



MONASH
University

HIGH PERFORMANCE MINDFULNESS

Pre-Program Snapshot
(Quantitative)

Dr. Zoe A. Morris

April 2021

monash.edu/education

AUTHORS

This report was written by the following staff at Monash University:

Dr. Zoe Morris

Dr. Emily Berger

Dr. Levita D'Souza

Professor Andrea Reupert

Suggested citation:

Morris, Z.A, Berger, E., D'Souza, L, & Reupert, A. (2021, April). *High Performance Mindfulness – Pre-Program Snapshot (Quantitative)*. Report produced for High Performance Mindfulness.

CONTENTS

AUTHORS	2
EXECUTIVE SUMMARY	4
PROGRAM & PARTICIPANTS	5
Program Description	5
Sample Description	6
Age	6
Gender & Year Level	6
SUMMARY STATISTICS FOR KEY VARIABLES	7
1. Self-efficacy for mindset, learning, & study	7
2. Mindfulness	9
3. Wellbeing	9
4. Self-efficacy for self-regulated learning	11
5. Test emotions	12
6. Perceived sources of pressure	13
REFERENCES	14

EXECUTIVE SUMMARY

Prior to commencing the HPM program, 313 participants completed an online survey in March 2021. Participants were VCE students (54.0% Year 11, 46.0% Year 12) from a co-educational independent school in Victoria and ranged in age from 15 to 19 years of age ($M = 16.61$, $SD = .64$). Participant gender was described as 49.8% female, 46.3% male, 1.3% non-binary/gender diverse, and 2.6% chose not to provide a gender.

Written parental consent was provided prior to participation.

The survey items aimed to explore pre-program levels of the following:

- Self efficacy for mindset, learning, and study
- Current wellbeing (engagement, perseverance, and optimism)
- Self efficacy for self-regulated learning
- Emotions related to tests and exams
- Current level of mindfulness
- Perceived sources of pressure

This report provides an initial snapshot of pre-program scores on the above variables. Results indicated that most average scores on key variables were reported to be at the midpoint of the scale, except in the case of test emotions and perceived sources of pressure where average responses on some subscales indicated moderate to high levels of emotions (e.g., relief, pride, and anxiety), and high levels of perceived pressure, particularly from oneself, school, and teachers.

Participants on average reported moderate levels of wellbeing, perceived self efficacy, and levels of mindfulness, however the range of scores indicated a proportion of participants did report lower confidence in their skills and/or ability, a proportion also reported lower perceived wellbeing ($n = 8$). It is important to note that these measures do not assess for clinical issues, thus, low scores on wellbeing do not necessarily indicate high illbeing or indicate concerns of a clinical nature.

Gender differences were explored for key variables, these indicated:

- Males reported significantly higher perceived everyday mindfulness, and overall wellbeing than females. Specifically, male participants reported a significantly higher sense of engagement (focus) and optimism, or helpfulness and confidence than females.
- In relation to the emotions experienced in relation to tests and exams, males reported significantly higher joy and hope than females. Conversely, females reported significantly higher levels of anxiety and hopelessness than males, but also a greater sense of relief once they are completed.
- Females reported significantly higher confidence in their self-regulated learning skills than males.
- In relation to the perceived sources of pressure for participants, females reported significantly higher perceptions of pressure from themselves compared to males. Similarly, females reported sensing pressure from external sources to a significantly higher degree than males, specifically from school, teachers, and social media.

Significant differences were also found for year level in relation to wellbeing, with Year 11 students reporting significantly higher wellbeing overall, in addition to higher perseverance and optimism than Year 12 students prior to program commencement.

The HPM program aims to complement current skills of participants, enhance their knowledge and understanding of how mindset can be harnessed for learning, and to further support those who are reporting difficulties with their mindset, learning, focus, and self-regulated study skills.

PROGRAM & PARTICIPANTS

Program Description

The High Performance Mindfulness (HPM) Program has been developed for Year 11 and 12 students, it contains eight modules and is typically undertaken over a four week period within the classroom (2 modules per week). The program includes video content specifically designed for senior high school students, as well as access to course notes, and audio and video reference materials. The module topics are summarised in Table 1.

