



2019 MENTAL WELLBEING SURVEY OF PROSPECTIVE INTERNATIONAL AND OVERSEAS STUDENTS



 **ENROLMENTSOLUTIONS**

Foreword

At a formative time in their lives, international students who study in another country, often have opportunities for self-development and contribution that will shape the rest of their lives. Students coming to another country and culture often face many challenges. Perhaps one of the more significant of these challenges has been our understanding of mental health and its relationship to increased ill health and lost opportunity. Indeed, when asked what the most challenging disease of the 21st century is, the previous US Surgeon General answered loneliness and social isolation. There is a growing recognition that international and overseas students are a risk group for experiencing poor mental wellbeing and socio-cultural isolation. This unique research report expands our understanding of those risks by bringing to light the mental wellbeing risk profile of international students before they arrive in Australia to study. Through our partnerships with education providers around Australia, we have seen it as important to develop initiatives and programs to ensure these students have access to quality health care and support while they achieve their educational goals. This report is our contribution to helping our community and education sector better understand international students and help them meet their needs and achieve their considerable potential.



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About Bupa

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With no shareholders, our customers are our focus. We reinvest profits into providing more and better healthcare for the benefit of current and future customers.

Health insurance accounts for the major part of our business with 16.7m customers and contributes around 75% of revenue. We operate clinics, dental centres and hospitals in some markets, with around 15m customers. We care for around 22,300 residents in our UK, Australia, New Zealand and Spain aged care businesses.

We directly employ around 80,000 people, principally in the UK, Australia, Spain, Poland, Chile, New Zealand, Hong Kong, Turkey, the US, Brazil, the Middle East and Ireland. We also have associate businesses in Saudi Arabia and India.



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Report Highlights

This research was undertaken to better understand pre-departure mental wellbeing risk in a sample of prospective international and overseas students – a group who are known to experience challenge and distress in significant numbers while studying in another country.

This is the first study to:

1. Explore mental wellbeing and related outcomes in a sample of prospective international and overseas students (OS) (known as ‘pre-departure’)
2. Quantify and report levels of life satisfaction, trait level anxiety, stress, loneliness, felt pressure to succeed in future studies abroad and social support prior to prospective student’s arrival at their international education destination of choice
3. Identify differences in the pre-departure mental wellbeing profile of international and OS prospects according to their age, gender, nationality / country of origin, intended level of study and intended area of study.

Key Learning Points

- International and OS prospects reported statistically significant lower average life satisfaction compared to a representative sample of Australian adults
- International and OS prospects are approximately two times more likely to report very low life satisfaction and are likely to be depressed or at very high risk for depression than Australian adults
- Approximately one in two international and OS prospects are vulnerable to experiencing psychological distress based on their trait stress, loneliness and anxiety scores
- Almost one in four international and OS prospects reported feeling an extreme level of pressure to succeed in their future studies in another country
- Approximately one-third of international and OS prospects reported limited access to social support in a time of need

Factors associated with lower and higher mental wellbeing risk:

On average, good mental wellbeing was reported by prospective students who:

- Experience very low levels of loneliness, stress, anxiety and pressure to succeed in their future studies
- Have good access to social support in a time of need
- Are a mature aged student aged 36+ years
- Are interested in studying a post-graduate qualification
- Are interested in studying a degree in Engineering or Education
- Are Pakistani, Canadian or Indian nationals

Conversely, a higher risk for experiencing poorer mental wellbeing was found in student prospects who:

- Reported very high levels of loneliness, stress, anxiety and pressure to succeed in their future studies
- Have limited access to social support in a time of need
- Are interested in studying at the non-tertiary level - such as English language, foundational or vocational course
- Are interested in studying a degree in Creative arts and design
- Are a national of Ghana, Nigeria, Zimbabwe or Vietnam

Executive Summary

Background and study objectives

The aim of this study was to empirically quantify the mental wellbeing of prospective international and OS pre-departure. Until now, no such data exists.

A further aim was to identify risk and resilient student prospect profiles, so that educational institutions, their partners and stakeholders, are better placed to support the needs of international and OS – a group of people who are, by nature, geographically, culturally and linguistically diverse and known to experience challenges studying in another country.

Why this research is important?

This research has major implications for the education sector as it relates to the welfare of international and OS. More targeted and appropriate interventions and initiatives can be developed for students at risk of, or experiencing, poor mental wellbeing and associated feelings of distress.

International education is Australia's largest service-based export, and so Australian institutions have a vested interest in the quality of care they provide to international and OS.

Australia's competitiveness as an international education destination of choice could be strengthened by promoting Australian educational institutions as global leaders offering a world-class tertiary education experience in the most supportive environment possible.



Future mental wellbeing benchmarking

Data collected from this study could be used as a benchmark for future comparison. International and OS mental wellbeing risk may change over time as the socio-demographic and cultural composition of students that choose Australia as their international education destination of choice evolves.

Normative or 'benchmark' data could be generated to quantify the changing nature of mental wellbeing risk, which has implications for service delivery, both at the level of institutions and the communities that students reside within.

In this study, trait negative affect is measured as feelings of loneliness, stress, anxiety and felt pressure to succeed in future studies in another country.

Conceptualising and measuring 'mental wellbeing' in this study

Mental wellbeing is a broad term with complex composition. In the context of this investigation, 'mental wellbeing' is an umbrella term describing two general approaches to understanding this concept as:

1. Life satisfaction (synonymous with subjective wellbeing) can be defined as '*a normally positive state of mind that involves the whole life experience*'; and
2. Trait negative affect which reflects a '*stable, heritable trait tendency to experience a broad range of negative feelings, including loneliness, stress and anxiety*'.

Data collection

The International Student Survey (ISS), conducted by QS Enrolment Solutions is the world's largest survey of prospective international students.

The 2019 iteration of the survey was the largest yet, capturing responses from over 77,000 prospective students, hailing from 195 countries around the world.

A subset of the 2019 dataset was used as the basis for this study.

Participants

Participants were 12,204 prospective international and overseas aged between 16 and 58 years ($M = 24.4$ years, $SD = 6.6$ years). 56% were male. Student prospects comprised 175 different countries, with India (11.0%), Pakistan (9.4%) and China (8.9%) most represented.



Results summary

Overall results summary

Prospective international and OS have significantly lower life satisfaction and are two times greater risk for depression compared to Australia's adult population.

- Average life satisfaction for prospective international and OS (70.6 points) is significantly lower than the Australian adult comparative sample average (77.6 points) measured on a 0-100 point scale; and below the Australian adult normative range of between 76.0 to 79.1 points.
- Student prospects (22.3%) are two times more likely than Australian adults (10.9%) to have very low life satisfaction and are likely to be depressed or at high risk for developing depression
- 57.0% may be more vulnerable to depression and distress based on their **trait loneliness** score; with 10.1% at very high risk
- 50.8% may be more vulnerable to depression and distress based on their **trait stress** score; with 10.6% at very high risk
- 41.7% may be more vulnerable to distress based on their **trait anxiety** score; with 11.5% at very high risk
- 22.6% of student prospects reported an extreme level of pressure (90-100 points) to succeed in their future studies in another country
- 34.5% of student prospects are not certain that they could access a friend, family member or neighbor in a time of need

Other key findings

Gender

- Females reported significantly higher average scores across all four negative affects compared to males, with the greatest difference for 'stressed' (females scored 9.0 points higher)
- Females (68.6%) were significantly more likely than males (63.3%) to report that they could 'Yes, definitely' get help when needed, however,

- No meaningful difference in average life satisfaction and depression risk among males and females.

Age

- Mature age student prospects aged 36+ years have significantly higher average life satisfaction than all other age groups
- Younger student prospects are at greater risk for experiencing associated psychological distress with average trait negative affect scores decreasing with age,

- Prospective students aged 36+ years (68.7%) were most likely to report that they could 'Yes, definitely' get help when needed, compared to 64.6% of prospective students aged 19-21 years

Nationality / country of origin

- Student prospects from Pakistan (75.0 points) and Canada (74.1 points) reported the highest average life satisfaction

- Students from Ghana (66.9 points) and Nigeria (67.5 points) reported the lowest average life satisfaction

- Student prospects from Vietnam reported the highest average loneliness, stress and pressure to succeed in their future studies

Intended study level

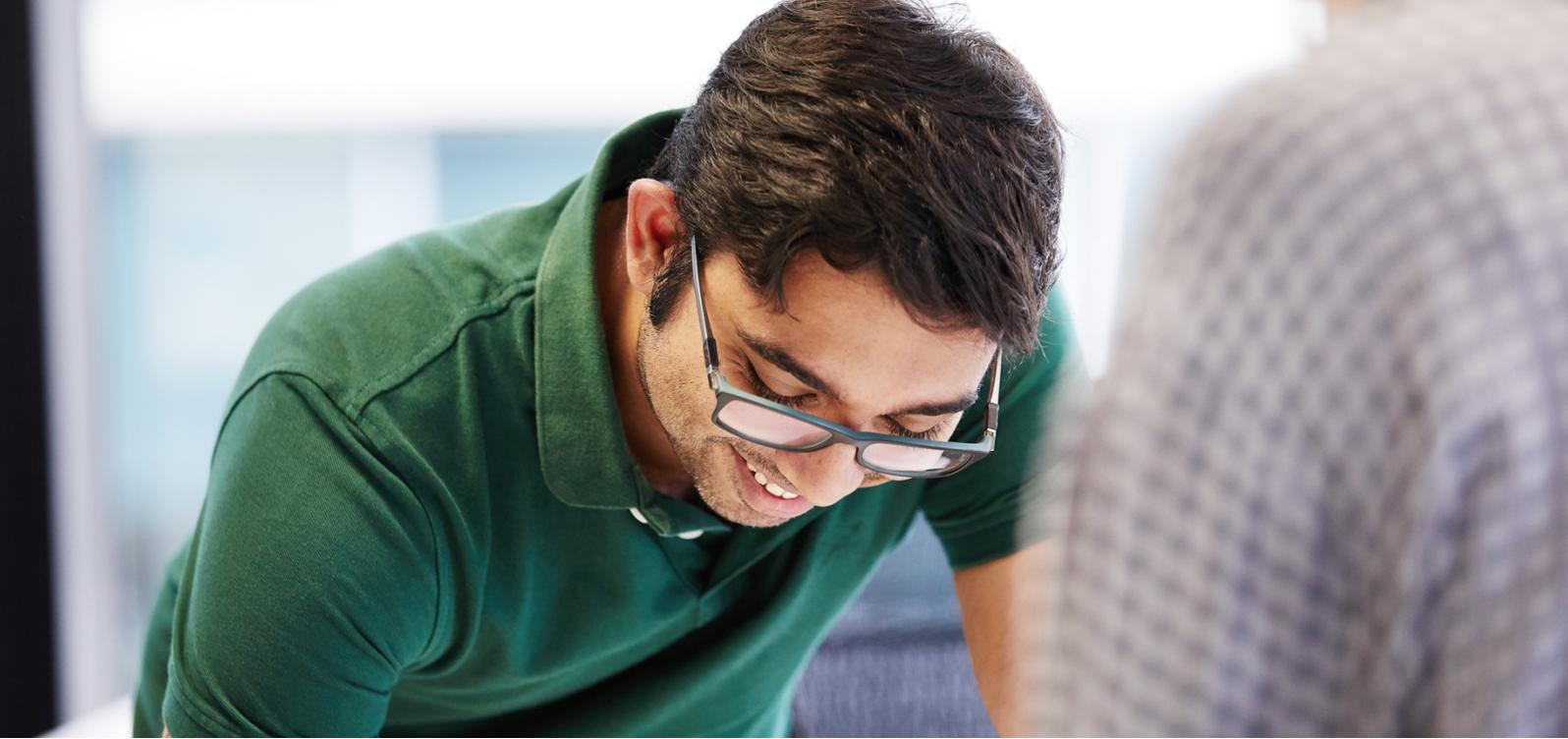
- Average life satisfaction was highest among prospective students who intend to study a post-graduate qualification by research (M = 73.2 points); and lowest among the Foundation course group (M = 68.3 points)

- Prospective students who intend on studying an undergraduate degree have significantly higher average loneliness, stress, anxiety and felt pressure to succeed compared to both post-graduate student prospect groups

Intended study area

- Student prospects who intend on studying a Creative arts and design course have very low average life satisfaction (66.8 points)

- Student prospects who intend on studying a Creative arts and design course reported the highest average loneliness, stress, anxiety and felt pressure to succeed scores



Introduction

There is a paucity of published research data that concerns the health and wellbeing of international and overseas students (OS), despite being a known risk group.

International and OS face many challenges while studying abroad, and these manifest in ways that can be detrimental to their mental wellbeing, and have implications for their educational attainment. For example, it has been suggested that student health and wellbeing are important factors for academic achievement in higher education, with some evidence of an association between academic performance and health, social and psychological wellbeing (Ansari & Stock, 2010).

While many international students enjoy their time studying abroad in Australia and achieve their educational goals, a significant proportion will experience substantial challenges relating to assimilation / acculturation, foreign language, employment and financial, housing and living, and difficulty navigating Australia's health care system.

Educational demands and pressure to succeed while studying abroad further compounds student risk. Unfamiliar, socially isolating environments and low support can be triggers for psychological distress and mental health issues such as anxiety, depression and related negative affective symptomology.

There are no published data available on the mental wellbeing of international and OS pre-departure

Several studies have provided some evidence that many international students experience mental health and other related health issues, and in some of these studies, poorer outcomes relative to domestic students (e.g. Ryan et al., 2016; Huixian Lu et al., 2014; Rosenhal, Russell, & Thompson, 2006; Skromanis et al., 2018). However, of the relatively few studies that have been conducted involving international and OS, it is notable that these studies concern student outcomes measured and assessed after students arrive in their international education destination of choice.

It is surprising that, until now, no pre-departure mental wellbeing data describing prospective student mental wellbeing risks exists. This is an important area of research as pre-departure student risk for poor mental health can manifest even more problematically for students after they arrive in another country to study.

With this in mind, there is a need to quantify and raise awareness of international and OS pre-departure mental wellbeing risk and in doing so, help protect Australia's largest service-based export.

International Education is Australia's largest service-based export

International education is Australia's largest service-based export, with enrolments expected to increase from 650,000 to 940,000 by 2025 (Deloitte, 2015). According to the Australian Bureau of Statistics, by the financial year to June 2018, international education income grew by \$3.8 billion to reach \$31.9 billion.

A Deloitte Access Economics review released in 2016, commissioned by the Australian Federal Government of Education and Training, suggested that in addition to the revenue generated from student fees, tourism (including students and their visiting family and friends) and other education-related expenditure, international education supported more than 130,000 FTE jobs in Australia, accounting for 1.3% of Australia's total employment in 2014-2015 (Deloitte, 2016).

While this report shows the scale of economic benefits international education provides to the broader Australian economy, Deloitte (2016) also highlighted the important social and cultural benefits of international education and recommend that this messaging should be the focus of the sector, rather than its role as an export.

The more we know about overseas and international students, including their cultural diversity, needs, interests and the challenges that they may face both at home and studying abroad, the better placed we will be to help ensure that their stay in Australia will be a successful, enjoyable, and rewarding experience. This will also have flow on effects

concerning Australia's competitiveness in attracting international and OS to our shores as a study destination.

Conceptualising 'mental wellbeing' in the context of this study

Mental wellbeing is a broad term with complex composition. The Victorian Health Promotion Foundation (VicHealth), describes mental wellbeing as *'the embodiment of social and emotional wellbeing - not merely the absence of mental illness'*. They add that *'Mental wellbeing is a dynamic state in which people are able to develop their potential, work productively and creatively, build positive and respectful relationships with others, and meaningfully contribute to the community'*.

The World Health Organization (WHO) offers a similar definition for the related concept of 'mental health' as *'a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community'*. According to the WHO, the positive dimension of mental health is embedded within their definition of 'health' as *'state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'*.

Throughout this report, 'mental wellbeing' is used as an umbrella term that considers two general approaches to understanding this concept as:

1. Life satisfaction (synonymous with subjective wellbeing) which reflects how satisfied people feel and think about their lives and personal circumstances and can be defined as *'a normally positive state of mind that involves the whole life experience'*; and
2. Trait negative affect which reflects a *'stable, heritable trait tendency to experience a broad range of negative feelings, including loneliness, stress and anxiety'*.

This conceptualisation reflects the traditional medical / pathological approach that describes mental wellbeing in terms of the likely presence or absence of mood and other mental disorders, such as anxiety and depression; as well as life satisfaction or 'subjective wellbeing'.

Mental wellbeing conceptualised according to the traditional medical approach is commonly linked to poor personal outcomes, life satisfaction, whereas 'subjective wellbeing' is typically associated with positive outcomes – like performance, productivity, engagement, resilience, social capital, longevity, creativity and problem solving.

Homeostasis Theory (Cummins, 2010) offers a comprehensive description of the subjective wellbeing (SWB; synonymous with life satisfaction) concept and is the

underlying theoretical paradigm that will guide understanding and interpretation of life satisfaction data in this study. A brief description of this theory will now follow.

Overview of Subjective Wellbeing Homeostasis Theory

Subjective Wellbeing Homeostasis Theory (Cummins, 2010) asserts that each person has a biologically determined level of SWB that is actively maintained and controlled around a 'set-point', much like body temperature.

Moreover, each person has their own set-point for Homeostatically Protected Mood (HPMood), which is the major component of SWB / life satisfaction. While the average set-point in Australia is 80 points, individual variation suggests that SWB set-points normally range between 70 points (lower set point limit) and 90 points (upper set-point limit) measured on a 0-100 point scale (Capic, Li, & Cummins, 2018).

According to Homeostasis Theory, the purpose of homeostasis is to defend the affective core of SWB, which is proposed to be a stable, genetically endowed, positive mood (Blore et al., 2011; Davern, Cummins, & Stokes, 2007; Tomy & Cummins, 2011). Under normal life circumstances, a person's responses to life satisfaction-type questions will reflect their ordinary set-point. However, when challenges are encountered, SWB may fall below its set-point level. When this occurs, psychological homeostatic forces are engaged to restore SWB to its normal range. When a challenge is chronic and persistent and in the absence of protective resources, like social support, ordinary homeostatic processes may fail, and a person may become vulnerable to depression (Cummins, 2010).

While a person with a lower SWB set-point (e.g. 60 points) is not necessarily depressed, a person who has the luxury of a high set-point is believed to be at lower risk for depression and likely has a homeostatic system that is more robust and better able to respond to life's challenges. A homeostatic system operating at optimal functioning is important. When people feel good about themselves, they feel content, energised, motivated and have a strong sense of optimism about the future. For this reason, it is important that we understand how different groups of people feel about themselves and offer support to those that are most vulnerable and in need.

For an extended description of Homeostasis Theory and evidence for subjective wellbeing set-points, refer to Cummins (2010) and Capic, Li, & Cummins (2018).

The difference between trait and state affect

There are two different types of affect known as 'state' affect and 'trait' affect.

The first type, 'state' affect, is typically experienced as a reaction to pleasant or unpleasant stimulus. State affect is a short-term, transient and emotional feeling a person has about something, which makes them feel good or bad for a moment or two.

'Trait' affect, on the other hand, is best understood as more stable, enduring positive and negative moods that reflect how people think and feel about themselves more generally.

While there are several prominent theories and models of self-reported affect (e.g. Larson & Diener's Self-reported Affect Circumplex, 1992; Russell's Circumplex, 2003; Watson & Tellegen's Two-Factor model of affect, 1985), in the context of this study, trait negative affect is an umbrella term to describe *'a disposition to experience negative mood, poor self-concept and psychological distress'* and *'stable, heritable trait tendencies to experience a broad range of negative feelings, such as worry, anxiety, self-criticisms, and a negative self-view'*.

In this study, trait negative affect is measured as 'stressed', 'lonely' and 'anxious'; and as a fourth variable, the feeling of being 'pressured' to succeed in future studies in another country.

