

Understanding and measuring the wellbeing of Australian university students

Angus Hamilton Gilmore
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Supervisor's Statement

This is to certify that the thesis entitled: "Understanding and measuring the wellbeing of Australian university students" submitted by Angus Hamilton Gilmore in fulfillment of the requirements for the degree of Doctor of Philosophy is in a form ready for examination.

I attest that the attribution statements provided for the studies presented in this thesis are true and accurate representations of the candidate's contribution to the research.

Signed:



Associate Professor Claire Ashton-James, Sydney Medical School, Faculty of Medicine and Health, The University of Sydney

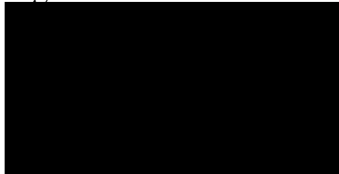
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Statement of Authorship

I, Angus Hamilton Gilmore declare that this thesis is my own work and has not been submitted to any other university or institution as a part or whole requirement of any higher degree.

I, Angus Hamilton Gilmore, declare that I was the lead researcher of all work included in this thesis. The University of Sydney Human Research Ethics Committee granted ethical approval for all four studies involving human participants presented in this thesis.

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Angus Hamilton Gilmore

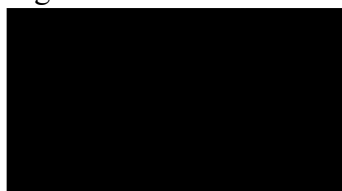
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This thesis has not been submitted for any degree or other purposes.

I certify that the intellectual content of this thesis is the product of my own work and the assistance I received in preparing this thesis has been acknowledged.

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Date: 21st February 2025

Angus Hamilton Gilmore

Acknowledgments

This thesis began with a zoom call that took place during the 2021 COVID lockdowns.

Having conducted a related psychology honours thesis the year prior, my name had been put forward as a possible fit for a PhD position researching university student mental health and wellbeing. At the time I was 23 and had a vague life-plan of becoming a clinical psychologist. While I accepted the zoom call to hear more about the opportunity, I went in fairly sure that I would have to politely decline. On the call I e-met Claire Ashton-James, who is now my head supervisor. For roughly 30 minutes she described all the wondrous things one could do during a PhD with what I now recognise as her trademark assertive, yet deeply caring, gusto. The call ended with me sitting in my share-house bedroom pondering why I'd just more-or-less agreed to do a PhD. It's now three and a half years later and I'm struggling to find the right words to convey how grateful I am that Claire convinced me to do this thesis.

Naturally, my first and foremost thanks go to Claire. That 'best supervisor' award you won is thoroughly deserved. You've been a constant figure of support and guidance throughout our time working together. Your supervision has given me an enduring passion for this research and no doubt changed the course of my life. To summarise what it was like having Claire as a supervisor, during my 42-month candidature she missed a single meeting, and this was because she had lost her car keys while out horse riding.

There are several more people without whom this thesis could not have been completed. To Daniel Costa and Amy McNeilage. Dan, it's now almost 5 years to the day since I walked into your office for our first honours meeting. Thank you for all the support you've provided since across all of your various roles. Amy, thank you for your expertise and guidance throughout

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Abstract

Australian university student populations have increased substantially within the past two decades. Troublingly, these large university student populations appear to be experiencing poor and declining rates of wellbeing. Recognition of poor wellbeing among university students has galvanised calls for universities to better support student wellbeing. Developing effective wellbeing policies requires robustly understanding the factors that underlie university student wellbeing. Evaluating the effectiveness of such policies requires validly measuring the wellbeing of large university populations. This thesis presents five interrelated studies which seek to elevate the understanding and measurement of Australian university student wellbeing.

Study one is the first scoping review of research into factors associated with the wellbeing of Australian university students. This scoping review outlines key knowledge gaps and future research directions which are addressed in subsequent studies. In particular, this review notes problematic inconsistencies in wellbeing measurement and non-representative sampling within the existing research, alongside a paucity of studies exploring whether subsets of student populations are particularly at-risk of poor wellbeing. Furthermore, the review observed a concerning trend towards unusually low response rates (5.6%) to surveys recruiting from whole-university populations. **Study two** applies content and relational analysis methodology to text-responses from 209 Australian university students. This study contributes to the burgeoning Australian qualitative evidence base by examining the factors students most frequently construed as influencing their wellbeing. Notably, students consistently described difficulties managing university workloads as directly and indirectly impacting their wellbeing. This suggests that the wellbeing implications of academic time demands may be under-recognised by prior research.

Studies three and four report the codesign and piloting of a novel SMS-based approach for measuring the wellbeing of whole-university populations. These studies suggest that collecting wellbeing data via large-scale SMS surveys is both acceptable in concept to students, and logistically feasible in practice. **Study four** additionally analyses wellbeing data from a whole-university sample (n = 4232) to provide novel insights into which sub-sets of Australian university student populations may be especially at-risk of poor wellbeing. Specifically, this study reports the novel finding that wellbeing differences between key student demographic groups vary depending on academic discipline. This finding indicates the appropriateness of considering discipline-specific factors when developing university wellbeing policies. **Study five** describes a semi-structured interview study which explores the lives of law students at the university (n = 21). A reflexive thematic analysis provided rich insights into the interconnections between law school experiences and wellbeing, highlighting the impact of pervasive cultures of competitiveness among law students. This depth of understanding assists in identifying potential institutional strategies for supporting the wellbeing of this student group.

This research represents an important contribution towards expanding the empirical evidence base into university student wellbeing. Of particular note, this thesis enhances understandings of how university experiences shape student wellbeing. This is an encouraging finding as it suggests that directly addressing features of university life may be an effective and under-utilised approach for supporting student wellbeing. This thesis also provides important and novel insights into potential methods for improving the measurement of university student wellbeing.

Publications arising from this thesis

Peer reviewed publications

1. **Gilmore, A. H.**, McNeilage, A. G., & Ashton-James, C. E. (2025). A scoping review of factors associated with Australian university student wellbeing. *International Journal of Wellbeing*, 15(1), 4063. 1-45.
<https://doi.org/10.5502/ijw.v15i1.4063>. Online ahead of print.
2. **Gilmore, A. H.**, Glozier, N., & Ashton-James, C. E. (2025). Australian university student perspectives on the factors influencing student wellbeing: a content and relational analysis. *Higher Education Research & Development*. 914-931.
<https://doi.org/10.1080/07294360.2024.2442636>.
3. **Gilmore, A. H.**, Glozier, N., Sunderland, M., & Ashton-James, C. E. (2025). Perspectives of university students as co-designers of a whole-of-university SMS wellbeing check. *Journal of Further and Higher Education*, 454-466.
<https://doi.org/10.1080/0309877X.2025.2462659>.

Papers being prepared for submission

1. **Gilmore, A. H.**, Costa, D., & Ashton-James, C. E. The moderating role of academic faculty in predicting student wellbeing: findings from a novel university-wide SMS wellbeing check.
2. **Gilmore, A. H.**, McNeilage, A., Graham, N., Ashton-James, C. E. The law school game: using reflexive thematic analysis to explore the influence of law school environments upon law student wellbeing.

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1. Introduction

1.1 Why universities should support student wellbeing

This is a thesis about the complex challenge of determining how best to support the wellbeing of university students. Before discussing *how* universities might support student wellbeing, it is important to first establish *why* universities should seek to improve student wellbeing. Several authors have argued that, in addition to teaching obligations, universities have a social responsibility to foster wellbeing and empower students to reach their potentials (Finley, 2016; Hughes & Spanner, 2019; Riva et al., 2020; Taylor et al., 2019; Volstad et al., 2020). Universities may have already thoroughly succeeded in these tasks, which would be indicated by university students typically displaying high levels of wellbeing. Therefore, the first question worth considering is the following. Do university students, for lack of more sophisticated terms, appear to display ‘good’ or ‘bad’ wellbeing?

1.1.1 Are university students at-risk of poor wellbeing?

To preface, throughout this thesis “wellbeing” is used as a broad umbrella term that encompasses the presence of positive psychological experiences and the relative absence of various negative affective and cognitive states. As a consequence, studies on concepts such as distress, life-satisfaction, depression, anxiety, stress, flourishing, and mental illness, as providing information about “wellbeing”. The decision to interpret the term wellbeing in this way is fundamentally pragmatic. As expanded upon in section 1.3.3, the term “wellbeing” has “defied definition due to its inherent complexity” (Dodge et al., 2012) and, consequently, researchers have defined and measured wellbeing with substantial heterogeneity (Dodd et al., 2021).

Reviewing the relevant research pertaining to university student wellbeing therefore requires a choice between two imperfect approaches. One approach would be to endorse a particular theoretical model of wellbeing and to limit the literature review to research which

conforms with this model. Doing so would provide consistency on what “wellbeing” means. However, this definitionally consistent approach would require omitting all non-conforming studies. Given the aforementioned variability in wellbeing measurement, this would overlook pivotal research, creating the false impression that student “wellbeing” has been scarcely investigated.

Alternatively, as is the approach of this thesis, a researcher can follow time-honoured convention and opt to avoid the tricky task of demarcating “wellbeing” from other related concepts. Adopting this broad definitional approach allows a thorough and broad review of relevant research. Prominent definition models of wellbeing, as well as the implications of heterogenous wellbeing definition and measurement, are expanded upon in greater detail in section 1.3.3.

Definitional concerns notwithstanding, the university student wellbeing literature contains many assertions that university students are “at-risk” of poor wellbeing, usually taken to mean that student samples display worse wellbeing than either age-matched non-university peers, or the general population (e.g Bore et al., 2016; Larcombe et al., 2016; Stallman, 2010). Labelling university students as at-risk often precedes an argument for the urgent development of effective student wellbeing policies (e.g Stallman, 2010). To qualify the following, universities should be committed to promoting student wellbeing irrespective of whether students appear ‘at-risk’. This being said, clarifying whether university students display atypically low or high wellbeing is relevant to macro-level understandings of this topic.

Several studies have compared university student wellbeing data with existing population data (Sharp & Theiler, 2018). Such studies have exclusively reported worse wellbeing among university students across a range of psychometrically robust outcome measures (Bore et al., 2016; Headspace, 2016; Larcombe et al., 2021; Larcombe et al., 2016;

C. Leahy et al., 2010; Roberts et al., 1999; Stallman, 2010). Papers employing this approach often use diagnostic cut-off scores to report alarming and easily communicable findings, such as university students being 3-6 times more likely to be clinically distressed than age-matched non-university peers (Bore et al., 2016; Headspace, 2016; C. Leahy et al., 2010; Stallman, 2010). A 2013 systematic review found that 30% of university students met cut-offs for clinical depression relative to 9% in the general population (Ibrahim et al., 2013).

The validity of these findings depends upon appropriateness of comparisons. In the above cases, student and population samples were recruited via different methods and at different times, with most studies using samples from single institutions. A smaller number of studies have compared university students to non-students within the same dataset, usually census data. These findings are less consistent, with university students at times reporting worse outcomes (Cvetkovski et al., 2012) no-difference (Blanco et al., 2008; Burns & Crisp, 2020; McManus & Gunnell, 2020), or better wellbeing (Cvetkovski et al., 2019; Tabor et al., 2021) compared to age-matched non-students. However, evidence also suggests that people in their early 20s, typical of most university students, tend to display higher prevalence of depression and mental health disorders relative to adults aged 30 and above (Gustavson et al., 2018; Mojtabai et al., 2016) Therefore, while the evidence is not completely uniform, there is an empirical basis for suggesting university students are 'at-risk' of poor wellbeing.

Another relevant consideration is whether student wellbeing appears to be improving or declining over time. Gradual improvements might suggest that current approaches are working, whereas ongoing declines would indicate need for change. Ideally trends in student wellbeing would be assessed using nationally representative longitudinal data. Evidence of this nature is limited as most countries, including Australia, do not conduct regular national student surveys that include psychometrically validated wellbeing measures (Browne et al., 2022). While one Australian single-institution study reported a consistent increase in distress

among first-year students between 2017-2021 (Knapp et al., 2024), and another found that wellbeing of first-year students declined during 2020 and returned to pre-pandemic levels in subsequent years (Dingle et al., 2024), it is rare for specific universities to publish data monitoring changes in student wellbeing over time. Fortunately, repeated national surveys are conducted in the USA and Norway, both indicating gradual declines in student wellbeing since their inceptions in 2007 (US) and 2010 (Norway) (Knapstad et al., 2021; Lipson et al., 2022). Decreasing wellbeing among university students occurs in the context of decreasing wellbeing of young people more broadly across the past two decades (Keyes et al., 2019; Mojtabai et al., 2016; Ross et al., 2017).

While longitudinal wellbeing data is scarce, declines in student wellbeing may have been indicated by more easily discernible increases in university mental health care utilisation. The past twenty years have seen widespread reports of increased requests for university counselling support and increasingly severe symptomologies among students receiving counselling (Broglia et al., 2018; Center for Collegiate Mental Health, 2024; Ibrahim et al., 2013; Lipson et al., 2022; Sharp & Theiler, 2018). While increased utilisation rates may be partly due to greater accessibility of services and reductions in stigma, the ubiquity of these findings suggests a growing experience of poor wellbeing amongst university students.

1.1.2 The importance of supporting student wellbeing

Poor wellbeing among university students should be recognised as a critical social issue warranting urgent attention (Upsher, Nobili, et al., 2022). As a starting point, it is worth acknowledging the size of present-day university populations, particularly in the Australian university context which is the focus of this thesis. In 2008 the Australian government removed caps limiting numbers of undergraduate enrolments. (Department of Education, 2008). Australian university student populations have since increased by 60% (to 1.7

million), with 53.3% of 2022 Australian high school graduates commencing undergraduate degrees in 2023 (Department of Education, 2023). The ‘university student’ is by no means a rare type of individual. Instead, a substantial proportion of the Australian population will at some point be exposed to the opportunities and challenges imparted by university.

These large student populations amplify the importance of ensuring university experiences and environments support wellbeing (Carter et al., 2017; Taylor et al., 2019). Ensuring university is a positive time of life could help establish positive wellbeing trajectories extending well beyond the university years (Marcotte et al., 2018). Creating supportive university environments could also increase the proportion of mentally healthy graduates entering the workforce, which would have a myriad of social benefits (Hughes & Spanner, 2019; Taylor et al., 2019).

Furthermore, removal of undergraduate caps led to substantially increased enrolment from students with relatively low levels of academic success in secondary school who disproportionately come from lower socio-economic backgrounds. Such students are more likely to report lower academic preparedness, as well as greater financial stress and likelihood of university drop out (Baik, Naylor, et al., 2019; Edwards & McMillan, 2015). Ensuring university environments are conducive to the success and wellbeing of such students is important for social mobility and equity.

1.1.3 Consequences of poor student wellbeing

There are also several negative indirect consequences of poor university student wellbeing. Firstly, poor wellbeing predicts worse academic performance. This applies to both objective measures of academic performance (Bruffaerts et al., 2018; Marcotte et al., 2018; Sharp & Theiler, 2018; Stallman, 2010) and to satisfaction with academic performance (Lipson & Eisenberg, 2018). Students with poor wellbeing are also more likely to miss

academic obligations and days of university (Eisenberg et al., 2007; Lipson & Eisenberg, 2018; Sharp & Theiler, 2018; Stallman, 2010).

Poor wellbeing also predicts greater likelihood of university drop-out which can be damaging to student's self-confidence and to institutional reputations (Baik, Naylor, et al., 2019; Hjorth et al., 2016; Zając et al., 2024). Students with poor wellbeing are significantly more likely to indicate that they are considering dropping out of university (Lipson & Eisenberg, 2018; Orygen, 2017) and students often cite university-related stress as a key factor motivating intention to dropout (Sanci et al., 2022). Furthermore, the rate of students considering dropping out of university for 'stress-related' reasons appears to be increasing over time (Browne et al., 2022).

Poor wellbeing also applies strain on university counselling services. While university-provided counselling is an effective and longstanding approach for supporting distressed students (Stallman, 2010), counselling services routinely struggle to meet student demand (Broglia et al., 2018; Center for Collegiate Mental Health, 2024; Sharp & Theiler, 2018). Services are often forced to use waiting list systems which creates equity issues as vulnerable students are unable to receive care efficiently (Broglia et al., 2018). Effective student wellbeing policies could alleviate strain on counselling services by reducing the number of students requiring support (Upsher, Nobili, et al., 2022).

Furthermore, students experiencing poor wellbeing often turn to academic staff for emotional support (Brewster et al., 2022; Cleary et al., 2011; Gulliver et al., 2018; Hughes et al., 2018). The burden of supporting distressed students can be detrimental to staff wellbeing, particularly as academic staff are neither trained nor paid to provide mental health assistance (Bennett et al., 2024; Hughes et al., 2018). Poor staff wellbeing predicts poor student wellbeing, creating the potential for vicious cycles of declining wellbeing (Brewster et al., 2022).

1.2 Why university students may be at-risk of poor wellbeing

Thus, despite the aspirational goal of creating university environments that empower wellbeing (Carter et al., 2017), the evidence suggests that university students are likely experiencing atypically poor and declining rates of wellbeing. This establishes an urgent need to support student wellbeing by designing and implementing effective university initiatives (Upsher, Nobili, et al., 2022). Developing effective methods for supporting students requires sophisticated understandings of the factors that influence their wellbeing (Baik, Larcombe, & Brooker, 2019; Campbell et al., 2022; Pedrelli et al., 2015). Why then, might university students report poor wellbeing?

1.2.1 Broader context of emerging adulthood and transitional challenges

As aforementioned, individuals in their early 20s, a typical age for university students, tend to display worse wellbeing than older adults (Gustavson et al., 2018; Mojtabai et al., 2016). Adopting a developmental perspective, the wellbeing of university students should be partly viewed against the backdrop of broader challenges implicated by the life stage of ‘Emerging Adulthood’.

The developmental theory of emerging adulthood construes the age range of 18-29 as developmentally distinct. Individuals within this age bracket typically perceive themselves as neither adolescent nor adults, but as occupying a transitional stage between the two (Arnett, 2006; Reifman & Niehuis, 2023). Emerging adulthood is thought to begin in earnest at the conclusion of high school and is typified by identity-exploration, sense of possibility and increased focus on the self (Reifman & Niehuis, 2023).

Emerging adulthood is also a time of frequent transitions and lifestyle instability, both of which can challenge wellbeing (MacLeod & Brownlie, 2014). Emerging adults experience uniquely high rates of residential moves (including leaving the family home), changes in employment, disruption of social circles, and romantic breakups (Arnett, 2006; Kansky &

Allen, 2018; Reifman & Niehuis, 2023). Furthermore, emerging adults often experience reductions in parental contact and support alongside increases in risky-behaviours and substance-use (Henin & Berman, 2016; Schulenberg et al., 2006).

Consequently, emerging adulthood has been described as a ‘proving ground’ for wellbeing, wherein young people develop and explore their identities whilst adapting to consistent and substantive lifestyle changes (Schulenberg et al., 2006). Successfully managing the transitional challenges typical of emerging adulthood predicts thriving wellbeing, while individuals who fail to adapt display negative wellbeing trajectories (Marcotte et al., 2018). Emerging adulthood has also been identified as a high-risk period for mental illness onset, with 75% of onsets occurring prior to the age of 25 (Kessler et al., 2005). In recognition of these findings, authors have recommended that universities provide developmentally informed preventative support to assist students in navigating the transitional challenges of this high-risk period (Conley et al., 2014; Larcombe et al., 2016; MacLeod & Brownlie, 2014; Taylor et al., 2019; van Herpen et al., 2020; Worsley et al., 2022).

Further, a feature of emerging adulthood is an absence of institutional support structures relative to other life-stages (e.g secondary schools for adolescents and workplaces for established adults) (Côté et al., 2006). The university itself is presumably the primary institution in student’s lives. Well-funded and developmentally informed university systems could assist at-risk students who would otherwise have difficulty accessing wellbeing support (Carter et al., 2017; Conley et al., 2014; Larcombe et al., 2016; MacLeod & Brownlie, 2014; Taylor et al., 2019; van Herpen et al., 2020; Worsley et al., 2022).

1.2.2 The impact of university life upon student wellbeing

While the more general transitional challenges of emerging adulthood are no doubt relevant to university student wellbeing, they do not explain why university students might

report worse wellbeing than age-matched non-university peers (e.g Larcombe et al., 2016; C. M. Leahy et al., 2010; Stallman, 2010). It is now time to consider the elephant in the room. Do university students display poor wellbeing *because* they attend university?

A convenient counterargument might be that the types of people who enrol in university simply tend to have worse wellbeing than those who don't. The apparent 'at-risk' status of university students could derive from selection bias rather than university-related stressors. However, longitudinal research consistently indicates that the average wellbeing of university students declines during the first year of university. This finding holds irrespective of whether students are initially assessed prior to formally commencing their studies (Andrews & Wilding, 2004; Bewick et al., 2010; Cooke et al., 2006) or towards the beginning of their first semester (Conley et al., 2014; Kroshus et al., 2021; O'Brien et al., 2011; Pritchard et al., 2007).

Studies that track students throughout an entire degree are less prevalent than those limited to the first year. Longitudinal studies including data points across each year of a university degree have observed wellbeing declining significantly in the first year, before plateauing (with minor variations) in later years (Bewick et al., 2010; Conley et al., 2020). This refutes the selection-bias hypothesis.

In an intersection of the emerging adulthood and university student wellbeing literatures, a major transition experienced by many emerging adults is the transition into university (Carter et al., 2017). Given that the clearest declines in student wellbeing occur during the first year, universities should pay particular attention towards supporting incoming students to make a successful transition into university (Conley et al., 2014; Hughes & Spanner, 2019; Morton et al., 2014; Scanlon et al., 2007; van Herpen et al., 2020; Young et al., 2020). Supporting students during this initial transition, as well as throughout their degrees, requires a nuanced understanding of how university life might diminish wellbeing

(Baik, Larcombe, & Brooker, 2019; Campbell et al., 2022; Pedrelli et al., 2015). Why then, might being a university student be detrimental to wellbeing?

As discussed throughout section 1.3.4, further research is needed to extend understandings of how university experiences shape student wellbeing. This being the case, existing research has examined interconnections between university-specific factors and student wellbeing.

Perhaps most obviously, university students experience academic stressors such as exam/assessment stress, intense academic workloads, academically competitive environments, overlapping assessment schedules, and difficulty understanding challenging concepts (Campbell et al., 2022; Larcombe et al., 2021; Linden & Stuart, 2020). Students have identified lack of clarity surrounding assessment expectations and insufficient assessment feedback as reducing academic self-efficacy and wellbeing (Baik, Larcombe, & Brooker, 2019; Jones et al., 2021; Upsher et al., 2023). Academic stress can also be compounded by the perception that success finding post-university employment depends upon exceptional academic performance (Beiter et al., 2015; Linden & Stuart, 2020; Sampson et al., 2022). Students may experience frustration when academic skills and habits established in high school prove ineffective in more self-directed university contexts (Cage et al., 2021; Scanlon et al., 2007). University can also be the ‘first point of failure’ for students who find themselves surrounded by other academically gifted students (Jones et al., 2021).