TABLE 1. HIGH PERFORMANCE MINDFULNESS SUMMARY OF MODULE TOPICS

Module 1	Control your mindset to own your skillset
Module 2	It's all about awareness
Module 3	The caveman mind
Module 4	Stopping the b-game loop
Module 5	Just take a breath
Module 6	Where's your focus?
Module 7	Overcoming overwhelm
Module 8	Setting yourself up for success

The HPM program is designed to help build a mindset that allows people to access and apply their strengths more effectively, especially under pressure. The program has been developed by Emma Murray with principles of mindfulness

The program aims to assist participants to:

- Identify and apply their strengths when it matters most
- Bounce-back from mistakes
- Tackle procrastination
- Overcome social media distraction
- Regain focus
- Build mental resilience, to feel more confident and capable
- Improve study and exam performance
- Enhance sleep quality
- Improve emotional awareness and presence which helps build positive family and social relationships

Sample Description

A total of 313 program participants undertook the online survey prior to the commencement of the High Performance Mindfulness (HPM) program commencement. All participants indicated they had prior parental consent to complete the survey.

Age

Participant age ranged from 15 to 19, with an average of 16.61 years ($SD = .64$, $N = 313$). One participant chose not to provide their age.

Gender & Year Level

Table 2 summarises the gender and year level breakdown of the program participants who completed the survey.

TABLE 2. GENDER & YEAR LEVEL OF PROGRAM PARTICIPANTS ($N = 313$)

		<i>N</i>	%
Gender			
Female		156	49.8
Male		145	46.3
Non-binary / gender diverse		4	1.3
Prefer not to say		8	2.6
Year Level			
Year 11		169	54.0
Year 12		144	46.0

Due to the potential identifiability of participants who identified themselves as non-binary or gender diverse, any separate analyses focusing on gender differences will include only those participants who identified themselves as females and males ($n = 301$).

* *Note:* The survey received a total of 354 responses, however 41 program participants provided accidental resubmissions of data and these duplicates were deleted from the dataset.

SUMMARY STATISTICS FOR KEY VARIABLES

1. Self-efficacy for mindset, learning, & study

Self-efficacy beliefs influence the choices people make and the courses of action they pursue (Bandura, 1986). Individuals tend to engage in tasks about which they feel competent and confident and avoid those in which they do not. Efficacy beliefs have been shown to impact effort, perseverance through challenges, and the degree of stress and anxiety an individual experiences during a given activity (Schunk, Hanson, & Cox, 1987). A 26-item scale was created by Morris, Berger, D'Souza, and Reupert, (2021) to assess HPM program participants' self-efficacy in the competencies outlined in the program goals. These included managing anxieties, maintaining focus, having a positive mindset, managing distractions, managing feelings of overwhelm, being productive, and time-management.

Items were rated on a scale from 1 (*not much like me*) to 5 (*very much like me*). The overall means are summarised in Table 3. It is noted, that on average students reported moderate to moderate-high self-efficacy for these skills. To consider those participants who are having the *most* difficulty with these competencies, the items are presented in descending order from the items where the greatest proportion of students indicated very low self-efficacy (i.e., by selecting the most extreme negative response).

This ranking indicates that prior to program commencement, participants who reported very low self-efficacy reported feeling least confident in managing worry about exams (34.5%) and assignments (13.4%), as well as worrying about their mindset impacting their ATAR negatively (14.1%). Managing social media distractions was an area that 11.2% of participants rated themselves as "not at all" confident in their ability. Similarly, approximately 8 to 9% of participants ranked themselves as not at all confident in managing their focus during class, managing distractions when studying, and avoiding distractions from their phone while studying.

TABLE 3. SUMMARY OF SELF-EFFICACY FOR MINDSET SCALE MEANS AND STANDARD DEVIATIONS (N = 313)