The current study Methodology will be described in the following section.



Methodology

Participants

Participants in this study were a convenience sample of 12,204 prospective international and OS aged between 16 and 58 years with a mean age of 24.4 years (SD = 6.6 years). Sample characteristics are presented in Table 1.

Table 1 Participant Demographic Summary

Variable		N	%
Gender	Male	6836	56.0%
	Female	5288	43.3%
	Other	80	0.70%
Age	16-18	2014	16.5%
	19-21	2606	21.4%
	22-25	3602	29.5%
	26-35	3120	25.6%
	36+	862	7.1%
Nationality / country of origin	India	1343	11.0%
	Pakistan	1148	9.4%
	China	1092	8.9%
	Nigeria	851	7.0%
	Australia	560	4.6%
	Ghana	452	3.7%
	Kenya	445	3.6%
	Indonesia	429	3.5%
	Philippines	395	3.2%
	Sri Lanka	326	2.7%
	Bangladesh	281	2.3%
Nepal	276	2.3%	

	United States	269	2.2%
	Malaysia	254	2.1%
	Iran, Islamic Republic of	187	1.5%
	Zimbabwe	173	1.4%
	Canada	154	1.3%
	Brazil	140	1.1%
	Viet Nam	130	1.1%
	Ethiopia	117	1.0%
	Other	3181	26.1%
Intended level of study	<i>Undergraduate</i>	4317	35.4%
	<i>Postgraduate (coursework)</i>	4566	37.4%
	<i>Postgraduate (research)</i>	2561	21.0%
	<i>Vocational education & training</i>	330	2.7%
	<i>Foundation course</i>	240	2.0%
	<i>English language studies</i>	190	1.6%
Intended area of study	<i>Business & Administrative studies</i>	2689	22.0%
	<i>Engineering</i>	1880	15.4%
	<i>Mathematical & Computer Sciences</i>	1035	8.5%
	<i>Subjects allied to Medicine</i>	884	7.2%
	<i>Biological Sciences</i>	822	6.7%
	<i>Medicine & Dentistry</i>	752	6.2%
	<i>Social studies</i>	714	5.9%
	<i>Architecture, Building & Planning</i>	528	4.3%
	<i>Education</i>	525	4.3%
	<i>Veterinary Sciences, Agriculture & related subjects</i>	456	3.7%
	<i>Law</i>	408	3.3%
	<i>Creative Arts & Design</i>	378	3.1%
	<i>Physical Sciences</i>	332	2.7%
	<i>Technologies</i>	263	2.2%
	<i>Other</i>	538	4.4%
	State or territory of institution that inquiry was made	<i>Victoria</i>	4243
<i>New South Wales</i>		3732	30.6%
<i>Queensland</i>		2639	21.6%
<i>ACT</i>		900	7.4%
<i>South Australia</i>		516	4.2%
<i>Western Australia</i>		174	1.4%

Measures

Life satisfaction

Life Satisfaction was measured by a single-item that asks ‘Thinking about your life and personal circumstances, how satisfied are you with your life as a whole?’ (0 = No satisfaction at all; 10 = Completely satisfied). This item is an adaptation from Andrews and Withey’s (1976, p.66) original question which asks ‘How do you feel about your life as a whole’. The measure of life satisfaction adopts an 11-point, unipolar format which is more sensitive and preferable over Likert-type response option formats as it reduces categorical naming and facilitates greater response discrimination. This single item has been found to correlate highly and positively ($r \geq .70$) with more robust, multiple item measures, such as the Personal Wellbeing Index (PWI; IWG, 2013) and Satisfaction With Life Scale (SWLS; Diener et al., 1985), demonstrating convergent validity. This item is routinely included in

major national surveys conducted in Australia (e.g. Australian Unity Wellbeing Index, Deakin University; and HILDA survey, Melbourne University) and in many other national surveys around the world.

Trait negative affectivity (lonely, stressed and anxious)

Trait negative affectivity was measured using three single items as: “How [lonely, stressed, anxious] do you generally feel?” using an 11-point, end-defined scale ranging from 0 (Not at all) to 10 (Extremely). These affects are based on Russell’s Circumplex Model of Affect (Russell, 2003) and the questions were designed and used by Tomyn and Weinberg (2016) to quantify trait level negative affectivity as part of their “Community survey of young Victorian’s resilience and mental wellbeing” (described below). These scores have been standardised onto a 0 to 100-point scale and include risk ratings for each experienced negative affect. Tomyn and Weinberg generated risk categorisations for each affect (see Table 1 of this report) based on their Victorian youth sample.

Pressure (to succeed)

The Cambridge Dictionary defines ‘pressure’ as ‘the act of trying to make someone else do something by arguing, persuading etc’ (noun) or ‘to strongly persuade someone to do something they do not want to do’ (verb). Pressure is a felt experience and is a term often used synonymously with ‘stress’. We included an additional item “How pressured do you feel to succeed in your future studies in another country?” using the same end-defined scale as for trait negative affect described. This item was specially designed as a variable of interest, given that international and OS are known to experience pressure, for example, that which they place upon themselves and that felt from their parents and families, to succeed in higher education in another country. While not an ‘affect’ per se, we have grouped the feeling of ‘pressure’ throughout this report with trait negative affect for analytic and reporting purposes and to help us better understand the student experience.

Social support

Social support was measured using the single item *‘I can get help from friends, family or a neighbor when needed?’* (Yes, definitely, Sometimes, Rarely, Never). Responses were calculated and presented as the proportion of respondents who endorsed each option. Weinberg and Tomyn (2015) used this item in the ‘Community survey of young Victorians’ resilience and mental wellbeing’ and reported these data in the context of a robust measure of subjective wellbeing in the Personal Wellbeing Index (PWI; International Wellbeing Group, 2013).

The relationship between measured scale variables

The table below shows means, standard deviations and correlations between measured scale variables.

Table 2 Means, standard deviations and correlations between scale variables

Variable	Mean	SD	1.	2.	3.	4.	5.
1. Life satisfaction	70.6	22.6	-				
2. Lonely	34.7	27.6	-.24	-			
3. Stressed	38.4	26.5	-.26	.55	-		
4. Anxious	38.6	27.1	-.22	.50	.67	-	
5. Pressured	58.4	30.5	-.15	.30	.38	.42	-

All correlations significant at $p < .001$

Across the entire data set, life satisfaction shares a low, negative correlation with each negative affect, suggesting that these variables are weakly related to one another.

The correlations between each of the four negative affects are moderate and positive, with the highest observed correlation between 'stressed' and 'anxious' ($r = .67$). This finding suggests that stress and anxiety may be more commonly experienced together, with an increase in the experience of one affect more typically associated with an increase in the other.

Procedure

The questions used in this study were included as part of a larger survey – the 2019 QSES International Student Survey – the world's largest survey of prospective international students.

QSES are experts in the field of student insights, having administered the QSES International Student Survey (ISS) – the largest existing dataset on the decision-making behaviour of international students – since 2013. Using close links with over 100 universities from Australian and around the world, and a survey instrument which has been refined over the 7-year lifespan of the survey, QSES assist educational institutions, government departments, and education-oriented private sector organisations to better understand the thoughts, motivations, attitudes and expectations of the global international student population.

The 2019 ISS was programmed in the online survey platform 'SurveyGizmo' and a unique URL was generated for each participating institution, in order to track where responses had originated from. The unique URLs were distributed to an international recruitment staff member at each of the participating institutions. The staff members then distributed the links via email to their list of prospective international students who had made an enquiry to their institution within the past 12 months. This survey was distributed globally by 77 participating institutions, although the specific questions used in this study were only shown to respondents who had clicked on a link from one of the 24 participating institutions located in Australia.

The survey was open from 29 January 2019 to 31 March 2019. Respondents were incentivised to participate by going into the draw to win one of five VISA gift cards, valued at \$500USD (first drawn) or \$250USD (second through fifth drawn). The average completion time for the survey was approximately 45 minutes.

The relevant current study data were extracted and processed from the larger survey into CSV format through SurveyGizmo by the lead analyst at QS Enrolment Solutions. This secondary, de-identified data set was sent to the Bupa Lead Researcher by QSES as a comma-delimited Microsoft Excel data file. Data were cleaned, coded and analysed in Microsoft Excel; and statistical tests of significance were undertaken in SAS.

Data analytic strategy

Data cleaning and preparation

To ensure the integrity of the data, all cases were examined for response set. This occurs when a respondent consistently scores at the scale maximum (10) or minimum (0) for all items, often due to 'acquiescence' (a tendency to respond in the affirmative) or misunderstanding. 69 cases were subsequently removed (46 10/10 cases; 23 0/10 cases) as is recommended by the International Wellbeing Group (IWG, 2013) because these data are considered unreliable.

No univariate outliers were identified as a z-score beyond 3.29 standard deviations from the mean (Tabachnik & Fidell, 2015). No multivariate outliers were detected across all five scale variables with a Mahalanobis distance greater than the critical value for corresponding degrees of freedom (Tabachnik & Fidell, 2015, p. 111).

Presentation of the results and significance testing

Standardisation. All 0-10 end-defined scale data were converted to a Percentage of Scale Maximum (%SM) score which transforms such data onto a standardised 0-100 point scale. Following this conversion, mean scores and standard deviations for all variables were calculated. Throughout this report, the magnitude of differences presented between

different groups of international and OS will be expressed in terms of points converted in this way.

Significance testing. All tests of significance were undertaken at the level of $p < .05$, unless otherwise stated. To control for familywise error rate that frequently occurs when conducting multiple group comparisons, the Bonferroni test of significance of group differences was used. The Bonferroni method is a conservative test that allows multiple comparisons while maintaining the overall confidence coefficient. The Bonferroni method is also a valid approach when comparing groups of unequal sizes, of which there are numerous presented throughout this report.

For ANOVA, where the homogeneity of variance assumption was violated, Dunnett's T3 Post-Hoc Test was used. In the case of t-tests, the SPSS option for significance when equality of variance cannot be assumed was employed.

Comparative data set and risk categorisations for life satisfaction and trait negative affect

This report includes comparisons with 1) Australian adult normative data for life satisfaction; and 2) interpretative guidelines for negative affectivity taken from a Victorian youth study (briefly described below).

Life Satisfaction

1. Adult normative data for life satisfaction

Normative data (referred throughout this report as the 'normal range') for life satisfaction (LS) are based on survey data collected as part of the Australian Unity Wellbeing Index (AUWI). Since 2001, 35 national surveys have been conducted on the Australian adult population. Each survey has involved a new and geographically representative sample of at least 1,000 Australians aged 18 years. The Australian adult normative range for LS has been calculated by taking the mean and standard deviation of the average score across the first 35 national surveys. The normative ranges represent two standard deviations either side of the mean score. More information about this project, and access to all data are available online via www.acqol.com.au.

The normative range for *group level* life satisfaction presented throughout this report is between 76.0 and 79.1 points. Group mean scores below this range are indicative of a higher than normal proportion of people within a sample group who have low life satisfaction and are at a greater risk for depression.

Table 3 Summary of interpretative guidelines for individual and group life satisfaction scores

LS Score	Description
Normal: 70+ points (7-10)	A person is likely to feel good about themselves and their lives and has a positive sense of life satisfaction / personal wellbeing
Challenged: 60 points (6)	A person has lower than average life satisfaction, but this does not imply depression; OR normal feelings of personal wellbeing have been compromised due to one or more challenges a person may be currently experiencing in life, and this may be indicative of depression / depression symptomology
High-risk: \leq 50 points (0-5)	A person is experiencing a very low level of life satisfaction which is indicative of depression / depression symptomology.

**Note: Scores in parentheses represent unstandardised 0-10 scale response data*

Trait negative affect

- Interpretative guidelines for trait negative affect taken from a Victorian youth study

Guidelines for the interpretation of single item measures of 'lonely', 'stressed', 'anxious' and 'pressured' are based on criteria employed by Tomyne and Weinberg (2016) who conducted a study involving a representative sample of 1,000 Victorians aged 16-25 years who participated in a telephone interview and responded to these same negative affect questions.

Vulnerability associated with each negative affect is determined at the level where **average life satisfaction falls below the lower normal cut-off of 70 points for an affect category, suggesting increased vulnerability to distress and depression.** Using these criteria and based on preliminary analyses undertaken on the current prospective international student data set, risk categorisations for each affect are presented in table 4 below.

Table 4 Negative affect risk categorisations

Affect Categorisation			
Affect	Normal	At-risk	High-risk
Lonely	0-20 points (0-2)	30-100 points (3-10)	80-100 points (8-10)
Stressed	0-30 points (0-3)	40-100 points (4-10)	80-100 points (8-10)
Anxious	0-40 points (0-4)	50-100 points (5-10)	80-100 points (8-10)
Pressured	0-50 points (0-5)	60-100 points (6-10)	90-100 points (9-10)

**Note: Scores in parentheses represent unstandardised 0-10 scale responses*

Normal = Negative affect rating(s) associated with normal average life satisfaction score (70+ points), suggesting lower average vulnerability to depression and psychological distress.

'At-risk' = Negative affect rating(s) associated with lower than normal average life satisfaction score (< 70 points), suggesting increased vulnerability to depression and psychological distress.

'High-risk' = Negative affect rating(s) associated with very low average life satisfaction score, suggesting very-high risk for depression and psychological distress.



Overall Results

In this chapter, we present aggregate results for the entire sample of 12,204 prospective international and overseas students across each of the measured mental wellbeing outcomes. We also present combinations of scores for different questions to help us better understand how these variables relate to one another.

Life satisfaction

We asked, *'How satisfied are you with your life as a whole?'*

Figure 1 shows the average life satisfaction score for prospective students compared to the Australian adult normative range of between 76.0 and 79.1 points, represented by the shaded horizontal bar. It also shows the average life satisfaction score for a geographically representative sample of 61,996 Australian adults who have also responded to this item.

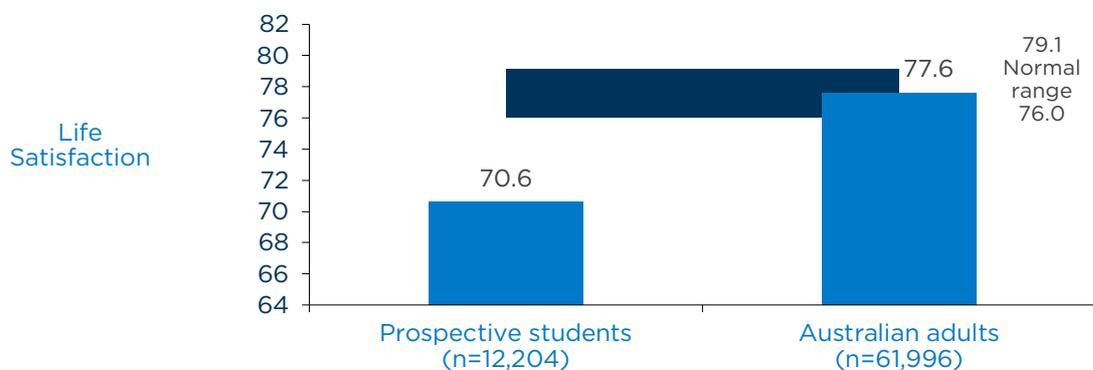


Figure 1: Average life satisfaction among prospective students compared to Australian adult normative data

Average life satisfaction among prospective international students (70.6 points; SD = 22.6 points) is statistically significantly lower than the Australian adult average of 77.6 points (SD = 16.9 points); and below the Australian adult normative range.

The lower average score and higher corresponding standard deviation suggests that prospective students are a higher risk for low life satisfaction and depression compared to Australia’s adult population.

Figure 2 shows the proportion of prospective students and mainstream Australian adult comparative sample categorised into three groups as ‘High-risk’ (0-50 points), ‘Challenged’ (60 points) and ‘Normal’ (70-100 points) based on individual life satisfaction scores.

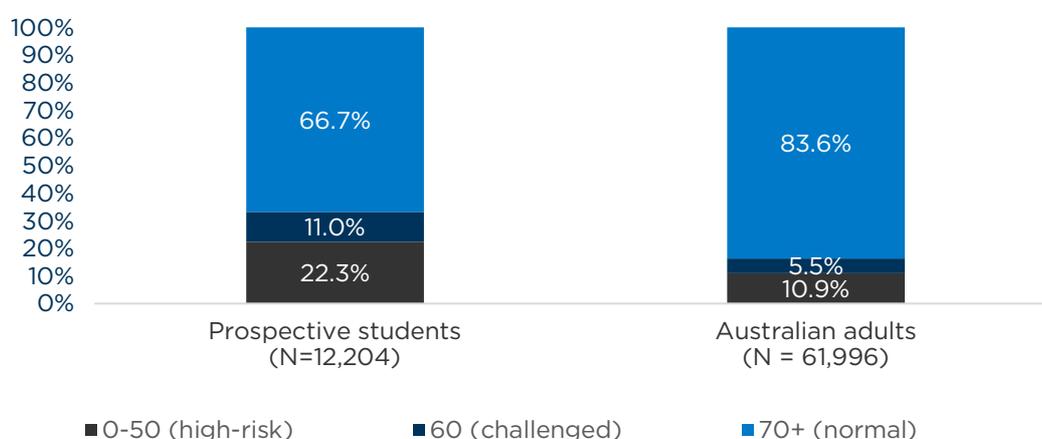


Figure 2: Life satisfaction risk categorisations for prospective students compared to mainstream Australian adults

Prospective students are approximately two times more likely than Australian adults (22.3% vs. 10.9%) to report very low life satisfaction of between 0 and 50 points – this difference is significant. People who score within this range are likely to be depressed or experiencing depressive-type symptomology, for example, due to pathology or difficult life circumstances that may be challenging to their feelings of personal wellbeing.

Prospective students (66.7%) are also significantly less likely than mainstream Australian adults (83.6%) to score in the normal range for life satisfaction of 70+ points. People who score in this range generally feel good about themselves and things in their lives and are likely to be more robust and resilient in the face of adversity.

Finally, prospective students were two times more likely (11.0% vs. 5.5%) than Australian adults to score in the ‘Challenged’ (60 points) range for life satisfaction. The composition of this group likely reflects a combination of people who are depressed (e.g. if they would

normally score between 80-100 points) as well as people who are not depressed but more vulnerable to depression because of a lower life satisfaction set-point.

Trait negative affect

We asked:

'How [lonely, stressed, anxious] do you generally feel?; and

'How pressured do you feel to succeed in your future studies in another country?'

0 = Not at all; 100 = Extremely

Figure 3 shows the average score for each negative affect for all 12,204 prospective students represented by the shaded bars. The vertical line at the center of each shaded bar represents one standard deviation around the mean for each variable.

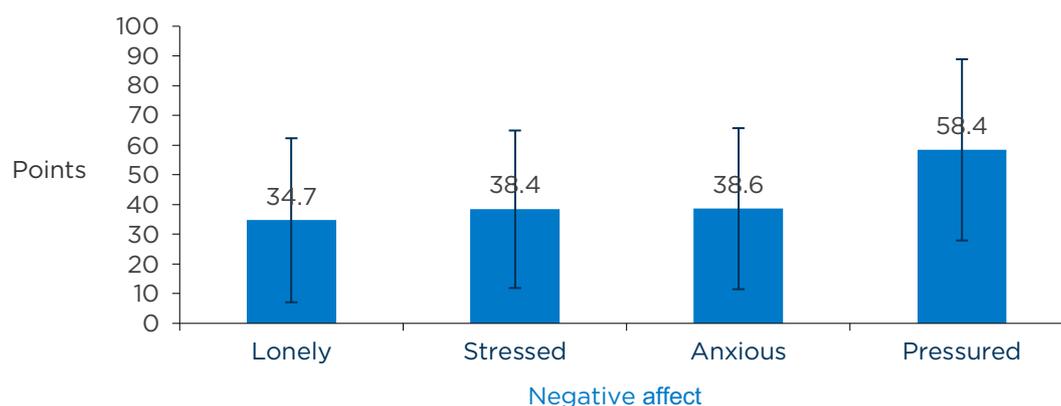


Figure 3: Average trait negative affect scores for prospective student sample

The highest average score was for 'pressured' (M=58.4; SD = 30.5). This average score, along with the high corresponding standard deviation, suggests that a significant proportion of prospective students are feeling high levels of pressure to succeed in their future studies in another country.