For undergraduates, university entails new and unfamiliar social settings. These settings are often navigated alongside loss of social support networks from high school (Bitsika et al., 2010; Linden & Stuart, 2020). Difficulty finding friends and feelings of loneliness are common university experiences (Campbell et al., 2022; Richardson et al., 2017; Sampson et al., 2022). University students often struggle to experience more general feelings of belonging at university which can intensify loneliness (Kahu et al., 2022; Linden & Stuart,

2020; Sampson et al., 2022). Conversely, successfully forming university friendship groups can buffer against other university stressors, partly by allowing students to share in experiences of academic stress (Campbell et al., 2022; Eloff et al., 2022). For international students, navigating unfamiliar social contexts at university is part of a broader acculturative transition (Marangell & Baik, 2022).

University studies introduce the challenge of study-life balance, where students must delicately balance academic demands alongside non-university obligations, such as part-time work (Douwes et al., 2023; Hurst et al., 2013; Linden & Stuart, 2020; Stanton et al., 2016). Finally, depending on the quality of teacher-student relationships, academic staff have the dual-capacity to empower or endanger student wellbeing (Baik, Larcombe, & Brooker, 2019; Eloff et al., 2023; Riva et al., 2020; Stanton et al., 2016).

As such, authors have suggested that poor wellbeing among university students may be a logical outcome of university-specific stressors which, by definition, are not experienced by non-students (Pedrelli et al., 2015). This is an assertion worth expanding upon. Much of this thesis centres around the idea that being a university student might, in some ways, be bad for one's wellbeing. While this may not seem immediately intuitive, the idea that features of present-day university experiences are diminishing student wellbeing should be viewed as encouraging and energising. This thesis aims to contribute towards empowering universities to better support the wellbeing of their students. However, universities are limited in their capacity to influence student's lives. Universities are most uniquely able to influence their student's university experiences. This could be achieved through reforms to course designs, assessments structures, social environments and events, physical environments, university support services and so on (Baik, Larcombe, & Brooker, 2019; Hughes & Spanner, 2019; Sampson et al., 2022). If features of university life are deleterious to wellbeing, it follows that reforming these features could improve student wellbeing (Larcombe et al., 2021). Conversely,

if elements of student life empower wellbeing, then recognition, expansion and refinement of these elements could further improve wellbeing.

To summate the above sections: Poor student wellbeing is widely recognised as a critical social concern (Upsher, Nobili, et al., 2022). University-specific stressors are thought to play a key role in explaining poor student wellbeing (Pedrelli et al., 2015). Finally, universities could theoretically intervene upon university-specific factors to create university environments which support wellbeing (Hughes & Spanner, 2019; Jones et al., 2021; Upsher, Nobili, et al., 2022). The question motivating the remainder of this thesis is *how?*

1.3 The Challenge of Supporting Student Wellbeing

1.3.1 Lack of resources allocated to wellbeing policy and gaps in the literature

In a perfect world, improving university student wellbeing would be a two-step process. Firstly, universities would explicitly identify supporting student wellbeing as a core institutional objective and dedicate sufficient funding and human resources towards wellbeing initiatives (Browne et al., 2022; Finley, 2016; Hughes & Spanner, 2019; Taylor et al., 2019). Secondly, universities would refer to a high quality and practically useful empirical evidence base to identify and implement efficacious strategies for improving student wellbeing (Upsher, Nobili, et al., 2022).

In the world in which we live this is more complicated. There are several factors which make the second step challenging. Perhaps the most critical factor is that, in many respects, the first step is yet to be achieved. University wellbeing services remain relatively under-resourced and level of investment towards student wellbeing differs substantially between and within universities (Carter et al., 2017; Linden & Stuart, 2020; Upsher, Nobili, et al., 2022). There is also very little collaboration between universities which stifles efficient identification of best practice (Carter et al., 2017; Hughes & Spanner, 2019; Linden & Stuart, 2020).

This being the case, even if university wellbeing initiatives were sufficiently funded, there are key knowledge gaps in the existing literature which cumulatively make it challenging to provide evidence-based recommendations for wellbeing policies (Barkham et al., 2019; Browne et al., 2022; Jones et al., 2021; Larcombe et al., 2021; Upsher, Nobili, et al., 2022). Elevating capacities to support student wellbeing requires expanding the overall breadth and quality of the empirical evidence base (Barkham et al., 2019; Hughes & Spanner, 2019; Upsher et al., 2023). This thesis aims to contribute to the development of this literature.

1.3.2 Lack of evidence for interventions designed to improve the wellbeing of university populations.

Improving student wellbeing will inevitably require “interventions” of some nature. Universities need to implement interventions that: improve student wellbeing in a meaningful way, are feasible and scalable, and, crucially, that aim to improve the wellbeing of whole university populations (Upsher, Nobili, et al., 2022). Before discussing the specific research objectives of this thesis, it is important to first clarify why the extant literature is unable to identify empirically supported interventions that fulfill these requirements (Upsher, Percy, et al., 2022).

Existing approaches to supporting student wellbeing have primarily sought to either train students to cope with stress, or to provide support to students only after they have developed poor wellbeing (Larcombe et al., 2021; Worsley et al., 2022). A recent review of reviews of interventions to support student mental health and wellbeing (variously defined) identified 27 existing reviews (Worsley et al., 2022). Effective approaches included mindfulness-based interventions, cognitive-behavioural therapy, skills training, and recreation programs. Student wellbeing interventions also appear more efficacious when facilitated by in-person specialists (Conley et al., 2014) and university provided counselling is a well-established component of university wellbeing approaches (Stallman, 2010).

However, it is financially and practically infeasible to provide one-on-one counselling or psychoeducation to all university students. While these interventions may be effective for students fortunate enough to receive them, for logistical reasons these approaches do not, in isolation, represent a solution for improving the overall wellbeing of entire student populations (Upsher, Nobili, et al., 2022; Worsley et al., 2022). Online wellbeing interventions might present a modern solution to this issue of scalability, however attempts to disseminate such interventions have received very low student engagement (e.g Chung et al., 2022).

A potentially very effective alternative would be attempting to make university environments and experiences themselves less threatening to wellbeing (Baik, Larcombe, & Brooker, 2019). By this logic, recent years have seen widespread calls for a paradigm shift away from reactive and personalised approaches, and towards wellbeing initiatives which are preventative and universal (Baik, Larcombe, & Brooker, 2019; Carter et al., 2017; Hughes & Spanner, 2019; Larcombe et al., 2021; Stanton et al., 2016; Taylor et al., 2019; Worsley et al., 2022). Such approaches are often referred to as “settings-based” (Upsher, Nobili, et al., 2022). Theoretically, settings-based approaches aim to create university environments that support wellbeing by addressing core university features such as: assessment structures, curriculum designs, academic workloads, social opportunities, pedagogical styles, classroom environments, teacher-student relationships and so on (Baik, Larcombe, & Brooker, 2019; Browne et al., 2022; Carter et al., 2017; Hughes & Spanner, 2019; Larcombe et al., 2021; Stanton et al., 2016; Upsher et al., 2023; Worsley et al., 2022). This concept is often referred to as ‘embedding’ wellbeing within university contexts. The need to ‘embed’ wellbeing is predicated on the view that all aspects of university environments can affect wellbeing, requiring wellbeing to be embedded throughout the ‘whole university’ (Cage et al., 2021; Hughes & Spanner, 2019; Upsher et al., 2023).

Settings-based approaches are consistent with student recommendations (Sharp & Theiler, 2018). When students are asked for feedback relating to how universities could improve their wellbeing they frequently suggest improvements to core features of university life (Baik, Larcombe, & Brooker, 2019; Cage et al., 2021; Douwes et al., 2023; Jones et al., 2021; Sampson et al., 2022; Scanlon et al., 2007; Sharp & Theiler, 2018; Upsher et al., 2023).

However, while settings-based approaches are theorised as best practice (Browne et al., 2022), evidence for such interventions is scarce (Bennett et al., 2024). Two systematic reviews have synthesised the literature on settings-based university student wellbeing interventions. While the number of interventional studies have increased since 2015, both reviews found that the evidence base had substantial knowledge gaps and was generally of very poor quality (Fernandez et al., 2016; Upsher, Nobili, et al., 2022). Alarming, very few studies worldwide have evaluated the wellbeing impacts of interventions addressing assessment structures or curriculum designs, with three studies published prior to 2015 (Fernandez et al., 2016) and only one additional paper (rated poor) published between 2015-2020 (Upsher, Nobili, et al., 2022).

Several factors make conducting robust trials of settings-based wellbeing interventions challenging. Firstly, this is logistically very difficult research to undertake, particularly with respect to acquiring valid control group data (Bennett et al., 2024). Furthermore, the general lack of high-quality research is no doubt influenced by insufficient resource allocations and consequent lack of researcher experience and expertise (Upsher, Nobili, et al., 2022).

Lack of evidence for settings-based approaches may also be partly due to limited understandings of how university experiences shape wellbeing (Baik, Larcombe, & Brooker, 2019; Campbell et al., 2022; Jones et al., 2021; Larcombe et al., 2021; Sharp & Theiler, 2018; Smith, 2019; Upsher et al., 2023). Attempting to address university factors without first richly

understanding the lived experiences of students runs the risk of university initiatives being well-meaning, but ultimately misdirected (Barkham et al., 2019). Therefore, the knowledge base on university student wellbeing needs to be further developed to allow for empirically informed wellbeing policies (Baik, Larcombe, & Brooker, 2019; Barkham et al., 2019; Browne et al., 2022).

1.3.3 What is (and isn't) wellbeing?

A key limitation to the student wellbeing literature is that different researchers interpret “wellbeing” to mean different things (Dodd et al., 2021; Upsher, Nobili, et al., 2022). Prior to discussing the more specific gaps in the knowledge base which this thesis seeks to address, it is important to recognise the implications of heterogenous wellbeing measurement.

The concept of wellbeing has been described as having “defied simple definition due to its inherent complexity” (Dodge et al., 2012 p.222). While research into wellbeing has become more widespread, there remains no academic consensus on how wellbeing should be defined or measured (Barkham et al., 2019; Dodge et al., 2012; La Placa et al., 2013). Rather, there are several different definitional frameworks that vary in scope and degree of overlap (Linton et al., 2016; Westerhof & Keyes, 2010).

The following briefly reviews the most prominent definitional frameworks for wellbeing.¹ Firstly, different scientific disciplines tend to interpret wellbeing in different ways (La Placa et al., 2013). Among psychologists, approaches to wellbeing definition mostly

¹ Throughout this thesis it was surprisingly unnecessary to subscribe to a particular model of wellbeing. Of the four studies involving human participants, two were purely qualitative and participants were not coached to understand wellbeing along a particular framework (Chapters 3 and 6). The other studies involved a novel single-item that measured wellbeing in terms of satisfaction with one's life as a university student (Chapters 4 and 5).

The challenge of defining wellbeing is presented in detail in this introduction chapter partly because it is not given due attention within the papers that make up the body of this thesis.

abide by either the hedonic or eudaimonic traditions (Dodge et al., 2012; Su et al., 2014; Westerhof & Keyes, 2010).

Hedonic wellbeing relates to an individual's affect and life-satisfaction and is at times referred to as "emotional wellbeing" (Westerhof & Keyes, 2010). The most prominent framework within the hedonic tradition is Ed Diener's model of "subjective well-being". Diener defined wellbeing as encompassing both cognitive wellbeing (how satisfied someone is with their life) and affective wellbeing (experiences of positive and negative affect) (Diener, 1984). Importantly, this model emphasises that wellbeing is not merely indicated by an absence of negative experiences, but also by the presence of positive experiences (Su et al., 2014).

While the hedonic tradition focuses on emotional experiences, the eudaimonic tradition construes wellbeing as relating to whether an individual is fulfilling their potential and displaying optimal psychological functioning (Waterman, 1993; Westerhof & Keyes, 2010). In 1989, Carol Ryff viewed the hedonic perspective as having an overly narrow focus on affective experiences (Ryff, 1989). Ryff proposed a new model called "Psychological Wellbeing" which drew upon pre-existing humanistic theories of positive psychological functioning such as Abraham Maslow's 'hierarchy of needs', and Carl Rogers' concept of the 'fully functioning person' (Maslow, 1962; Rogers, 1961). Ryff's model posited self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth as the six core dimensions of psychological wellbeing (Ryff, 1989). Affective experiences are absent from this model which is typical of a eudaimonic perspective.

Another key framework within the eudaimonic tradition is Self-Determination theory which views the three basic psychological needs of competence, autonomy and relatedness as essential to "an ongoing sense of integrity and well-being or eudaimonia" (Ryan & Deci,

2000 p.75). A more recent framework, the PERMA model, somewhat bridged the hedonic and eudaimonic traditions by construing positive emotions as one of the elements that allows one to ‘flourish’ alongside more eudaimonic concepts of: engagement, relationships, meaning, and accomplishment (Seligman, 2011). It is worth emphasising that, while the aforementioned models are all prominent, none have emerged as the pre-eminent conceptual understanding of wellbeing (Dodd et al., 2021; Linton et al., 2016).

Wellbeing has also been considered in terms of its distinction from mental illness. The “dual continua” model has a strong empirical basis and posits that the experience of mental health or mental wellbeing should be viewed as a related but distinct concept to mental illness (Iasiello et al., 2020; Westerhof & Keyes, 2010).² The dual continua model empirically reaffirms the view that experiencing wellbeing requires more than the absence of negative experiences (Keyes, 2005).

The challenge of defining wellbeing is further complicated by the tenuous distinction between the terms “mental health” and “wellbeing”.³ Despite evidence that these terms have quite different connotations (Galderisi et al., 2015), they are often used interchangeably or combined into the phrase “mental health and wellbeing” (e.g Worsley et al., 2022). Perhaps unhelpfully, the World Health Organisation has defined “mental health” as “a state of wellbeing”, further linking the two terms (Herrman et al., 2005).

Wellbeing is also inconsistently qualified with adjectives such as “mental”, “psychological”, “subjective”, or “psychosocial”, usually without clarification of whether these qualifiers denote distinct views of wellbeing (Dodd et al., 2021). Speaking to the general confusion surrounding what “wellbeing” means, Rachel Dodge began her 2012 paper

² Wellbeing is defined by this school of thought as entailing a combination of the hedonic and eudaimonic models of wellbeing, as well as social functioning (social wellbeing), see Keyes, 2005. The idea of social wellbeing, while interesting, is beyond the scope of this thesis.

³ Keyes tends to use the terms mental health and wellbeing interchangeably. His theory mostly relates to the idea that the two are distinct from mental illness.

“The challenge of defining wellbeing” by sardonically observing that there is not even an academic consensus on how wellbeing (or well-being) is spelt (Dodge et al., 2012 p.222).

1.3.3.1 Heterogeneity in Wellbeing Measurement.

Lack of definitional clarity leads to inconsistencies in wellbeing measurement (Dodd et al., 2021). Due to the absence of a pre-eminent definitional framework, psychometrics designed to measure “wellbeing” have construed the term in vastly different ways (Dodd et al., 2021). A 2016 review found 99 published wellbeing psychometrics which assessed a total of 196 distinct wellbeing ‘dimensions’ (Linton et al., 2016). Troublingly, the review noted that authors of validation papers often did not provide a clear definition of wellbeing by which to understand their measure. Therefore, even studies using explicit wellbeing measures may suffer from ambiguity surrounding what these studies have actually assessed (Linton et al., 2016).

Secondly, self-described “wellbeing” studies often operationalise wellbeing using psychometrics which were not explicitly designed to measure wellbeing (Dodd et al., 2021). Most notably, “wellbeing” has frequently been operationalised by instruments that screen for clinically relevant negative outcomes such as distress, depression, stress, and anxiety (Barkham et al., 2019; Dodd et al., 2021; Scott & Takarangi, 2019). This directly contradicts the view that experiencing wellbeing requires more than the absence of negative features (van Agteren et al., 2019). Many of these ‘negative experience’ psychometrics were designed for clinical populations which further calls into question the appropriateness of their use in student samples (Dodd et al., 2021). Furthermore, it is not uncommon for papers to measure the wellbeing of university students using instruments assessing concepts more typically thought of as wellbeing predictors, such as self-esteem or optimism (Dodd et al., 2021).

Heterogeneity of wellbeing measurement is widely recognised as a major limitation of the university student wellbeing literature (Barkham et al., 2019; Dodd et al., 2021; van

Agteren et al., 2019). As wellbeing becomes more of a priority for universities, it is increasingly important that the concept is clearly demarcated and consistently measured (Barkham et al., 2019; Dodd et al., 2021). At present, engaging with student wellbeing research requires vigilant attention to how each researcher has measured wellbeing. Discrepancies between “wellbeing” studies could be artefacts of the different wellbeing outcomes used (Barkham et al., 2019; Dodd et al., 2021; Linton et al., 2016; Upsher, Nobili, et al., 2022). This heterogeneity in wellbeing outcomes inherently increases the challenge of comprehending the existing literature, linking datasets and building a robust evidence base with which to inform university wellbeing policies (Barkham et al., 2019; Campbell et al., 2022; Fernandez et al., 2016; Linton et al., 2016; Upsher, Nobili, et al., 2022).

Furthermore, heterogenous wellbeing measurement limits the capacity to conduct meta-analyses of student wellbeing research (Campbell et al., 2022; Upsher, Nobili, et al., 2022). Inconsistent measurement has recently thwarted attempts to identify the most important factors underlying student wellbeing (Campbell et al., 2022) and the most effective interventions to support student wellbeing (Upsher, Nobili, et al., 2022).

1.3.4 Limited understanding of factors associated with university student wellbeing

As aforementioned, there is a dearth of high-quality research examining approaches for improving the wellbeing of university populations (Bennett et al., 2024; Fernandez et al., 2016; Upsher, Nobili, et al., 2022). The absence of interventional studies is partly a symptom of wider knowledge gaps in the university student wellbeing literature (Barkham et al., 2019; Browne et al., 2022; Larcombe et al., 2021; Upsher, Nobili, et al., 2022). Ensuring that university initiatives are evidence-informed requires expanding the overall quality and coverage of the empirical knowledge base (Barkham et al., 2019; Upsher, Nobili, et al., 2022). Naturally elevating the ‘overall knowledge base’ is well-beyond the scope of a single thesis. Therefore, this thesis aims to contribute towards this overarching goal by addressing a

handful of more focused research questions. The following reviews specific knowledge gaps addressed by this thesis.

Firstly, university initiatives should be informed by robust empirical insights into the factors that underlie wellbeing (Barkham et al., 2019; Beiter et al., 2015; Upsher et al., 2023). In particular, universities should address factors which are both important to wellbeing and which university are also feasibly able to intervene upon (Larcombe et al., 2021). However, while it is recognised that universities are ideally situated to support students by addressing features of university life, the specific mechanisms by which university life impacts student wellbeing remain under-researched (Campbell et al., 2022; Jones et al., 2021; Larcombe et al., 2021; Sharp & Theiler, 2018). For instance, although several studies have reported that ‘academic stress’ is detrimental to wellbeing, the features of university life that induce academic stress have received relatively little attention (Larcombe et al., 2021). This limits capacities to identify actionable targets for university intervention (Larcombe et al., 2021). Researchers have also pointed towards relatively shallow understandings of the wellbeing impacts of key features of university life such as: assessment formats (Jones et al., 2021), curriculum and pedagogy (Upsher et al., 2023), relationships between teachers and students (Eloff et al., 2023; Riva et al., 2020), and academic workloads (Smith, 2019).

Furthermore, university student populations are diverse, with students demarcated by demographic categories such as academic discipline, international/domestic status, undergraduate/postgraduate status, part-time/full-time status, and so on. Demographic factors may predict systematic differences in levels of wellbeing and in the factors influencing wellbeing between sub-sets of student populations (Browne et al., 2022; McLafferty et al., 2022).

Research assessing wellbeing differences between student groups is somewhat scarce. A particularly critical knowledge gap is that relatively few studies have compared wellbeing

between students from different academic disciplines (Allen et al., 2022; Larcombe et al., 2016; C. Leahy et al., 2010; Lipson et al., 2022; McLafferty et al., 2022). Different academic disciplines may attract students with varying propensities for poor wellbeing and each discipline will impose unique disciplinary stressors (Allen et al., 2022; Lewis & Cardwell, 2020). Understanding which student groups appear especially at-risk of poor wellbeing could direct university resources towards students standing to benefit most (Allen et al., 2022; Erekson et al., 2023; Lipson et al., 2022; McLafferty et al., 2022).

Moreover, without assessing the relative wellbeing of different student groups university policies may be constructed on the assumption that certain student groups are especially at-risk or poor wellbeing, when in fact they are not. This could lead to inefficient use of resources. For example, Australian international students have frequently been assumed to be at greater risk of poor wellbeing than their domestic peers (Larcombe et al., 2024). However, papers comparing Australian domestic and international students report mixed findings, with several studies observing significantly better wellbeing among international students (Dingle et al., 2024; Larcombe et al., 2024; Sanci et al., 2022). Future research should more comprehensively explore which groups of university students are at-risk of poor wellbeing.

1.3.5 Need for further qualitative research exploring the lived wellbeing experiences of present-day university students

Moreover, despite the fact that university students are the ‘experts’ in their lived wellbeing experiences, researchers have identified an overall paucity in qualitative research that leverages this expertise (Baik, Larcombe, & Brooker, 2019). Consequently, multiple prominent university student wellbeing frameworks have argued that expanding the knowledge base requires qualitative enquiry that ‘centres’ student perspectives. (Browne et al., 2022; Hughes & Spanner, 2019). Additionally, these frameworks advocate for the active

engagement of student co-designers throughout all stages of the development, implementation, and evaluation of university wellbeing policies (Browne et al., 2022; Hughes & Spanner, 2019). Encouragingly, the last 5-10 years have seen a proliferation of qualitative studies exploring student wellbeing (e.g Baik, Larcombe, & Brooker, 2019; Brewster et al., 2022; Cage et al., 2021; Douwes et al., 2023; Eloff et al., 2022; Jones et al., 2021; Riva et al., 2020; Sampson et al., 2022; Upsher et al., 2023). However, the bulk of this research has been conducted in the United Kingdom (c.f Baik, Larcombe, & Brooker, 2019; Eloff et al., 2022). Further research, particularly within other national contexts, is required to progress the literature towards fully realised qualitative understandings of how university life impacts student wellbeing.

Additionally, if quantitative research indicates that particular student groups may be at-risk of poor wellbeing, then in-depth qualitative inquiry examining the experiences of such at-risk groups could provide invaluable insights into developing tailored wellbeing support (Allen et al., 2022; McLafferty et al., 2022).