Item	Mean	SD	% very low self efficacy	% low self efficacy
1. [I worry about exams.]	3.82	1.13	34.5	30.7
2. [I worry that my mindset will negatively affect my ATAR.]	3.12	1.19	14.1	26.5
3. [My anxiety about exams and assignments gets in the way of my performance.]	3.19	1.10	13.4	24.9
4. [Social media is a distraction when trying to study or complete schoolwork.]	3.11	1.16	11.2	28.4
5. [I am able to manage distractions when studying.]	2.94	1.05	8.6	25.9
6. [My phone distracts me when I am studying or completing schoolwork.]	3.16	1.14	8.3	20.1
7. [I have an effective study routine in place.]	3.07	1.05	8.3	18.2
8. [My current sleep habits allow me to focus on school and study.]	3.16	1.12	8.0	20.8
9. [I am able to remain focused when studying.]	3.15	1.02	6.4	18.8
10. [As a VCE student, I feel good about my current level of productivity.]	3.15	0.98	6.4	15.7
11. [I am able to focus at school, even when others around me are not.]	3.46	1.00	5.1	10.5
12. [I am able to manage any sense of overwhelm about the workload at school this year.]	3.13	0.97	5.1	19.8
13. [I am able to juggle multiple SACS and assessments at the same time.]	3.19	0.93	4.8	14.1
14. [I am able to maintain my focus during class.]	3.45	1.00	4.8	12.1
15. [I am confident about my ability to focus on school-related tasks.]	3.47	0.98	4.5	11.5
16. [I believe my current mindset will help me reach my VCE potential.]	3.29	0.98	4.5	15.0
17. [I am productive with my time when studying.]	3.25	0.95	4.2	17.3
18. [As a VCE student, I feel good about my current level of performance at school.]	3.28	0.97	4.2	16.6
19. [When I am overwhelmed, I have the skills to manage things so I can get by.]	3.28	0.95	3.8	15.0
20. [I have the skills to be effective with my study time.]	3.41	0.90	3.5	10.5
21. [My ability to focus will allow me to meet the study demands upon me this year.]	3.37	0.94	3.5	13.4
22. [I am confident that I can perform at school even when under pressure.]	3.45	0.92	3.2	10.2
23. [I am able to manage any sense of unease about exams.]	3.27	0.95	3.2	18.2
24. [I believe that my mindset will help me apply my skill set more effectively]	3.41	0.93	2.9	11.8
25. [I am able to remember the things I learn about and can recall information when needed.]	3.51	0.90	1.9	10.5
26. [I understand how the mind works and how it impacts my performance.]	3.68	0.83	1.0	7.0

Note: Items were rated 1 (not much like me) to 5 (very much like me). "very low self efficacy" indicates the participant provided a score of 1 (positively worded items) or 5 (negatively worded items). "low self efficacy" refers to a participant scoring 2 (positively worded items) or 4 (negatively worded items) on the response scale provided.

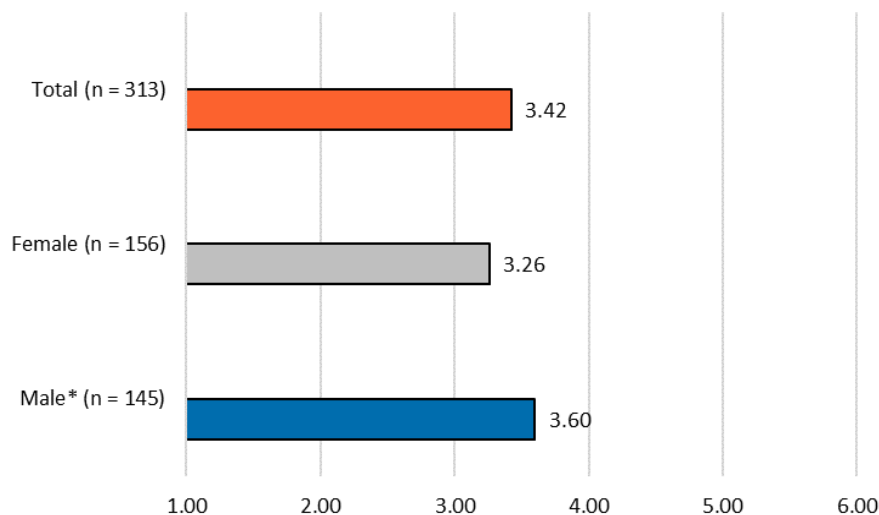
Next, this scale will be further evaluated to validate potential subscales or "clusters" of competencies such that pre and post program changes in self efficacy can be evaluated in more detail, including exploring potential significant differences across gender and year level.

2. Mindfulness

Self-reported levels of mindfulness were captured using 11 items from the Mindful Attention Awareness Scale – Adolescents (MAAS-A, Brown, West, Loverich, & Biegel, 2011). Mindfulness in daily life involves attention and meta-awareness (being present), it is a “receptive state of attention that, informed by an awareness of present experience, simply observes what is taking place” (Brown, West, Loverich, & Biegel, 2011, p. 2). Higher levels of mindfulness have been associated with lower self-reported stress, and maladaptive emotion regulation strategies such as rumination and catastrophising (de Bruin, Zijlstra, Van de Weijer-Bergsma, & Bögels, 2011).

Items were rated on a scale from 1 (*almost always*) to 6 (*almost never*), with higher scores indicating a higher perceived degree of trait mindfulness. The total score was calculated by averaging scores for each participant across the 11 items. The average scores are summarised in Figure 1.

FIGURE 1. AVERAGE MINDFULNESS SCORES BY TOTAL SAMPLE AND GENDER (N = 313)



Note: [$t_{\text{mindfulness}}(299) = -3.98, p < .001$].