It remains unclear, however, as to how much felt pressure is that students have placed on themselves, pressure felt from their parents and extended families to succeed, or a combination.

While mean scores for lonely (M=34.7; SD = 27.6), stressed (M=38.4; SD = 26.5) and anxious (M=38.6; SD = 27.1) are relatively lower, high corresponding standard deviations

again suggest that large numbers of student prospects scored highly on these outcomes. Dispositions to experience high levels of trait negative affectivity are likely to lead to some students experiencing distress and compromised feelings of wellbeing, especially when challenged.

In this section, the relationship between trait negative affect and life satisfaction is explored to better understand how the strength of each negative affect impacts feelings of life satisfaction and corresponding depression risk. Average life satisfaction scores for each level of trait negative are represented by the vertical the blue bars. The horizontal shaded bar represents the Australian adult normative range for life satisfaction of between 76.0 and 79.1 points.

The percentages across the horizontal represents the proportion of participants that responded to each point on the 0-10 (unstandardized) scale for each trait negative affect. Trait affect vulnerability is interpreted at the level where average life satisfaction falls below 70 points.

Trait loneliness and life satisfaction

Figure 4 shows the relationship between trait loneliness and life satisfaction.

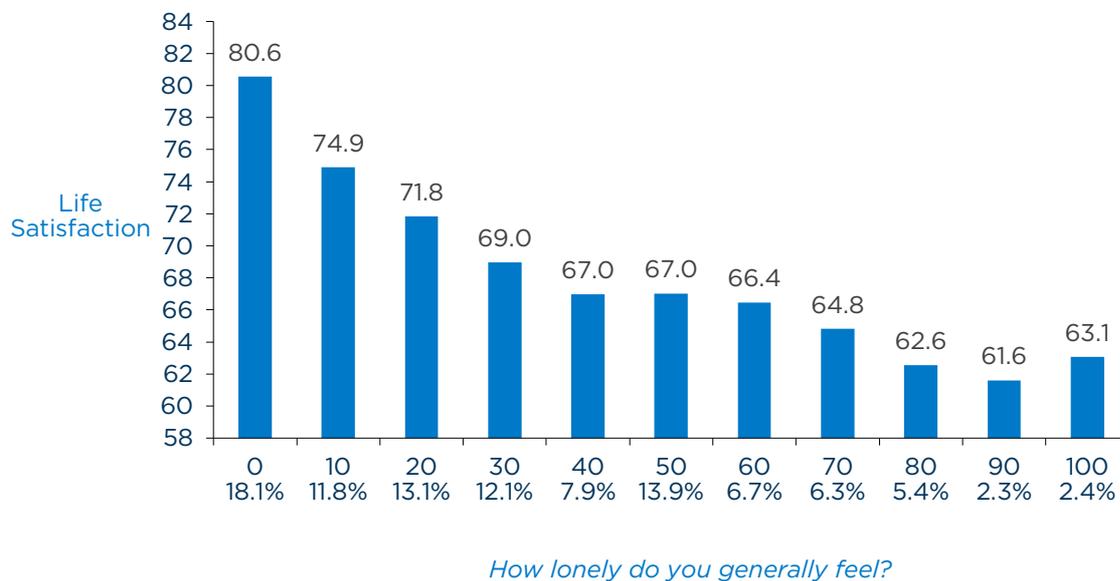


Figure 4: The relationship between trait loneliness and life satisfaction

In Figure 4, it can be seen that average life satisfaction generally decreases with increasing levels of trait loneliness.

Participants who scored between 0-10 points on the trait loneliness measure have average life satisfaction above or not meaningfully different from the Australian adult normative range. A majority of these prospective students would feel good about themselves and their lives and likely have good social connections with other people.

Average life satisfaction falls below 70 points at the level of only 30 points lonely, with 57% of student prospects scoring 30 points or more on the loneliness measure. A higher proportion of these people may be more vulnerable to experiencing low levels of life satisfaction and may be a higher risk for depression and associated distress.

It is concerning that 10.1% of prospective students scored very high on the measure of trait loneliness (80-100 points). On average, these student prospects have very low life satisfaction and are a substantially higher risk for experiencing depression and depression-type symptomology.

Trait stress and life satisfaction

Figure 5 shows the relationship between trait stress and life satisfaction.

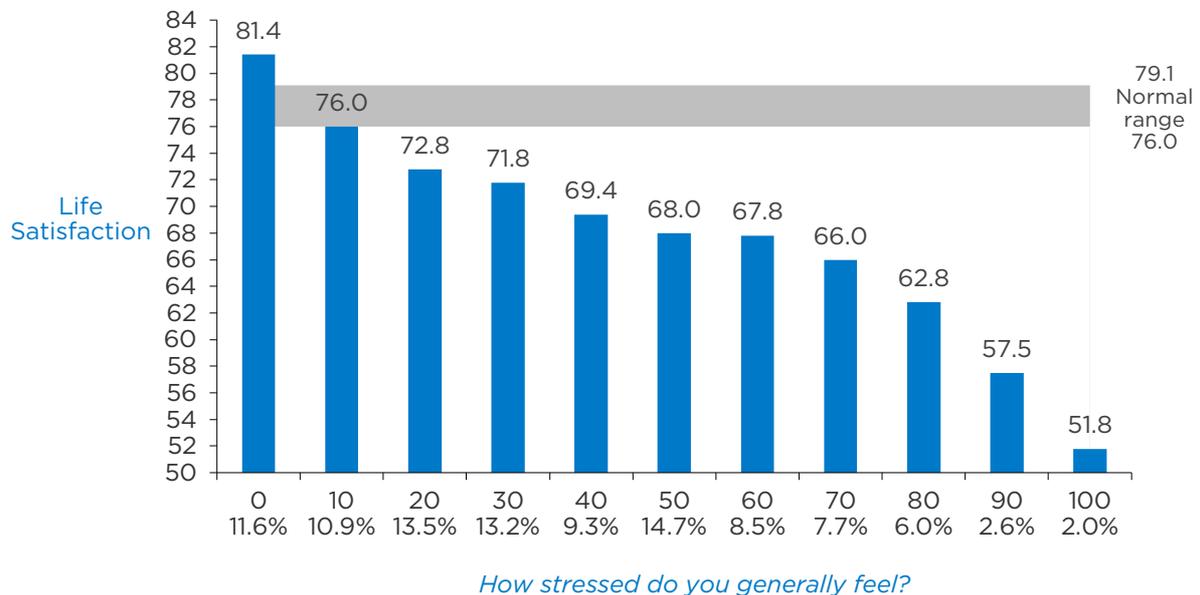


Figure 5: The relationship between trait stress and life satisfaction

In Figure 5, it can be seen that average life satisfaction decreases with increasing levels of trait stress.

Participants who scored between 0-10 points on the trait stress measure have average life satisfaction above or within the Australian adult normative range. A majority of these prospective students would feel good about themselves and their lives and are a lower risk for depression.

Average life satisfaction falls below 70 points at the level of only 40 points stressed, with 50.8% of student prospects scoring 40 points or more on the stress measure. A higher proportion of these student prospects may be more vulnerable to feeling low levels of life satisfaction and may be a higher risk for depression and associated distress.

It is concerning that 10.6% of prospective students scored very high on the measure of trait loneliness (80-100 points). On average, these student prospects have very low life satisfaction and are a higher risk for experiencing depression and depression-type symptomology. A propensity to experience high levels of stress also exposes many of these people to psychological distress as stress is a known trigger for other mental health issues, such as depression and anxiety.

Trait anxiety and life satisfaction

Figure 6 shows the relationship between trait anxiety and life satisfaction.

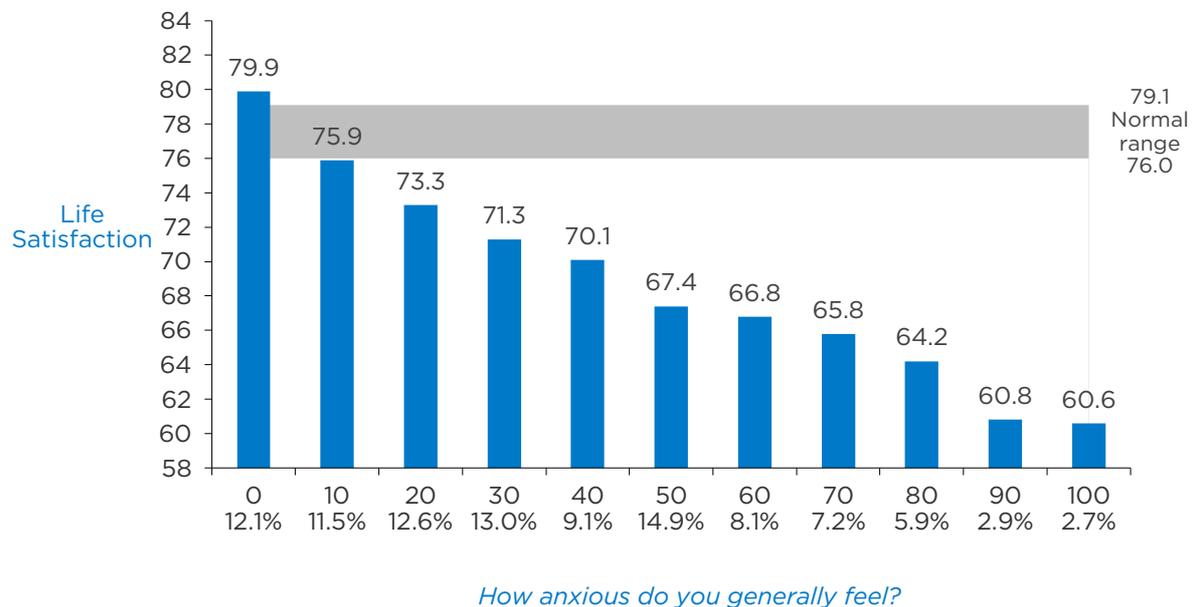


Figure 6: The relationship between trait anxiety and life satisfaction

In Figure 6, average life satisfaction can be seen to decrease with increasing levels of anxiety stress.

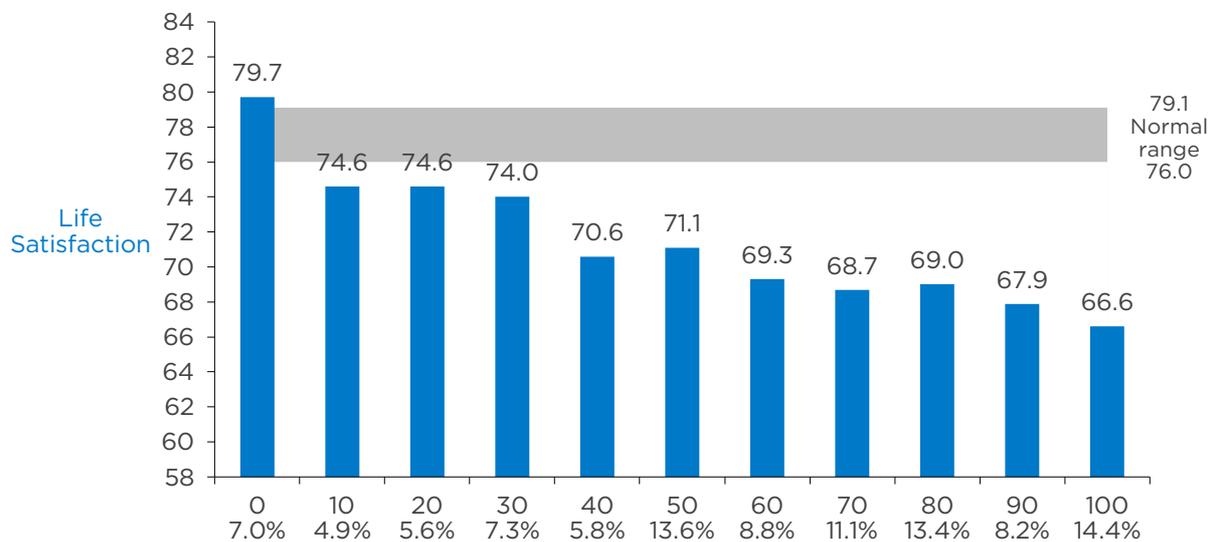
Participants who scored between 0-10 points on the trait anxiety measure have average life satisfaction above or approximately within the Australian adult normative range. A majority of these prospective students would feel good about themselves and their lives and are a lower risk for depression.

Average life satisfaction falls below 70 points at the level of 50 points anxious, with 41.7% of students scoring 50 points or more on the measure of anxiety. A higher proportion of these students may be more vulnerable to lower feelings of life satisfaction and associated depression risk.

It is concerning that 11.5% of prospective students scored very high on the measure of trait anxiety (80-100 points) and also have very low corresponding average life satisfaction. High trait anxiety and low average life satisfaction may suggest that this sub-group of student prospects is at a greater risk for experiencing anxiety and depression comorbidity.

Pressure to succeed and life satisfaction

Figure 7 shows the relationship between pressure to succeed and life satisfaction.



How pressured do you feel to succeed in your future studies in another country?

Figure 7: The relationship between feeling pressured to succeed and life satisfaction

In Figure 7, average life satisfaction generally decreases with increasing levels of trait pressure, however, this trend is not as consistent and predictable as for trait loneliness, stress and anxiety.

Participants who scored between 0-30 points on the measure of pressure to succeed have average life satisfaction that is above or not meaningfully different from the Australian adult normative range. A majority of these prospective students would feel good about themselves and their lives and are a lower risk for depression.

Average life satisfaction falls below 70 points at the level of 60 points pressured, with 55.8% of students scoring 60 points or more on this measure. A higher proportion of these students may be more vulnerable to feeling lower levels of life satisfaction and may be a higher risk for depression and associated distress.

It is concerning that 22.6% of prospective students reported an extreme level of pressure to succeed (90-100 points). These student prospects are likely to be substantially more vulnerable to experiencing depression and distress, especially after they have arrived at their international education destination of choice when feelings of pressure will naturally become more real.

Social support and life satisfaction

We asked:

'I can get help from friends, family or a neighbor when needed?'

Figure 8 shows the relationship between the measures of social support and life satisfaction. Average life satisfaction for each response option is represented by the blue bars. The horizontal shaded bar represents the Australian adult normative range for life satisfaction of between 76.0 and 79.1 points. This figure also shows the proportion of participants who responded according to each of the four options presented in parentheses.

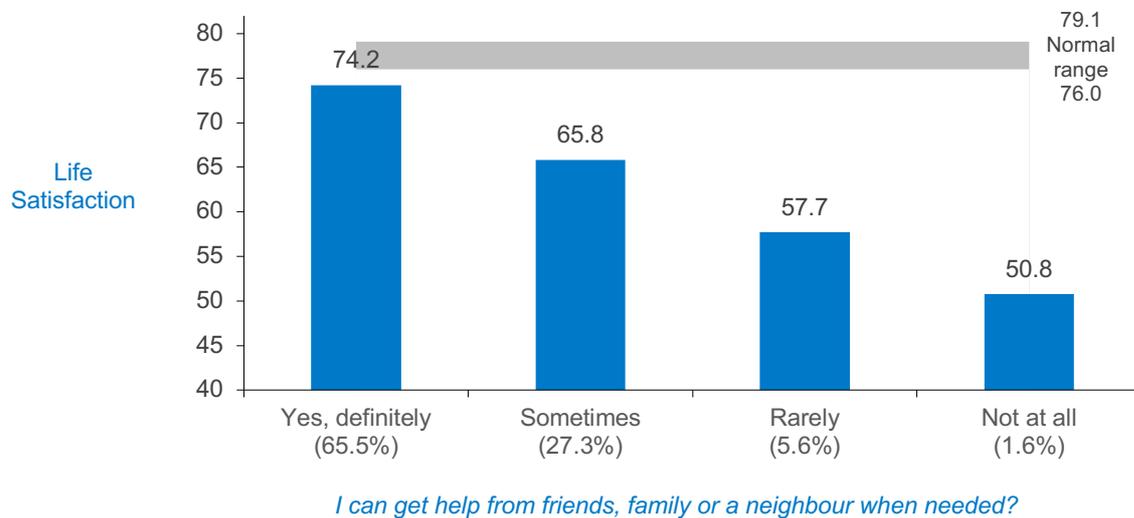


Figure 8: Social support and succeed and average life satisfaction

65.5% of participants responded Yes, definitely to the question *'I can get help from friends, family or neighbor when needed'*. Average life satisfaction for this group (74.2 points) is just below the Australian adult normative range, suggesting some greater than normal risk, but indicative of a group of people who generally feel positive about themselves and their lives.

Average SWB for all other groups is below the normal range and the lower cut-off of 70 points, suggesting that a higher than normal proportion of these respondents are depressed and / or substantially more vulnerable to depression.

34.5% of prospective students reported that they may not be able to access support in a time of need. It is concerning that such a large proportion feel this way before they have even arrived in Australia to study.

7.2% of student prospects responded 'Rarely' or 'Not at all' to this question and average life satisfaction for both these groups may be indicative of increased depression / very high depression risk.

Collectively, the results suggest that access to support in a time of need is associated with higher average life satisfaction – a finding that is generally supported within the literature. It is well-known that social support is an important 'protective resource' that people can access during difficult and challenging times and which can act as a 'buffer' to our feelings of personal wellbeing.

Finally, it is important to recognise that good access to social support pre-departure may not translate equivalently in another country. Indeed, it is well-known that many international and overseas students find themselves feeling isolated and alone and without knowing who and where they can turn for friendship and support.

Social support and trait negative affect

Figure 9 shows the relationship between the measures of social support and trait negative affect. Average scores for lonely, stressed, anxious and pressured for each reported level of social support accessibility are represented by the vertical shaded bars. It also shows the overall sample average negative affect score for each affect represented as the grey shaded bars respectively.

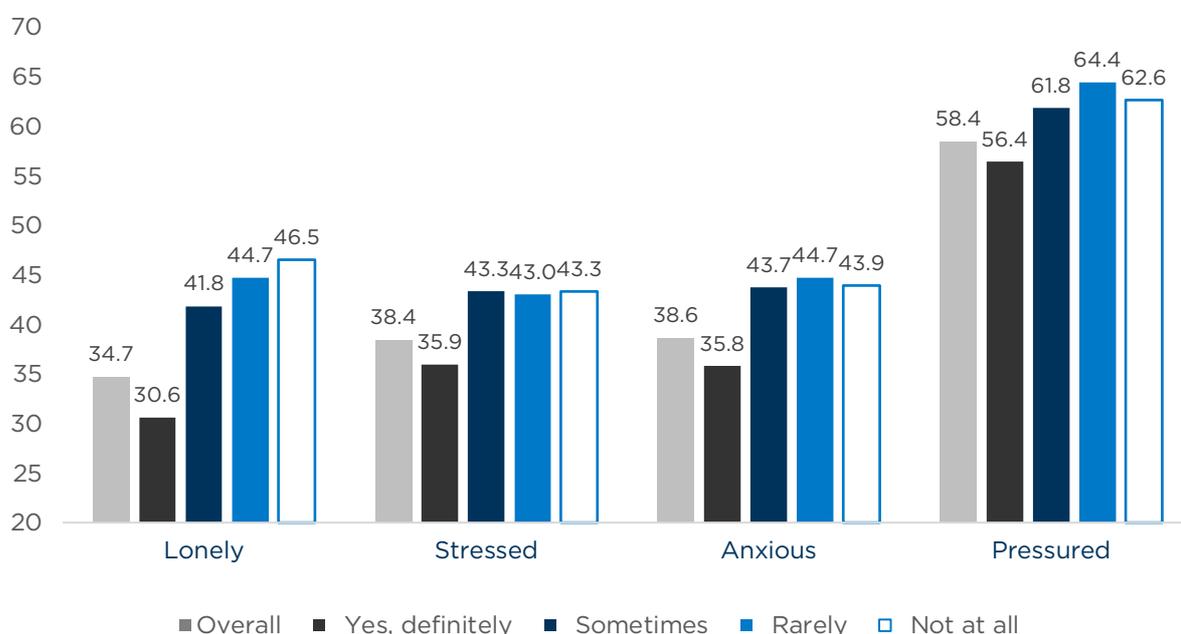


Figure 9: Social support trait negative affect

The 'Yes, definitely' group has a statistically significantly lower average score across all four negative affects than the 'Sometimes', 'Rarely' and 'Not at all' groups. These findings

highlight the important role that social support may play in negating feelings of psychological distress, for example, through the provision of reassurance, displays of empathy and understanding and effective problem solving that occurs between two or more people.