1.3.6 Low response rates as a systemic issue within university student wellbeing research

Elevating the overall quality of the evidence base requires collecting valid wellbeing data. A critical factor determining the utility of wellbeing data is external validity, in this case referring to whether wellbeing trends and associations observed within student samples accurately represent trends and associations within broader student populations (Groves, 2006). Chapters 2, 4 and 5 consider the implications of low response rates received by university student wellbeing surveys. To briefly summarise, average survey response rates have declining since the late 20th century in both student and general populations (Brick & Williams, 2012; Tschepikow, 2012). Response rates to annual national surveys of college student wellbeing in the United States have declined from around 20-25% in 2007-2012, to 11% and 9% in the most recent iterations (ACHA, 2024; Eisenberg et al., 2024). While not

ensuring the presence of non-response bias, lower response rates increase the potential for non-response bias (Groves, 2006). Response rates also appear to decrease as target populations increase, which is troubling given the need to collect wellbeing data from whole-university populations in order to identify at-risk subsets of student populations (Wu et al., 2022). Therefore, future researchers should consider methods for improving response rates to whole-university surveys to increase confidence in data representativeness.

1.3.7 Concerns surrounding generalisability of research across national contexts

Finally, university systems can differ substantially between countries, casting doubt over the generalisability of student wellbeing research across national contexts (Bitsika et al., 2010; Hagel et al., 2012). Multi-national studies have found significant differences in both levels and predictors of student wellbeing between nations (Li et al., 2022; Maercker et al., 2015; Turner et al., 2021).

Of particular concern to Australian university policymakers is the fact that the bulk of existing research into student wellbeing has been conducted in US residential college contexts which have several marked differences to Australian university systems (Hagel et al., 2012; Linden & Stuart, 2020; Worsley et al., 2022). In the US, a conventional undergraduate degree takes four years and students do not specialise in a particular discipline until the third year. Australian undergraduate degrees are typically three-years with students specialising in the first year, meaning that Australian university students are siphoned into academic disciplines more quickly than their American counterparts (Hagel et al., 2012).

Australian universities are also notable for being commuter, rather than residential universities, with substantially lower proportions of students living either on or near campus relative to the US and the UK (CBRE, 2024; Hagel et al., 2012). Consequently, Australian university students spend unusually large amounts of time commuting to and from university

and are less likely to enjoy the increased engagement in university life afforded by living on or near campus (Hagel et al., 2012; Steel & Huggins, 2016).

Australia is also home to an almost uniquely high proportion of international students (33%, 2nd in the world, compared to 6% in the US) most of whom speak English as a second language (Marangell & Baik, 2022; OECD, 2024).⁴ International students logically face substantial challenges which are not experienced by domestic students, including general acculturative stress, learning in a second language, loss of family and social networks from their home country, and disproportionately high levels of residential instability (Larcombe et al., 2024).⁵

Reflecting these differences across national contexts, a 2010 study asked Australian university students to explain the stressors imposed by transitioning to university and noted extensive disparities between Australian and American responses (Bitsika et al., 2010). As such, when designing wellbeing policies, it would be advisable to some degree to prioritise research conducted on local students. Therefore, there is value in synthesising the university student wellbeing research conducted within particular national contexts.

1.4 Thesis aims and rationale

Enabling universities to implement evidence-based wellbeing reforms requires elevating and expanding the empirical knowledge base (Barkham et al., 2019; Upsher, Nobili, et al., 2022). As aforementioned, attempting to expand the entirety of the evidence base is well beyond the scope of a single PhD project. Therefore, in order to feasibly contribute towards this overarching goal, this thesis will narrow the context of the research and attempt to address three specific research aims.

⁴ Australia has the second highest proportion of international students behind Liechtenstein which has a national population of roughly 40000.

⁵ As aforementioned, Australian international students may not experience significantly worse wellbeing than domestic students despite these additional challenges.

1.4.1 Context and theoretical perspectives

Firstly, this project will limit its scope to the experiences of Australian university students. This focus on the Australian context is adopted both out of feasibility considerations and, as outlined in section 1.3.7, due to the value in synthesising research conducted within specific national tertiary systems. Additionally, all studies involving human participants (chapters 3-6) will recruit students from The University of Sydney. The University of Sydney is a large, prestigious, research-intensive, public university with its main campus located in inner-city Sydney. While the thesis aims to explore the wellbeing of Australian university students, it must be recognised that student insights are reflective of this particular university context.

To clarify the theoretical underpinnings of this research, given the background of the candidate and supervisory team, the disciplinary perspective of the thesis is rooted in the psychological sciences. Furthermore, while this thesis does not endorse a single superordinate theoretical perspective, there are two key theoretical frameworks which have most influenced this project and which should be acknowledged. Firstly, although a conscious decision was made to not adopt a specific conceptual model of wellbeing, this project's understanding of wellbeing is nevertheless heavily influenced by the "positive psychology" perspective that experiencing wellbeing requires more than the absence of negative psychological experiences (Seligman, 2011; van Agteren et al., 2019). Additionally, the perspectives on student wellbeing adopted within this thesis largely align with the "whole university approach", most notably the view that meaningfully improving the wellbeing of student populations will require embedding wellbeing across the whole 'breadth' of university environments (Hughes & Spanner, 2019).

1.4.2 Research questions and methodologies

This thesis aims to address the following three research questions.

Research Question 1: What factors appear to be associated with the wellbeing of Australian university students?

As outlined during section 1.3.4, developing effective approaches for supporting wellbeing relies upon a thorough understanding of the factors that underlie wellbeing. To facilitate this understanding it is essential to clarify what is currently known. While an existing systematic review has examined university student wellbeing research in the United Kingdom (Campbell et al., 2022), an equivalent systematic research synthesis is yet to be conducted within the Australian context. The absence of such a review means that the present coverage and nature of Australian university student wellbeing research is undetermined.

Chapter 2 addresses this shortcoming. A scoping review methodology, as opposed to a more focused systematic review, with an inclusion criteria that encompasses quantitative, qualitative and experimental research designs was identified as the most appropriate approach given our goal of ‘mapping’ the overall evidence base and identifying knowledge gaps (Munn et al., 2018).

Whereas chapter 2 seeks to clarify existing evidence into factors associated with Australian university student wellbeing, **Chapter 3** aims to provide novel insights by contributing to the burgeoning Australian qualitative evidence base on this topic. In recognition of the under-representation of student perspectives in the existing literature, chapter 3 used an open text response format to provide a diverse student sample with a platform to freely describe the factors they interpret as impacting their wellbeing. Data was firstly analysed using qualitative content analysis to examine the frequencies with which students interpreted various factors as impacting their wellbeing (Schreier, 2012). A supplementary relational analysis was also employed to examine whether certain factors were felt to impact wellbeing indirectly, via cause-and-effect relationships with other factors which in turn influence wellbeing (Robinson, 2011).

As further explained in section 1.3.4, it is important to clarify whether specific demographics of university students are particularly at-risk of poor wellbeing. Comprehensively assessing whether demographic factors are predictive of better or worse wellbeing requires collecting wellbeing data from whole university populations. Therefore, **chapters 4 and 5** report the development and piloting of a novel SMS based approach for surveying a whole university sample. In line with the recommendations of prominent university wellbeing frameworks (Browne et al., 2022; Hughes & Spanner, 2019), this initiative was developed via a series of cognitive interviews wherein the perspectives of a diverse sample of student co-designers informed the format and delivery of the novel SMS survey. The data received from this whole university study allowed for a comprehensive quantitative analysis examining variability in wellbeing between different groups across the whole breadth of the university population.

Research Question 2: What strategies could assist in improving the response rates received by wellbeing surveys of Australian university students?

As outlined during section 1.3.5, declining survey response rates necessitates the development of strategies for increasing response rates to student wellbeing surveys, particularly those recruiting whole university samples. One approach would be to review existing research and explore whether different features of university wellbeing surveys (e.g target population, survey format, survey context, recruitment strategies) appear to influence response rates. Such an exercise could identify potential approaches for increasing response rates in future research. As such, the scoping review within **chapter 2** had the additional objective of clarifying the response rates typically received by Australian university student wellbeing surveys.

Additionally, university student wellbeing data is conventionally collected via email-delivered online surveys. A potential strategy for improving response rates would be to

deliver surveys via a different medium. To this end, **chapters 4 and 5** examined whether delivering a whole-university survey via SMS might provide an acceptable and feasible alternative to typical email approaches.

Research Question 3: What are the lived wellbeing experiences of Australian university students who appear at-risk of poor wellbeing?

As outlined in section 1.3.6, there is currently a paucity of qualitative research exploring the wellbeing experiences of Australian university students. A potentially very effective application of qualitative research would be to examine the experiences of student groups whom quantitative data indicates may be at-risk of poor wellbeing. By this logic, **chapter 6** sought to richly understand the lived experiences of a law student sample. In-depth semi-structured interviews were chosen to facilitate a nuanced dissection of student narratives and of the ways that university life shapes wellbeing. This data was then analysed via an inductive reflexive thematic analysis which sought to ‘give life’ to student perspectives and, in doing so, identify potential strategies for supporting the wellbeing of this at-risk group (Braun & Clarke, 2022).

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Chapter 2: A scoping review of factors associated with the wellbeing of Australian university students

Preface

This chapter presents the first scoping review of research relating to Australian university student wellbeing. Developing effective support for student wellbeing relies upon understanding the factors that underlie wellbeing. Therefore, clarifying what is currently known about factors associated with wellbeing is necessary for guiding evidence-based recommendations for university policy (Campbell et al., 2022; Linden & Stuart, 2020). Synthesising the existing evidence base also allows identification of key knowledge gaps which could be addressed by future research.

Furthermore, researchers have raised concerns that the practical utility of student wellbeing literature may be constrained by heterogeneity in wellbeing outcomes and potential non-response bias stemming from poor response rates (Barkham et al., 2019). The scope of these concerns is yet to be examined within the Australian literature specifically. We therefore additionally sought to explore consistency of wellbeing measurement and typical response rates reported by wellbeing research conducted on Australian university students.

This chapter addresses the following research questions underlying this thesis:

Research Question 1. *What factors appear to be associated with the wellbeing of Australian university students?*

Research Question 2. *What strategies could assist in improving the response rates received by wellbeing surveys of Australian university students?*

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AUTHORSHIP STATEMENT

The co-authors of the paper “Gilmore A, McNeilage A & Ashton-James C. *A scoping review of factors associated with the wellbeing of Australian university students*” confirm that

Angus Hamilton Gilmore has provided the following contributions to the study:

- conception and design of the research
- data analysis and interpretation of the findings
- writing of the manuscript and critical appraisal of the content

As the primary supervisor for the candidate upon which this thesis is based, I can confirm that the authorship attribution statements above are correct.

Signed:

A solid black rectangular box used to redact the signature of the Associate Professor.

Associate Professor Claire Ashton-James

Date: 25th February 2025

A scoping review of factors associated with Australian university student wellbeing

Angus H. Gilmore · Amy G. McNeilage · Claire E. Ashton-James

Abstract: Universities have a social obligation to support student wellbeing. Given that university experiences differ across countries, synthesising student wellbeing research within specific national contexts can assist policy makers in identifying research most relevant to local students. A scoping review was conducted to (i) map the factors associated with Australian university student wellbeing, (ii) identify knowledge gaps, and (iii) assess the response rates reported in this literature. 160 studies were included in the review. Associations were reported between wellbeing and 242 different factors. Factors were thematically grouped into psychological, social, demographic, university-specific, lifestyle, aversive life-events, and work-related/financial categories. Several knowledge gaps were identified. These included: Inconsistent wellbeing measurement, non-representative sampling, limited understanding of university-specific factors, limited research identifying at-risk student groups, and absence of interventional studies addressing features of university environments or experiences. Excluding whole-of-university studies, the average response rate was 37.7%, although response rates were lower in online surveys (24.8%) and in studies recruiting whole-of-university samples (5.6%). In-class surveys received the highest response rates (57.3%). Further research is needed to address knowledge gaps identified in this review.

Keywords: wellbeing; higher education; mental health; university policy; scoping review

1. Introduction

University life presents a challenge to student wellbeing (Cleary et al., 2011). Longitudinal studies have consistently observed declines in student wellbeing (and related concepts) during the first year of undergraduate study (Andrews & Wilding, 2004; Bewick et al., 2010; Conley et al., 2020; Kroshus et al., 2021) and several studies have observed worse wellbeing among university students relative to non-student samples (Bore et al., 2016; Ibrahim et al., 2013; Larcombe et al., 2021; Leahy et al., 2010; Stallman, 2010). Poor university student wellbeing also predicts diminished academic performance and increased rates of university drop-out (Bruffaerts et al., 2018; Lipson & Eisenberg, 2018; Zając et al., 2024).

Logically, universities are ideally situated to support university students, for instance, by providing access to counselling or by creating university environments and curriculums which empower wellbeing (Larcombe et al., 2021; Stallman, 2012; Taylor et al., 2019; Upsher et al., 2023). In theory, universities wellbeing policies should aim to address and ameliorate factors that negatively impact students (Baik et al., 2019; Cleary et al., 2011; Jones et al., 2021). To construct such policies requires comprehensively understanding the factors associated with student wellbeing (Baik et al., 2019; Campbell et al., 2022; Kroshus et al., 2021; Pedrelli et al., 2015).



University student wellbeing has been researched extensively. A 2020 scoping review mapped the academic literature relating to the stress and wellbeing of tertiary students worldwide (Linden & Stuart, 2020). The review noted many factors associated with student wellbeing, including challenges adjusting to university, academic stress, resilience, absence of social support, financial stress, and future uncertainty (Linden & Stuart, 2020). A 2022 review examined factors influencing poor mental health and wellbeing of students in the United Kingdom. This review identified loneliness and adverse childhood experiences as deleterious, while university belongingness, student engagement, social support, and resilience were protective factors (Campbell et al., 2022).

However, university systems and student experiences differ across national and cultural contexts, diminishing the generalisability of university student wellbeing research across countries (Bitsika et al., 2010; Hagel et al., 2012; Suárez Reyes & Van den Broucke, 2016). For example, Australia has unusually high proportions of international students (OECD, 2024) and unusually low rates of students living on-campus (CBRE, 2024), particularly compared to the United States where much of the existing research has been conducted (Linden & Stuart, 2020). Multinational studies have found disparities in levels of student wellbeing across national contexts, as well as differences in the strengths of various wellbeing predictors such as resilience, social support, and value-orientations (Li et al., 2022; Maercker et al., 2015; Turner et al., 2021).

As such, policy makers and researchers would benefit from syntheses of the student wellbeing research conducted within their particular national context. Such an exercise could summarise the existing literature in order to identify appropriate targets for university initiatives and ensure that university policies are sufficiently informed by existing empirical research (Barkham et al., 2019; Linden & Stuart, 2020). Furthermore, such a review could assist researchers by identifying relevant knowledge gaps and future research directions. This scoping review maps the literature conducted on the wellbeing of Australian university students; a similar review has previously been undertaken in the United Kingdom (Campbell et al., 2022).

Moreover, “wellbeing” is a complex concept with no unifying academic consensus regarding its definition (A. L. Dodd et al., 2021; Dodge et al., 2012). A recent review found significant heterogeneity in the conceptualisation and measurement of university student wellbeing in research conducted in the United Kingdom (A. L. Dodd et al., 2021). Lack of consistency in wellbeing measurement may diminish both the comparability between wellbeing findings and capacities to conduct meta-analyses of wellbeing research (Campbell et al., 2022; Linton et al., 2016; Upsher et al., 2022). Understand the factors relating to Australian university student wellbeing requires also examining how wellbeing has been defined and measured within Australian university contexts.

1.1 Response rates and non-response bias

Declining rates of survey response have been observed in both student and general populations across the past three decades (Brick & Williams, 2012; Fosnacht et al., 2017; Peytchev, 2012). Reluctance to participate in surveys has been theorised to stem from oversaturation of survey requests, perceived lack of benefits to completing surveys, and lack of trust in the motives behind surveys (Leeper, 2019; Tschepikow, 2012). Since surveys are commonplace in student wellbeing research, the Australian university student wellbeing literature may be susceptible to non-response bias, particularly if a student’s wellbeing influences their decision to participate (Groves, 2006).

Online survey response rates appear to differ depending on the population being surveyed, with online surveys recruiting specific populations tending to produce higher response than

surveys on more general populations (Wu et al., 2022). Furthermore, survey contexts and formats may influence response rates, with an Australian study observing substantially higher response rates to in-class surveys relative to email (Steinmetz et al., 2020).

1.2 The current study

To date, there have been no systematic reviews of the factors associated with the wellbeing of Australian university students. The current study systematically reviewed the Australian university student wellbeing literature to answer the following questions:

1. What is the scope of the literature on factors associated with the wellbeing of Australian university students?
 - a. Do there appear to be gaps within this literature?
 - b. How has wellbeing been measured within this literature?
2. What are the typical response rates reported within this literature?
 - a. Do any factors appear to influence student response rates?

2. Method

Scoping reviews allow for identification of key evidence and knowledge gaps within a body of research, as well as examination of how research is conducted within a given field (Munn et al., 2018). As such, a scoping review was identified as the most suitable approach with which to address our research goals. The current review followed the recommendations of the Joanne Briggs Institute Manual of Evidence Synthesis (Aromataris & Munn, 2020) and the reporting guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analysis extension for Scoping Reviews Checklist (PRISMA-ScR) (Tricco et al., 2018). The review protocol was registered prospectively on the Open Science Framework on August 1st, 2022: https://osf.io/9h7wx/?view_only=98c791dd58a5467b86b0ba80cc00c537

2.1 Eligibility criteria

To meet inclusion criteria, papers needed to report original data from students enrolled at an Australian university at the time of data collection. Papers were included if they explicitly used the term “wellbeing” to describe a reported variable and if they reported at least one association between this ‘wellbeing’ variable and another variable. Quantitative, qualitative, mixed-methods and experimental papers were included. Quantitative associations were defined as statistical associations between a wellbeing outcome and another factor, typically as a correlation or regression coefficient. Qualitative associations were recorded whenever a qualitative paper explicitly described a factor as influencing wellbeing. Experimental designs were included if the intervention was explicitly intended to influence wellbeing. No restrictions were placed on the context of each study, provided participants were Australian university students. The search was limited to English language. No limits were placed on time of publication.

2.2 Information sources

To identify potentially relevant documents the following databases were searched: PSYCinfo, Medline, SCOPUS, and Web of Science.

2.3 Search strategy

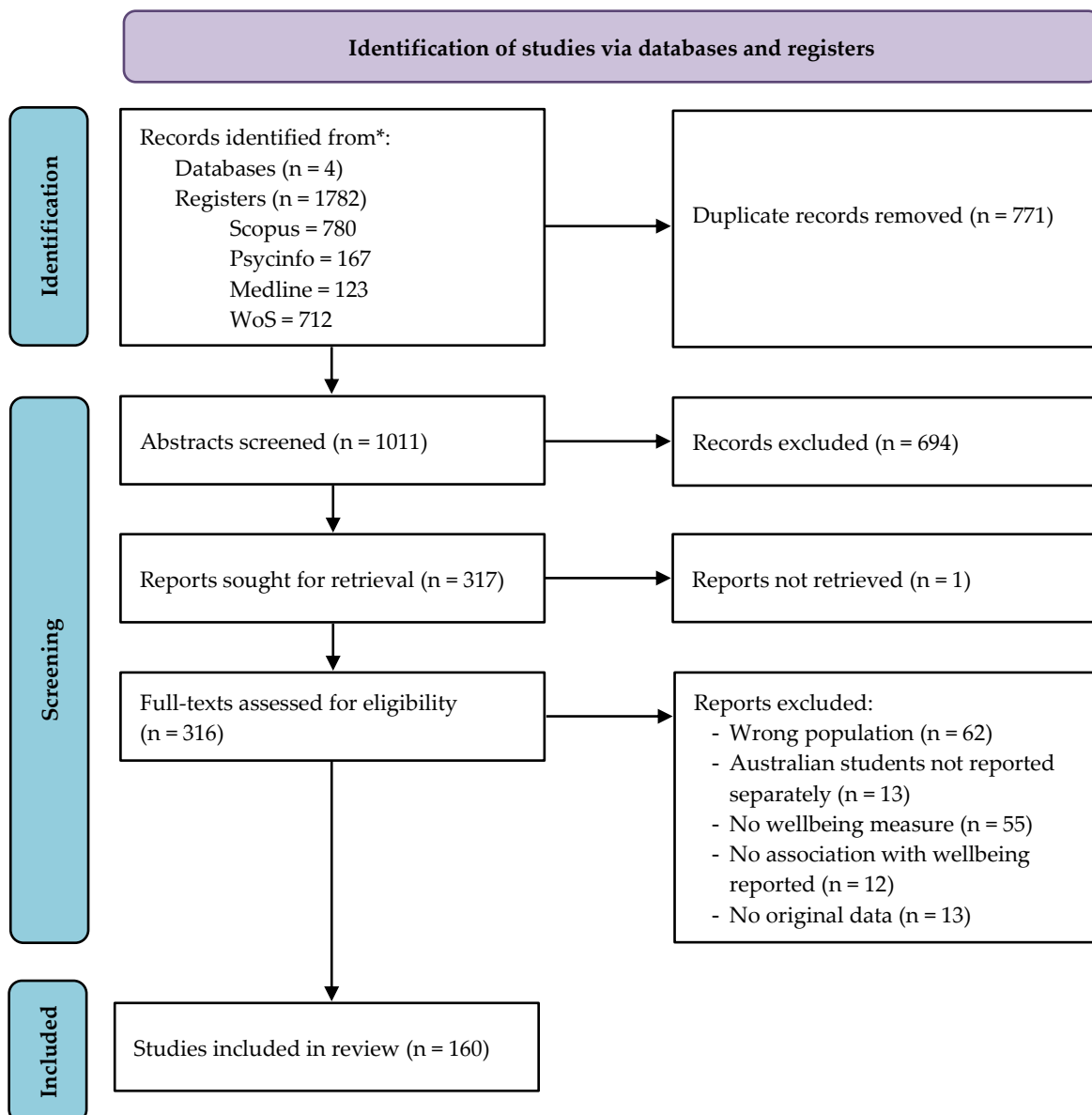
The search strategy was developed by a librarian and refined by the research team. The final search strategy is depicted in Figure 1 in Appendix 1. The most recent search was conducted on

August 24th, 2022. Search results were exported into Endnote and duplicates were removed. Following de-duplication, sources were uploaded onto Covidence. Grey-literature and reference lists were not searched due to the large number of sources retained at the end of second-pass screening.

2.4 Selection of the sources of evidence

To pilot first-round screening, titles and abstracts of the same 100 publications were screened by two reviewers. Once this pilot screening returned acceptable inter-rater consistency (>85%), the remaining 911 abstracts were screened by both reviewers. Conflicts were resolved by reviewer discussion. In total, 317 publications were selected for full-text screening, 1 of which could not be located. To pilot second round screening, each reviewer screened the same 20 full texts. Once this pilot screening returned acceptable inter-rater consistency (>85%), the remaining 296 full texts were screened by both reviewers. Conflicts were again resolved by discussion and 160 full texts were included in the review. See Figure 2.

Figure 2. Prisma flow chart depicting the selection of relevant publications



2.5 Data extraction

After identifying relevant publications, the following data were extracted from each paper. (1) Study characteristics: Year of publication, publication format, research design, study aims, wellbeing definition, wellbeing measures. (2) Sample characteristics: Sample size, response rate, characteristics of student participants, university location, recruitment strategy. (3) Study outcomes: Factors associated with wellbeing (including direction and significance where applicable), key findings. Data was recorded using Microsoft Excel.