Overall, participants reported moderate levels of mindfulness. Males reported significantly higher levels of mindfulness compared with female students prior to the HPM program commencing

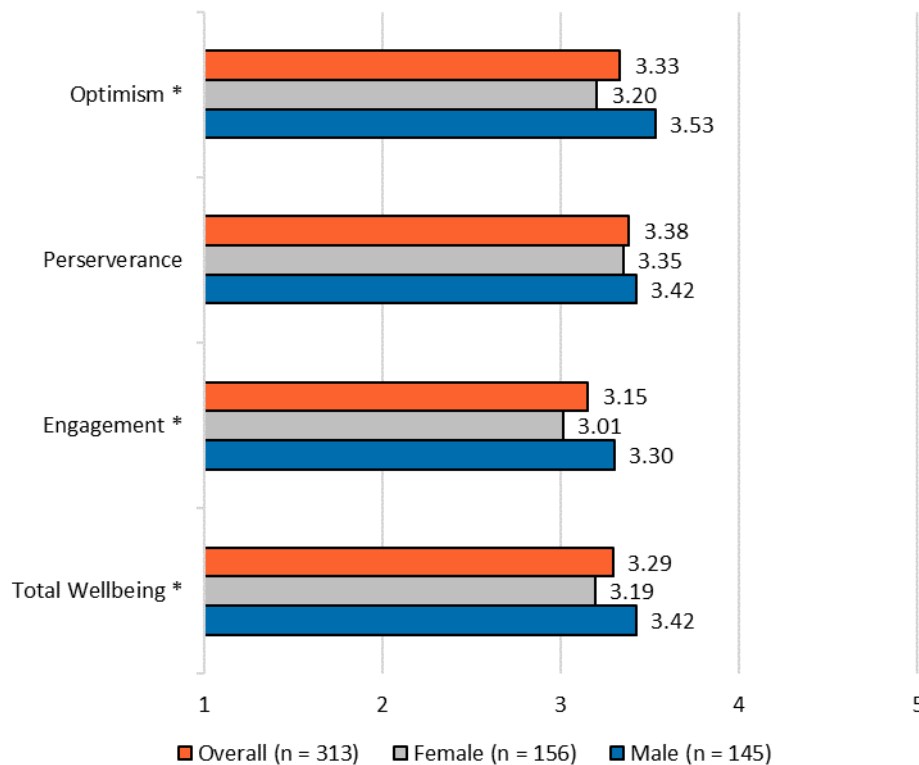
3. Wellbeing

Participants' current level of wellbeing was captured by the inclusion of 12 items from three of the five domains from the Engagement Perseverance Optimism Connectedness Happiness (EPOCH) measure of wellbeing (Kern et al., 2016). The three selected domains were:

- **Engagement:** the capacity to become absorbed in and focused on what one is doing as well as involvement and interest in life activities and tasks (4 items, e.g., “when I do an activity, I enjoy it so much that I lose track of time”).
- **Perseverance:** the ability to pursue one's goals to completion, even in the face of obstacles (4 items, e.g., “I keep at my schoolwork until I am done with it”).
- **Optimism:** characterised by hopefulness and confidence about the future, a tendency to take a favourable view of things, and an explanatory style marked by evaluating negative events as temporary, external, and specific to situation (4 items, e.g., “I am optimistic about my future”).

The items were rated on a scale from 1 (*almost never*) to 5 (*almost always*), higher scores indicated a higher degree of positive wellbeing. The total wellbeing score was calculated by averaging scores for each participant across the 12 items. The average scores are summarised in Figure 2.

FIGURE 2. AVERAGE WELLBEING SCORES BY TOTAL SAMPLE AND GENDER (N = 313)