The higher overall average negative affect scores for the 'Sometimes', 'Rarely' and 'Not at all' groups suggest that prospective students in these groups may be more vulnerable to feeling distressed; and this is especially likely to be the case when people who are low on social support are faced with challenging and difficult life circumstances.

Another observation is that across all four perceived social support accessibility groups, the greatest variation in average scores across all four negative affects is for 'lonely' (15.9 points) – compared to only 6.2 points average variation for 'pressured'.

These findings highlight two things: a) that social support and feelings of loneliness are strongly connected; and b) that the feeling of pressure to succeed is a relatively common experience and perhaps largely independent of the extent of a person's perceived ability to access social support in a time of need.



Chapter Summary

The results presented throughout this chapter have provided strong evidence that international and overseas students are a risk group for low feelings of life satisfaction, depression and associated distress, relative to Australia's adult population, before they arrive in Australian to study.

The results also showed that significant proportions of student prospects scored highly on the measures of trait loneliness, stress and anxiety. A propensity to experience high levels of trait negative affect can predispose students to mental illness and related distress, especially when placed in unfamiliar, challenging and stressful situations, such as making a home and living and studying in another country and without the resources that would normally be available to them.

“High levels of trait negative affect can predispose students to mental illness and related distress, especially when placed in unfamiliar, challenging and stressful situations”

It is notable that a very high proportion of student prospects reported an extreme level of felt pressure to succeed in their studies in another country. This is concerning in light of the fact that many of these student prospects are yet to formally choose their course or have not been formally made or accepted an offer to study in another country.

Finally, the evidence presented in this chapter highlights that a significant proportion of student prospects are not certain that they could access a friend, family member or neighbor in a time of need. This is very concerning as there is a strong published evidence base that supports a positive association between social support and connections and good mental health. Moreover, if students are reporting low levels of social support accessibility pre-departure, in many cases, these perceptions will likely only worsen in another country.

In explanation of these findings, compared to Australia, many student prospects are currently living in many countries around the world that are not as objectively well-off. For example, in Australia, we enjoy a relatively high standard of living, democracy, good access to social services, education, healthcare and amenities, and have low known levels of government influence and control over daily living. Per capita, Australia also has a very high proportion of mental health professionals, such as psychologists, psychiatrists and psychiatric nurses relative to other countries around the world, such as China and India.

When citizens collectively experience and are exposed to hardship and challenge, there will naturally be a greater propensity among members of the population to experience mental illness; and in the absence of appropriate mental health care, many citizens will not receive the support and treatment that they require.

Another explanation for these findings may be that many international and OS prospects share a common experience. For example, while the opportunity to study in another country is exciting, for many students, the thought of leaving one's home and travelling to the other side of the world to learn and study and in a foreign land may be a daunting one. Coupled with the added pressure to succeed in higher education, earn a qualification and then return home to support themselves and their extended family financially, these are all additional sources of stress and worry that can act as a trigger for low feelings of wellbeing and psychological distress.

Collectively, a combination of within country factors in addition to what is a challenging transitional period in a person's life is what is likely contributing to higher mental wellbeing risk among international and OS compared to Australia's adult population.



Gender and mental wellbeing

In this chapter, we present results for gender across each of the measured mental wellbeing outcomes. The sample comprised 6,836 males (56.0%), 5,288 females (43.3%) and 80 participants who responded 'Other' (.70%). Due to the small sample size of the 'Other' group, we have not reported these data.

Gender differences for country of origin / nationality and across intended study level and intended study area groups are not presented.

Gender and life satisfaction

Figure 10 shows average life satisfaction for male and female respondents compared to the Australian adult normative range of between 76.0 and 79.1 points, represented as the horizontal shaded bar. The number of respondents in each group is also represented in parentheses.

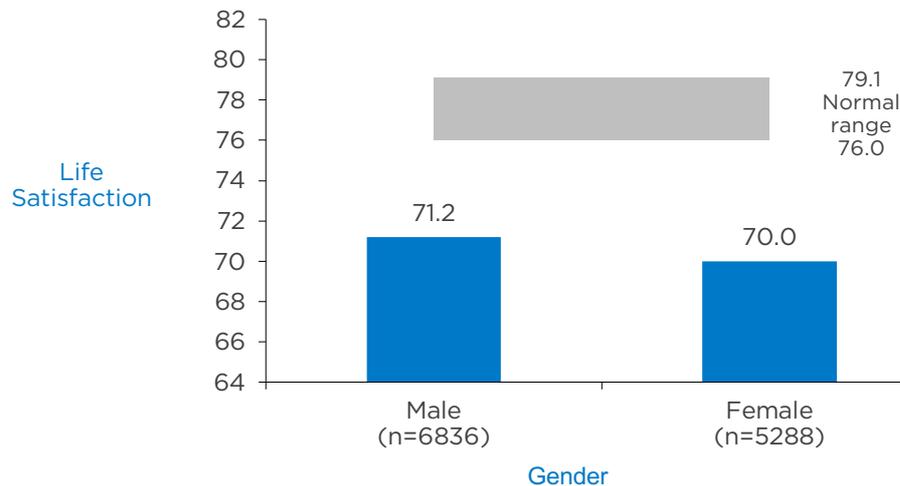


Figure 10: Gender and life satisfaction

Average life satisfaction among males (71.2 points; SD = 23.4 points) is statistically significantly higher than females (70.0 points; SD = 21.3 points). However, this difference is small and likely an artifact of high statistical power due to large sample size.

Both mean scores are below the Australian adult normative range, suggesting that both male and female prospective students are at a higher risk for experiencing low life satisfaction and possibly depression compared to the general Australian population.

Figure 11 shows male and female prospective students categorised into the three life satisfaction risk groups as 'High-risk' (0-50 points), 'Challenged' (60 points) and 'Normal' (70-100 points) based on their life satisfaction score.

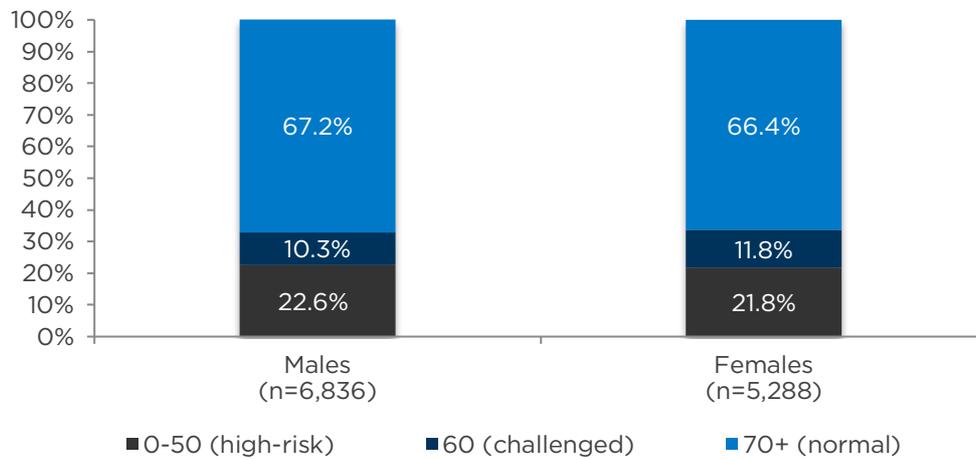


Figure 11: Gender and life satisfaction group categorisations

As expected, the proportion of male and female prospective students categorised into each life satisfaction group is not meaningfully different, suggesting comparative levels of life satisfaction and low life satisfaction risk between the genders at an aggregate level.

Gender and trait negative affect

Figure 12 shows average trait negative affect scores for male and female prospective students. The vertical shaded bars represent the average scores for each affect, for males and females respectively.

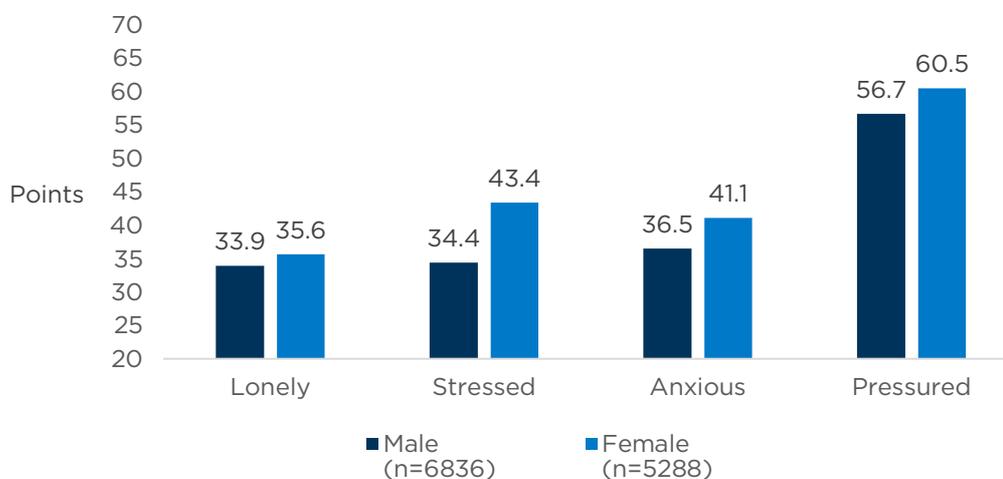


Figure 12: Gender and trait negative affect

Females reported statistically significantly higher average scores compared to males across all four negative affects.

Interestingly, the greatest difference between the genders was for 'stressed' with females scoring 9.0 points higher than males. The reason for this finding, however, is not well understood. The difference between the genders for 'anxious' (4.6 points) is also notable, although similarly as for stressed, the reasons why are not entirely clear.

The difference, however, for 'lonely' (1.7 points) is relatively small, suggesting that the feeling of loneliness may be a more common and comparative experience for both genders.

Gender, social support and life satisfaction

Figure 13 shows the relationship between gender, social support and life satisfaction. Male and female prospective students have been categorised according to their response to the question '*I can get help from friends, family or a neighbor when needed*'. The shaded bars represent average life satisfaction scores for male and female prospective students for each level of social support respectively.

The proportion of prospective students who responded 'Yes, definitely', 'Sometimes', 'Rarely' and 'Not at all' are represented in parentheses and labelled M (male) and F (female).

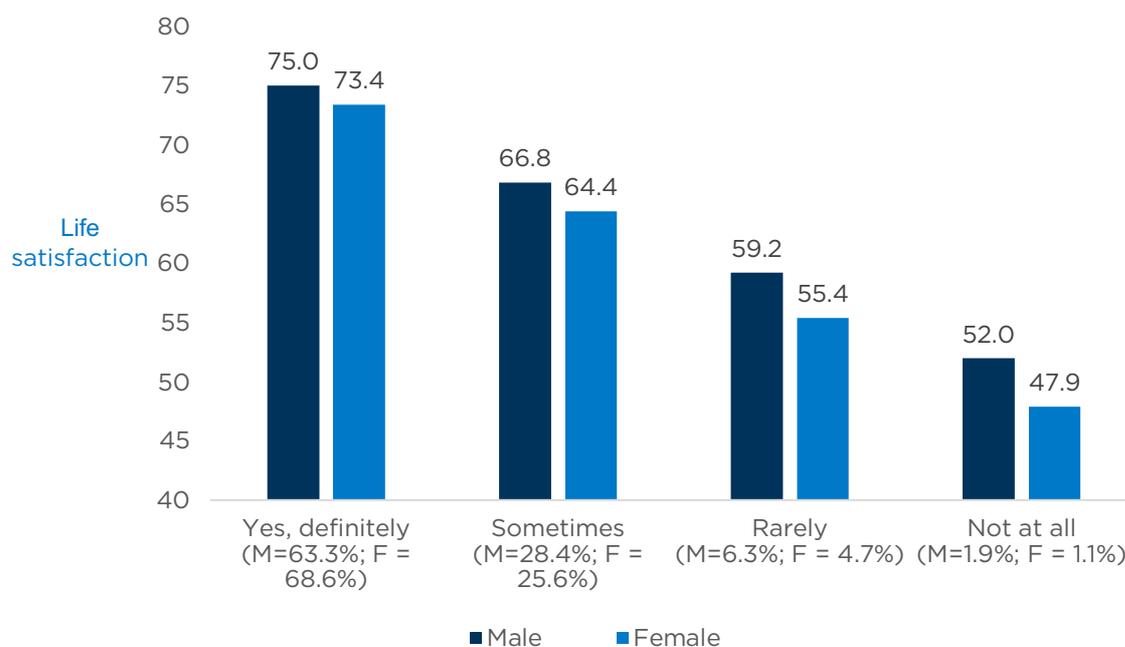


Figure 13: Gender, social support and life satisfaction

The relationship between social support and life satisfaction is consistent across both genders, with higher levels of social support accessibility associated with higher average life satisfaction.

Females (68.6%) were statistically significantly more likely than males (63.3%) to respond 'Yes, definitely' to the question '*I can get help from friends, family or a neighbor when needed*'.

Interestingly, average life satisfaction for males who responded 'Yes, definitely' (75.0 points; SD = 21.4 points) is statistically significantly higher than for females (M = 73.4 points; SD = 19.4 points). While the significance of difference is likely due to large sample size, it does highlight the importance of social support accessibility, particularly for males, to maintaining good feelings of personal wellbeing.

It is also notable that average life satisfaction for males is higher than females at each level of social support, suggesting that, while social support is important to both genders, females may be more adversely affected when perceptions of social support accessibility in a time of need are low.



Chapter summary

In this chapter, we explored differences in mental wellbeing scores for males and females respectfully. While male student prospects reported significantly higher average life satisfaction than females, this difference was small and most likely due to very large sample sizes.

Analysis of life satisfaction risk group categorisations for each gender revealed a similar risk profile, with the proportions of males and females scoring in the normal, challenged and high-risk groups not meaningfully different. These findings suggest that, at least at the overall aggregate level, experienced life satisfaction is comparative for males and females. This result is generally consistent with Australian adult population life satisfaction data, which shows no meaningful gender difference at an aggregate level.

Average negative affect scores, however, revealed that females scored significantly higher than males for loneliness, stress, anxiety and felt pressure to succeed, with the greatest difference for 'stressed'. The reasons for these differences are not entirely clear, however, a higher proportion of females compared to males are known to report experiencing mood and affective disorders in Australia and other parts of the world.

Female respondents were more likely to report high social support accessibility in a time of need compared to males. However, high social support accessibility was associated with higher average life satisfaction for male respondents compared to females, highlighting the crucial role that social support networks play in supporting men's psychological wellbeing.

While males scored lower across all four measured affects, it is not certain how these dispositions will manifest in terms of actual distressed experienced relative to females after they arrive in Australia to study, especially when faced with challenging and difficult circumstances and in the absence of available support.



Age and mental wellbeing

In this chapter, we present results for age across each mental wellbeing outcome. Participants ranged in age between 16 and 58 years, with a mean age of 24.4 years (SD = 6.6 years). Participants were categorised into four groups as 16-18 years, 19-21 years, 22-25 years, 26-35 years and 36+ years.

It is important to consider that 81.6% and 50.6% of the 16-18 and 19-21 year old groups respectively expressed interest in studying an undergraduate degree; while 74.1%, 79.2% and 78.6% of the 22-25, 26-35 and 36+ age groups respectively expressed interest in studying a post graduate degree, either by research or coursework.

We do not present age differences for country of origin / nationality and across intended study level and intended study area groups.

Age and life satisfaction

Figure 14 shows average life satisfaction for each age group compared to the Australian adult normative range of between 76.0 and 79.1 points, represented as the horizontal shaded bar. The number of respondents in each group is also represented in parentheses.

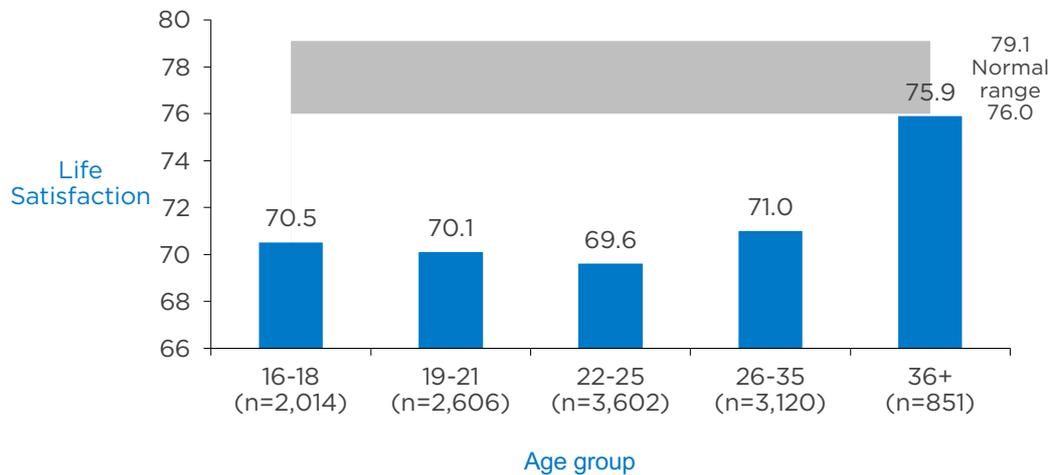


Figure 14: Age and life satisfaction

Average life satisfaction is highest among the 36+ age group (M=75.9 points; SD = 21.1 points), with this average score not meaningfully different to the Australian adult normative range and statistically significantly higher than all other age groups. All other groups are comparatively lower and within a percentage point of the lower normal cut-off of 70 points.

Collectively, these results suggest that more mature age international student prospects have, on average, higher life satisfaction and are at a lower risk for depression than younger student prospects.

Figure 15 below shows prospective students in each age group categorized into three groups as 'High-risk' (0-50 points), 'Challenged' (60 points) and 'Normal' (70-100 points) based on their life satisfaction score.

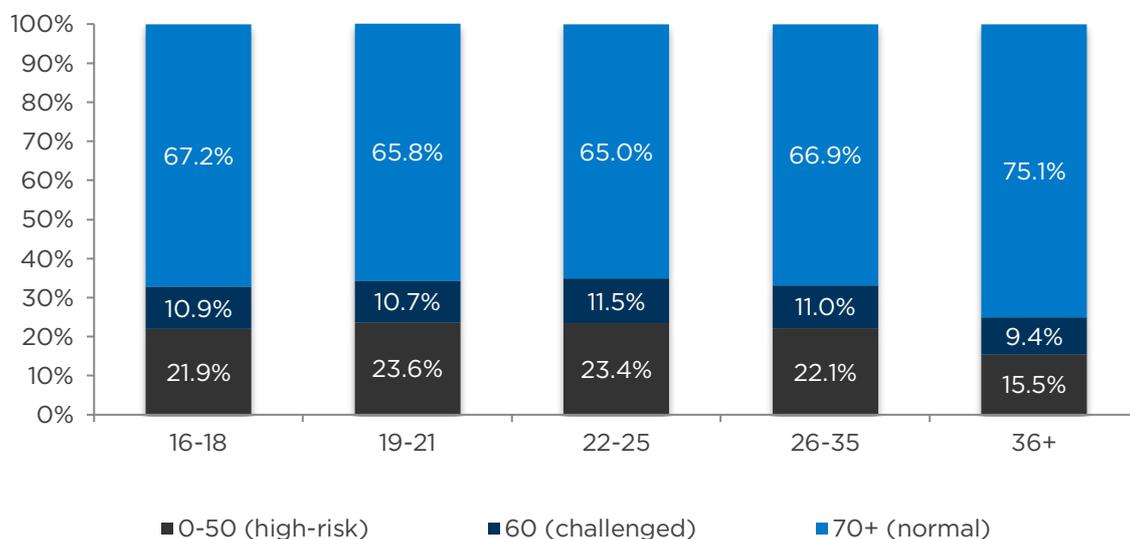


Figure 15: Age and life satisfaction risk group categorisations

Three-quarters of student prospects in the 36+ age group scored in the 70+ normal range for life satisfaction. Not surprisingly, this group also comprises the lowest proportion of participants who scored between 0 and 50 points (15.5%) and who are at a higher risk for depression.