3. Results

Out of 160 included papers, 92 used non-experimental quantitative methods, 29 used non-experimental qualitative approaches, 28 used experimental approaches and 11 used mixed methods approaches. Six papers were published before 2000, 16 between 2001-2010, 22 between 2011-2015, and 116 between 2016 and August 2022, indicating a growing interest in the field.

Australian university student wellbeing was examined in relation to 242 distinct factors. To synthesize the literature, factors were grouped conceptually into psychological, social, demographic, university-specific, lifestyle, work-related/financial, and aversive life-experiences. Psychological factors were further clustered into affect, personality, cognitive skills, cognitive styles, attitudes and beliefs, self-concept, motivation, and spirituality. Table 1 depicts the prevalence, direction, and significance of all identified quantitative associations (see Appendix 2). Table 2 depicts the prevalence and direction of all identified qualitative associations (see Appendix 2). Included studies have been assigned corresponding numbers (see List 1 in Appendix 3) for the complete numbered list.

3.1 Quantitative research into Australian university student wellbeing

3.1.1 Research design and sample characteristics

Of the 92 papers using non-experimental quantitative methods, 84 reported cross-sectional data and 8 longitudinal data. Eleven additional papers used mixed methods designs. Quantitative associations from mixed-method papers are reported in Table 1 (see Appendix 2).

Only two quantitative studies collected samples intended to be relatively representative of the whole Australian student base, either by recruiting from all Australian universities (Stallman et al., 2017) or from at least one university in each state (R. Dodd et al., 2021). One such study had a sample size of 787, 41% of whom were medicine and health students (R. Dodd et al., 2021). The other utilised archival baseline data collected by a wellbeing support website offered to all Australian university students ($n = 6195$, 91% domestic, 77% female) (Stallman et al., 2017). A third study recruited from 5 'major Australian universities' but did not provide a response rate or clarify whether these 5 universities were representative of the whole Australian student base (Usher & Curran, 2018).

Six studies attempted to recruit a whole institution's student base, primarily via student email lists (Larcombe et al., 2021; Liu et al., 2021; Merhej et al., 2022; Mulder & Cashin, 2015; Skromanis et al., 2018; Watson et al., 2015). As Table 5 depicts, these studies tended to report particularly low response rates.

The normative sampling approach was recruiting specific subsets of university students, usually from single institutions. Many studies sampled specific student groups on the logic that these groups had distinctive experiences that would not generalise to other student groups (e.g., Saikal et al., 2020). The main exceptions to this rule were samples of psychology students participating for course credit (e.g., Fullerton et al., 2021). Sampling by academic discipline was

the most common approach among quantitative studies (59 out of 92), with psychology (18), medicine (11), law (5) and nursing (3) students studied most often. Fourteen studies recruited first year students, often without clarifying whether this referred specifically to first-year undergraduates. Three papers solely recruited international students (Praharsu et al., 2017; Rosenthal et al., 2008; Russell et al., 2010). In six cases the sample could not be qualified beyond the fact that participants were Australian university students.

3.1.2 Quantitative associations with Australian university student wellbeing

Quantitative studies have predominantly explored associations between wellbeing and various psychological concepts, most notably resilience, mindfulness and personality traits. The prevalence of research into psychological factors, often derived from prominent psychological models (e.g., The five-factor model, self-determination theory) indicates that quantitative research into Australian university student wellbeing has primarily been conducted within the psychological sciences. This is also indicated by over-representation of psychology student samples.

Positive social experiences and university belonging positively predicted wellbeing across a diverse range of samples. A smaller number of studies explored associations between family support and student wellbeing, with ongoing connections with family associated with increased wellbeing, although two studies found that autonomy from parents predicted greater wellbeing. No study specifically considered associations between romantic relationships and student wellbeing.

Various lifestyle factors were considered, with sleep quality most consistently predicting greater wellbeing. Hazardous lifestyle behaviours were studied infrequently but were typically associated with significantly worse wellbeing. Financial stress was consistently negatively associated with wellbeing across diverse samples.

Female gender was variably associated with either significantly poorer wellbeing or was not significantly different relative to male gender. Older age was typically associated with either better wellbeing or was not a significant predictor. Despite Australia having unusually high proportions of international students (OECD, 2024), the wellbeing of international and domestic students was only compared on four occasions with predominantly non-significant differences. Undergraduate students reported worse wellbeing than postgraduates in two studies. Only one study compared wellbeing between students of different academic disciplines, reporting worse wellbeing among law students relative to psychology students (Skead & Rogers, 2015). No studies compared the wellbeing of relocating and non-relocating domestic undergraduate students.

Quantitative associations between features of academic life and wellbeing were studied relatively infrequently. Academic stress predicted worse wellbeing across four large and diverse samples. Objective measures of academic performance were either positively or non-significantly associated with wellbeing, while satisfaction with academic performance consistently predicted greater wellbeing.

3.2 Qualitative research into Australian university student wellbeing

3.2.1 Study and sample characteristics

Twenty-nine papers used qualitative approaches, with 19 using one-on-one interview methods, 11 open-text response methods, and two using focus groups. Three papers incorporated both

interview and text-response data. Eleven additional papers used mixed methods designs, the qualitative results of which are reported in Table 2 (see Appendix 2).

Qualitative studies almost exclusively sampled specific student-groups from single-institutions, usually on the logic that these groups had distinctive experiences. Exceptions were three text-response studies, one which recruited a whole university sample ($n = 2776$) (Baik et al., 2019), one which recruited social work students from 29 universities ($n = 2320$) (Gair & Baglow, 2018) and another which recruited mature-age students from several regional universities ($n = 1879$) (Crawford et al., 2022). Seven qualitative studies specifically sampled international students. Four studies sampled medical students and three nursing students. Four studies qualitatively explored the experiences of first-year undergraduate students, all by the same author (e.g., Kahu et al., 2022).

3.2.2 *Qualitative associations with Australian university student wellbeing*

Whereas the quantitative research predominantly considered psychological factors, qualitative studies most often described interconnections between wellbeing and university-related experiences. Various student samples identified the negative influence of study/life imbalance and high academic workloads upon student wellbeing. Students highlighted high-quality, engaging teaching and general feelings of being supported academically as empowering wellbeing. The pain of loneliness and the buffering impact of positive social experiences and university belonging was identified by multiple student groups, as was the deleterious impact of financial stress.

3.3 *Interventions addressing Australian university student wellbeing*

Twenty-eight studies reported interventions designed to influence wellbeing, 21 using quantitative evaluation and seven qualitative. Amongst the quantitative approaches, eight used controlled designs, 11 compared pre and post intervention scores without a control and two studies conducted post-intervention only evaluations. Seven qualitative papers evaluated interventions using post-intervention feedback. See Table 3 in Appendix 2.

Once again, interventions were largely conducted within specific student groups, usually specific academic disciplines, the main exception being online interventions made available to large university cohorts (Chung et al., 2022; Simmons & Rman, 2018; Viskovich & Pakenham, 2020). Interventions predominantly entailed some variation of skills training intended to empower students to maintain wellbeing during university.

3.4 *Measurement of wellbeing*

Thirty-five different quantitative instruments were described as wellbeing outcomes. Additionally, 13 studies either used a novel wellbeing questionnaire or did not report their wellbeing instrument. Table 4 shows frequencies and descriptions of each instrument.

A number of studies used scales assessing 'positive' features only, notably the Satisfaction with Life Scale, Warwick Edinburgh Mental Wellbeing Scale, the WHO-5, and Ryff's Psychological Wellbeing Scale. Conversely, many studies used scales assessing negative features and interpreted the absence of negative experiences as indicating the presence of wellbeing. Measures used in this capacity included instruments designed to capture depression, anxiety, distress, stress, suicidal ideation, or indicators of psychiatric illness. The two scales most frequently used in this way were the Depression, Anxiety and Stress Scale (DASS) and the

General Health Questionnaire (GHQ). Positive measures were at times used in conjunction with ‘negative’ indicators to capture a broader range of experiences (e.g., van Agteren et al., 2019).

Multiple studies operationalised wellbeing using measures designed to assess concepts usually construed as wellbeing predictors rather than wellbeing outcomes. Concepts described as wellbeing indicators included self-esteem, optimism, purpose and meaning in life, engagement, emotional exhaustion, and burnout. These concepts were therefore interpreted as wellbeing predictors in some papers, and as wellbeing outcomes in others.

Table 4. *Quantitative instruments used to operationalise wellbeing in research on Australian university students*

Wellbeing Measure	Frequency	Constructs Assessed
Satisfaction with Life Scale (Diener et al., 1985)	21	Positive affect, negative affect, and life satisfaction.
Warwick Edinburgh Mental Wellbeing Scale (Tennant et al., 2007)	16	Positive mental health; positive affect, satisfying interpersonal relationships and positive functioning
Depression, Anxiety and Stress Scale (Lovibond & Lovibond, 1995)	15	Negative emotional states; depression, anxiety and stress
Novel or Not Reported	13	Varied
Positive & Negative Affect Scale (Watson et al., 1988)	13	Positive and negative affect
WHO-5 (World Health Organization, 1998)	9	Positive mental wellbeing
Mental Health Continuum – Short Form (Keyes, 2005)	8	Emotional, Social and Psychological Wellbeing
General Health Questionnaire (Goldberg, 1972)	8	Presence of psychiatric illnesses
Personal Wellbeing Index (International Wellbeing Group, 2024)	7	Various domains of life satisfaction
Ryff’s Psychological Wellbeing Scale (Ryff, 1989)	7	Autonomy, environmental mastery, personal growth, purpose in life, positive relations with others, self-acceptance
State Trait Anxiety Scale (Spielberger et al., 1983)	3	State and trait anxiety
Kessler Psychological Distress Scale 10 (Kessler et al., 2002)	2	Psychological Distress
Psychological General Well-Being Index (Dupuy, 1984)	2	Positive wellbeing, self-control, anxiety and depression, vitality and general health concerns
Trait Emotional Intelligence Questionnaire - Wellbeing Dimension (Petrides et al., 2009)	2	Self-esteem, happiness, and optimism
Mental Health Inventory (Veit & Ware, 1983)	2	Distress and wellbeing
Rosenberg Self-Esteem Scale (Rosenberg, 1979)	2	Self-Esteem
Centre for Epidemiological Depression Scale (Radloff, 1977)	2	Depressive symptoms
	2	Positive and negative emotions

Table 4. *Quantitative instruments used to operationalise wellbeing in research on Australian university students (Cont.)*

Wellbeing Measure	Frequency	Constructs Assessed
Subjective Happiness Scale (Lyubomirsky & Lepper, 1999)	2	Subjective happiness
Meaning in Life Questionnaire (Steger et al., 2006)	2	Presence of meaning in life; search for meaning in life
Consumer Based Wellbeing Scale (Sirgy et al., 2008)	1	Consumer wellbeing
The Flourishing Scale (Diener et al., 2010)	1	Positive relationships, self-esteem, purpose and optimism
Beck Hopelessness Scale (Beck et al., 1974)	1	Hopelessness
Suicidal Ideation Questionnaire (Reynolds, 1988)	1	Suicidal thoughts
Life Orientation Test Revised – Optimism Sub-Scale (Scheier et al., 1994)	1	Optimism
Everyday Feeling Questionnaire (Uher & Goodman, 2010)	1	Psychological wellbeing and distress
Wellbeing Manifestations Measures Scale (Massé et al., 1998)	1	Control of self and events, happiness, social involvement, self-esteem, mental balance and sociability
Comprehensive Quality of Life Scale (Cummins, 1993)	1	Material wellbeing, health, productivity, intimacy, safety, place in the community and emotional wellbeing
Student Life Stress Inventory (Gadzella & Baloglu, 2001)	1	Causes and reactions to stress
Student Version of Utrecht Work Engagement Scale (Schaufeli et al., 2002)	1	Student engagement – absorption, dedication and vigour
Student Version of Oldenburg Burnout Inventory (Reis et al., 2015)	1	Exhaustion and Disengagement
Maslach Burnout Inventory (Maslach & Jackson, 1981)	1	Emotional Exhaustion
Goldberg Anxiety and Depression Scale – Anxiety sub-scale (Goldberg et al., 1988)	1	Anxiety
Abbreviated World Health Organisation Quality of Life Questionnaire (Murphy et al., 2000)	1	Physical and Psychological Functioning
Symptoms Checklist-90 Revised – General Severity Index (Derogatis, 1994)	1	Psychological distress – depression, anxiety and hostility
Adult Manifest Anxiety Scale – College Version (Reynolds et al., 2003)	1	Anxiety – physiological anxiety, social concerns/stress, test anxiety, worry/over sensitivity and lie/validity

3.5 Response rates

Forty-one papers provided interpretable response rates, see Table 5. Treating all studies as one sample, the average response rate overall was 12.6%. Omitting studies recruiting whole

institutions, which had very large target populations, the overall combined response rate was 37.7%.

Studies recruiting from populations of <1000 students (29 of 41) had an average combined response of 42.4%. Studies sampling from populations between 1000-10000 (7 of 41) had an average combined response of 27.2%. Studies recruiting from populations > 10000 (3 of 41) had an average combined response of 5.1%.

Thirty-eight papers reported response rates and recruitment methods. On average, the highest response rates were returned by studies conducted during lectures or tutorials (n = 8, Mean combined response rate = 57.3%, Range = 43-91%). Five studies used mail-back survey methods, the most recent published in 2008 (Mean combined response rate = 46%, Range = 20-73%). The most common recruitment method involved using student email lists to disseminate online survey links. The total combined response rate was 7.7% (n = 19, Range = 4.7-77%), although this increases to 24.8% when omitting whole university studies.

Thirty-seven papers provided response rates for studies conducted on sub-sets of students within the broader population (Mean combined response rate = 37.7%, Range = 11 - 91%). Four studies attempted to recruit entire university student populations via student email lists (Mean combined response rate = 5.6%, Range = 4.7 - 9.1%).

Table 5. Response rates reported by studies on the wellbeing of Australian university students

Authors	Year	Recruitment Strategy	Student Characteristics	Sample Size/ Response Rate
Nielsen et al.	2016	Survey during class	Postgraduate Business	143 (91%)
Innes	2016	Survey during class	Chiropractic	194 (82%)
Saikal et al.	2020	Not Reported	Medical	644 (81.7%)
Turner et al.	2019	Survey during class	Construction Management	183 (80-90%)
Bye et al.	2020	Survey during class	First-Year	342 (80%)
Pekerti et al.	2020	Student Email	International Business	863 (77%)
Gho & Kim	2020	Not Reported	Hotel Management	60 (75%)
Cameron et al	2022	Survey during class	Undergraduate Nursing	113 (74%)
Condon et al.	1995	Mail-Back	Female	146 (73%)
Harth et al.	1992	Not Reported	Medical	403 (72.4%)
King et al.	2016	Survey During Class & Student Email	Medical	454 (68%)
Winefield	1993	Mail-Back	Mature Age	568 (67%)
Hodge et al.	2020	Student Email	Social Work	60 (60%)
Vollmer-Conna et al.	2020	Student Email	Medical	151 (56%)
Hassed et al	2009	Not Reported	First-Year Medical	148 (55%)
Middleton et al.	2021	University Platforms and Social Media	Nursing	693 (46.5%)
Moxham et al.	2018	Survey during class	Nursing	920 (46%)
Rosenthal	2008	Mail-Back	International	979 (44%)
Cotto et al.	2002	Mail-Back	Second-Year	176 (43%)
Russel et al.	2010	Not Reported	International	979 (43%)
Turner et al.	2017	Survey during class	Built Environment	410 (43%)
Johnson	2015	Student Email	Psychology	58 (41%)
Lyons et al.,	2020	University Online Platforms and Social Media	Medical	297 (37.5%)

Table 5. Response rates reported by studies on the wellbeing of Australian university students (Cont.)

Authors	Year	Recruitment Strategy	Student Characteristics	Sample Size/ Response Rate
McNulty et al.	2015	Student Email & Lecture Presentation	First-Year Radiology	59 (37%)
Blevins et al.	2022	Student Email	Dance	76 (36%)
Hearn et al.	2019	Student Email	Indigenous	69 (33%)
Skead et al.	2020	Online Invitation	Law	225 (30%)
Ramagoolam-Atchiamith et al.	2022	Student Email	Hospitality	195 (25%)
Pakenham & Viscovich	2018	Student Email	Psychotherapy	125 (24%)
Wrench et al.	2014	Not Reported	First Year Health Science	132 (23%)
Rasmussen et al.	2022	Student Email (One Reminder)	Nursing and Midwifery	637 (22%)
Skead & Rogers	2014	Student Email	Law	206 (20%)
Steward & Podbury	2003	Mail-Back	First-Year	142 (20%)
Rogers et al.	2010	Posters on Campus	Medical	179 (18%)
Van Agteren et al	2019	Student Email, Newsletter Promotion & Announcements in Lectures	Education, Psychology and Social Work	905 (16.1%)
McKay et al.	2021	Student Email	Education	60 (11%)
Bynes et al.	2020	Student Email, Flyers & Social-Media	Medical	69 (11%)
Skromanis et al.	2018	Student Email, Lottery, Flyers, Social-Media & SMS Reminder	Whole University	1395 (9.1%)
Watson et al.	2015	Student Email & Online Portal Advertisement	Whole University	614 (9%)
Mulder & Cashin	2015	Student Email	Whole University	609 (5.1%)
Liu et al.	2021	Student Email (Five Reminders)	Whole University	3793 (4.7%)

4. Discussion

This review of research into Australian university student wellbeing contributes to the literature in several ways. Primarily, this synthesis can help guide future researchers and policy makers by summarising the existing literature on factors associated with university student wellbeing and identifying gaps within the evidence base. Additionally, this review provides insights into potential approaches for improving wellbeing survey response rates within this field.

4.1 Factors associated with Australian university student wellbeing

To support students effectively requires university policies informed by robust understandings of the factors associated with student wellbeing (Baik et al., 2019; Campbell et al., 2022; Pedrelli et al., 2015). In line with scoping review methodology, this review first aimed to summarise the current state of the literature (Munn et al., 2018).

Our review included 160 papers reporting associations between wellbeing and 242 distinct factors. Australian university student wellbeing has been studied using a diverse range of

research methodologies, although cross-sectional quantitative designs are most prevalent. Furthermore, 28 studies reported on interventions intended to influence the wellbeing of Australian university students, although only eight used controlled designs.

Encouragingly, the breadth of the literature reveals a large existing evidence base which could theoretically inform university policy. By tabling this literature, this review can assist researchers and policy makers in identifying research relevant to their particular goals. For example, policy makers interested in potentially manipulable features associated with wellbeing can access a multitude of Australian papers studying psychological factors such as resilience (Fullerton et al., 2021), mindfulness (Bergin & Pakenham, 2016), self-control (Bore et al., 2016), and self-esteem (Hoffmann et al., 2020). Policy makers interested in reforming aspects of university social environments can refer to papers investigating the protective elements of social support (Praherso et al., 2017) and the deleterious effects of loneliness (Dingle et al., 2022; Liu et al., 2021) and so forth. Such empirical insights help clarify appropriate targets for university intervention (Campbell et al., 2022). However, the tendency towards cross-sectional research limits capacity for causal inferences and early identification of vulnerable students (Brown, 2018).

Studies exploring relationships between wellbeing and university specific factors are likely of particular interest to university policy makers. Significant associations were reported between wellbeing and concepts such as university belongingness (Dingle et al., 2022; Larcombe et al., 2021), satisfaction with academic performance (Russell et al., 2010), feelings of teacher and supervisor support (Nielsen et al., 2017; Saikal et al., 2020), academic workloads (Skead & Rogers, 2014) and study-life imbalance (Bergin & Pakenham, 2015) across a broad range of student groups. While correlational, the consistent statistical significance of these associations speaks to the interconnected relationship between university life and Australian student wellbeing. Furthermore, qualitative feedback indicated a clear tendency for students to perceive wellbeing and university experiences as closely intertwined (Baik et al., 2019; Kahu et al., 2022). This supports the theory that student wellbeing could be improved by university initiatives that directly address university environments and experiences (Baik et al., 2019; Jones et al., 2021; Upsher et al., 2023). However, as expanded below, further research is needed to extend understandings of how university-specific factors shape wellbeing.

4.2 Knowledge gaps and future research directions

This review also sought to identify knowledge gaps and directions for future research. While Australian university student wellbeing has been studied extensively, the practical utility of this literature is constrained by several knowledge gaps. Recognition of these knowledge gaps can guide future research.

4.2.1 Inconsistent wellbeing measurement

We observed substantial heterogeneity in wellbeing measurement. This finding aligns closely with a previous scoping review of university student wellbeing research conducted in the United Kingdom (A. L. Dodd et al., 2021). Australian university student “wellbeing” has often been measured using psychometrics designed to capture negative psychological experiences (e.g., stress, depression, anxiety, distress). This directly contradicts the well supported view that wellbeing represents more than the absence of negative psychological experiences (Iasiello et al., 2020). Wellbeing is also at times measured using psychometrics capturing concepts more typically construed as wellbeing predictors (e.g., self-esteem, engagement, burnout) or via novel or undefined measures. Furthermore, qualitative papers frequently do not define wellbeing, introducing further ambiguity when interpreting qualitative associations.

Therefore, while Australian university student wellbeing has been studied widely, what “wellbeing” means can vary substantially. This heterogeneity of measurement complicates the task of comparing “wellbeing” findings (Barkham et al., 2019; A. L. Dodd et al., 2021; Linton et al., 2016; Upsher et al., 2022). To illustrate, we observed one positive and one non-significant association between openness to experience and wellbeing, indicating a mixed finding. However, considering the wellbeing measures used, we could alternatively report openness to experience as negatively associated with psychological illness in one study (Creed & Evans, 2002) and non-significantly associated with positive affect in another (Rogers et al., 2012).

Inconsistent wellbeing measurement has recently prevented multiple attempts to conduct meta-analyses of university student wellbeing literature within other research contexts (Campbell et al., 2022; Upsher et al., 2022). Our review indicates that meta-analyses of the Australian university student wellbeing literature may also be impracticable due to heterogeneity in measurement. To expand the practical utility of the evidence base, future research should pursue greater consensus in the definition and measurement of the wellbeing of Australian university students (Barkham et al., 2019; A. L. Dodd et al., 2021).

4.2.2 Inconsistent and non-representative sampling

Furthermore, inconsistent and non-representative sampling pervades the literature. Ideally Australian university policymakers and researchers would have access to data from samples which are representative of Australian university students as a whole. However, only two identified studies aspired towards representative ‘Australian’ samples (R. Dodd et al., 2021; Stallman et al., 2017) while whole university studies were published infrequently.

The Australian university student wellbeing literature is instead comprised primarily of studies sampling specific student groups, usually from single institutions. Troublingly, levels and predictors of wellbeing (and related concepts) can differ significantly between student groups (Allen et al., 2022; Erekson et al., 2023; Lipson et al., 2016; McLafferty et al., 2022) and across institutional contexts (Eisenberg et al., 2013; Skead et al., 2020). This calls into question the validity of generalising wellbeing findings collected from specific student groups to broader populations.