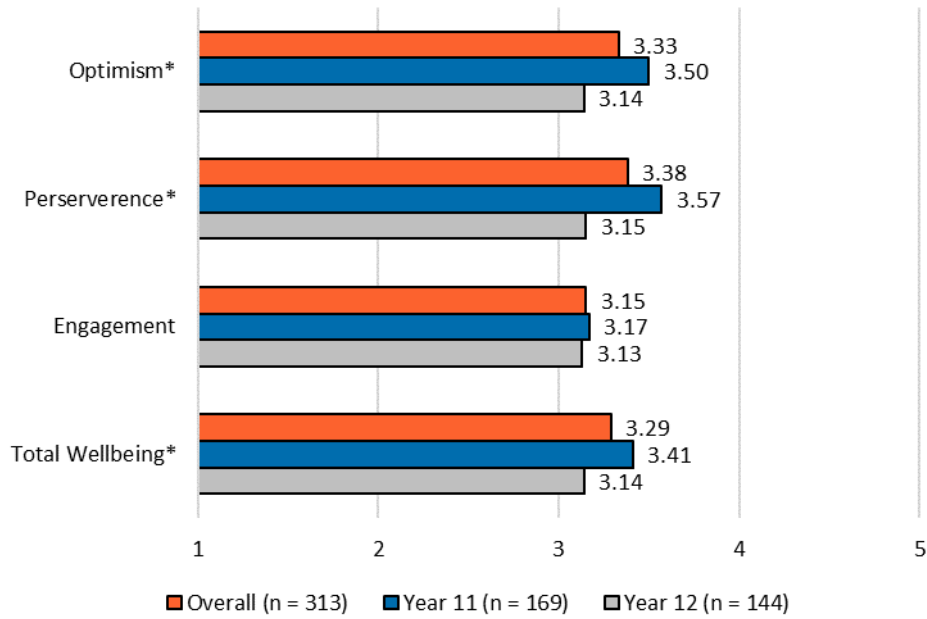
Note: [$t_{\text{wellbeing}}(299) = -2.86, p = .005$; $t_{\text{engagement}}(299) = -3.29, p = .001$; $t_{\text{optimism}}(299) = -3.24, p = .001$]

Average scores for total wellbeing and the three domains were above the scale mid-point, indicating participants generally reported moderate wellbeing, as measured by their sense of optimism, perseverance, and engagement. Despite this, eight participants indicated a total wellbeing score that was < 2, suggesting that a smaller number reported low levels of optimism (typically responding with “almost never” to the survey items). Of these eight participants, the majority were in Year 12 ($n = 6$) and included 5 females, 2 males, and 1 unknown gender.

Gender differences were noted in the overall wellbeing of participants with males reporting higher wellbeing than females. On average, males reported higher levels of engagement and optimism. No gender differences were noted in reported levels of perseverance.

Differences in reported wellbeing of the participants at different year levels were also explored. Year 11 students reported significantly higher total wellbeing than Year 12 students. This was particularly evident in the domains of perseverance and optimism. The mean scores are summarised in Figure 3.

FIGURE 3. AVERAGE WELLBEING SCORES BY TOTAL SAMPLE AND YEAR LEVEL (N = 313)



Note: [$t_{\text{wellbeing}}(311) = 3.39, p = .001$; $t_{\text{perseverance}}(311) = 4.49, p < .001$; $t_{\text{optimism}}(311) = 3.48, p < .001$]

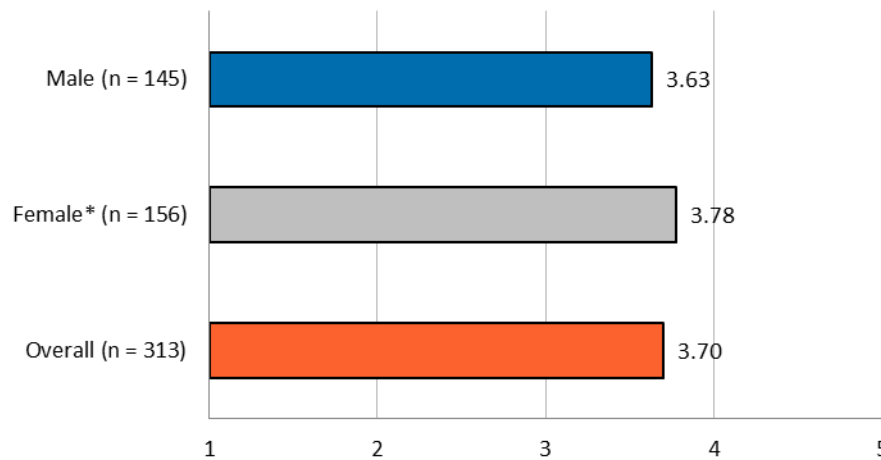
4. Self-efficacy for self-regulated learning

Self regulated learning and performance refers to the processes whereby learners personally activate and sustain cognitions, affects, and behaviours that are systematically oriented towards the attainment of personal goals. The Self Efficacy for Self-regulated Learning Scale (Zimmerman, Bandura, & Martinez-Pons, 1992) included 11 items that measure one’s perceived capability to use a variety of self-regulated learning strategies.

For the purposes of the current study, some of the items have been modified to fit the project context, to create greater focus on study for high stakes exams and to reflect current terminology and use of the internet and social media. For example, one new item was added to assess potential distractions during study from social media.