The 22-25 age group comprised the lowest proportion of respondents who scored in the normal 70+ point range (65.0%) and this group also comprised the highest proportion of people who scored in the 0-50 point high-risk range (23.4%).

It is notable, however, that there is little variation in the proportion of prospective students categorised in each life satisfaction group among the 16-35 year old groups - suggesting comparative levels of life satisfaction and depression risk pre-departure.

Age and trait negative affect

Figure 16 shows average negative affect scores for participants categorized into each age group. The vertical bars represent the average scores for each affect, for each age group represented.

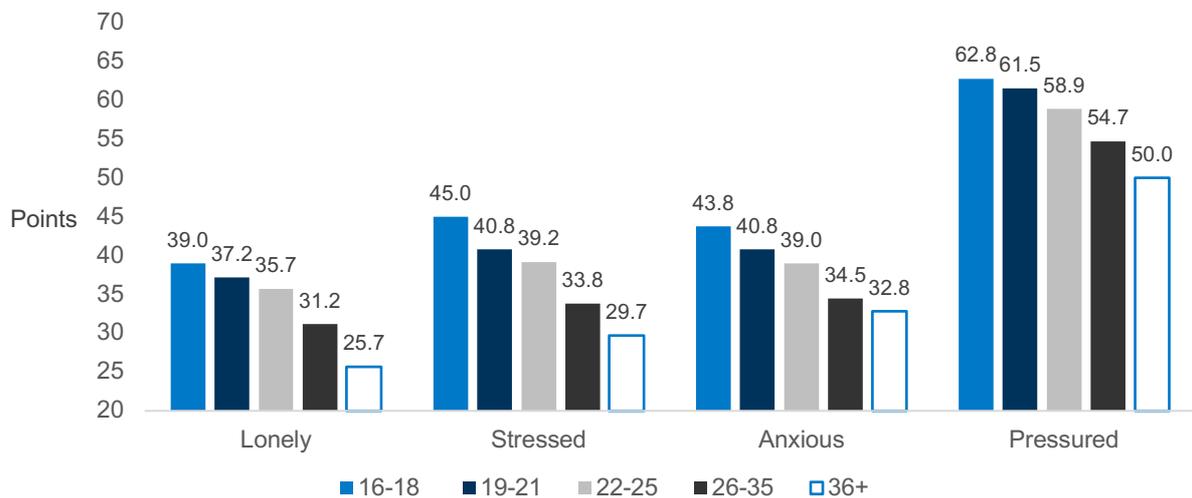


Figure 16: Age and trait negative affect

A clear relationship between age and average trait negative affect can be seen, with average scores across all four negative affects decreasing with increasing age.

Regarding statistical significance, the 16-18 year old group scored significantly higher than all other age groups for lonely, stressed and anxious; and significantly higher than all other age groups (except the 19-21 group) on pressured. In contrast, the 36+ group scored significantly lower than all other age groups across all four negative affects.

It remains uncertain, however, how these pre-departure risks manifest in terms of actual distress-experienced once students arrive in Australia to undertake their studies.

Age and social support

Figure 17 shows the proportion of prospective students in each age group categorised according to their response to the question 'I can get help from friends, family or a neighbor when needed'. The proportion of prospective students who responded 'Yes, definitely', 'Sometimes', 'Rarely' and 'Not at all' are represented in each shaded bar respectively for each age group.

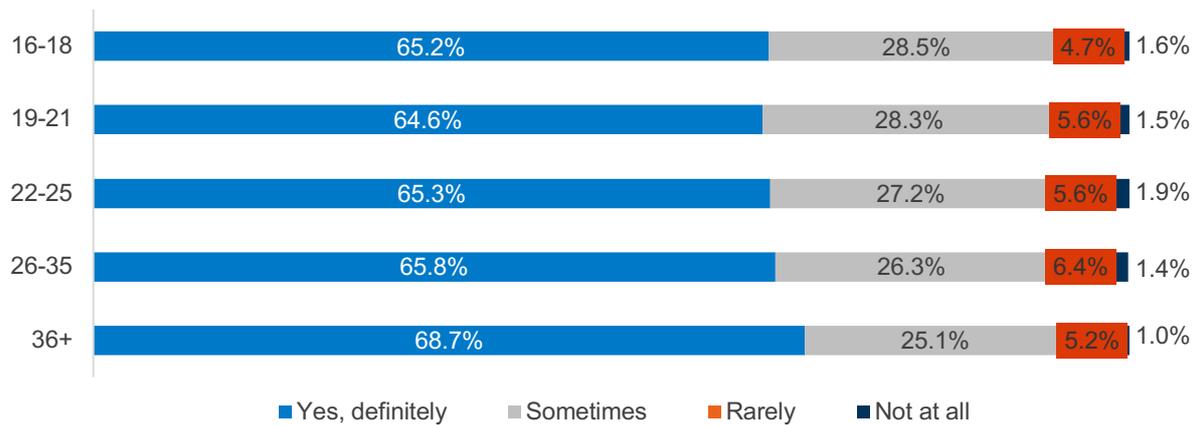


Figure 17: Age and social support

Prospective students aged 36+ years (68.7%) were most likely to report that they could 'Yes, definitely' get help when needed, compared to 64.6% of prospective students aged 19-21 years.

It is important to highlight that the difference between all five groups in terms of social support accessibility is not meaningful, with substantial numbers of student prospects across all five groups reporting limited accessibility to support in a time of need.

Chapter summary

In this chapter, evidence was presented showing that mature age students aged 36+ years have significantly higher average life satisfaction than all younger age cohorts and are a lower risk for experiencing low life satisfaction which is indicative of depression.

Average life satisfaction and depression risk was neither substantially nor meaningfully different among the four younger age cohorts.

Concerning trait negative affect, the 36+ years mature age participant group scored significantly lower than all other age groups across all four negative affects. In fact, average scores across all four negative affects decreased predictably with increasing age, with the 16-18 year old group scoring significantly higher than all other age groups on lonely, stressed and anxious.

While the 36+ mature age student group was more likely to report high levels of social support accessibility in a time of need, the difference between all five groups was small.

In explanation of these findings, it is possible that older prospective students may be better equipped to cope with the challenges of everyday life compared to younger student prospects. For example, student prospects in the 36+ group were more likely to express interest in studying a post-graduate degree (78.6%) compared to the 16-18 group, which is predominately comprised of undergraduate student prospects (81.6%). From this, we can make several assumptions about older student prospects:

1. They have already earned at least one tertiary qualification and by association, are more likely to be in some form of employment and earning a wage; and
2. It is intuitive that mature age student prospects are more likely to be married, in a long-term relationship and/or have families, for example, relative to the school leaver groups. Their feelings of personal wellbeing are therefore further supported by intimate relationships with other people (e.g. their spouse / partner).

Mature age student prospects are therefore more likely to have greater financial and social resources, which are known to play an important role in supporting feelings of wellbeing, especially in times of challenge, compared to younger cohorts.

It is worth noting that while high pre-departure life satisfaction is an advantage, mature age, post-graduate students who leave their work and families and come to study in

Australia alone may find themselves in a very unfamiliar, low resource and low support environment compared to their circumstances at home. This may represent a significant challenge to feelings of personal wellbeing as mature age students experience difficulties navigating their new surroundings and in the absence of familiar sources of support to which they may have grown accustomed to.

So, for many mature age students, good feelings of life satisfaction pre-departure may not be a reliable proxy for how they feel as they transition into student life in Australia - some without their families. Indeed, post-graduate students are known, at least anecdotally, to experience challenge and distress in significant numbers as they work towards completing two or three (or more) years of additional postgraduate education, often in isolation from other students.



Nationality / country of origin and mental wellbeing

In this chapter, we present results for participants according to their nationality country of origin. Given that there were participants from 175 countries / nationalities, here we report the top 20 countries which ranged in sample size from 1,343 (India) to 117 (Ethiopia).

It is important to highlight that there were 560 participant responses from 'Australia'. These student prospects are believed to be Australian ex-pats living in another country who are seeking to return to Australia to study.

Nationality / country of origin and life satisfaction

Figures 18 and 19 show average life satisfaction for participant's categorised into each nationality / country of origin group, compared to the Australian adult normative range of between 76.0 and 79.1 points, represented as the horizontal shaded bar. The number of respondents in each group is also represented as the value in parentheses. Countries are ordered according to sample size from largest to smallest.

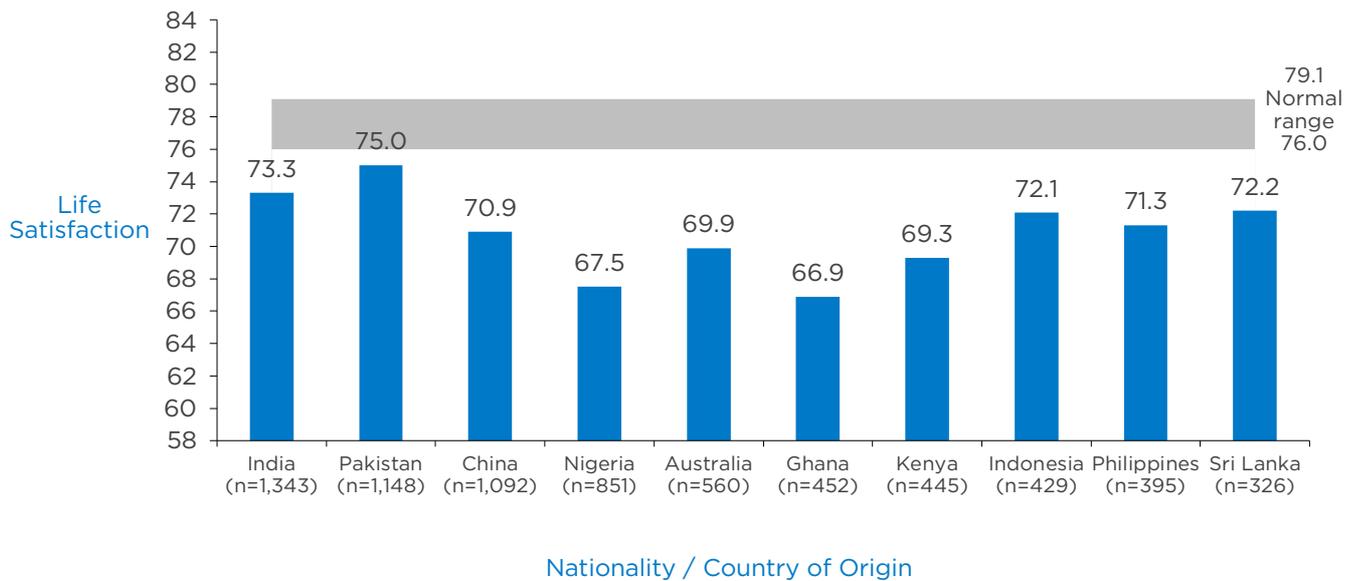


Figure 18: Nationality / country of origin and life satisfaction (a)

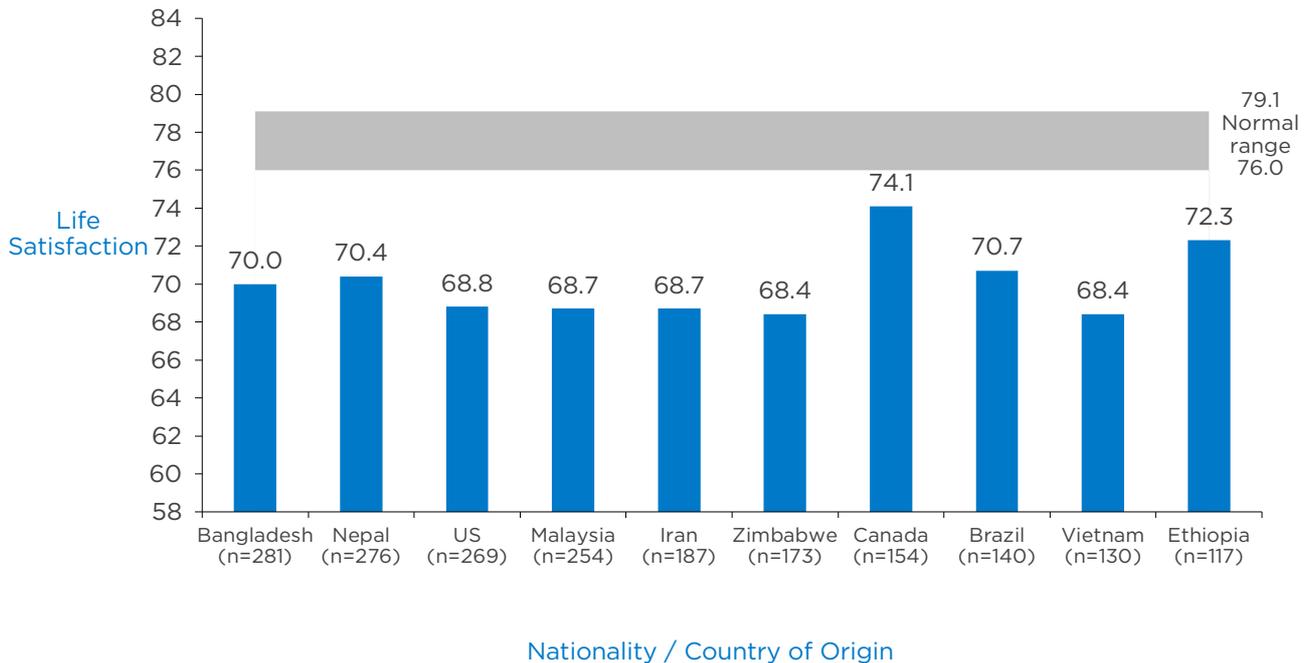


Figure 19: Nationality / country of origin and life satisfaction (b)

In figures 18 and 19 it can be seen that all average life satisfaction scores for the top 20 nationalities and countries represented are below the Australian adult normative range.

Average life satisfaction was highest among participants from Pakistan (75.0 points; SD = 24.0 points) and Canada (74.1 points; SD = 20.5 points). These average scores are not substantially different from the Australian normative range, suggesting that, relative to the other countries, prospective students from these countries are at a lower risk for experiencing low life satisfaction and depression, pre-departure.

In contrast, average life satisfaction was lowest among participants from three African nations as Ghana (66.9 points; SD = 25.1 points), Nigeria (67.5 points; SD = 25.9 points) and Zimbabwe (68.4 points; SD = 25.9 points). These scores suggest substantially higher low life satisfaction and depression risk, on average, among prospective students from these countries, pre-departure.

Concerning Australia's three largest international student enrolment groups, average life satisfaction scores for China (70.9 points; SD = 19.0 points), India (73.3 points; SD = 12.0 points) and Nepal (70.4 points; SD = 23.0 points) respectively were not substantially different from one another. All three scores are below the Australian adult normative range and not meaningfully different from the average for all student prospects sampled.

Figures 20 and 21 below show prospective students in each country of origin / nationality group categorised into three groups as 'High-risk' (0-50 points), 'Challenged' (60 points) and 'Normal' (70-100 points) based on their life satisfaction scores.

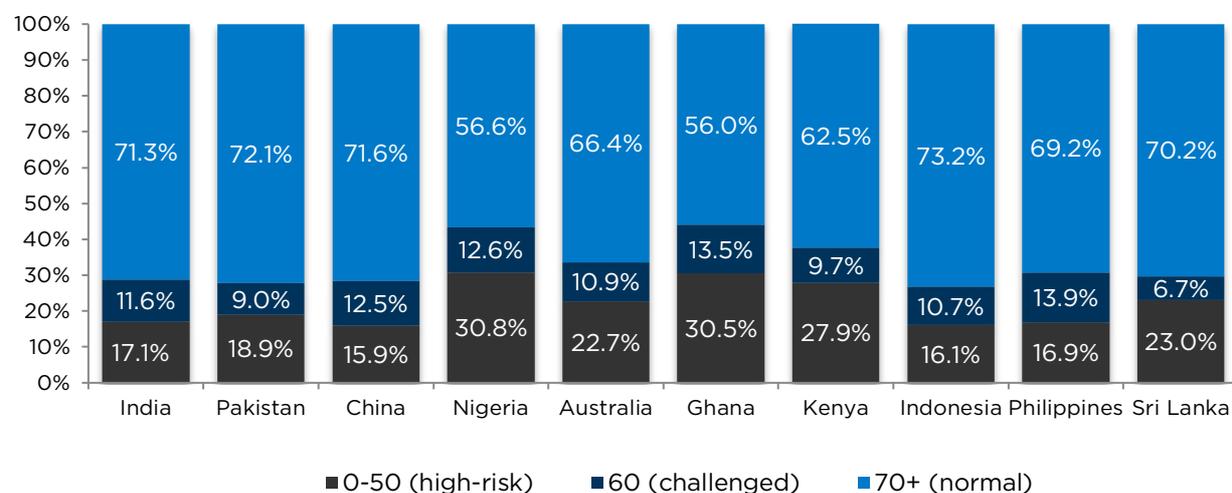


Figure 20: Nationality / country of origin and life satisfaction risk group categorisations (a)

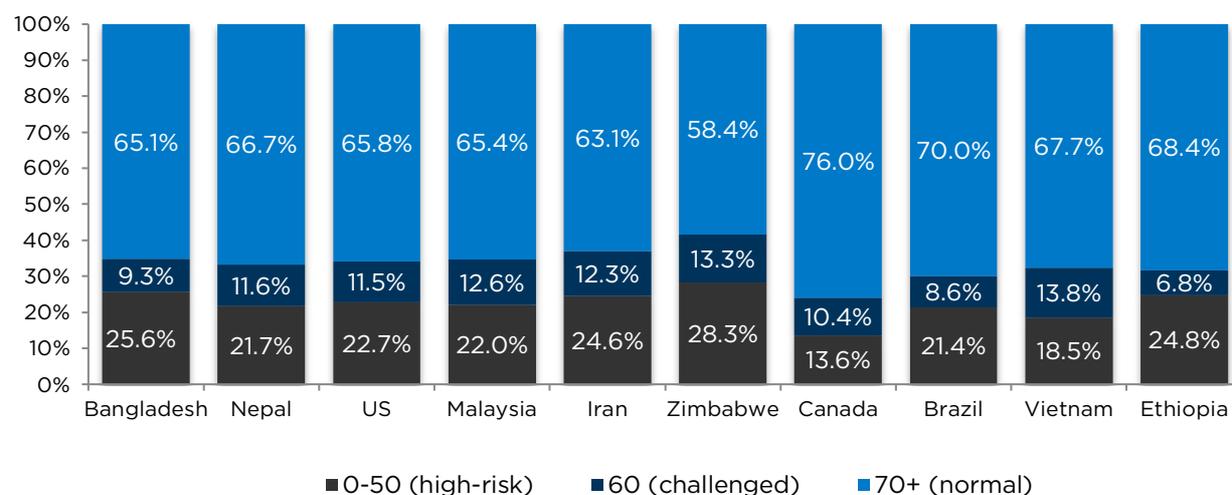


Figure 21: Nationality / country of origin and life satisfaction risk group categorisations (b)

As expected based on average life satisfaction scores, Canada (76.0%), Pakistan (72.1%) and India (71.3%) comprised the highest proportion of student prospects who scored in the normal 70+ point range.

