**	-.255**
Self-Efficacy	.463**	.469**	-.281**	-.278**	-.356**	.584**	-.348**
Accomplished	.462**	.442**	-.200**	-.225**	-.334**	.593**	-.274**
Nutrition	.264**	.273**	-.209**	-.206**	-.231**	.260**	-.206**
Exercise	.183**	.215**	-.107**	-.089**	-.121**	.307**	-.106**
Sleep	.366**	.375**	-.399**	-.384**	-.376**	.277**	-.350**

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table: Interpreting Correlation Coefficients

Correlation Coefficient	Strength of Relationship
-1.0 to -0.5 or 1.0 to 0.5	Strong
-0.5 to -0.3 or 0.3 to 0.5	Moderate
-0.3 to -0.1 or 0.1 to 0.3	Weak
-0.1 to 0.1	None or very weak

SFP PERMA Factor Structure

The SFP scales that measure the original five PERMA components include: Positive Emotions, Absorption, Positive Relationships, Purpose, and Accomplished. A factor analysis was performed that confirmed five independent components.

Table: Factor Analysis Output

Pattern Matrix

SFP Item	Component				
	1	2	3	4	5
PE6	.773				
PE4	.764				
PE3	.682				
PE1	.680				
PE5	.678				
PE8	.674				
PR2		-.893			
PR1		-.888			
PR4		-.769			
PR3		-.760			
PU2			-.851		
PU3			-.816		
PU1			-.775		
AB2				.861	
AB3				.798	
AB4				.763	
AC1					-.843
AC2					-.774
AC5					-.706
AC4					-.527

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Test-Retest Reliability

In October 2016 an Australia all boys secondary school participated in a test-retest evaluation of the SFP. 437 students completed the survey twice with a one week interval between administrations. Internal consistency of each of the PERMA scales was assessed as being acceptable or better after each survey administration and correlations were strong (above 0.5) for all but the negative emotions scale. The lower test-retest correlations on the scales of positive emotions, negative emotions, balance, and absorption were to be expected as participants were asked to reflect on their experience over the past week only when responding to these scales.

Table: Reliability Coefficients of SFP Scales (Wave 1 and Wave 2) n=437

Dimension	W1 α	W2 α
Positive Emotions	0.84	0.87
Negative Emotions	0.80	0.87
Strengths Known	0.90	0.93
Balance	0.86	0.93
Absorption	0.76	0.83
Positive Relationships	0.85	0.89
Purpose	0.80	0.80
Community	0.82	0.91
Goal Setting	0.74	0.86
Self-Efficacy	0.79	0.88
Accomplished	0.71	0.81

Table: Interpreting Reliability Coefficients (α)

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Table: Test-Retest Correlation (Wave 1 and Wave 2) – One week interval

Dimension	Correlation
Positive Emotions	.667**
Negative Emotions	.509**
Strengths Known	.676**
Balance	.497**
Absorption	.582**
Positive Relationships	.670**
Purpose	.707**
Community	.693**
Goal Setting	.704**
Self-Efficacy	.710**
Accomplished	.626**

**. Correlation is significant at the 0.01 level (2-tailed).

Table: Interpreting Correlation Coefficients

Correlation Coefficient	Strength of Relationship
-1.0 to -0.5 or 1.0 to 0.5	Strong
-0.5 to -0.3 or 0.3 to 0.5	Moderate
-0.3 to -0.1 or 0.1 to 0.3	Weak
-0.1 to 0.1	None or very weak

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