The items were rated on a scale from 1 (*never*) to 5 (*almost always*), higher scores indicated a higher degree of confidence in self regulated learning. The total score was calculated by averaging scores for each participant across the 12 items. The average scores are summarised in Figure 4.

FIGURE 4. AVERAGE SELF EFFICACY FOR SELF REGULATED LEARNING SCORES BY TOTAL SAMPLE AND GENDER (N = 313)



Note: [$t_{\text{self efficacy}}(299) = 2.19, p = .03$].

Scores indicated participants were confident that they could engage in self-regulated learning on average “*sometimes*” to “*often*”. There was a significant gender difference noted, with females reporting stronger confidence in their ability to engage in self-regulated learning than males.

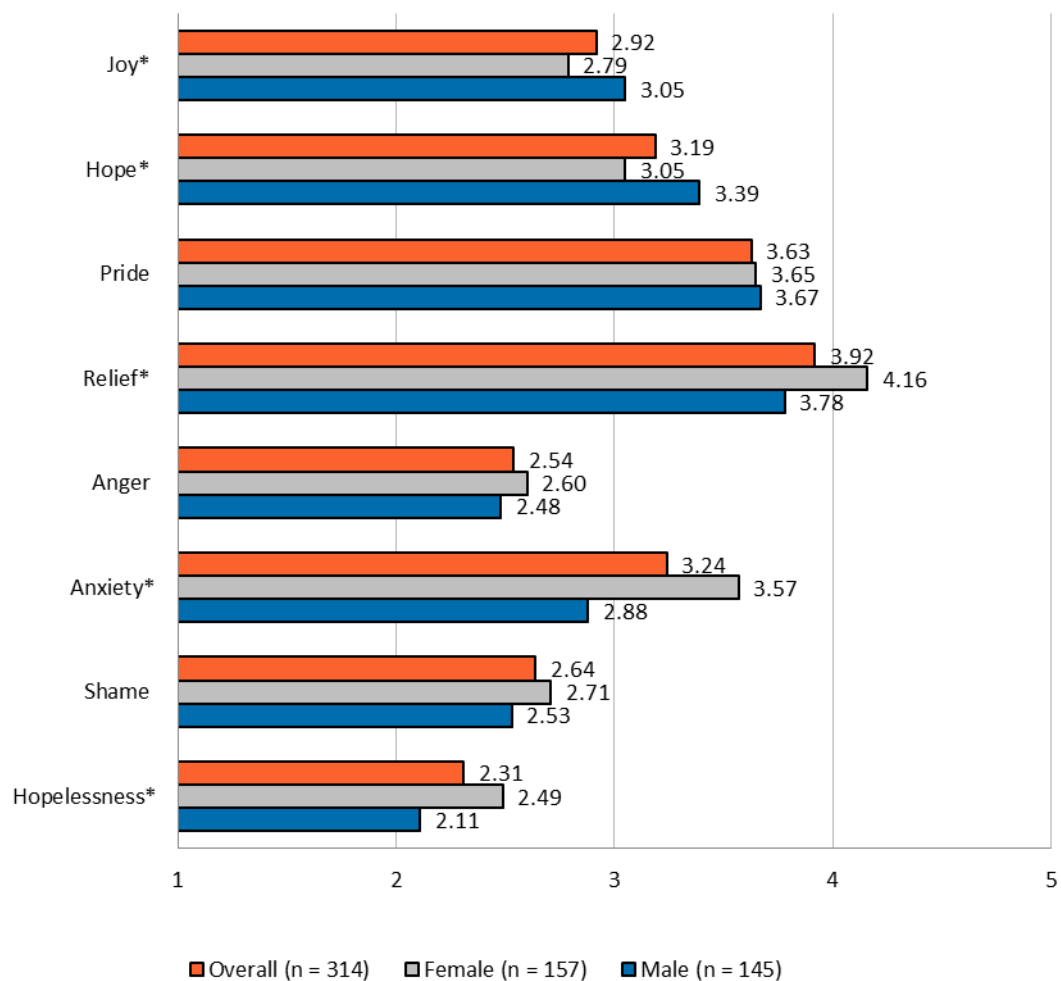
5. Test emotions

Test anxiety is well documented; however, students can experience a range of emotions before, during, and after exams. The Test Emotions Questionnaire (TEQ; Pekrun, Goetz, Perry, Kramer, Hochstadt, & Molfenter, 2007) acknowledges that students can experience both positive and negative emotions surrounding exams. Eight emotions are measured, with two items selected for the current study per emotion, except for anxiety which was measured with 3 items:

- Test joy (e.g., “before taking the exam, I feel a feeling of eagerness”)
- Test hope (e.g., “I am optimistic that everything will work out fine”)
- Test pride (e.g., “To think about my success makes me feel proud”)
- Test relief (e.g., “I feel very relieved”)
- Test anger (e.g., “I get so angry, I start feeling hot and flushed”).
- Test anxiety (e.g., “I feel panicky when taking an exam”)
- Test shame (e.g., “My marks embarrass me”)
- Test hopelessness (e.g., “I have lost all hope that I have the ability to do well on the exam”).