These proportions are in contrast to Ghana (56.0%), Nigeria (56.6%) and Zimbabwe (58.4%) - countries with relatively low proportions of student prospects who scored in the

normal 70+ point range; and high corresponding proportions of students with very low average life satisfaction.

Concerning Australia's three largest student enrolment groups, 15.9% of student prospects from China, 17.1% from India and 21.7% from Nepal, scored in the high-risk range and have very low life satisfaction and depression / high-depression vulnerability.

Interestingly, the range in high risk (0-50 points) categorisations between these 20 countries is 17.2% - from 13.6% (Canada) to 30.8% (Nigeria). Thus, Nigerian student prospects are more than 2 times more likely than Canadian student prospects to have very low life satisfaction and who are likely to be depressed or have a high vulnerability to experiencing depression. This difference may be due, at least in part, to socio-demographic and political differences between the two countries which can either promote (or hinder) good mental health outcomes among citizens.

Nationality / country of origin and trait negative affect

Table 4 shows average trait negative scores (and corresponding standard deviations) for participant's categorised into each country of origin / nationality group.

Table 5 Nationality / country of origin and trait negative affect

Nationality / country of origin	Lonely		Stressed		Anxious		Pressured	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
India	31.7	27.9	35.9	26.2	36.9	26.9	53.6	30.7
Pakistan	34.8	28.7	30.7	26.2	32.9	27.4	53.0	32.4
China	39.7	24.6	51.0	23.1	45.2	24.2	56.9	23.9
Nigeria	32.4	27.5	33.4	23.7	39.9	27.3	59.6	33.0
Australia	38.0	27.0	40.4	26.2	40.3	26.6	59.8	30.0
Ghana	32.5	28.2	31.1	23.0	35.9	26.8	57.1	31.8
Kenya	27.5	25.4	27.9	25.2	38.0	27.1	67.3	30.7
Indonesia	39.0	27.0	37.4	26.6	38.3	26.8	57.6	29.6
Philippines	37.4	25.1	43.8	24.8	40.6	26.9	62.1	27.4
Sri Lanka	33.8	29.5	36.3	27.0	33.5	26.4	54.3	31.8
Bangladesh	36.7	28.4	40.6	27.1	37.6	26.9	54.8	30.6
Nepal	28.9	25.7	32.5	24.3	33.5	24.1	50.9	29.1
United States	40.3	26.7	50.7	26.9	46.5	29.5	58.3	31.4
Malaysia	42.7	26.3	49.3	24.5	46.1	25.0	68.2	25.6
Iran	32.3	26.9	37.8	23.6	36.3	25.6	58.6	30.4
Zimbabwe	30.5	29.2	30.1	25.2	39.5	26.6	68.3	30.4
Canada	35.5	26.4	45.7	26.8	42.7	27.8	61.5	31.0
Brazil	34.9	29.7	42.9	24.2	50.6	27.0	57.9	29.5
Vietnam	44.1	27.1	51.2	24.0	47.3	25.8	70.5	22.4
Ethiopia	27.9	31.0	20.9	23.5	21.0	23.4	60.8	35.6
Other	34.2	27.7	39.7	27.0	38.2	27.6	60.3	30.8

In table 5 it can be seen that there is considerable variation in average negative affect scores between the 20 nationalities / countries represented as lonely (16.6 points), stressed (30.3 points), anxious (29.6 points) and pressured (19.6 points). This suggests that there may be cultural differences in the experience of trait negative affect.

High standard deviations within countries, however, highlights variation in the strength of trait negative affect as experienced by individuals within each country. This suggests that feelings of distress are likely also influenced by individual factors, such as personal beliefs, attitudes and expectations.

Nationalities / countries with the highest and lowest average scores for each affect were:

Lonely

Highest risk: Vietnam (44.1 points)

Lowest risk: Kenya (27.5 points)

Stressed

Highest risk: Vietnam (51.2 points) and China (51.0 points)

Lowest risk: Ethiopia (20.9 points)

Anxious

Highest risk: Brazil (50.6 points)

Lowest risk: Ethiopia (21.0 points)

Pressured

Highest risk: Vietnam (70.5 points) and Malaysia (69.5 points)

Lowest risk: Nepal (50.9 points)

Nationality / country of origin study and social support

Figure 22 shows prospective students representing each nationality / country of origin categorised according to their response to the question 'I can get help from friends, family or a neighbor when needed'. The proportion of prospective students who responded 'Yes, definitely', 'Sometimes', 'Rarely' and 'Not at all' are represented in each shaded bar respectively for each country listed.

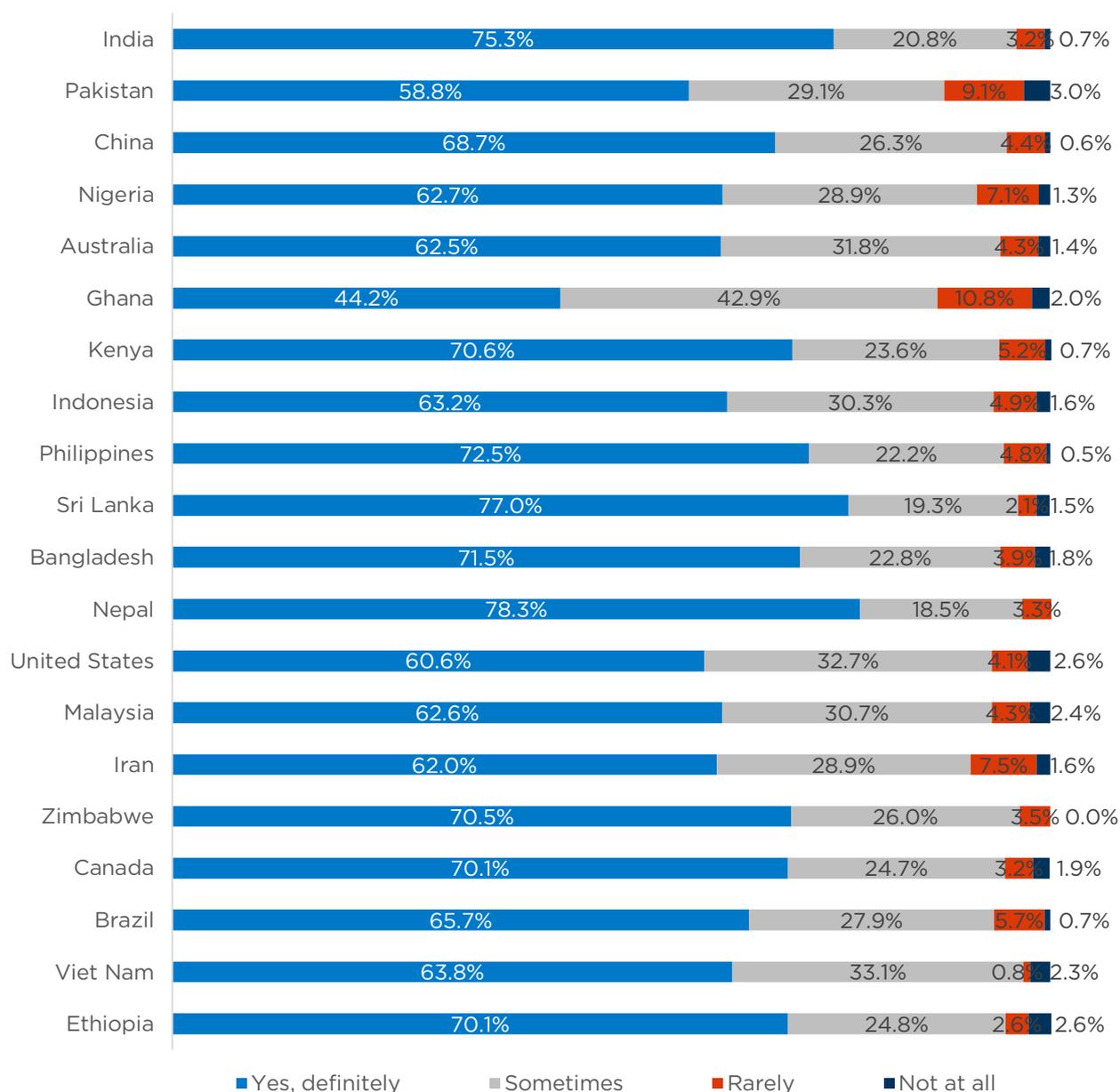


Figure 22: Nationality / country of origin and social support

Prospective students from Nepal (78.3%), Sri Lanka (77.0%) and India (75.3%) were most likely to report that they could 'Yes, definitely' get help from friends, family or a neighbor when needed. These are positive results for prospective students from these countries as there is a body of literature that supports an association between social support and feelings of personal wellbeing.

In contrast, prospective students from Ghana (44.2%), Pakistan (58.8%) and the United States (60.6%) were least likely to report that they could 'Yes, definitely' get help from friends, family or a neighbor when needed.

Chapter summary

In this chapter, we presented mental wellbeing outcomes across the top 20 nationalities / countries represented based on survey participation. These included a majority of Australia's largest student enrolment groups and emerging markets.

In terms of average life satisfaction, all scores across each country represented were below the Australian adult normal range, suggesting a greater risk for depression and distress relative to Australia's adult population.

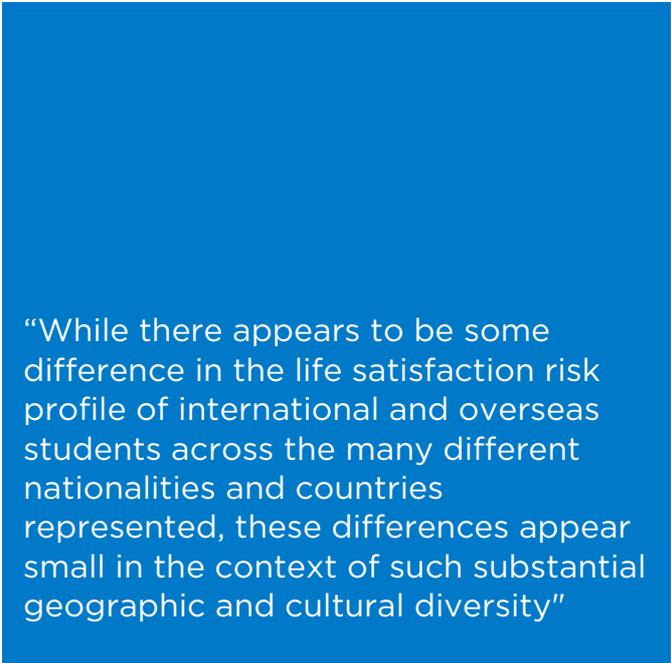
An interesting observation was that the variation in average life satisfaction scores across all countries is only 8.1 points (Pakistan, 75.0 points to Ghana, 66.9 points). Concerning some of Australia's largest student enrolment groups of China, India, Nepal, Brazil and Malaysia, variation in average life satisfaction across students from these countries was only 4.6 points.

The collective implication of these observations is that while there appears to be some difference in the life satisfaction risk profile of international and overseas students across the many different nationalities and countries represented, these differences appear small in the context of such substantial geographic and cultural diversity.

Concerning trait negative affectivity, and unlike for life satisfaction, there was substantial variation in average scores for lonely, stressed, anxious and felt pressure to succeed between countries. This result may suggest cultural influences on the propensity for people to experience negative affectivity that may be embedded in the fabric of the many different and diverse societies represented. High standard deviations within countries across all trait negative affects, however, suggests that feelings of distress are also influenced by within person differences, such as beliefs, attitudes, expectations, and genetic dispositions.

An interesting finding was that Vietnamese students reported the highest average loneliness, stress and pressured score. The reason for this, however, is not clear and suggests further research is needed to better elucidate the causes of higher average negative affectivity scores in this specific group of international student prospects.

Finally, similarly to trait negative affect, there were very large discrepancies in perceptions of social support accessibility between the countries represented; and the reasons for these differences are also not entirely clear. Regardless, the results highlight that efforts to enhance social connection on-campus might consider how to best reach student groups known to report lower levels of social support accessibility pre-departure, such as students from Ghana, Pakistan, the United States and Iran, as identified in this study.



“While there appears to be some difference in the life satisfaction risk profile of international and overseas students across the many different nationalities and countries represented, these differences appear small in the context of such substantial geographic and cultural diversity”



Intended level of study and mental wellbeing

In this chapter, we present results for participants who expressed interest in studying at each level, including undergraduate (35.4%), postgraduate coursework (37.4%), postgraduate research (21.0%), vocational education and training (2.7%), foundation course (2.0%) and English language studies (1.6%).

At the time of participation in this study, many student prospects would not have chosen a course or accepted an offer - so level of study reflects intentions to study at each level.

Level of study and life satisfaction

Figure 23 shows average life satisfaction for participants who expressed studying at each of the level respectively, compared to the Australian adult normative range of between 76.0 and 79.1 points, represented as the horizontal shaded bar. The number of respondents in each group is also represented.

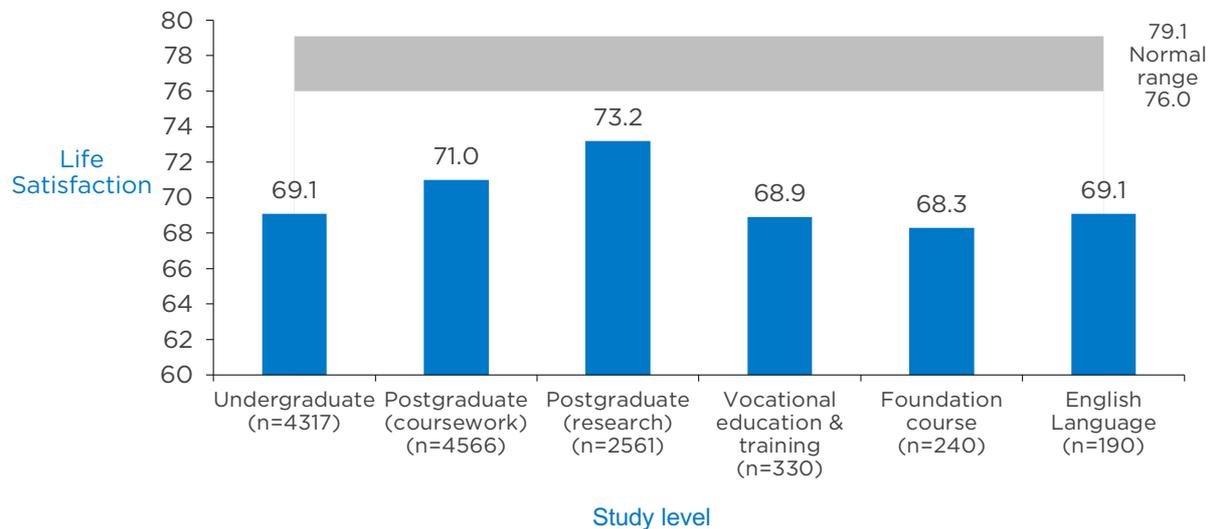


Figure 23: Level of study and life satisfaction

In figure 23 it can be seen that average life satisfaction across all six level of study groups is below the Australian adult normative range.

Average life satisfaction is highest among prospective students who have expressed interest in studying a post-graduate qualification by research (M = 73.2 points; SD = 21.8 points); and lowest among the Foundation course group (M = 68.3 points; SD = 24.0 points).

Average life satisfaction for the post-graduate research group is statistically significantly higher than all other groups except the English Language student group. It is also notable that average life satisfaction for the post-graduate coursework group is significantly higher than the undergraduate group.

Interestingly, average life satisfaction for four of the groups, including the undergraduate group, is below 70 points, suggesting that students in these groups are a higher risk for experiencing low life satisfaction and depression.

Figure 24 below shows prospective students who have expressed interest in studying at each level categorised into three groups as 'High-risk' (0-50 points), 'Challenged' (60 points) and 'Normal' (70-100 points) based on their life satisfaction score.

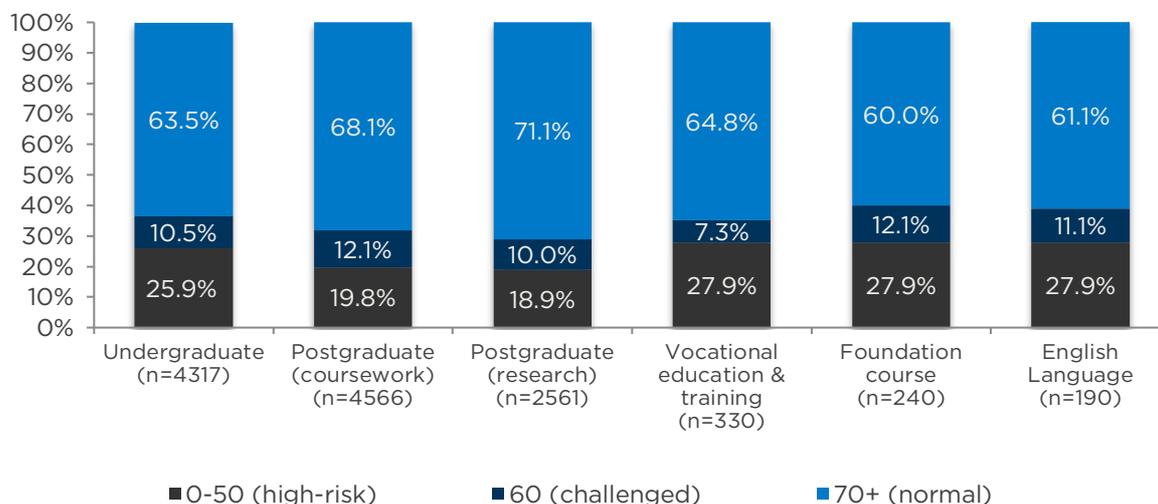


Figure 24: Level of study and life satisfaction risk categorisations

Consistent with average life satisfaction scores for each group, a higher proportion of postgraduate research students (71.1%) and postgraduate coursework students (68.1%) scored in the normal range; with fewer students scoring in the high-risk range (18.9% and 19.8% respectively) compared to the other study level groups.

It is also notable that less than two-thirds (63.5%) of prospective undergraduate students scored in the normal range for life satisfaction, with one-quarter (25.9%) likely to be depressed or highly vulnerable to depression.

Interestingly, 27.9% of students in all three non-tertiary / degree group scored in the high-risk range, suggesting that these students are at a greater risk for depression or highly-vulnerable to depression.

These results indicate that student prospects wishing to undertake foundational, vocational or English language may be facing additional challenges, for example, additional years or study / training and associated costs, before they can enroll in a tertiary degree, that may impact their sense of personal wellbeing.

Level of study and trait negative affect

Figure 25 shows average negative affect scores for prospective students who have expressed interest in studying at each level. The vertical bars represent the average scores for each affect, for each of level of study represented.