Moreover, some student groups are over-represented, while others are under-represented. Sample of students from specific academic disciplines were most prevalent, with psychology and medicine students accounting for 49% of quantitative papers using this approach. The literature, therefore, disproportionately reflects the experiences of students from these disciplines. Comparatively, students from high enrolment disciplines such as business, arts and social science, and engineering are scarcely represented. The paucity of studies sampling arts students is particularly concerning given overseas research indicating that arts students may be especially at-risk of poor wellbeing (Allen et al., 2022; Erekson et al., 2023; Lipson et al., 2016; McLafferty et al., 2022).

Future research should pursue a more representative evidence base, both by recruiting whole-university, or ideally nationally representative samples, and by researching the wellbeing of currently under-represented student groups. Research comparing wellbeing between different institutions can help establish the degree to which wellbeing approaches should be tailored to specific institutional contexts (Eisenberg et al., 2013). Researching under-represented academic disciplines is important both to rectify the omission of these groups from the existing literature, and to inform tailored wellbeing policies implemented at the discipline or school level (Baik et al., 2019; Jones et al., 2021; McLafferty et al., 2022). Notably, one study collected text-response feedback from 2320 social work students across 22 Australian universities. This provided

student-driven insights into targets for discipline specific intervention (Gair & Baglow, 2018). The same approach could be employed within other disciplines.

4.2.3 Under-researched concepts and research questions

This review also helps identify under-researched concepts. In general, the absence of concepts from our synthesis can indicate areas warranting further enquiry. For instance, relationships between drug and alcohol use and Australian university student wellbeing have scarcely been studied.

4.2.3.1 Need for further research into interconnection between university experiences and wellbeing

As aforementioned, universities are most able to influence student's university experiences, meaning that robustly understanding how university life shapes student wellbeing is essential for informing university wellbeing policy (Baik et al., 2019; Campbell et al., 2022; Pedrelli et al., 2015; Riva et al., 2020). While qualitative studies have consistently focused on university-specific experiences, university-specific factors have received comparatively less attention from quantitative Australian researchers. Qualitative studies have also typically focused on the experiences of very specific student groups. Therefore, further research, both quantitative and qualitative, is required to extend understandings of how university-specific factors influence wellbeing.

To highlight an exemplar, one recent study observed that, while 'academic stress' negatively predicts wellbeing, the specific elements of university life which cause academic stress were not well understood. The study recruited a whole university sample to attempt to delineate the features of coursework experiences that predict both academic stress and wellbeing. This helped to identify appropriate and specific targets for university intervention (Larcombe et al., 2021). Further research in this vein is required to provide practical insights into ways universities could reform university experiences to better support student wellbeing.

4.2.3.2 Need for further research into interventions that support wellbeing by addressing features of university life

A qualitative whole-of-university study (n = 2776) reported that students most often felt their wellbeing could be improve by initiatives that directly address university experiences. Student requests included greater clarity and guidance surrounding assessment requirements and feedback, increased teacher empathy and approachability, and redesigning classroom environments to allow greater interaction with peers (Baik et al., 2019). However, in direct contrast to these recommendations, none of the 28 interventional studies included in this review attempted to reform university approaches to create more supportive university environments. Interventions tended to either teach students techniques for managing the stress of university on a relatively individual level (e.g., psychoeducation), or to provide distractions from university stressors (e.g., canine therapy), rather than attempting to reduce the inherent stress of university life (Larcombe et al., 2021). Whether Australian university student wellbeing could be supported by reforms to foundational university experiences, such as academic demands and social environments, is yet to be evaluated. A similar dearth of studies directly addressing features of university life has been identified in overseas research (Upsher et al., 2022). This represents a key knowledge gap which future researchers should seek to address. The relative scarcity of interventional studies using controlled designs also speaks to a need for more gold-standard research into student wellbeing interventions.

4.2.3.3 Limited understanding of at-risk student groups

In addition, this review found surprisingly few studies investigating whether wellbeing varies systematically between different groups of Australian students. While this is partly due to aforementioned tendencies to recruit specific sub-sets of students, studies sampling broad ranges of students often opted not to disaggregate wellbeing data across student groups. Notably, the wellbeing of students from different academic disciplines was only compared on one occasion (Skead et al., 2020). Future researchers should examine whether particular groups of Australian students tend to be at-risk of poor wellbeing and therefore likely to benefit most from targeted support (McLafferty et al. 2022). Furthermore, future research could explore whether the factors predicting wellbeing differ between different student groups. This would provide insights into tailoring wellbeing support to the specific needs of specific student groups (Baik et al., 2019).

4.3 Response rates in Australian university student wellbeing literature

Concerns have been raised over the potential for non-response bias to diminish the external validity of survey research (Brick & Williams, 2012; Reyes, 2020). We observed an average combined response rate of 12.6% when including whole university samples and 37.7% when excluding these samples. The 37.7% result is similar to two recent meta-analyses, one reporting a 44% average response rate for online surveys conducted in the worldwide education sector from 2007-2014 (Wu et al., 2022), and another reporting an 49% average response rate for online surveys of undergraduate students in papers published in four major journals between 2007-2015 (Poynton et al., 2019). However, the average response rate for email delivered surveys (excluding whole-university studies) was 24.8% which falls substantially below these two existing syntheses.

Whole-of-university samples received substantially lower average response rates (5.6%) than research conducted within specific student cohorts (37.7%). This aligns with previous research suggesting that response rates are higher when target populations are more specific and personalised (Wu et al., 2022). Australian university students appear far more willing to participate in surveys perceived as relevant to their personal experience. Researchers recruiting specific sub-sets of student populations might be advised to emphasise the personal relevance of the research to potential participants.

The especially low response rates received by whole-university surveys are alarming as key future research directions, such as acquiring representative Australian datasets and identifying at-risk student groups, require collecting wellbeing data from large and diverse student populations. Furthermore, this low response rate calls into question the external validity of existing whole-university studies.

Therefore, improving response rates to large scale university wellbeing surveys is a key challenge for future researchers. One approach might be to leverage the high response rates received by in-class surveys. In-class surveys had the highest response rate of any recruitment method (57.3%). This aligns with a previous Australian study which reported a response rate of 5% to an email survey increasing to 45% when the same survey was conducted during lectures (Steinmetz et al., 2020). Australian university students appear more willing to participate in research in classroom contexts compared to online, perhaps due to oversaturation of email survey requests (Leeper, 2019; Steinmetz et al., 2020; Tschepikow, 2012).

A 2020 study included in this review described an intriguing approach to sampling incoming first-year undergraduates. Whereas conventional recruitment would be enacted via bulk email, the researchers instead identified specific tutorials that approximated a representative first-year sample and conducted surveys during these classes with an 80% response rate (Bye et al., 2020).

Using similar targeted in-class approaches could provide a solution to acquiring representative samples while avoiding contributing to oversaturation of bulk-email survey requests. However, care would need to be taken to ensure that such data collections were conducted ethically.

4.4 Summary of implications for university policy

Previous researchers have observed a tendency for university policy to be enacted without thorough grounding in the empirical evidence base (Barkham et al., 2019). At a general level, by synthesising and tabling this literature, we hope this review can help policy makers to expediently identify research relevant to their particular policy aims.

A clear policy direction is that universities need to invest in expanding the knowledge base on the factors underlying student wellbeing. Such investment is essential for ensuring the academic evidence base is sufficiently developed so as to provide practically useful recommendations for university wellbeing policies (Barkham et al., 2019). This review has identified several further research directions which would have clear policy implications. For instance, more comprehensively understanding which Australian student groups are at-risk of poor wellbeing could assist in determining the appropriate allocation of limited university resources. Furthermore, a clear omission from the existing research is the absence of studies evaluating whether wellbeing can be improved by changing university experiences and environments. This represents a critical direction for future Australian university wellbeing initiatives.

4.5 Limitations

This review has several limitations. Firstly, studies were only included if they used the term “wellbeing” in their title or abstract. Considering the tendency to use terms such as “mental health”, or “mental illness” interchangeably with “wellbeing”, we may have missed relevant studies that opted not to write “wellbeing” in their abstracts.

Secondly, given the number of included studies, we did not search reference lists or grey literature. Consequently, we may have missed potentially relevant sources. By only reviewing published literature the review may also be susceptible to publication bias.

Thirdly, as this was a scoping review, we did not assess the methodological quality of included sources. While this review summarises the Australian university student wellbeing literature, we are unable to comment on the overall quality of the research in this field. A future systematic review would be required to assess the empirical quality of the research (Munn et al., 2018).

Finally, this review considered associations between different factors and wellbeing. In the quantitative literature these associations were typically zero-order correlations or regression coefficients. A variable being significantly associated with wellbeing does not mean this factor causally affects wellbeing, nor that addressing this factor will necessarily impact student wellbeing.

5. Conclusion

To our knowledge, this is the first systematic review of factors associated with Australian university student wellbeing. This scoping review found both a large existing literature and a need for ongoing research to address gaps within the knowledge base. This review also provides insights into potential approaches for improving survey response rates in studies of Australian university student wellbeing.

Author

Angus H. Gilmore

Sydney Medical School, Kolling Institute, The University of Sydney, Australia

<https://orcid.org/0009-0005-2413-6986>

████████████████████

Amy G. McNeilage

Sydney Medical School, Kolling Institute, The University of Sydney, Australia

<https://orcid.org/0000-0001-7112-042X>

Claire E. Ashton-James

Sydney Medical School, Kolling Institute, The University of Sydney, Australia

<https://orcid.org/0000-0001-5547-4295>

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Appendices

Appendix 1

Figure 1. Search strategy as in Scopus

	Search Terms
Population	College Student*, OR Undergraduate Student*, OR Postgraduate Student*, OR University Student*, OR Higher Education, OR Medical Student* OR International Student*, OR Post-Secondary Education, OR Tertiary Education
AND	
Concept	Wellbeing, OR Well-Being OR "Well Being"
AND	
Context	Australia*

Appendix 2

Table 1. Quantitative associations between wellbeing outcomes and other factors in studies conducted on Australian university student samples

Concept <i>Sub-Concept</i>	Direction & Significance	Studies	Student Characteristics (sample size)
Associated Factor			
Psychological Factors			
<i>Affect</i>			
Stress	Negative	3, 5, 25, 31, 38, 45, 59, 64, 88, 160	Law (481), Dance (72), First-Year (1239), First-Year (447), Education (257), Whole University (731), Undergraduate (218), First-Year International (79)
Depression	Negative	3, 31, 39, 59, 64	Law (481), First-year (447), Residential College (171), Whole University (731), First-Year International (79), Psychology (518)
Distress	Negative	7, 25, 61	Psychology (150), First-Year (1239), Whole University (609)
Anxiety	Negative	3, 31, 59	Law (481), First-Year (447), Whole University (731)
Bipolar Features	Negative	20	First-Year Undergraduate (238)
Shame/Guilt	Negative	35	Psychology (100)
<i>Personality</i>			
Resilience	Positive	7, 8, 20, 29, 66, 71, 81, 82, 83, 87, 89	Psychology (150), Medical (127), First-Year Undergraduate (238), Psychology (305), Hospitality (195), International (979), Project Management (292), Project Management (183), Built Environment (410), Aged 18-25 (614), Aged 24-26 (568)
Dispositional Mindfulness	Positive	3, 5, 23, 38, 59	Law (481), Dance (72), Whole University (238), Education (257), Whole University (731)

Neuroticism	Negative	6, 20, 29, 48, 52, 67	Female Nursing (60), First-Year Undergraduate (238), Psychology (305), Psychology (437), Undergraduate (163), Medical (755)
Conscientiousness	Positive	20, 29, 48, 67, 86	First-Year Undergraduate (238), Psychology (305), Psychology (437), Medical (755), Fourth-Year Medical (151)
Extraversion	Positive	20, 29, 48, 67	First-Year Undergraduate (238), Psychology (305), Psychology (437), Medical (755)
Agreeableness	Positive	20, 29, 48	First-Year Undergraduate (238), Psychology (305), Psychology (437)
	Non-Significant	67	Medical (755)
Openness to Experience	Positive	20	First-Year Undergraduate (238)
	Non-Significant	67	Medical (755)
Optimism	Positive	63, 88	Psychology (156), Psychology (518)
Schizotypy	Negative	1	Psychology (139)
Proactive Personality	Positive	13	Employed (401)
Intellect	Positive	29	Psychology (305),
Spirituality	Positive	30	Students with disability (274)
Tenacity	Positive	30	Students with disability (274)
Adaptability	Positive	30	Students with disability (274)
Perfectionism	Negative	42	Chiropractic (194)
Narcissism	Non-Significant	48	Psychology (437)
Cynicism	Negative	50	Whole-University (216)
Maladaptive Perfectionism	Negative	56	Not provided (215)
Adaptive Perfectionism	Positive	56	Not provided (215)
<i>Cognitive Skills</i>			
Self-Control	Positive	7, 8, 19, 30	Psychology (150), Medical (127), Second-Year Undergraduate (176), Students with disability (274)
Music as Coping Strategy	Positive	90, 91	First-Year Undergraduate (402), First-Year Undergraduate (465)
Time Management	Positive	12	Not Provided (111)
Perceived Control over Time	Positive	12	Not Provided (111)
Stress Management	Positive	30	Students with disability (274)
Negative Attributional Style	Negative	33	Psychology (127)
Cognitive Reappraisal	Positive	34	Psychology (85)
Expressive Suppression	Negative	34	Psychology (85)
Emotion Oriented Coping	Negative	42	Chiropractic (194)
Task Oriented Coping	Non-Significant	42	Chiropractic (194)
Emotional Intelligence	Positive	50	Whole University (216)
Low Efficacy	Negative	50	Whole University (216)
Goal Attainment	Positive	92	Psychology (159)
Sustained Effort	Positive	92	Psychology (159)

Cognitive Styles, Attitudes and Beliefs

Cognitive Engagement	Non-Significant	9, 65	Business (952), First-Year Undergraduate (195),
Dysfunctional Beliefs	Negative	16	Not Provided (457)
Rumination	Negative	17	Psychology (163)
Difficulty Identifying Emotions	Negative	17	Psychology (163)
COVID Fear	Negative	18	Domestic (154)
Future Anxiety	Negative	26	Whole University (787)
Victimisation	Negative	33	Psychology (127)
Negative Attributional Style	Negative	33	Psychology (127)
Vertical Individualism	Negative	41	Whole University (507)
Horizontal Individualism	Non-Significant	41	Whole University (507)
Horizontal Collectivism	Positive	41	Whole University (507)
Vertical Collectivism	Non-Significant	41	Whole University (507)
Stress Mindset	Negative	45	Undergraduate (218)
Stress Control Mindset	Positive	45	Undergraduate (218)
Positive Feelings about Marriage	Positive	53	First-year Psychology (240)
Reluctance to seek help	Negative	54	Medical (92)
Psychological Capital	Positive	62	Postgraduate Business (143)
Balanced Time Perspectives	Positive	63	Psychology (156)
Future Anticipation	Positive	63	Psychology (156)
Psychological Barriers	Negative	73	First-Year (306)
Goal Clarity	Positive	80	First-Year Psychology (128)
Need Satisfaction	Positive	92	Psychology (159)
Psychological Inflexibility	Negative	106	Third-Year Psychology (125)
Stigma Consciousness	Negative	126	International Business (863)

Self-Concept

Self-Esteem	Positive	39, 65	Residential College (171), First-Year Undergraduate (195)
Self-Compassion	Positive	63, 76	Psychology (156), Law (206)
Threats to Self-Concept	Negative	14	Not Provided (122)
Short Term Self-Concept Inconsistency	Negative	14	Not Provided (122)
Self-Actualisation	Positive	15	Social Sciences (122)
Value Congruence	Positive	35	Psychology (100)
Satisfaction with Personal Appearance	Positive	53	First-Year Psychology (240)
Self-Acceptance	Positive	58	Undergraduate (203)
Self-Kindness	Positive	78	Whole-Australia (6195)
Self-Other Match	Non-Significant	88	Psychology (518)
Self-Concordance	Positive	92	Psychology (159)

Motivational Factors

Autonomy	Positive	10, 15, 24, 80	Psychology (364), Social Sciences (122), Not Provided (127), First-Year Psychology (128)
	Non-Significant	128	First-Year Undergraduate (142)
Relatedness	Positive	11, 15, 24, 30	First-Year Undergraduate (342), Not Provided (122), Not Provided (127), Students with disability (274)
Competence	Positive	15, 24, 72	Social Sciences (122), Not Provided (127), Medical (644)
Intrinsic Motivation	Positive	2	First-Year Undergraduate (184)
Extrinsic Motivation	Non-Significant	2	First-Year Undergraduate (184)
Amotivation	Negative	2	First-Year Undergraduate (184)
Autonomous Motivation	Positive	47	Whole University (4575)

Spirituality

Meaning in Life	Positive	2	First-Year Undergraduate (184)
Mindful Awareness	Non-Significant	58	Undergraduate (203)
Being Present	Positive	78	Whole Australia (6195)

Social Factors

Social Support / Positive Relationships	Positive	8, 10, 11, 19, 39, 49, 58, 64, 74, 78, 86, 88	Medical (127), Psychology (364), First-Year Undergraduate (342), Second-Year Undergraduate (176), Residential College (171), Whole University (3797), Undergraduate (203), First-Year International (79), Law & Psychology (188), Whole Australia (6195), Fourth-Year Medical (151), Psychology (518)
Social Isolation / Loneliness	Negative	4, 25, 43, 46, 49, 71, 72	Law (481), First-Year (1239), Medical Students (619), Medical (454), Whole University (3797), International (979), Medical (644)
Social Interactions	Positive	7, 8, 24, 48, 70, 76	Psychology (150), Medical (127), Not Provided (127), Psychology (437), First-Year Domestic Undergraduate (749), Law (206)
Social Status	Positive	11, 26, 29, 70	First-Year Undergraduate (342), Whole Australia (787), Psychology (305), First-Year Domestic Undergraduate (749)
Group Identification	Positive	39, 54, 64	Residential College (171), Medical (92), First-Year International (79)
Family Support	Positive	13, 62	Employed (401), Postgraduate Business (143)
Autonomy from Parents	Positive	28	Undergraduate (129)
Technology Based Interactions	Non-Significant	24	Not Provided (127)
Multiple-Group Memberships	Positive	25	First-Year (1239)

Parental Warmth	Positive	28	Undergraduate (129)
Parental Control	Non-Significant	28	Undergraduate (129)
Parental Involvement	Non-Significant	28	Undergraduate (129)
In-group Prototypicality	Positive	39	Residential College (171),
Social Challenges	Negative	73	First-Year (306)
Secure Attachments with Parents & Peers	Positive	128	First-Year Undergraduate (142)
Increased Phone / Email Contact	Positive	128	First-Year Undergraduate (142)
Demographic Factors			
Female Gender	Negative	8, 26, 42, 59, 77, 85, 89,	Medical (127), Whole-Australia (787), Chiropractic (194), Whole University (731), Whole University (1395), Education, Psychology and Social Work (905), Aged 24-26 (568)
	Non-Significant	19, 20, 29, 55, 60	Second-Year Undergraduate (176), First-Year Undergraduate (238), Psychology (305), First-Year Radiology (59), Nursing (920)
Older Age	Positive	23, 26, 59, 60, 69, 85	Whole University (239), Whole Australia (787), Whole University (731), Nursing (920), International (979), International (979), Education, Psychology and Social Work (905)
	Negative	57	Nursing (693)
	Non-Significant	19, 20, 29, 58	Second-Year Undergraduate (176), First-Year Undergraduate (238), Psychology (305), Undergraduate (203)
Living Away from Home	Negative	87, 128	Aged 18-25 (614), First-Year Undergraduate (142)
Being Employed	Positive	20, 60	First-Year Undergraduate (238), Nursing (920)
	Non-Significant	19	Second-Year Undergraduate (176),
International Student Status	Negative	77	Whole University (1395)
	Non-Significant	26, 85, 90	Whole Australia (787), Education, Psychology and Social Work (905), First-Year Undergraduate (402)
Undergraduate Status	Negative	26, 69	Whole Australia (787), International (979)
Being Married	Positive	60, 80	Nursing (920), First-Year Psychology (128)
Full-Time Study	Non-Significant	19	Second-Year Undergraduate (176),
Asian Ethnicity	Negative	69	International (979)
Socio Demographic Barriers	Negative	73	First-Year (306)
Law Student Status	Negative	74	Law and Psychology (188)
Having Children	Positive	80	First-Year Psychology (128)
Mental-Health Diagnosis	Positive	84	Five Australian Universities (2326)

University-Specific Factors

University Belonging	Positive	25, 47, 74, 75, 76, 80	First-Year (1239), Whole University (4575), Law & Psychology (188), Law (225), Law (206), First-Year Psychology (128)
Academic Performance	Positive Non-Significant	13, 19 27, 32, 45, 65	Employed (401), Second-Year Undergraduate (176), Students with disability (83), Postgraduate Hotel Management (60), Undergraduate (218), First-Year Undergraduate (195)
Academic/Assessment Stress	Negative	4, 47, 67, 71	Law (481), Whole University (4575), Medical (755), International (979)
Teacher / Academic Support	Positive	19, 36, 47, 62, 72	Second-Year Undergraduate (176), Medical (403), Whole University (4575), Postgraduate Business (143), Medical (644)
Academic Satisfaction	Positive	30, 69, 71, 89	Students with disability (274), International (979), International (979), Aged 24-26 (568)
Academic Demands/Workload	Negative Non-significant	4, 76 47	Law (481), Law (206) Whole University (4575)
Study/Life Imbalance	Negative	4, 6	Law (481), Female Nursing (60),
Positive Feelings Towards University	Positive	21, 74	Social science (185), Law and Psychology (188)
Negative Feelings Towards University	Negative	21, 75	Social science (185), Law (225)
Supportive Peers	Positive	80, 89	First-Year Psychology (128), Aged 24-26 (568)
Peer Engagement	Positive	47	Whole University (4575),
University Adjustment	Positive	2	First-Year Undergraduate (184)
University Engagement	Positive	9	Business (952)
Trust in Peers	Positive	11	First-Year Undergraduate (342)
Trust in University	Positive	11	First-Year Undergraduate (342)
Absence of Supervisor Support	Negative	6	Female Nursing (60)
Considering withdrawing from university	Non-Significant	37	Indigenous (69)
Online Learning	Negative	44	Psychology (58)
Teacher Motivation	Positive	47	Whole-University (4575),
Supervisor Support	Positive	72	Medical (644)
Transitional Adjustments	Negative	73	First-Year (306)
Cohort Competitiveness	Negative	75	Law (225)
University Supportiveness	Positive	75	Law (225)