Items were rated on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*), higher scores indicated higher degrees of a given emotion surrounding exams. Figure 5 summarises the average scores on test emotions for the total sample and by gender.

FIGURE 5. AVERAGE TEST EMOTION SCORES BY TOTAL SAMPLE AND GENDER (N = 313)



Note: [$t_{\text{relief}} (299) = 4.19, p < .001$; $t_{\text{anxiety}} (299) = 6.49, p < .001$; $t_{\text{hopelessness}} (299) = 3.20, p = .002$;

$t_{\text{joy}} (299) = -2.62, p = .009$; $t_{\text{hope}} (299) = -3.77, p < .001$].

Overall, participants indicated they experience a range of emotions before, during, or after exams. The most prominent emotion was **relief** following the conclusion of an exam. Students next indicated they experience a sense of **pride** in themselves and their success in exams. **Anxiety** was the third most endorsed emotion by students, which could occur before, during, and after exams. Students indicated they were less likely to experience hopelessness and anger in relation to the exam experience.

Significant gender differences were found in the responses to five of the eight emotions (see emotions marked with an asterisk * in the figure above).

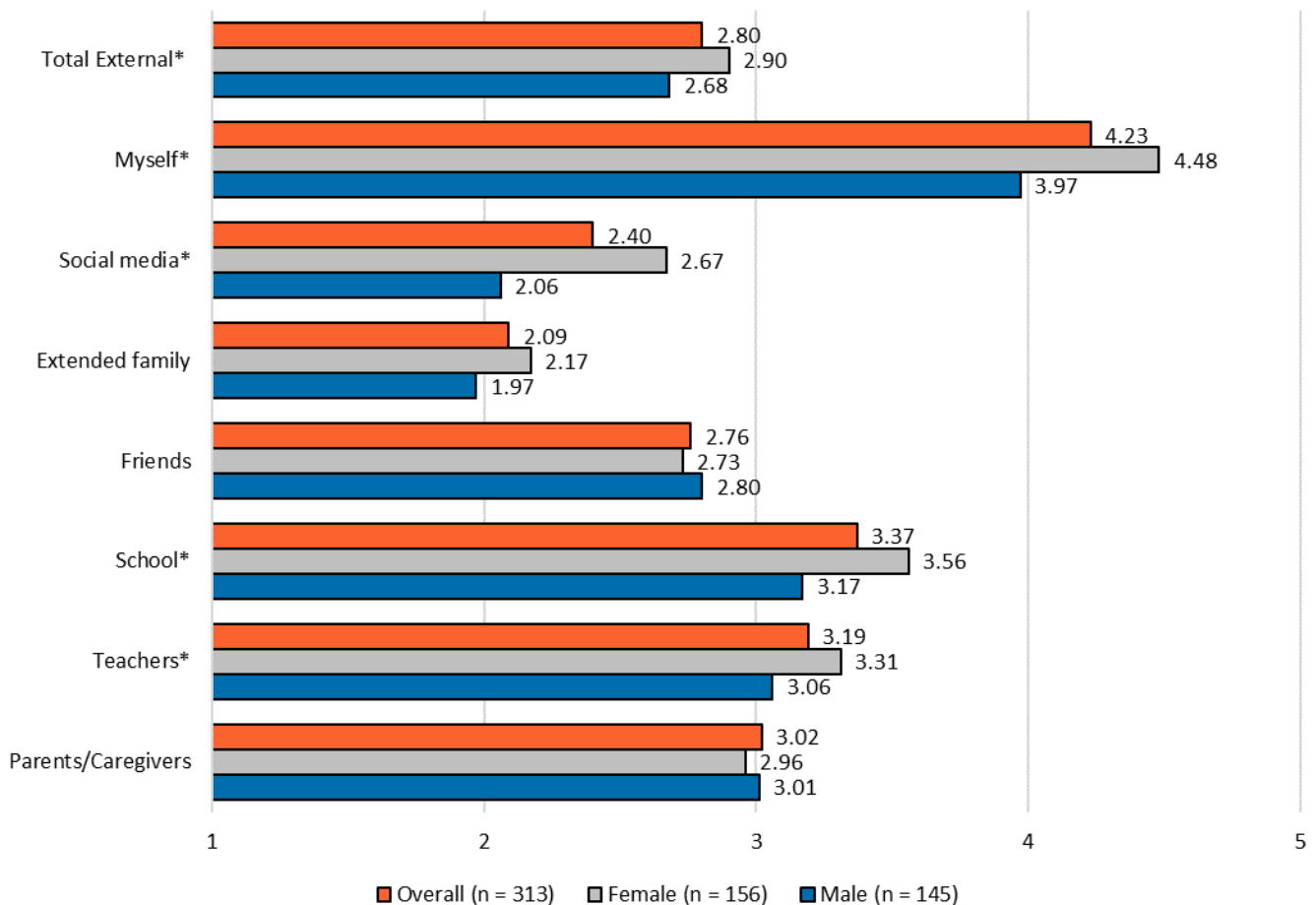
- Females reported higher endorsement of experiencing **relief**, **anxiety**, and **hopelessness** in relation to exams than males.
- Males reported higher endorsement of experiencing **joy** and **hope** in relation to exams than females.