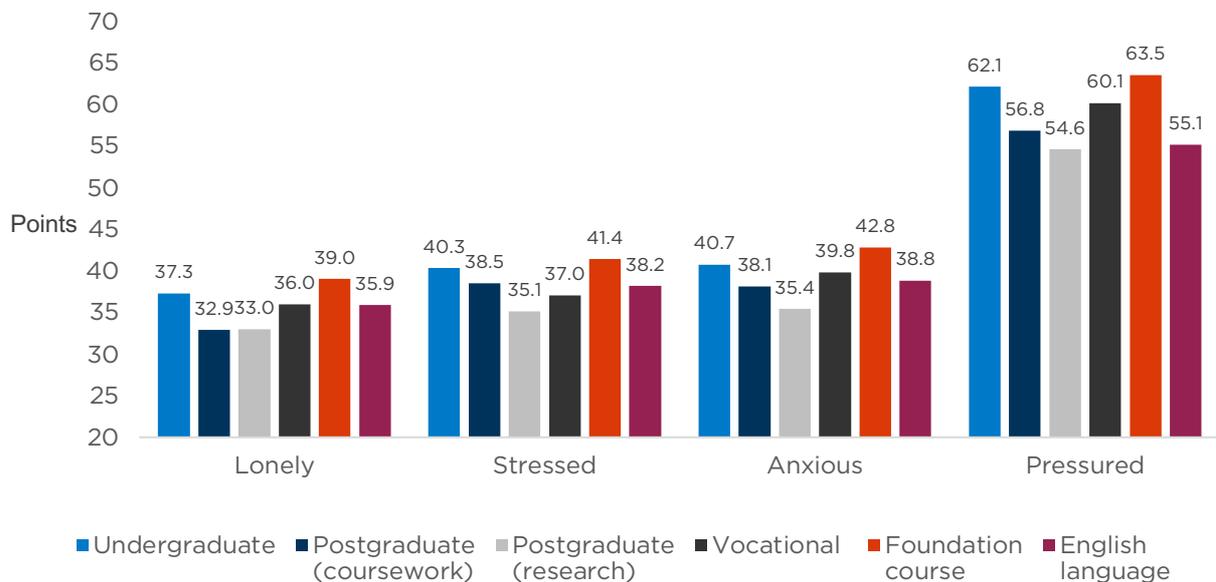


Figure 25: Level of study and trait negative affect

Across all four negative affects, the average score for the undergraduate student prospect group is statistically significantly higher compared to both postgraduate student groups. This suggests that, on average, the younger student prospect cohort that comprises a larger proportion of undergraduate student prospects appear to experience higher levels of loneliness, stress, anxiety and pressure to succeed compared to their more mature aged peers.

It is notable that the average score is highest for the Foundation course student prospect group across all four negative affects. This finding further alludes to added pressures and concerns these students face as they negotiate a sometimes complex path to achieving their higher education goals.

Level of study and social support

Figure 26 shows prospective students who have expressed interest in studying at each level categorised according to their response to the question *'I can get help from friends, family or a neighbor when needed'*. The proportion of prospective students who responded 'Yes, definitely', 'Sometimes', 'Rarely' and 'Not at all' are represented in each shaded bar respectively for each study level.

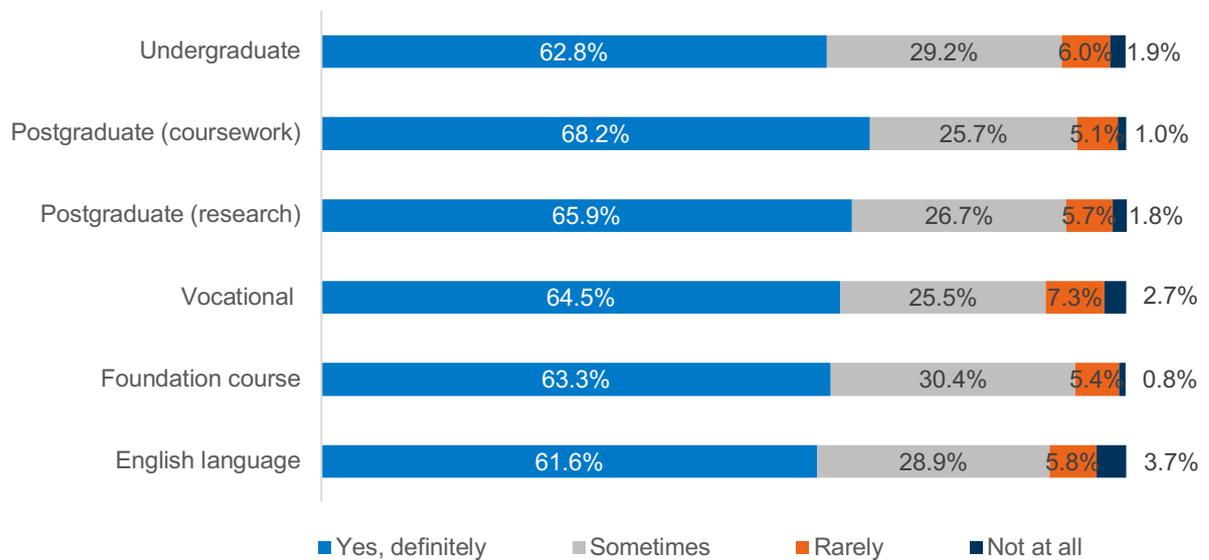


Figure 26: Level of study and social support

Prospective students wishing to study a Postgraduate degree by coursework degree (68.2%) were most likely to report that they could 'Yes, definitely' get help from friends, family or a neighbor when needed; compared to only 61.6% of English language and 62.8% of undergraduate students respectively.

It is concerning that 10.0% of Vocational students and 9.5% of English language students respectively responded 'Rarely' or 'Not at all', highlighting significant social support deficits among these students' pre-departure.

Chapter summary

In this chapter, we found that students interested in studying a postgraduate degree by research reported the highest average life satisfaction score, are the lowest risk for depression; and reported the lowest levels of trait negative affectivity. Both postgraduate student prospect groups were also more likely to report good accessibility to social support in a time of need, relative to the other four groups.

The lower scores for the vocational education, foundation course and English language groups may allude to additional challenges these students experience, for example, additional lengths and costs that these students must encounter to ultimately obtain a tertiary qualification in Australia. These include additional financial costs, time away from home, and the added pressures of further study at the tertiary level.

As discussed in the chapter for Age, these differences may be an artifact of the socio-demographic composition of students in each study level group. For example, mature age students, who are generally seeking to study a postgraduate qualification in higher proportions than younger student prospects, are arguably more likely to be employed and in a long-term relationship. Greater social and financial resources will therefore be an advantage for postgraduate student prospects, which can act as a buffer to feelings of personal wellbeing and protect against depression and feelings of distress.

The implications of these findings are that concerted efforts should be directed toward supporting all international and overseas student groups, including vocational education, foundation course and English language students, who all face potentially complex and difficult circumstances living and learning in another country.



Intended area of study and mental wellbeing

In this chapter, we present results for participants who expressed interest in studying in one of a broad number of study areas. We have included the top 14 areas of study which range in sample size from 2,689 (Business and Administrative Studies) to 190 (Technologies). Data for several additional study area groups were not analysed due to sample size.

At the time of participation in this study, area of study reflects student prospects intentions to study in a particular area or course and many students would have yet to have been formally been made or accepted an offer.

Area of study and life satisfaction

Figures 27 and 28 show average life satisfaction for participants who expressed interest in each study area respectively, compared to the Australian adult normative range of between 76.0 and 79.1 points, represented as the horizontal shaded bar. The number of respondents in each group is also represented in parentheses.

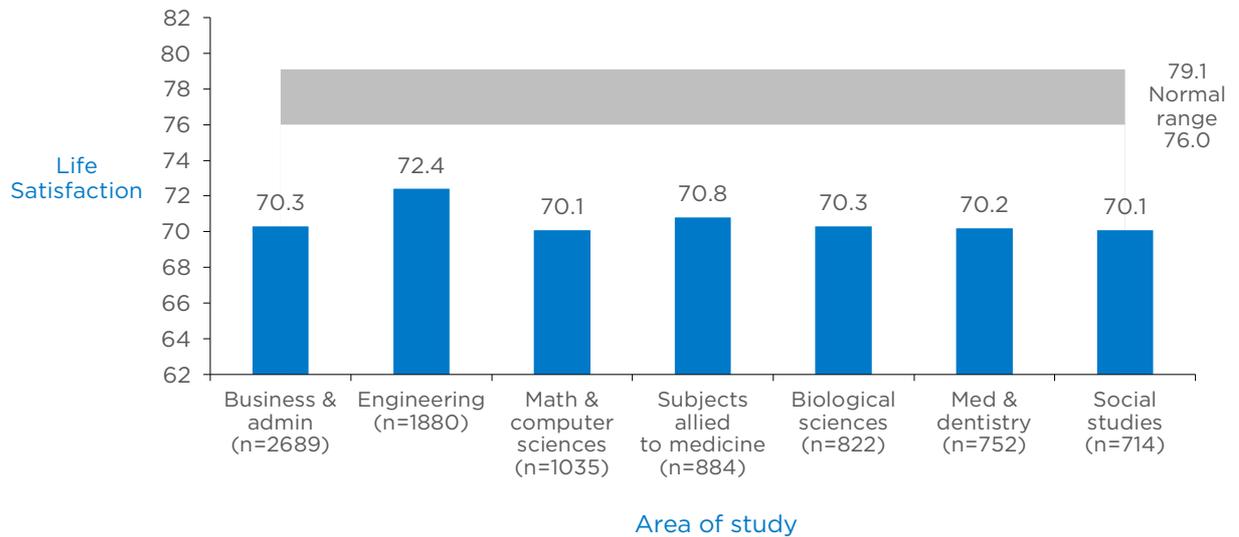


Figure 27: Area of study and life satisfaction

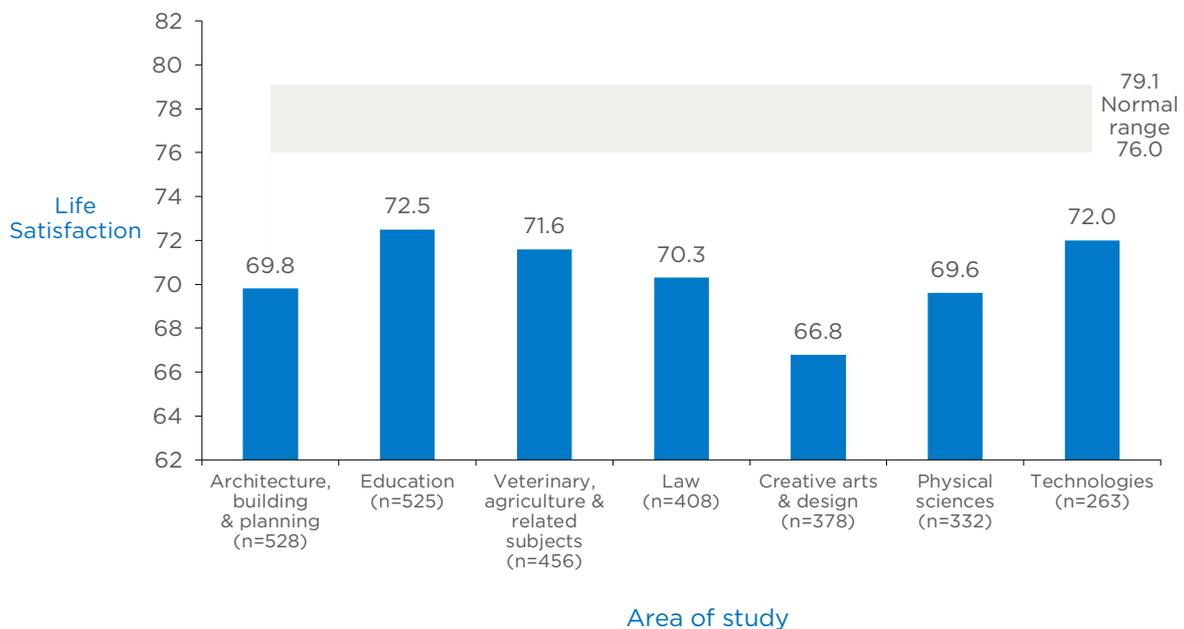


Figure 28: Area of study and life satisfaction

In Figures 27 and 28 it can be seen that average life satisfaction for the majority of study areas varies within a few points.

Education (M = 72.5; SD = 23.3) and Engineering (M = 72.4; SD = 22.0) student prospects reported the highest average scores; while Creative arts and design (M = 66.8; SD = 23.5) and Physical sciences (M = 69.6; SD = 22.4) student prospects reported the lowest average scores.

Figures 29 and 30 below show prospective students who have expressed interest in each study area categorised into three groups as 'High-risk' (0-50 points), 'Challenged' (60 points) and 'Normal' (70-100 points) based on their life satisfaction score.

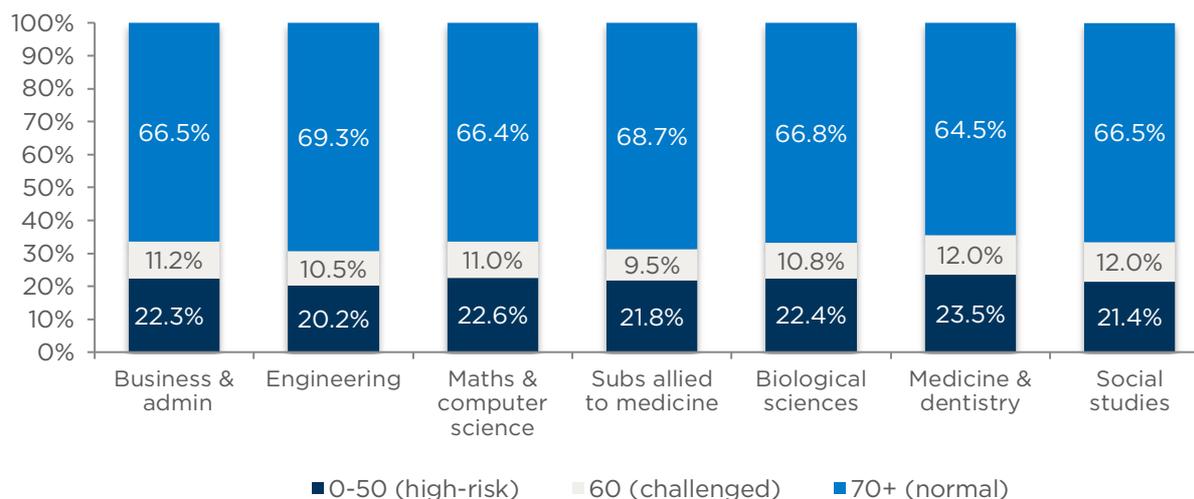


Figure 29: Area of study and life satisfaction risk group categorisations (a)

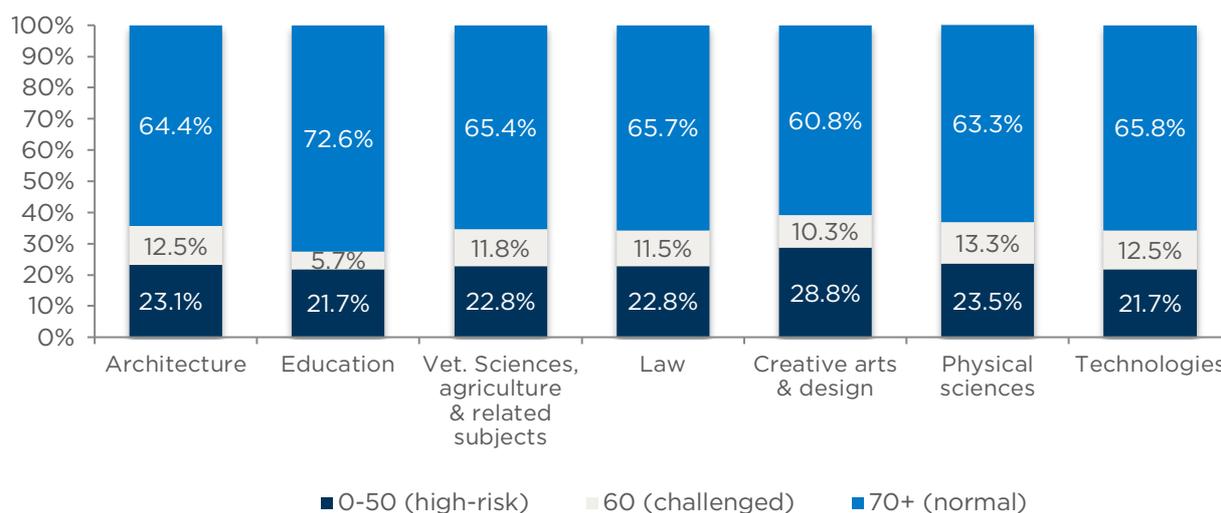


Figure 30: Area of study and life satisfaction risk group categorisations (b)

As expected, Education comprised the study area group with the highest proportion of student prospects who scored in the normal 70+ point range (72.6%); while Creative arts and design had the lowest (60.8%). It is also not surprising that the Creative arts and design group had the highest proportion of student prospects who scored in the high-risk 0-50 point range for life satisfaction with 28.8%, compared to 20.2% of Engineering students.

Low life satisfaction risk between the remaining study level groups is only marginally different.

Area of study and trait negative affect

Figures 31 and 32 show average negative affect scores for prospective students who have expressed interest in studying in each area respectively. The vertical bars represent the average scores for each affect, for each study area represented.

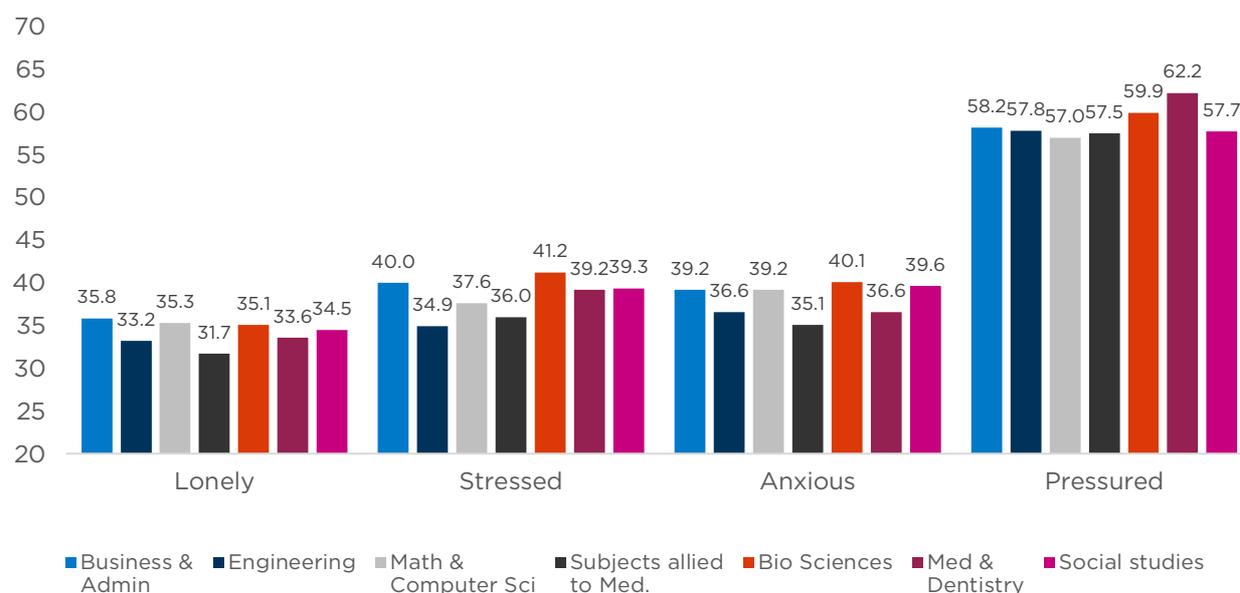


Figure 31: Area of study and trait negative affect (a)

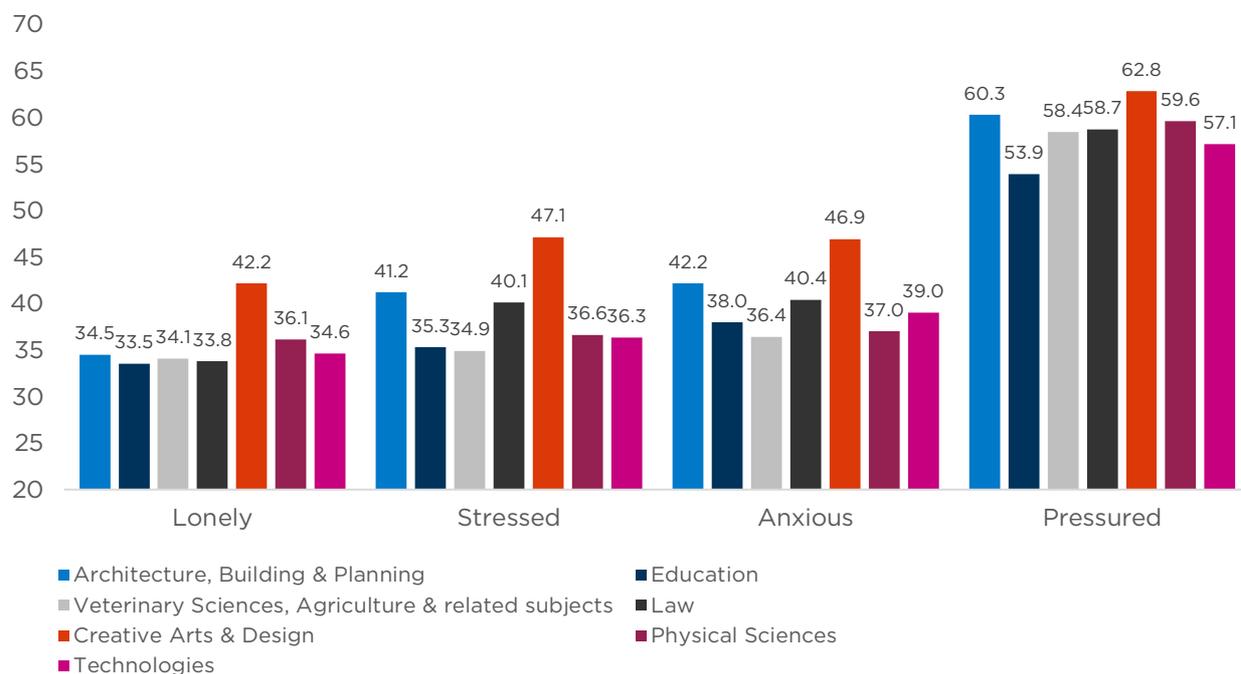


Figure 32: Area of study and trait negative affect (b)

What is most striking from Figures 31 and 32 are higher average scores for the Creative Arts and design group for lonely, stressed and anxious compared to all other area of study area groups. In relation to statistical significance, it is notable that the average score for the Creative arts and design group is significantly higher than all other groups for lonely and stressed.