Lifestyle Factors

Sleep Quality	Positive	22, 23, 58, 86	Medical Students (59), Whole University (238), Undergraduate (203), Fourth-Year Medical (151)
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Exercise	Positive	23, 76	Whole University (238), Law (206)
	Non-Significant	58	Undergraduate (203)
Physical Health	Positive	49, 86	Whole University (3797), Fourth-Year Medical (151)
Diet Quality	Positive	23, 58	Whole University (238), Undergraduate (203)
Leisure Time	Positive	74, 76	Law and Psychology (188), Law (206)
Impactful Life-Experiences	Positive	10	Psychology (364)
Number of Life-Experiences	Positive	10	Psychology (364)
COVID impacting study	Negative	26	Whole Australia (787)
Problematic Smartphone Use	Negative	40	Psychology (539)
Dietary Changes (Due to COVID)	Negative	49	Whole University (3797),
Sexual Experience	Positive	53	First-year Psychology (240)
Experience of STD's	Negative	53	First-year Psychology (240)
Partying Behaviours	Non-Significant	54	Medical (92)
Balanced Lifestyle	Positive	71	International (979)
Connectedness with City	Positive	71	International (979)
Online Leisure Time	Negative	76	Law (206)
Exposure to Body Positivity	Positive	79	Psychology (113)
Exposure to Thinspiration	Negative	79	Psychology (113)
Exposure to Fitspiration	Non-Significant	79	Psychology (113)
Hazardous Alcohol Use	Negative	86	Fourth-Year Medical (151)
Access to Ethnic and Intercultural Resources	Positive	126	International Business (863)
Schoolies Attendance	Positive	109	Recent High-School Leavers (334)
Uplifting Daily Events	Positive	160	Education, Psychology and Sociology (123)
Daily Hassles	Non-Significant	160	Education, Psychology and Sociology (123)
Work-Related and/or Financial Factors			
Financial Stress / Insufficient Finances	Negative	7, 8, 20, 29, 71, 87, 89, 128	Psychology (150), Medical (127), First-Year Undergraduate (238), Psychology (305), International (979), Aged 18-25 (614), Aged 24-26 (568), First-Year Undergraduate (142)
Work Demands	Negative	19	Second-Year Undergraduate (176)
	Non-Significant	21	Social Sciences (185)
Positive Work Features	Positive	21, 52	Social Sciences (185), Undergraduates (163)
Likelihood to Pursue Rural Medical Placement	Positive	46, 72	Medical (454), Medical (644)
Financial Support	Positive	72, 87	Medical (644), Aged 18-25 (614)
Night Work	Negative	6	Female Nursing (60)
Career Pressure	Negative	4	Law (481)

Job Satisfaction	Positive	12	Not Provided (111)
Work-Study Congruence	Positive	13	Employed (401)
Work Support	Positive	13	Employed (401)
Employability	Positive	13	Employed (401)
Strain at Work	Negative	21	Social Sciences (185)
Hours Worked	Non-Significant	21	Social Sciences (185)
Work Conflicts	Non-Significant	21	Social Science (185),
Career Optimism	Positive	30	Students with disability (274)
Career Barriers	Negative	67	Medical (755)
Professional Expectations	Positive	67	Medical (755)
Preference to work in capital city	Positive	68	Medical (179)
Positive Appraisal of Rural Work	Positive	72	Medical (644)
Aversive Life Events			
Acculturative Stress	Negative	71	International (979)
Being Victimised (Bullying)	Negative	33	Psychology (127)

Table 2. Qualitative accounts of association between wellbeing and other factors in studies conducted on Australian university student samples

Concept	Direction	Studies	Sample Characteristics (n)
<i>Sub-Concept</i>			
Associated Factor			
University-Specific Factors			
Study/Life Imbalance	Negative	121, 129, 133, 134, 140, 144	First-Year (142), Medical (38), PhD (222), Whole University (2776), Social Work (2320), Social Work (60)
University Belonging	Positive	130, 138, 146, 148	Baby Boomer (12), Mature-Aged (1879), First-Year Undergraduate (18) First-Year Undergraduate (19)
Academic Demands/Workload	Negative	121, 125, 158, 143	First-year (142), Education (Not Provided), First-Year Health Science (132), Law (10)
Teaching Quality	Positive	147, 150, 133	First-Year Undergraduate (19) International (30), Whole University (2776)
University Engagement	Positive	143, 148	Law (10), First-Year Undergraduate (19)
Teacher/Academic Support	Positive	127, 133	Whole University (11), Whole University (2776)
Academic/Assessment Stress	Negative	154	Asylum Seekers (10)
Academic Satisfaction	Positive	129	Medical (38)
Supportive Peers	Positive	145	Chinese International (84)
Positive Feelings Towards University	Positive	148	First-Year Undergraduate (19)
Peer Engagement	Positive	135	Medical (68)
Learning in Small Groups	Positive	120	Undergraduate Nursing (11)
Fieldwork Experience	Positive	122	Science (116)
Class Attendance	Positive	124	Law (17)

University Causing Relationship Strain	Negative	132	Nursing Students with Children (22)
Dehumanising University Experiences	Negative	134	PhD (222)
Positive Interactions with Staff	Positive	135	Medical (68)
University Not Matching Expectations	Negative	148	First-Year Undergraduate (19)
Nature of International Student Life	Negative	149	International (21)
Use of Student Services	Negative	151	First-Year Undergraduate (19)
Social Factors			
Social Support / Positive Relationships	Positive	125, 129, 145, 148, 152	Education (Not Provided), Medical (38), Chinese International (84), First-Year Undergraduate (19), International, experiencing residential instability (12)
Social Isolation / Loneliness	Negative	131, 140, 144	Nursing (637), Social Work (2320), Social Work (60)
Distance from Family and Friends	Negative	121	First-Year (142)
Social Interactions	Positive	127	Whole University (11)
Family Support	Positive	139	Indigenous (30)
Autonomy from Parents	Positive	156	International (20)
Maintaining Familial Connections	Positive	156	International (20)
Psychological Factors			
<i>Personality</i>			
Dispositional Mindfulness	Positive	127	Whole University (11)
Spirituality	Positive	139	Indigenous (30)
<i>Cognitive Skills</i>			
Successful Coping Strategies	Positive	141, 153	Health Science, Social Work and Psychology (16), Medical (10)
Sleep Education Literacy	Positive	127	Whole University (11)
Inadequate English Ability	Negative	155	Postgraduate International (28)
<i>Cognitive Styles, Attitudes and Beliefs</i>			
Cognitive Engagement	Positive	145	Chinese International (84)
Perception of Community Wellbeing	Positive	139	Indigenous (30)
Future Uncertainty	Negative	142	Higher Degree by Research (26)
<i>Self-Concept</i>			
Cultural Identity	Positive	139	Indigenous (30)
Identity Growth	Positive	150	International (30)

<i>Spirituality</i>			
Connection to Country	Positive	139	Indigenous (30)
Sense of Purpose	Positive	110	Student Leaders (5)
Lifestyle Factors			
Routine Disruption due to COVID	Negative	125, 129, 136, 142	Education (Not Provided), Medical (38) Female International Working in Hospitality (3), Higher Degree by Research (26)
Exercise	Positive	145	Chinese International (84)
Physical Health	Positive	129	Medical (38)
Loss of face-to-face contact	Negative	125	Education (Not Provided)
Having Positive Indigenous Role-Models	Positive	139	Indigenous (30)
Perceiving Low Quality Housing as Temporary	Positive	152	International, experiencing residential instability (12)
Work-Related and/or Financial Factors			
Financial Stress / Insufficient Finances	Negative	121, 140, 157	First-Year (142), Social Work (2320), Medical and Nursing (103)
Negative Work Experiences	Negative	141, 153, 108	Health Science, Social Work and Psychology (16), Medical (10), Paramedicine during workplace placement (Not reported)
Career Identity Development	Positive	132	Nursing students with children (22)
Workplace Bullying	Negative	137	Medical (10)
Aversive Life Events			
Experiences of Discrimination	Negative	139, 150	Indigenous (30), International (30)
Acculturative Stress	Negative	153	Medical (10)
Traumatic Memories	Negative	154	Asylum Seekers (10)
Demographic Factors			
Living Away from Home	Negative	148	First-Year Undergraduate (19)

Table 3. Interventions intended to influence the wellbeing of Australian university students

Intervention	Evaluative Approach	Direction and Significance	Studies	Sample Characteristics (n)
	Quantitative			
Mindfulness	Pre - Post	Negative	94	Veterinary (70)
		Positive	99, 103, 113, 159	First-Year Medical (148), First-Year Medical (205), Whole University (74), Whole University (236)
Peer Support	Pre – Post	Non-Significant	112, 95	Autism-Spectrum (10), Peer-Support Facilitators (14)
	Treatment – Control	Non-Significant	110	First-Year International (108/238)
	Post Only	Significant Positive		Whole University (641)

Psychoeducation	Treatment – Control Pre – Post	Positive	109 119	Recent High School Leavers (388/95) Psychology (155)
Curriculum- embedded skills training	Treatment – Control	Non- Significant	106	Third-Year Psychology (54/65)
Web-based acceptance and commitment therapy	Pre – Post Treatment – Control	Positive Positive	115 116	Whole university (130) Whole university (566/596)
Nature Immersion	Pre – Post	Positive	97	PDHPE (54)
Wellbeing Plan Training	Treatment – Control	Positive	98	Whole-university (49/54)
Support Dog Intervention	Treatment – Control Within Subjects	Positive	100	Undergraduate Paramedicine (89)
Discrimination Priming	Treatment – Control	Negative	105	International (80)
Mental Health Day Participation	Post Only	Positive	111	Whole university (700)
Mobile App Coping Skills Intervention	Treatment – Control	Positive	114	Highly distressed (28/28)
Qualitative				
Mindfulness	Interview	Positive	102	Physiotherapy (12)
Self-Care	Interview	Positive	117	Mental Health Nursing (32)
Museum Immersion	Interview	Positive	93	Postgraduate Optometry (81)
Cross-Cultural Meetings	Interview	Positive	96	Whole-university (28)
Gratitude Practices	Interview	Positive	101	Medicine and Physical Science PhD (8)
Tutor Support Sessions	Focus Group	Positive	104	International Social Work (43)
Art Based Therapy	Focus Group	Positive	118	International Higher Degree by Research (27)

Appendix 3

List 1. Numbers corresponding with included sources

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Chapter 3. Australian university student perspectives on the factors influencing student wellbeing: a content and relational analysis

Preface

Previous research has identified a dearth in qualitative research examining university student perspectives on student wellbeing (Baik et al., 2019). Frameworks for best practice in designing university wellbeing policy have also identified ‘centring the student voice’ as crucial to ensuring the appropriateness of university wellbeing approaches (Browne et al., 2022; Hughes & Spanner, 2019). The previous five years have seen an encouraging proliferation of qualitative student wellbeing research in the United Kingdom (e.g Cage et al., 2021; Jones et al., 2021; Sampson et al., 2022; Upsher et al., 2023). A comparable proliferation has not occurred within Australian university contexts. The following chapter contributes towards expanding the qualitative evidence base relating to Australian university student wellbeing. Specifically, this is the first study to examine the frequencies with which Australian students identify various factors as influencing wellbeing. This is also the first study to examine the frequencies with which students describe factors influencing wellbeing indirectly, by impacting another factor which in turn impacts wellbeing.

This chapter addresses the following research question underlying this thesis:

Research question 1. *What factors appear to be associated with the wellbeing of Australian university students?*

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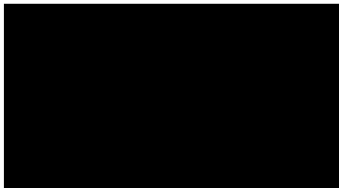
AUTHORSHIP STATEMENT

The co-authors of the paper “Gilmore A, Glozier N & Ashton-James C. *Australian university student perspectives on the factors influencing student wellbeing: a content and relational analysis*” confirm that Angus Hamilton Gilmore has provided the following contributions to the study:

- conception and design of the research
- data collection and interpretation of the findings
- writing of the manuscript and critical appraisal of the content

As the primary supervisor for the candidate upon which this thesis is based, I can confirm that the authorship attribution statements above are correct.

Signed:

A solid black rectangular box redacting the signature of the supervisor.

Associate Professor Claire Ashton-James

Date: 25th February 2025



Australian university student perspectives on the factors influencing student wellbeing: a content and relational analysis

Angus H. Gilmore ^a, Nick Glozier ^b and Claire E. Ashton-James ^a

^aSydney Medical School, Faculty of Medicine and Health, The University of Sydney, Sydney, Australia;

^bCentral Clinical School, Faculty of Medicine and Health, The University of Sydney, Sydney, Australia

ABSTRACT

It is important to ensure that university student wellbeing policies are informed by the lived experiences of local university students. Relatively few qualitative studies have explored Australian university students' perspectives on which factors influence student wellbeing. The current study analysed 209 open-text responses provided by Australian university students to the question 'What most affects your day-to-day wellbeing as a university student?' We used inductive qualitative content analysis to assess the frequency with which students identified different factors. We also conducted a novel relational analysis to examine accounts of causal relationships between these factors. Academic workload (37%), social interactions (17%), academic stress (16%) and teaching quality (15%) were most frequently described as contributing to student wellbeing. Academic workload was identified as the 'cause' in 61% of all accounts of causal relationships between factors. Students consistently described academic workloads indirectly affecting their wellbeing by exacerbating other aspects of their lives, including academic stress, social isolation, and study/life balance. The current study provides novel insights into the ways that current Australian university students perceive the factors that shape their wellbeing. In particular, our findings suggest that the direct and indirect impact of academic workloads upon student wellbeing may be under-recognised.

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Introduction

Universities have a responsibility to support student wellbeing. University students appear more distressed than age-matched non-university peers, both in Australia and overseas (c.f. Cvetkovski et al., 2017; Ibrahim et al., 2013; Sharp & Theiler, 2018; Stallman, 2010). Research suggests that university student wellbeing has declined while demand for student counselling has risen worldwide over the past two decades (Knapstad et al., 2019; Lipson et al., 2019; Storrie et al., 2010). Poor wellbeing predicts diminished academic performance and higher rates of drop-out (Bruffaerts et al., 2018; Zajac et al., 2023).

CONTACT Angus Gilmore  Sydney Medical School, Northern Clinical School, Kolling Institute, Royal North Shore Hospital, St Leonards, NSW 2065, Australia

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To support university student wellbeing appropriately requires robustly understanding the factors that influence student wellbeing (Pedrelli et al., 2014). Two recent systematic reviews have identified several factors associated with student wellbeing, including financial stress and adverse childhood experiences as negative wellbeing predictors, and social support, resilience and coping skills as positive wellbeing predictors (Campbell et al., 2022; Linden & Stuart, 2020). While students experience many factors unrelated to university, there are also many university-specific factors associated with student wellbeing (Larcombe et al., 2021; Pedrelli et al., 2014). Transitioning to university can cause challenges as students acclimatise to new academic environments with less structure relative to high school (Curtis et al., 2023). University students frequently experience disruptions to pre-existing social support networks and difficulties forging new friendships (Bitsika et al., 2010; McIntyre et al., 2018). University life also entails various academic stressors including assessment anxiety, pressure to succeed, difficulties understanding course content, and high academic workloads (Beiter et al., 2015; Larcombe et al., 2021).

University environments can differ substantially between countries. For instance, Australia has unusually high proportions of international students and of students living in off-campus accommodation (OECD, 2023; CBRE, 2024). Discrepancies in levels and predictors of wellbeing have been reported between countries, suggesting meaningful differences in student wellbeing experiences across national contexts (Li et al., 2022; Maercker et al., 2015). Australian university populations have grown alongside the aforementioned declines in student wellbeing, with 58% of Australian high school leavers now pursuing tertiary education (Australian Bureau of Statistics, 2023; Australian Government: Department of Education AUS, 2023). It is crucial that Australian university policy makers are adequately equipped to support the wellbeing of increasingly large student populations.

Incorporating qualitative student feedback can help ensure that university wellbeing policies are appropriately tailored to support students (Baik et al., 2019). However, relatively little research has qualitatively explored the factors that Australian students feel affect their wellbeing. One study found that Australian students often felt that decreased wellbeing occurred when university life forced them to forgo previously available sources of pleasure and enjoyment (Bitsika et al., 2010). A Melbourne-based study found that students felt their wellbeing could be supported by changes to teaching practices, course designs, support services and university cultures (Baik et al., 2019). Other qualitative Australian studies have discussed the protective role of university belongingness (Kahu et al., 2022), and the detrimental effect of struggling to balance university and non-university responsibilities (Hews et al., 2022).

The current study analysed open-text responses to the question ‘What most affects your day-to-day wellbeing as a university student?’ provided by 209 Australian university students. While similar research has been conducted overseas (Eloff et al., 2022; Hurst et al., 2012), no study has specifically asked Australian students to describe the factors influencing their wellbeing, meaning it is unclear which factors Australian students most typically perceive as important to their wellbeing. Our first research goal was to assess which factors our sample most frequently identified as influencing wellbeing. This research could help identify aspects of student life that could be addressed by university policy. Furthermore, this analysis would be extended by also considering the relationships between

these factors. To our knowledge, no study has explicitly examined qualitative accounts of cause-and-effect relationships between factors that students perceive to influence their wellbeing. If students consistently feel that a given factor impacts their wellbeing both directly and indirectly (via its influence upon another factor), then this factor may be particularly crucial to student wellbeing. As such, our second research goal was to examine whether students tended to describe ‘causal’ relationships between factors identified as affecting their wellbeing. This novel approach has the capacity to provide nuanced insights into the wellbeing experiences of present-day university students.

Method

This study analyses responses to an open-text question embedded within a larger survey. The survey was conducted during May–September 2022 in a large (>70,000 students) public Australian university. In this post-pandemic context, the university was employing a ‘mixed teaching’ approach. Most classes were in-person, but students could opt to study online.

Recruitment

To approximate a representative sample the research team contacted unit co-ordinators from all 8 university faculties. Co-ordinators were asked to provide students with survey links via email and online announcements. Sixteen co-ordinators agreed to disseminate the survey. No participation incentives were offered.

Materials

Two quantitative wellbeing measures are reported below to characterise sample wellbeing. Respondents answered a single-item Likert-scale measure assessing general life-satisfaction, where higher scores indicated greater life-satisfaction. Participants also responded to 9 items from the SF-36 evaluating affective wellbeing. The SF-36 assesses mental, emotional and physical health and is widely used in census-style surveys (Kettlewell et al., 2020). We calculated a summed score with a possible range of 0–100 in which higher scores indicated better affective wellbeing.

Participants had the option of responding to the open-text question. No limitations were placed on response length. Students also provided demographic information including their age, gender, domestic/international student status and degree.

Sample characteristics

209 respondents answered the open-text question. At least one student from each faculty provided a qualitative response. Ratios of responses from each faculty were broadly proportionate to the university population, although Medicine and Law students were over-represented, while Business students were under-represented. Mean age was 22.8 years (SD = 6.17). Forty per cent of participants were male, 59% were female and 1% were non-binary. Seventy-seven per cent of participants were domestic students and 23% were international students. International students who comprise 38.5% of the university population were underrepresented.

Table 1. Descriptive statistics.

Measure	<i>n</i>	Possible range	Mean (<i>SD</i>)	Kurtosis (<i>SE</i>)	Skewness (<i>SE</i>)
Life-Satisfaction	209	1–5	3.56(1.19)	–.751(.335)	–.529(.168)
Affective Wellbeing	205	0–100	59.91(9.93)	–.436(.338)	–.194(.170)

Quantitative measures were used to confirm that our sample displayed diverse well-being scores and was not skewed toward predominantly low or high wellbeing. Quantitative measures had kurtosis statistics between -2 and 2 and skewness statistics between -1 and 1 , indicating that the sample had a broad range of wellbeing experiences and was not disproportionately skewed towards positive or negative wellbeing scores, see [Table 1](#).

Qualitative content analysis

Qualitative content analysis (QCA) is a method of systematically analysing qualitative data by classifying data into instances of concepts within a coding frame, allowing concept frequencies to be determined (Schreier, 2012). Given our goal of identifying which factors our sample most typically construed as influencing their wellbeing, an inductive qualitative content analysis, as described in Elo and Kyngäs (2008), was identified as the most appropriate analytic strategy.

While QCA can be applied to all types of written data (Bengtsson, 2016), researchers have raised concerns regarding conducting QCA on open-ended written responses that typically provide less rich data relative to interview-based methods (Elo et al., 2014). In the current study, responses ranged from single words to extended paragraphs. However, as we primarily aimed towards evaluating frequencies of factors, QCA remains suitable. The presence or absence of factors could be determined irrespective of response length.

Relational analysis

A supplementary ‘Relational Analysis’ (RA) extends the findings of a QCA by considering the relationships between concepts identified by the QCA (Columbia: Mailman School of Public Health, 2023; Robinson, 2011). When conducting an RA, the researcher must define the relationships between concepts that is being considered. Relational analyses can examine ‘cause-and-effect’ statements wherein a respondent describes one concept causally influencing another. Here, causality is not understood in an objective quantitative sense. Instead, researchers study qualitative descriptions of causal relationships between concepts in the coding frame (Robinson, 2011).

In addition to the QCA, which identified instances of concepts thought to affect student wellbeing, the current study also coded ‘cause-and-effect’ statements between concepts. For example, the response ‘*Having so much work to do that you don’t have time to spend time with friends*’ described one concept, academic workload, having a ‘cause-and-effect’ relationship with another concept, social isolation. In each instance, one concept was identified as the ‘cause’ and another as the ‘effect’.

Coding team and data analysis

The coding team consisted of two researchers who were familiar with the university student wellbeing literature. This knowledge may have pre-disposed them

towards interpreting responses as affirming existing research. While each researcher aimed to remain critically self-reflexive and adopt a theory-free perspective during data analysis, it is impossible to entirely eliminate this potential bias.

Both researchers immersed themselves in the data and inductively created lists of concepts present in the data. Concepts described specific factors which students identified as affecting their wellbeing. Inductive content analysis was used to examine these concepts without applying pre-existing theories (Elo & Kyngäs, 2008). During co-researcher discussion data abstraction was completed by finalising the coding scheme and grouping concepts into four higher-order dimensions.

Responses were coded by AG. Given variance between responses, some responses contained many concepts, while others contained a single concept. Similarly, some responses contained multiple 'cause-and-effect' statements. Responses often explicitly referred to concepts within the coding frame. When this did not occur, researcher discretion or second reviewer consultation was used to determine whether a response had sufficiently engaged with a specific concept. Similarly, discretion was required to determine whether responses explicitly contained 'cause and effect' statements.

Results

Factors that students identify as affecting their wellbeing

Students described a large range of factors impacting their wellbeing. Factors were grouped into four higher-order dimensions (*Academic Life, Experiences with University Staff and Services, Social Life, and Personal Life*), see [Table 2](#).

Academic life

Students most frequently mentioned their wellbeing being impacted by academic factors. Academic workload was by far the most frequently cited factor. Students also described pervasive feelings of academic stress and difficulties understanding content as negatively impacting their wellbeing. Many students mentioned the quality of curriculum design as influencing their wellbeing, often identifying the importance of clear communications surrounding assessments.