6. Perceived sources of pressure

Participants were asked to rate the degree to which they perceive pressure from seven sources: parents/caregivers, teachers, friends, extended family, school, social media, and themselves.

Responses were provided on a scale from 1 (*never*) to 5 (*always*), with higher scores indicating higher perceived pressure from a given source. For ease of comparison, a total score was calculated for the six external sources of pressure (all sources except themselves) by averaging the scores on each. The average scores are summarised in Figure 6.

FIGURE 6. PERCEIVED SOURCES OF PRESSURE FOR TOTAL SAMPLE AND GENDER (N = 313)



Note: [$t_{\text{external}} (299) = 3.00, p = .003$; $t_{\text{school}} (299) = 3.57, p < .001$; $t_{\text{teacher}} (299) = 2.52, p = .01$;
 $t_{\text{social media}} (299) = 4.49, p < .001$; $t_{\text{myself}} (299) = 4.87, p < .001$]

Overall, participants indicated that the greatest source of pressure was from themselves, whereas the perceived pressure from external sources was moderate on average. Of the external sources, participants were less likely to perceive pressure from extended family, and more likely to nominate school, friends, and teachers as sources of pressure.

Significant gender differences were observed in the perception of sources of pressure. Overall:

- Females reported significantly higher sense of pressure from **all external sources** compared to males
- Females also reported a significantly stronger perception than males that pressure was being placed upon them from specific external sources including their **school**, **teachers**, and **social media**.
- Females reported a significantly stronger perception of pressure from **themselves** compared to males.

REFERENCES

- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall, Inc.
- Brown, K. W., West, A. M., Loverich, T. M., & Biegel, G. M. (2011). Assessing adolescent mindfulness: Validation of an Adapted Mindful Attention Awareness Scale in adolescent normative and psychiatric populations. *Psychological Assessment, 23*(4), 1023-1032.
- De Bruin, E. I., Zijlstra, B. J., van de Weijer-Bergsma, E., & Bögels, S. M. (2011). The mindful attention awareness scale for adolescents (MAAS-A): Psychometric properties in a Dutch sample. *Mindfulness, 2*(3), 201-211.
- Kern, M. L., Benson, L., Steinberg, E. A., & Steinberg, L. (2016). The EPOCH measure of adolescent well-being. *Psychological Assessment, 28*(5), 586.
- Morris, Z.A., Berger, E., D'Souza, L., & Reupert, A. (2021). Self-efficacy for mindset, learning, & study scale (SMILES). Unpublished scale.
- Pekrun, R., Goetz, T., Perry, R. P., Kramer, K., Hochstadt, M., & Molfenter, S. (2004). Beyond test anxiety: Development and validation of the Test Emotions Questionnaire (TEQ). *Anxiety, Stress & Coping, 17*(3), 287-316.
- Schunk, D. H., Hanson, A. R., & Cox, P. D. (1987). Peer-model attributes and children's achievement behaviors. *Journal of Educational Psychology, 79*(1), 54.
- Zimmerman, B. J., Bandura, A., & Martinez-Pons, M. (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *American Educational Research Journal, 29*(3), 663-676.

Dr. Zoe A. Morris

Faculty of Education

zoe.morris@monash.edu

+61 (0)3 9905 4387

monash.edu/education

CRICOS provider: Monash University 00008C. 19P-0023.

This information was correct at the time of publication.
Monash University reserves the right to alter this information
should the need arise.