Similarly as for life satisfaction, Education and Engineering student prospects scored comparatively lower across all four affects relative to the average for the other study area groups.

Area of study and social support

Figure 33 shows the prospective students who have expressed interest in studying in each study area categorised according to their response to the question ‘I can get help from friends, family or a neighbor when needed’. The proportion of prospective students who responded ‘Yes, definitely’, ‘Sometimes’, ‘Rarely’ and ‘Not at all’ are represented in each shaded bar respectively for each study area.

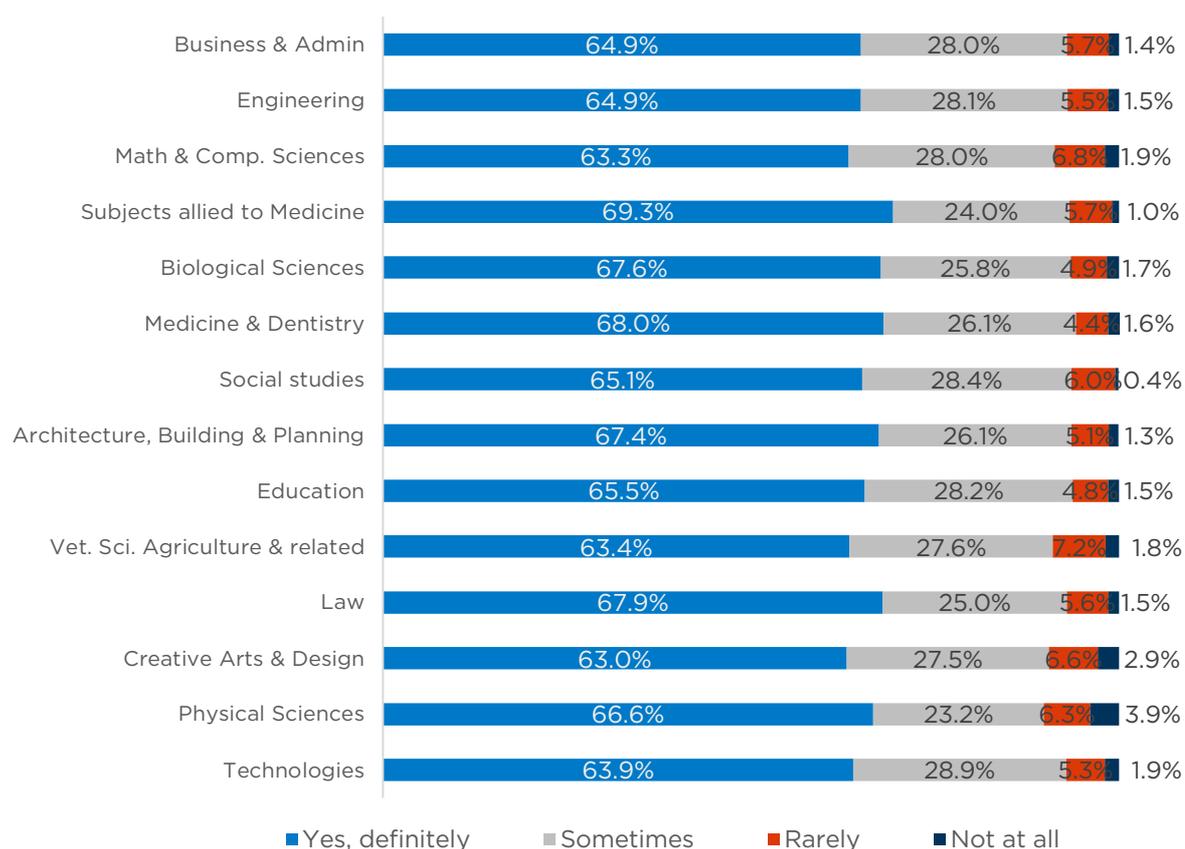


Figure 33: Area of study and social support

Prospective students who had expressed interest in studying ‘Subjects allied to medicine’ (69.3%) were most likely to report that they could ‘Yes, definitely’ get help from friends, family or a neighbor when needed; compared to 63.0% of Creative arts and design students respectively.

10.2% and 9.5% of students wishing to pursue a degree in Physical sciences and Creative arts and design respectively responded ‘Rarely’ or ‘Not at all’, highlighting significant perceived social support deficits among these student’s pre-departure.

There were no other notable between study area group differences concerning social support accessibility.

Chapter summary

In this chapter, we found that average life satisfaction, depression risk and average trait negative affect, was generally comparative across most of the study area groups. This suggests that the distribution of risk and resilient mental wellbeing student prospect profiles is relatively consistent across the many study areas and courses on offer at Australian institutions.

One study area group, however, provided some exceptional results. The very low average life satisfaction score for the Creative arts and design student group relative to other study area groups, in addition to higher average loneliness and stress scores, is worrying. Further, these students, on average, were least likely to report a high level of accessibility to social support in a time of need.

The reasons why Creative arts and design students have lower average life satisfaction and higher average trait negative affect is not entirely clear. However, there may be some combination of personality-related factors and dispositions that attract particular students to Creative arts and design type courses; in addition to course-specific factors, such as competitiveness, that may be driving greater feelings of distress among these student prospects.

These findings are important and relevant to educational institutions who offer Creative arts and design courses from a student welfare perspective. It is also clear that more research is needed to better understand what these student prospects may have in common and which is causing a higher proportion of them to feel the way they do relative to their peers.



Recommendations

In this section, several key recommendations have been made to help improve and enhance mental health outcomes among international and OS. These are based on a collective view of the major findings presented throughout this report, which suggest that many international and OS will come to Australia with either an existing or undiagnosed mental health condition or vulnerability to mental illness or psychological distress based on their propensity to experience high levels of trait negative affectivity. These recommendations are purposely broad as they may relate to issues and actions that can be addressed and undertaken by multiple stakeholders, including educational institutions, their partners, service providers and state and federal governments.

Recommendation # 1: Build mental health acumen and reduce mental health-related stigma to enhance help-seeking behaviour among international and OS

It is well-known that many international and OS come to Australia from countries with significant cultural, social and religious beliefs and attitudes towards mental health. These stem, in part, from social norms and expectations emphasising a person's role and reputation within broader groups; and has implications for understanding the context in which mental health issues occur, recognition of symptoms, and intentions to seek help.

We recommend that educational institutions and their stakeholders seek ways to build mental health acumen and reduce mental health-related stigma to enhance help-seeking behaviour among international and OS. This can be achieved by better understanding the many different cultural contexts and belief systems in which mental health is understood and addressing these directly with students through education and awareness raising activities and initiatives.

Recommendation # 2: A greater focus on early intervention as a means to reduce the prevalence and severity of mental illness experience by international and OS

Early intervention services are critical to minimising, and in some cases preventing, psychological harm and the onset of mental health issues. Early intervention services also provide opportunities for people to develop effective coping strategies, such as problem solving and self-management, which can reduce the severity of mental illness-related symptomatology and prevent the need for more complex and intensive psychological intervention.

We recommend a greater focus on early intervention as a means to reduce the prevalence and severity of mental illness experienced by international and OS. This could take the form of digital or face-to-face screening and assessment or the provision of educational collateral. International students may also benefit from being provided with more information, resources and education about life as a student in Australia to better prepare them for the challenges that they may face studying in another country.

Recommendation # 3: Create opportunities for international students to build social connections and support networks while studying in Australia

The current study found that a substantial proportion of student prospects may not be able to access another person in a time of need, with these students reporting significantly lower average life satisfaction and higher average negative affectivity than those who feel they can. These findings highlight the important role that social support plays in supporting good mental wellbeing outcomes in this group.

We recommend that educational institutions and their partners look for ways to create opportunities for international and OS to build social connections and support networks while studying in Australia. This could take the form of initiatives designed to link international students with each other as well as with domestic students, such as participation in culturally-relevant community events and activities, peer-mentoring, online social communities, and through volunteering opportunities in the local community.

Enhance social skills and social connections will boost students' ability to cope with the stresses and challenges they face while studying away from home; minimise feelings of loneliness and social isolation and associated distress; and support good feelings of personal wellbeing through a sense of group belonging, participation and friendship.

Recommendation # 4: More research is needed to address the paucity of published data concerning international and OS within the scientific literature

The topic of international and OS mental wellbeing is a grossly underdeveloped area of research. As it remains, little is known about the causes and correlates of international student mental wellbeing, the impact that mental health issues have on educational attainment, cultural stigma as these relate to mental health and other important outcomes, such as sexual health and understanding and intentions to seek help.

We recommend that more research is needed to address the paucity of published data concerning international and overseas students within the scientific literature. More evidence-based data are needed to quantify the extent and nature of international and overseas student mental wellbeing risk, from the pre-departure period to onboarding, graduation through to post-tertiary training and employment. By better understanding international and OS and their needs, institutions will be better placed to make evidence informed decisions with regard to how they can be best supported.

Research opportunities could also extend to rapid-testing of co-designed mental wellbeing programs and initiatives to test and learn cycles of innovation and new technologies.

Recommendation # 5: Mental health first aid certification for teaching staff

Given the important role that teaching staff play in the lives of students and their frequent face-to-face on-campus contact, it is essential that the educational workforce is mentally aware and culturally competent to support students who may have a mental health condition.

We recommend mental health first aid certification for teaching staff. Certification offers teaching staff an opportunity to enhance their mental health acumen, better understand and acknowledge the signs, symptoms and risk associated with various types of mental illness, and best manage, support and direct students to professional and other services that are available to them.

A more mentally aware and competent institutional learning and teaching workforce may also help facilitate greater connection between faculties and health and wellbeing services

to ensure that students identified as being at-risk are appropriately targeted for intervention and support.

Recommendation # 6: Support students to sleep well, exercise more and eat better

Associations between sleep, exercise, diet and feelings of personal wellbeing and mental health are now well-recognised within the scientific research literature. Sleep, exercise and diet have all been found to play a role in mood regulation and in some circumstances, enhanced feelings of wellbeing and reduced symptoms of depression and distress.

We recommend that educational institutions, their partners and stakeholders, seek ways to support students to sleep well, exercise more and eat better. This could be achieved through awareness raising initiatives and activities concerning the benefits associated with these three things (e.g., sleep hygiene collateral and resources, opportunities to participate in local sporting teams and cooking classes / demonstrations).



Study limitations

A major strength of this study is the very large sample size, facilitating robust between group comparisons and reporting. Another strength of this study is the existence of normative data for life satisfaction in the Australian population, which offers a strong comparative benchmark to help better understand and quantify international and OS risk, compared to Australian adults.

This study, does, however, have some limitations, including convenience sampling and representativeness, the use of single item measures and the threat of cultural response bias.

Convenience sampling and representativeness

Despite a large sample 12,204 student prospects representing 175 different countries, participants were recruited via convenience sampling and therefore may not reflect all the qualities and characteristics of prospective international and OS. It is also noteworthy that the composition of student prospects who participated in this study is not representative of the composition of students that do end up coming to Australia to study. For example, in 2018, students from China (30%), India (13%), Nepal (6%), Brazil (4%) and Malaysia (4%) represented more than half of all the 693,750 international and OS enrolments in Australia (Department of Education and Training, 2018). In the current study, the top five countries represented were India

(11.0%), Pakistan (9.4%), China (8.9%), Nigeria (7.0%) and Australian nationals / expats (4.6%).

As discussed, however, between country comparisons for Australia's largest groups of international and OS did not reveal substantial differences in pre-departure risk for life satisfaction and negative affect. This may suggest that the differing composition of student prospects sampled in this study versus actual student enrolments may not meaningfully compromise the validity of the current study findings and estimations of pre-departure risk for low life satisfaction and depression.

Single item evaluation measures of 'mental wellbeing'

Another limitation of this study is the reliance on a suite of single item measures. While single item measures can prove adequate representations of underlying constructs, they are less reliable than multiple item scales (IWG, 2013). We do not believe, however, that use of single items invalidates the current findings.

This study was not intended as a comprehensive evaluation or 'deep-dive' into the mental wellbeing of international and OS prospects. Rather, this was an opportunistic investigation aimed at providing a 'snap shot' of pre-departure mental wellbeing risk.

In selecting our single item measures, we also considered international students as an inherently diverse sample group, and as such, made a deliberate attempt to manage the complexity of survey items to enhance comprehension and understanding. Thus, we defend the use of single item measures and corresponding 0-10 end-defined rating scales as appropriate for a culturally and linguistically diverse sample group with English commonly as a second (or third) spoken language.

Measurement invariance and cross-cultural response bias

Comparing mental wellbeing among people from different countries is becoming increasingly more common (e.g. Helliwell, Layard & Sachs, 2019). However, at the heart of such endeavours there must be measures that function equivalently across different cultural groups (Tomyn et al., 2016). To this end, one limitation of this study is that the suite of single item measures employed have not been used previously across all cultural groups comprising this study.

Determination of the cross-cultural utility of measurement instruments is important because people in different cultures may employ varying response styles when answering survey questions, threatening the validity of quantitative comparisons (Diener et al., 1995; Oishi, 2006; Van de Vijver & Poortinga, 1997). Thus, caution is suggested in the interpretation of cross-cultural findings embedded throughout this report.

Summary and conclusions

International and OS are a known-risk group for mental health issues, with many students facing significant challenges leaving home to study in another country, and without familiar support networks. Despite this, until recently, no study has quantified levels of pre-departure student prospect mental wellbeing risk. This is an important issue because pre-existing mental health issues, such as low feelings of life satisfaction, depression, and the propensity to experience high levels of trait negative affect, can manifest poorly and may be compounded by issues students face after they arrive in Australia to study.

The major aim of this study was to address this important gap in the research literature and quantify the mental wellbeing of international and OS prospects to better understand the extent of pre-departure risk. Using a convenience sample of 12,204 student prospects from 175 countries who participated in the 2019 QSES International Student Survey, the results highlighted that student prospects have significantly lower average life satisfaction compared to the Australian adult population and are at twice the risk for experiencing very low life satisfaction, which may be indicative of depression or being at high-risk of developing depression.

These are significant findings as the data allude to the fact that many student prospects may have a disposition for a mood disorder which may be exacerbated by relocating to another country to study with few protective resources available (like social support) and not knowing where or who to turn to for help.

The results also highlighted that substantial proportions of international and OS prospects are vulnerable to psychological distress, based on their high loneliness, anxiety and stress scores. A high proportion of student prospects also reported feeling extreme levels of pressure to succeed in their future studies in another country. These findings are concerning and suggest that many students have a propensity to feel high levels of trait negative affect, which may manifest in terms of more severe psychological distress, especially when faced with challenging circumstances.

A high proportion of student prospects also reported limited access to social support in a time of need. This finding is a cause for concern as it is well documented that social support acts as an important protective factor 'buffer' to our feelings of personal wellbeing. Moreover, if students are reporting limited or no accessibility to social support in their home countries, it could be argued that it is unlikely that accessibility to social

support will improve substantially in a foreign country and that associated feelings of social isolation and loneliness will only worsen.

The collective findings have major implications for the education sector as these relate to the welfare of international students. It is essential that educational institutions have the necessary support structures in place to adequately care for the mental wellbeing needs of international and OS. The current study findings also have implications for Australia's competitiveness as a destination of choice for international and OS prospects. By better supporting the needs of international and OS on-campus and in the community, the more likely their educational attainment and success; and ultimately the greater the likelihood that future students will consider Australian as the most regarded and reputable choice for their international education.

Finally, and without question, more research is needed to better understand this important group and to provide a stronger evidence base for the development of programs, interventions and initiatives to better support the needs of international and overseas students as guests learning and living in Australia.



The collective findings have major implications for the education sector as these relate to the welfare of international students. It is essential that educational institutions have the necessary support structures in place to adequately care for the mental wellbeing needs of international and OS.

Glossary of terms

Average score. The combined average score for a group of respondents on a particular variable. Also known as a 'mean' or 'mean score' (*M*).

Distress or psychological distress. A general term used to describe unpleasant feelings or emotions that may impact a person's level of functioning.

International and /or overseas student (OS). In this study, a person who travels to another country to study at a tertiary institution or educational college (e.g. English language, vocational training).

Life satisfaction (LS). Life satisfaction reflects how satisfied a person feels and thinks about their life and personal circumstances. Life satisfaction can be defined as 'a normally positive state of mind that involves the whole life experience'.

Mental wellbeing. The umbrella term used in this study to describe levels of life satisfaction and trait negative affectivity (e.g. loneliness, stress, anxiety and felt pressure to succeed).

Post-hoc test. Test of the significance of difference between two or more group mean scores. Post-hoc tests are presented throughout the Appended Tables and discussed where relevant in this report.

Pre-departure. The period in time before a student / student prospect leaves their country of origin to study in another country (e.g. the person still resides in their home country).

Prospective student or student prospect. In this study, a person who has expressed interest in studying at a tertiary institution or educational college in another country, but has not necessarily formally enrolled in a particular degree or course or accepted an offer.

Significant or statistically significant. A statistical exploration of how likely a result is to occur by chance alone. A difference between two mean scores that is significant ($p < .05$) is likely to reflect a true difference between the means and is unlikely to have occurred by chance. Significance level is represented by the 'p' value. Throughout this report, the minimum significance criteria employed is $p < .05$ – in other words, if there was no actual difference between groups, the chance of obtaining the values observed is less than 5%.

Standard deviation (SD). A SD is the measure of the spread of scores around a mean value. Lower standard deviations indicate a lower dispersion of scores round the mean, and vice versa.

Trait negative affect or negative affect. An umbrella term to describe a disposition to experience negative mood, poor self-concept and psychological distress. Trait negative affect can also be defined as a stable, heritable trait tendencies to experience a broad range of negative feelings, such as worry, anxiety, self-criticisms, and a negative self-view.



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