Experiences with university staff and services

Students described various engagements with university staff as affecting their wellbeing. Responses largely related to either teaching quality or challenges engaging with non-academic university services. Students often indicated that teachers had the capacity to support their wellbeing by being enthusiastic and supportive, while disengaged or overly strict teachers diminished wellbeing. Some students described general feelings of disconnection between staff and students. Students also cited long wait times for responses to queries and difficulties engaging with university administration (e.g., timetabling, enrolment, assessment special considerations) as diminishing their wellbeing.

Table 2. Factors identified as impacting university student wellbeing.

Dimension	Concept Exemplar Quotation	Frequency
Academic Life	Academic Workload <i>'The amount of readings and work required in certain assignments/tutorials, effect my day to day time commitments and wellbeing'</i>	77
	Academic Stress <i>'The Uni is fully based of fear factor and I am always stressed because of it. The expectations are unreal'</i>	34
	Appraisals of Course Management or Curriculum Design <i>'Lack of organisation by staff. Lack of explanation regarding rubric for assessments'</i>	29
	Online Learning <i>'Lectures being online is the worst'</i>	13
	Satisfaction with Academic Performance <i>'Honestly not sure I guess it's alot of things like my marks, my assessments'</i>	9
	Content Comprehension <i>'If I can't understand what the teacher is talking about in the lecture or tutorial, it actually depresses me a lot'</i>	8
	Productivity and Time Management <i>'Feeling like I'm not doing as much as I should be doing/feeling as though I should be doing more than I am currently'</i>	6
	Class Attendance or Engagement <i>'Student engagement during lecturers by involving them through active learning'</i>	2
	Total	176
	Experiences with University Staff & Services	Teaching Quality <i>'Knowing that my teaching staff are accessible and also that I think they are genuinely interested in my wellbeing'</i>
Experiences Engaging with University Administration <i>'The special considerations process is unduly harsh on struggling students and I've rarely applied for it because I haven't had the time to visit a JP, or because I'm so afraid that there'll be lags in admin that I'm better off sitting the exam and doing poorly'</i>		13
Accessibility of Resources and Affordable Food at University <i>'I guess is the lunch at school, but somehow the food is not very good but more expensive than outside campus'</i>		6
Experiences with Support Services <i>'The ongoing support provided by Disability & Inclusion Services has helped reduce the stress I feel throughout the semester'</i>		4
Experiences with Non-Academic University Staff <i>'The accommodation staff haven't been very helpful. Very distressing'</i>		4
Experiences with Canvas and other Online Platforms <i>'Having to deal with canvas, (Primary online teaching platform) technical difficulties'</i>		2
Total		61
Social Life	Social Interactions <i>'Meeting new people randomly on campus – Clubs and societies, as they are a great chance to meet friends and form groups, aside from just academics'</i>	36
	Social Isolation <i>'Being lonely at uni has given me such negative expectations for the rest of my 20s, and I really thought I'd be having the time of my life here'</i>	22
	Experiences of University Culture <i>'The vibrancy/dullness of the social atmosphere, which is heavily dependent upon the type of class that I am in'</i>	21
	Feelings of Belonging and Connectedness at University <i>'The campus is so large that I feel like it is impossible to connect with people and make friends'</i>	9
	Participation in University Events or Societies <i>'Club and society activities also seemed to have a great effect on my mental health'</i>	4

(Continued)

Table 2. Continued.

Dimension	Concept Exemplar Quotation	Frequency
	Total	92
Personal Life	Study/Life Balance <i>'The stress of being expected to fit so much in my day – rehearsals, practice, lectures, tutorials, homework, working, public transport to and from uni, trying to have a social life, downtime, contributing to household responsibilities'</i>	21
	General Non-University Factors <i>'External factors of full-time work in a stressful job'</i>	17
	Exhaustion <i>'Being tired all the time from commitments to work and University and just managing life in general'</i>	9
	Experiences with Mental Illness <i>'Struggling with Mental health issues most of the time'</i>	8
	Accommodation and other practical day-to-day concerns <i>'Money, living further away is difficult, most favourable would be to live on campus but the living costs are very high'</i>	8
	Sleep Quality <i>'The quality of my sleep is the biggest factor that affects my day-to-day wellbeing'</i>	8
	Motivation <i>'I always feel like that I don't have enough time or motivation to do all the things that I need to do'</i>	7
	Leisure Time <i>'Remembering to take time off studying to socialise, engage with hobbies and look after myself'</i>	5
	Financial Stress <i>'In my personal experience what has affected my day-to-day most as a university student has been ensuring that I have enough money to pay for expenses such as rent and food'</i>	3
	Perfectionism <i>'Even if I know I have spent all the time possible on an assignment, if I feel it has been compromised in quality, it is difficult to not be critical'</i>	2
	Exercise <i>'If I have exercised'</i>	2
	Experiences of Discrimination <i>'Being called slurs behind my back based on my lived experience of mental illness'</i>	1
	Imposter Syndrome <i>'Imposter syndrome and feeling inadequate here is a significant element'</i>	1
	Total	91

Note: Frequencies of concepts identified within each dimension. Exemplar quotations are presented in italics.

Social life

Many students felt their wellbeing was influenced by the quality and frequency of their social interactions. A common perspective was that positive social interactions buffered against the difficulties of university life. Multiple students felt that university had been unexpectedly alienating and reported difficulties forming new friendships due to large class sizes and perceived lack of opportunities for extracurricular social interactions. Students also noted the importance of supportive university environments and cultures for cultivating wellbeing.

Personal life

Students mentioned several factors relating primarily to their personal lives. Most frequently, students described difficulties maintaining balanced lifestyles in the context of their studies and other personal obligations.

Accounts of causal relationships between factors thought to influence student wellbeing

Students described causal relationships between factors influencing their wellbeing on 62 occasions, see Figures 1–5.

Academic workload as a causal concept

Academic workload was the ‘cause’ in 38 of the 62 identified ‘cause and effect’ statements (61%). A recurring sentiment was that students felt the quality of their overall university experience was largely defined by their academic workloads, due partly to the impact of academic workload on other aspects of their lives.

Academic workload and academic stress

Students often attributed their academic stress as stemming from the amount of content they were required to learn, more so than the conceptual difficulty of this content. Various students described constant stress due to struggles keeping up with course workloads. Workloads were often characterised as unrealistic or overwhelming. Multiple

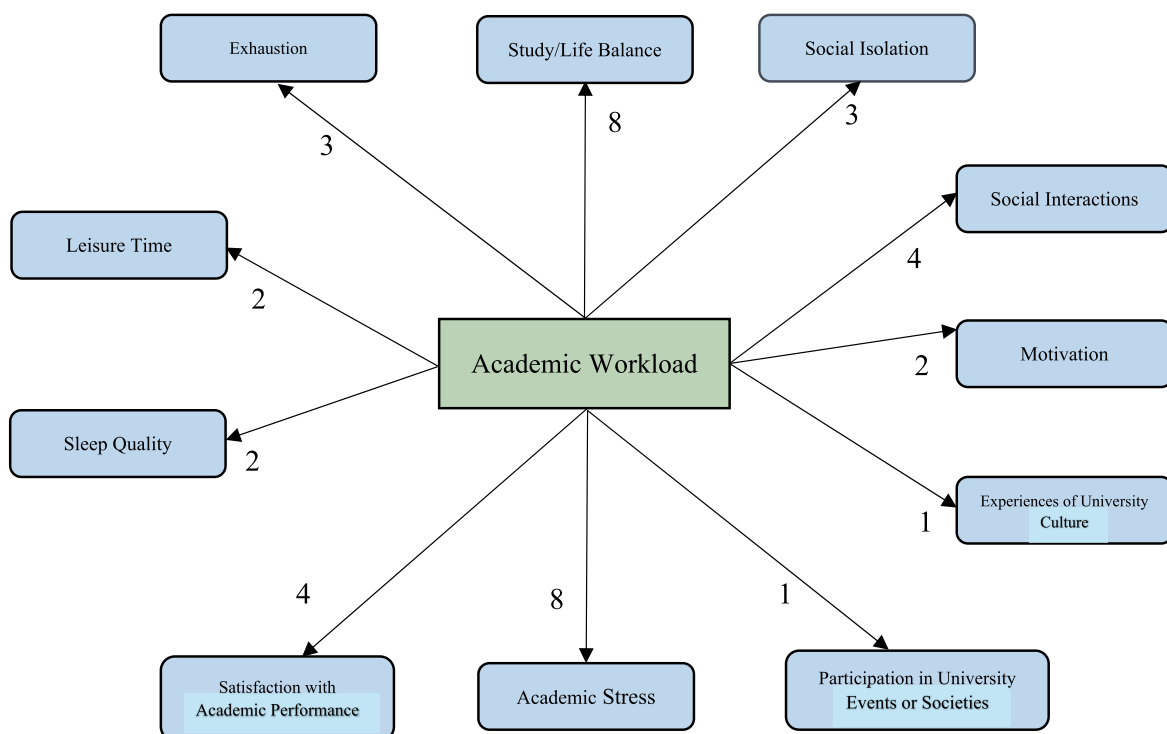


Figure 1. Frequency of ‘cause-and-effect’ statements where academic workload was the causal concept. Note: Concepts with rounded corners are ‘effects’ and concepts with square corners are ‘causes’

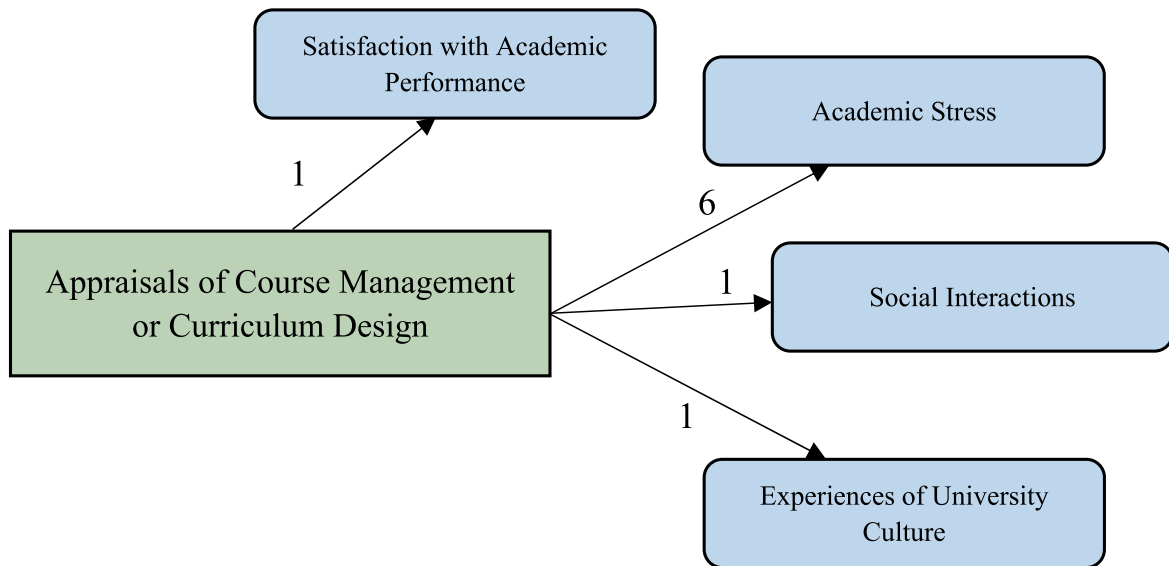


Figure 2. Frequency of ‘cause-and-effect’ statements where appraisals of course management or curriculum design was the causal concept. Note: Concepts with rounded corners are ‘effects’ and concepts with square corners are ‘causes’

students articulated that their stress was caused by the sense that managing workloads felt impossible.

The amount of content to learn is unrealistic and puts a ridiculous amount of pressure on students

I feel that the units are designed to be impossible to keep up with ... This results in students constantly being stressed from day one. Every student feels like they are constantly in a game of catch-up, and this constantly builds through the semester

Academic workload and satisfaction with academic performance

Students also reported diminished wellbeing when academic workloads forced them to compromise the quality of their academic work. Multiple students felt their desire to

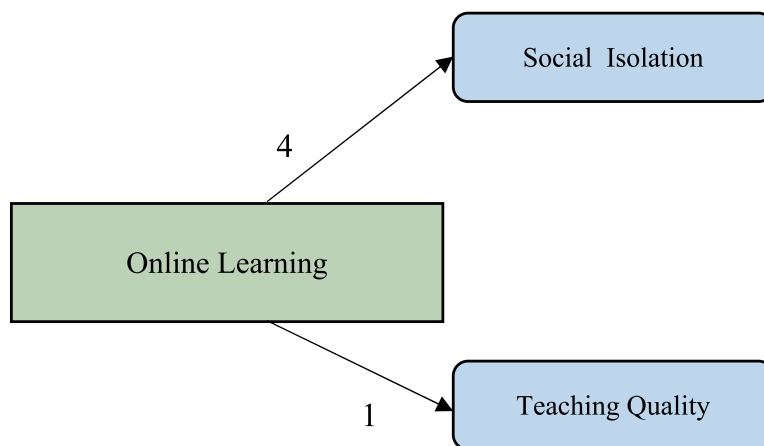


Figure 3. Frequency of ‘cause-and-effect’ statements where online learning was the causal concept. Note: Concepts with rounded corners are ‘effects’ and concepts with square corners are ‘causes’

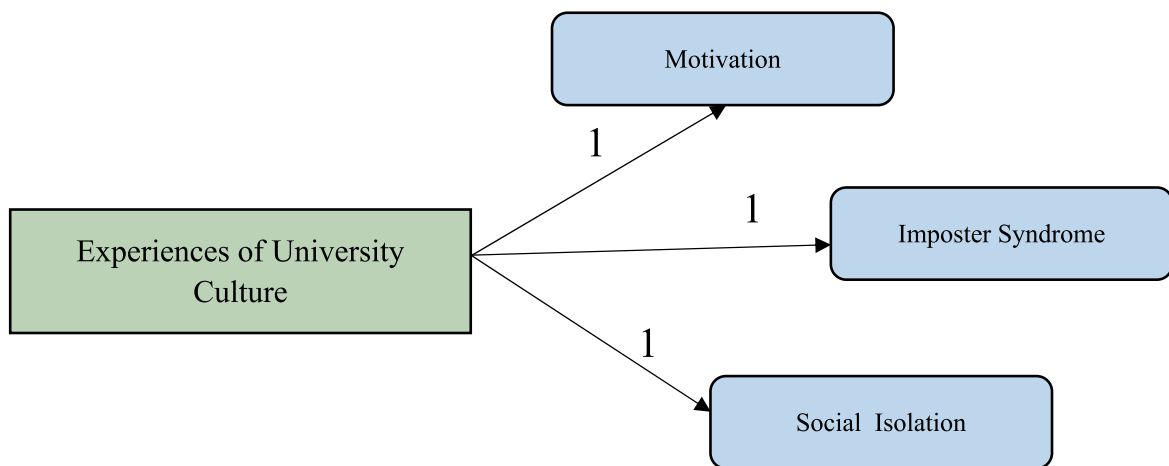


Figure 4. Frequency of ‘cause and effect’ statements where experiences of university culture was the causal concept. Note: Concepts with rounded corners are ‘effects’ and concepts with square corners are ‘causes’.

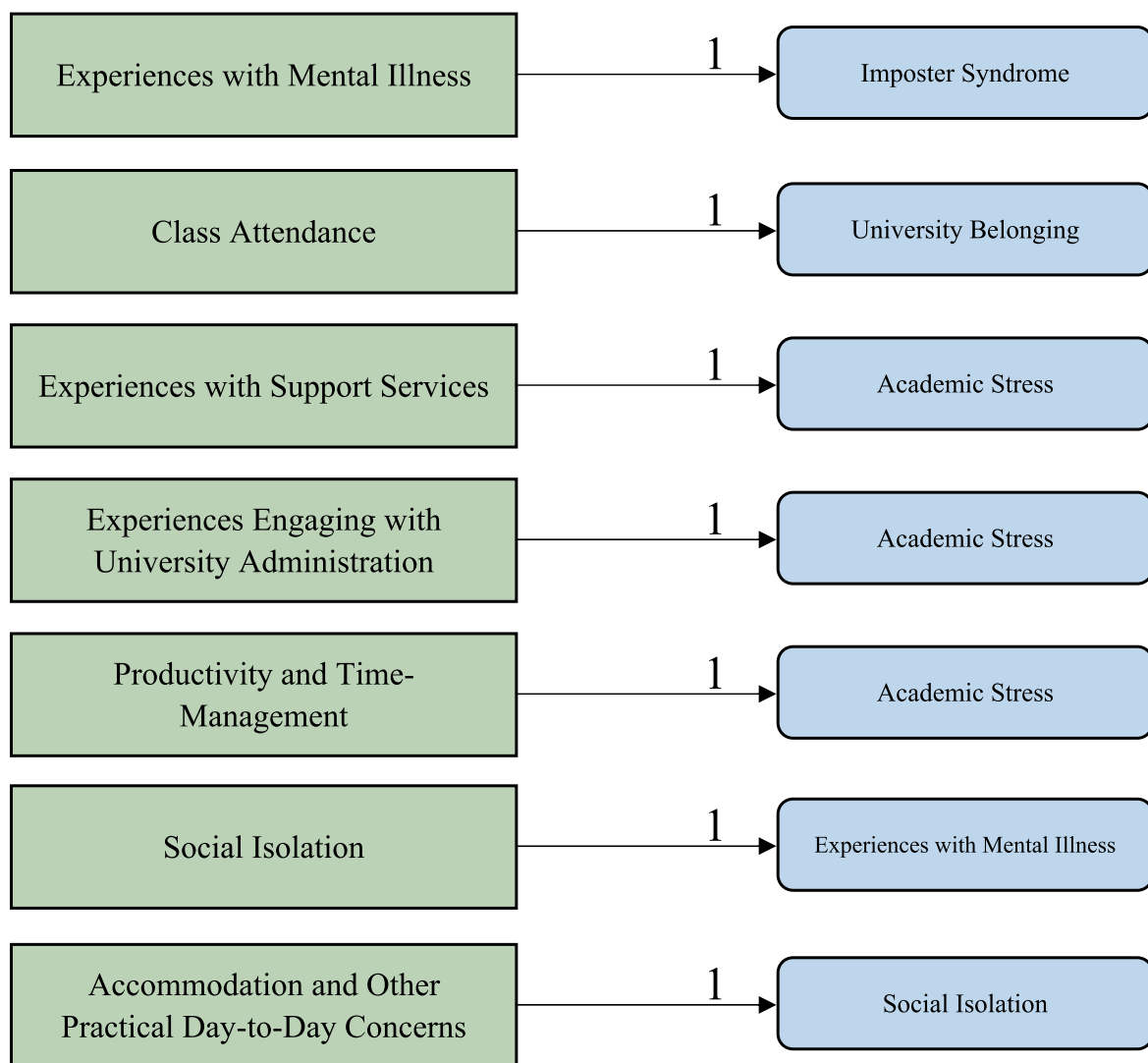


Figure 5. Frequency of ‘cause and effect’ statements in which a concept was described as influencing another concept on a single occasion. Note: Concepts with rounded corners are ‘effects’ and concepts with square corners are ‘causes’.

produce high-quality academic work was undermined when completing assessments to satisfactory standards required infeasible amounts of time. Submitting low-quality assignments led to regret and self-criticism.

I think mostly assessment loads. I am motivated to hand in work that I am proud of but studying a normal full-time load of 24 credit points, does not always leave time to complete tasks to the standards I strive for. . . . This impacts my perspective on my own work ethic. Even if I know I have spent all the time possible on an assignment, if I feel it has been compromised in quality, it is difficult to not be critical.

My well-being is greatly determined by the amount of work I feel I have on my plate, and more importantly, if I feel I am completing it to a standard I'm comfortable with. This often involves compromising some of the designated learning opportunities run by the faculty to keep up with the content load of the course.

Academic workload and study/life balance

Several students felt their wellbeing was negatively impacted when academic workloads disrupted their sense of having a balanced lifestyle. Students felt their workloads made it extremely difficult to sustain other responsibilities, such as working alongside their studies, maintaining sleep quality, and having personal leisure time.

The workload that we have is significant to the point it is almost physically impossible to sleep enough/manage a part time job/etc. I feel completely rushed and unable to learn properly for the future.

A combination of how much free time I have and how many assessments I have to do. If my assessments eat too much into my free time, it severely affects my mental wellbeing. On the contrary if I can come home from uni and I have the evening to myself, it greatly aids my wellbeing.

Academic workload and social interactions/social isolation

Several students felt overwhelming academic workloads negatively impacted their social lives. Students often described feeling unable to meaningfully engage in the social aspects of university life on account of unmanageable workloads. Students reported difficulties seeing existing friends as well as making new friends due to their academic workload.

The workload as a first-year student is just unacceptable. I am trying to fit in a new country and a new way of life, make new friends but I can't do that if I always have assignments and tests coming up

My time as a medicine student is heavily dictated around the significant pre-reading and practical skills workload, it feels as if a major part of my capacity to socialise, enjoy and interact with friends in my life is dictated by this workload

Other causal concepts

Twenty-four of the 62 'cause-and-effect' statements featured a causal concept other than academic workload (39%).

Appraisals of course management or curriculum design as a causal concept

Nine statements described aspects of course management or curriculum design causally influencing another concept, usually academic stress. Responses identified poor communication of the format and content of assessments as making assessments unnecessarily stressful, largely by making it difficult to determine optimal study approaches. Some students felt assessment formats could be adjusted to be less stressful and more accommodating of students with non-academic obligations or diverse schedules. Having multiple assessments scheduled closely together was identified as particularly stressful.

Please think about the well-being of students, the amount of stress each exam has on each student is immense, especially with the pressure to get a distinction average in order to get a job. If it is clear at the beginning of the semester what exams will be examining, rather than such a broad spectrum, this will be hugely beneficial to the wellbeing of students.

Experiences with online learning as a causal concept

Five statements described online learning having negatively impacted social and academic experiences, usually suggesting that online learning had caused loneliness.

Having all of my lectures on Zoom has made me feel disengaged, isolated and depressed

Experiences of university culture as a causal concept

Three statements described university culture influencing other concepts.

I would also add that imposter syndrome and feeling inadequate here is a significant element ... The difference in wealth and privilege here is very palpable

Single-Instance causal concepts

Seven concepts were identified as causal concepts on a single occasion.

Discussion

This study contributes to the existing literature in two key ways. Firstly, this is the first study to explicitly ask Australian university students which factors affect their wellbeing. The freedom of response afforded by the open-text entry approach provided insights into the factors most typically perceived as influencing student wellbeing. Encouragingly, students mentioned many factors which could potentially be intervened upon by universities. This includes the five most frequently mentioned factors: academic workload, social interactions, academic stress, teaching quality, and appraisals of course management or curriculum design. While our findings otherwise largely aligned with existing literature, the disproportionate frequency with which students identified academic workload as impacting their wellbeing (relative to all other factors) is arguably unexpected.

Secondly, this was the first study to apply relational analysis (RA) methodology to assess 'cause-and-effect' statements between factors felt to influence student wellbeing. Notably, we found that students consistently described academic workloads as diminishing wellbeing by exacerbating other aspects of their lives. No other factor was felt to indirectly impact wellbeing with comparable regularity.

Key findings

Students perceived academic workload as impacting their wellbeing more than twice as frequently as any other factor. Quantitative studies have found that greater academic workloads predict diminished wellbeing (Bergin & Pakenham, 2014) although non-significant relationships have also been observed (Larcombe et al., 2021). However, it has been suggested that the relationship between workload and student wellbeing may be under-researched (Smith, 2019). The primacy given to academic workloads by our sample suggests that further research into the interconnection between academic workloads and student wellbeing is warranted.

Academic workload was the causal factor in 61% of all causal statements. Sophisticated understandings of the relationship between academic workloads and wellbeing could provide useful insights into how best to support students. Our RA extends our understanding of this relationship by considering how academic workloads may impact other elements of students' lives which in turn affect student wellbeing. Multiple students described academic workloads diminishing their wellbeing by forcing them to forgo various protective behaviours (e.g., socialising, sleep, personal leisure time). University workloads may not be immediately or necessarily deleterious to wellbeing. Rather, wellbeing may become threatened when academic workloads force students to withdraw from protective behaviours and/or compromise the quality of their academic work. This theory aligns with previous qualitative insights both in Australia and overseas (Bitsika et al., 2010; Yangdon et al., 2021).

Further, our sample described overwhelming academic workloads as the most common cause of academic stress. University students experience high levels of academic stress, which predicts worse wellbeing (McIntyre et al., 2018). Academic stress is thought to derive from a variety of factors, including perceived difficulty of content, high academic workloads, desire for high performance, fear of exams or competitiveness of cohorts (Beiter et al., 2015; Bergin & Pakenham, 2014). However, the relative importance of factors underlying academic stress could be better delineated (Larcombe et al., 2021). In the present study, academic stress was mostly discussed in the context of overwhelming academic workloads, suggesting that our sample primarily felt that their academic stress derived from excessive university time demands. Students also described academic workloads as diminishing wellbeing by limiting social opportunities and capacities to maintain balanced lifestyles. Reducing overall workloads may help promote these other factors which are themselves well-established wellbeing predictors (Campbell et al., 2022).

Our sample's concerns about academic workload were not based on an objective measure of academic workload, but on subjective perceptions of university demands being excessive or unjustified. It is possible that university workloads are increasingly experienced as unmanageable due to increasing demands on students' time outside of their university work. As the cost-of-living increases, students are likely pressured to work longer hours and have longer commutes to campus due to housing inaccessibility. Therefore, universities could dedicate greater support and resources towards training students to study and use their time efficiently.

A second possibility is that students' perceptions that academic workloads are excessive is partly due to the pedagogical rationale for these heavy workloads not being well

understood by students. In the current study, several students appeared confused or shocked by the scope of university time-demands. This finding is consistent with recent qualitative studies which have observed that, while students will accept academic challenges that seem 'reasonably' difficult, wellbeing is diminished when challenges seem unreasonably difficult, or difficult without a clear pedagogical benefit (Jones et al., 2020; Upsher et al., 2022). The impact of academic workloads on wellbeing may, therefore, be mitigated by efforts to ensure that students understand the rationale behind high course workloads.

Naturally, academic workload is an essential feature of university life and substantially reducing academic workloads could have pedagogical drawbacks. However, it is always possible that, in some courses, workloads are unintentionally excessive due to lecturer or course designer oversight or underestimation of the effort and time required to complete assigned tasks. Hence, a simple and potentially very effective approach may be encouraging course designers and lecturers to weigh the pedagogical benefit of academic tasks against the inherent time-demands to ensure that students are not being avoidably or unnecessarily overworked.

Aside from the centrality of academic workload, our QCA largely aligned with the existing literature, identifying various aspects of students' academic, social, and personal lives as important to wellbeing. Echoing previous research, many students described teaching quality influencing wellbeing (Baik et al., 2019; Eloff et al., 2022). Depending on teaching styles and practices, university teachers have the capacity to either protect or endanger student wellbeing (Baik et al., 2019). This reaffirms the importance of ensuring that university teachers are adequately supported to create teaching environments which empower student wellbeing (Baik et al., 2019). Students reported frustrating engagements with university administration, relating to timetabling, enrolment, and special considerations processes. Improving ease of administrative procedures may provide another avenue for supporting student wellbeing.

This study aligns with existing literature by reflecting the beneficial impact of positive social experiences on student wellbeing (Bye et al., 2019; Eloff et al., 2022; Hurst et al., 2012). Students supporting each other is naturally something universities should foster and encourage. This study reiterates the importance of university environments which are conducive to positive social experiences (Bye et al., 2019; McIntyre et al., 2018). Students provided suggestions for ways to create a more social university experience, including increased visibility of extracurricular clubs and societies, smaller tutorial sizes, addressing competitive university cultures, more engaging lecturing and tutorials, and reducing academic workloads.

Limitations

This study's findings should be considered with an appreciation of its limitations. Firstly, the open-text response method did not allow follow-up questions and produced mostly brief responses. This survey was conducted in the aftermath of the COVID-19 pandemic. While almost all students were attending university in-person during data collection, they nevertheless responded in the context of recent online studies. We sampled students from a single large metropolitan Australian university which limits generalisability.

This study may be susceptible to sampling bias. While we sought a representative sample by recruiting from all faculties, respondents may not be representative of the general student population. Medicine and law students were somewhat over-represented. As these disciplines likely require high academic workloads this may partly explain the primacy given to academic workload in responses. This being the case, our sample did not appear skewed towards predominantly negative or positive wellbeing.

The qualifier ‘as a university student’ was included in the qualitative question to gain data relevant to university researchers and administrators. This likely prompted increased focus on university-related factors. Finally, the concept of wellbeing is complex and there is no academic consensus upon a single definition by which to understand wellbeing (Dodd et al., 2021). In this study, students were not instructed to understand ‘wellbeing’ according to a particular definition. Consequently, the conceptualisation of ‘wellbeing’ depended on each student’s personal interpretation of the term.

Implications and future directions

By applying a rigorous qualitative analysis methodology, the present study extends the literature towards a more holistic understanding of the lived wellbeing experiences of current Australian students. The insights provided can inform best practice for supporting Australian students. Moreover, students gave suggestions about how universities could empower their wellbeing, even when unprompted to do so. This reaffirms the potential to utilise student perspectives as resources for informing policy (Baik et al., 2019).

Future research could compare student responses between different Australian universities. If universities report similar findings, this would indicate that relatively uniform wellbeing policies are appropriate. If responses differ substantially, then universities might prioritise feedback from either their own students or from students attending ostensibly similar universities. Such comparisons could also be made across different national contexts. Notably, similar qualitative research conducted overseas has not reported comparable focus on academic workloads (e.g., Eloff et al., 2022; Upsher et al., 2022). This suggests that our sample may experience unusually high academic workloads.

Finally, the factors influencing student wellbeing likely differ across academic disciplines (Baik et al., 2019). Our sample was not large enough to allow for cross-faculty comparisons. Future research could assess cross-discipline discrepancies in the factors that students feel underly their wellbeing.

Conclusion

Nuanced understandings of the current university student experience can help inform university wellbeing policies. This study has outlined the factors which an Australian university student sample perceived as influencing their wellbeing, notably finding that academic workload was most frequently identified as affecting wellbeing, both directly and indirectly. Further research is required to establish the degree of consistency in student responses across different university contexts.

Disclosure statement

The authors report that are no competing interests to declare. This research was approved by the relevant human research ethics committee on the 18th of May 2022 [2022/152]. Submission of survey was taken as indicating consent to participate in this research.

ORCID

Angus H. Gilmore  <http://orcid.org/0009-0005-2413-6986>

Nick Glozier  <http://orcid.org/0000-0002-0476-9146>

Claire E. Ashton-James  <http://orcid.org/0000-0001-5547-4295>

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Chapter 4. Perspectives of university students as co-designers of a whole-of-university SMS wellbeing check

Preface

This chapter describes the codesign development of a novel approach for collecting wellbeing data from large university populations. Chapter 2 observed that whole-university wellbeing surveys have conventionally been conducted via email invitations and have received unusually poor response rates. Developing approaches for improving survey response to whole university wellbeing surveys was identified as an important future research direction.

SMS approaches are often used in healthcare settings to track patient outcomes following hospital discharge (Shimoni et al., 2020). SMS methods have received higher response rates than emails in healthcare contexts (DiCarlo et al., 2023; Premkumar et al., 2019; Romeiser et al., 2021), and this appears to be due to SMS responding being seen as more convenient (Chang et al., 2014; Nippita et al., 2015). SMS messaging may represent a possible means for improving response rates to whole-university wellbeing surveys. However, no previous study has collected wellbeing data from university students via SMS. Given the novelty of this approach, we engaged students as co-designers to establish the acceptability and preferred format of a university-wide SMS wellbeing check.

This chapter addresses the following research question underlying this thesis:

Research Question 2. *What strategies could assist in improving the response rates received by wellbeing surveys of Australian university students?*

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AUTHORSHIP STATEMENT

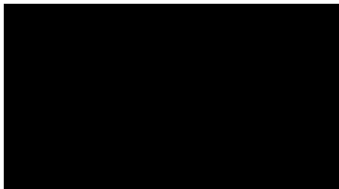
The co-authors of the paper “Gilmore A, Glozier N, Sunderland M & Ashton-James C.

Perspectives of university students as co-designers of a whole-of-university SMS wellbeing check” confirm that Angus Hamilton Gilmore has provided the following contributions to the study:

- conception and design of the research
- data collection and interpretation of the findings
- writing of the manuscript and critical appraisal of the content

As the primary supervisor for the candidate upon which this thesis is based, I can confirm that the authorship attribution statements above are correct.

Signed:



Associate Professor Claire Ashton-James

Date: 25th February 2025

Perspectives of university students as co-designers of a whole-of-university SMS wellbeing check

Angus H. Gilmore ^a, Nick Glozier ^b, Matthew Sunderland ^c and Claire E. Ashton-James ^a

^aSydney Medical School, Faculty of Medicine and Health, The University of Sydney, Sydney, Australia; ^bCentral Clinical School, Faculty of Medicine and Health, The University of Sydney, Sydney, Australia; ^cThe Matilda Centre for Research in Mental Health and Substance Abuse, The University of Sydney, Sydney, Australia

ABSTRACT

Whole of university surveys of student wellbeing typically achieve very low response rates and are conventionally conducted via email. Given the risk that non-response bias poses to the external validity of student wellbeing research, it is worth considering whether using alternative survey methods could improve response rates. The current study describes the co-design and evaluation of the acceptability and feasibility of using SMS text messaging to survey university student wellbeing. We developed a single-item student wellbeing SMS survey based on feedback from cognitive interviews with 74 university students. Most students preferred receiving a wellbeing survey via text message over email. Students also expressed preferences for texting their responses compared to clicking a link to an external survey, largely due to the convenience of text responding. Likert scale responses were preferred to emoji-based response options. Students predicted that the major barrier to response was the possibility that the SMS might be perceived as a potential scam. Future research will pilot the implementation of this SMS Wellbeing Check in a whole-of-university sample to evaluate response rates and outcomes.

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Introduction

Several studies have indicated that university students are at-risk of poor mental health and wellbeing (Larcombe, Baik, and Finch 2021; Sharp and Theiler 2018; Stallman 2010) and student wellbeing appears to be declining over time (Knapp et al. 2024; Knapstad et al. 2021; Lipson et al. 2022). Given these findings, universities are under increasing pressure to develop effective approaches for supporting student mental health and wellbeing (Upsher et al. 2022).

Wellbeing surveys that attempt to recruit all students within a university (i.e whole university samples) could identify student groups displaying unusually poor wellbeing and help guide targeted support towards these at-risk groups (Larcombe et al. 2016). Repeated whole-of-university wellbeing assessments would allow universities to monitor changes in student wellbeing over time and evaluate the effectiveness of wellbeing policies. However, the validity of wellbeing research on whole-of-university populations may be undermined by non-response bias.

Studies attempting to sample whole-of-university populations have conventionally used student email lists to disseminate survey links and frequently receive very low response rates, at

CONTACT Angus H. Gilmore  Sydney Medical School, Northern Clinical School, Kolling Institute, Royal North Shore Hospital, St Leonards, NSW 2065

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times between 5% and 10% (Knapp et al. 2024; Liu et al. 2021; Mulder and Cashin 2015; Skromanis et al. 2018). Large-scale tertiary student wellbeing studies reporting response rates greater than 10% tend to employ extensive marketing campaigns and participation incentives which require substantial financial, administrative, and human resources that limit the feasibility of regularly monitoring student wellbeing (e.g. multiple times per year) (Larcombe, Baik, and Finch 2021; Lipson et al. 2022; Sancu et al. 2022; Van Agteren et al. 2019). Low response rates for emailed surveys are thought to be partly attributable to over-saturation of survey requests and a perceived lack of benefit in responding to university-wide surveys (Steinmetz, Thompson, and Marshall 2020; Tschepikow 2012).

While low response rates do not guarantee the presence of non-response bias (Reyes 2020), the very low response rates typical of whole-of-university wellbeing data collection increases the potential for non-response bias. This is to say that the minority of students who respond to wellbeing surveys may differ systematically from the non-responding majority, particularly if a student's wellbeing influences response likelihood (Fosnacht et al. 2017; Reyes 2020). Such non-response bias could result in the over-representation of more vocal student groups, difficulties in robustly identifying at-risk student groups, and ultimately misdirection of limited university resources.

As such, it is worth exploring whether alternative methods of data collection might receive higher response rates from whole-of-university samples. One alternative would be to collect data using SMS messaging. SMS messaging is frequently used in healthcare settings and healthcare research to monitor patient outcomes following discharge (Shimoni, Nippita, and Castaño 2020). Research suggests that SMS methods receive higher response rates than email and paper diary methods in healthcare settings (DiCarlo et al. 2023; Premkumar et al. 2019; Romeiser et al. 2021). Studies using SMS to collect health data (e.g. post-operative pain ratings) frequently receive response rates greater than 90% (Brabyn et al. 2014; Kew 2010; Premkumar et al. 2019). Unlike emailed surveys, SMS-delivered surveys are typically very brief, often asking only a single question requiring a single alphanumeric response (Shimoni, Nippita, and Castaño 2020). Allowing participants to send survey responses by return text message, rather than clicking a link to an external online survey, may increase response rates by removing a step from the response process (Shimoni, Nippita, and Castaño 2020).

Qualitative studies suggest that patient and community populations prefer providing data via SMS due to the increased response convenience relative to emails (Chang et al. 2014; Nippita et al. 2015). Several theoretical frameworks provide insights into why SMS-approaches could produce higher response rates than emails among university students. SMS messages are likely a far more salient feature of student's lives relative to emails, especially considering high frequency of smartphone use among younger people. As per Social Cognitive theory, greater familiarity with SMS responding likely contributes to more established feelings of self-efficacy surrounding mobile phone use which may increase the likelihood of responding (Bandura 1997). Furthermore, the Technology Acceptance Model and Health Belief Model both identify ease of use as a key motivating factor underlying health-related behaviour and engagement with technology (Becker 1974; Davis 1989). The advantage of SMS over email may therefore lie in increased familiarity with this medium and decreased response burden.

To maximise the convenience of SMS data collection, it is ideal to ask a single-item requiring a single alpha-numeric response (Shimoni, Nippita, and Castaño 2020). While psychological researchers have historically harboured negative views towards single-item measures, the previous two decades have seen calls for a re-appraisal (Allen, Iliescu, and Greiff 2022). The primary concern surrounding single-item measures is that they may lead to increases in measurement error (Diamantopoulos et al. 2012). The internal consistency of a single-item measure cannot be assessed and single-items may be unable to adequately capture complex or multi-dimensional psychological constructs (Allen, Iliescu, and Greiff 2022). While these concerns are legitimate, single-item measures of wellbeing have displayed

acceptable convergent validity with multi-item measures of the same concept and are often equivalently strong predictors of wellbeing indicators (Cheung and Lucas 2014; Jovanović and Lazić 2020).

A clear benefit to single-item measures is that they require minimal time to complete (Jovanović and Lazić 2020). Keeping survey completion time to a minimum is desirable as this may reduce non-participation due to perceived time demands. The most ubiquitous single-item wellbeing measure asks some variation of, 'How satisfied are you with your life as a whole?' (International Wellbeing Group 2024; Jovanović and Lazić 2020). This 'general life-satisfaction' item assesses the cognitive component of wellbeing and is frequently used as a generic wellbeing indicator in various large-scale global surveys (e.g. The Gallup World Poll) (Raudenská 2023). Life-satisfaction can also be assessed using 'domain-specific' items (e.g. Satisfaction with personal relationships), as in the widely used Personal Wellbeing Index (PWI) (International Wellbeing Group 2024). Domain-specific indicators of life-satisfaction display moderate–high correlations with general life-satisfaction items, indicating that they represent related but distinct aspects of overall life-satisfaction (International Wellbeing Group 2024). Hence, to understand wellbeing in the context of life as a university student, we aimed to develop a single-item, domain-specific measure of wellbeing as it relates to satisfaction with university life.

To our knowledge, no studies have evaluated the feasibility and acceptability of using SMS text messaging to collect wellbeing data from a whole-of-university sample. While the feasibility and acceptability of SMS text messaging is well established in healthcare settings, there are important differences between healthcare and university contexts. For instance, SMS-delivered surveys are typically sent to patients who have agreed in advance to receive SMS messages requesting health data (Shimoni, Nippita, and Castaño 2020). In contrast, we are proposing an SMS wellbeing check that would be sent to a whole university student population without prospective consent. In addition, patients in healthcare settings are likely to be more motivated to respond to SMS-delivered health surveys, as survey completion may have implications for care and treatment outcomes. By contrast, there would be no direct benefits to students who choose to complete a wellbeing survey, sent via SMS or otherwise. Finally, it is increasingly commonplace to receive text messages from healthcare organisations (e.g. appointment reminders), while students may be comparatively less familiar and potentially less comfortable with receiving a text message from their university. As per the diffusion of innovations theory (Rogers 1962), university student response to the SMS wellbeing check may gradually increase as students become more familiar with the concept.

Rationale for the current study

The effectiveness of SMS-delivered surveys in healthcare settings points to the potential for SMS-delivered surveys to improve response rates to whole of university wellbeing surveys. Given the novelty of collecting wellbeing data via SMS in university contexts, we engaged with university students to co-design and evaluate the acceptability and feasibility of this survey method prior to pilot testing the SMS wellbeing check.

The current study aimed to a) evaluate whether this method of surveying wellbeing among university students would be acceptable and feasible, and b) co-design a brief SMS text message to measure student wellbeing. More specifically, our objectives were to i) establish if university students felt it was acceptable for universities to collect wellbeing data using bulk-SMS messaging, ii) consult with students to develop a single-item SMS measure of student wellbeing that is easy to understand, iii) explore students' preferred methods of receiving student wellbeing surveys from their university, and iv) identify potential barriers to student engagement with an SMS-delivered wellbeing survey.

Method

Concept of an SMS wellbeing check

The host university securely stores administrative data including student mobile numbers and demographic information such as student gender, degree, and domestic/international status. The SMS wellbeing check would involve sending all enrolled students a bulk SMS via a university affiliated research centre. Participant responses would be linked to demographic information case-by-case using mobile numbers, after which student names and mobile numbers would be removed, creating a de-identified dataset for storage in a secure university administered data storage system. Scores on the SMS wellbeing check would be compared between different student groups to identify sub-sets of the student population who may be at-risk of poor wellbeing.

Cognitive interviews

Cognitive interviews are widely used in survey item development (Meadows 2021). Cognitive interviewing involves presenting end-users with draft versions of survey items to identify and correct potential issues with item wording and presentation (Willis, Vannette, and Krosnick 2018). Cognitive interviews typically involve asking participants to 'think-aloud' about the way an item is worded (Meadows 2021). Cognitive interviews also allow for feedback on survey presentation and any broader issues which might influence responses (Willis, Vannette, and Krosnick 2018).

The present study reports on two rounds of cognitive interviews which provided student feedback on the acceptability of a university-wide SMS wellbeing check and assisted in developing this SMS. The first round of interviews assessed the comprehensibility of an initial draft of this SMS. This original draft was iteratively revised following first-round feedback. The acceptability of this revised item was evaluated in a second round of interviews.

Recruitment

University students were approached by interviewers at various locations on a large metropolitan university campus in Australia during August 2022 (Total 2022 enrolments = 69200).

Interviews were conducted by the first author, a higher degree by research student, and by four postgraduate social work students employed by the university. Interviewers introduced themselves to students and asked if they would be willing to participate in a 2-to-3 minute interview about a novel wellbeing measurement initiative being developed at the university. Two rounds of cognitive interviews were conducted on separate days. Feedback was received from 38 students in the first round and 36 in the second. Students were asked about their age, degree, and domestic/international student status. We intended to recruit participants until feedback had been received from at least one student from each university faculty. This was achieved in both rounds with the exception of no students from the music faculty being recruited during the second round. Ethics approval was received from the relevant human research ethics committee [2022/149].

First round interviews

Students who indicated willingness to participate were provided with a participant information statement and asked to sign consent forms prior to commencing the interview. Interviewers provided example SMS items either on paper-print outs or on mobile phones. The first example asked students to respond to the question 'In general, how satisfied are you with your life as a university student?' along a 1–7 Likert scale (1 = Extremely Dissatisfied, 7 = Extremely Satisfied). This question was an adaptation of the domain-specific items in the Personal Wellbeing Index (International Wellbeing Group 2024). The second example asked students to 'Tell us how you are feeling about your university life from 1–5'. The five response options were visually represented by

The University of Sydney cares about your wellbeing. Please let us know how you are currently feeling about University life by REPLYING to this msg with one of the following options (1-5):

1 = 😄 ; 2 = 😊 ; 3 = 😞 ; 4 = 😡
or 5 = 😟

Figure 1. Draft emoji SMS item used during first round interviews.

emojis which became more emotionally negative as the corresponding number increased, see Figure 1. Students were asked to ‘think-aloud’ about the wording and format of both items. Students were also asked for feedback on the overall concept of conducting an SMS wellbeing check. Given interview brevity and the background noise of the on-campus locations, field notes were taken to record student responses and demographic information. Naturally, the use of field notes over interview methods diminishes the richness of the data relative to interview recordings. This approach was taken mostly out of practicality considerations. However, because our research goal was to assess item-comprehensibility and overall concept acceptability, we did not feel conducting in-depth interviews was strictly necessary. The brief interview approach allowed students to provide their opinions on the wellbeing check briefly, without imposing excessive time burden upon participants. This being the case, the use of field notes over recordings inevitably results in information loss and less rich data relative to recorded in-depth interviews.

Second round interviews

The proposed SMS item was iteratively revised following first round feedback. Second round participants were shown an updated SMS, see Figure 2. The second round of interviews explored the comprehensibility of this updated item and the overall acceptability of conducting an SMS wellbeing check using a similar methodology as in the first-round interviews.

The University of Sydney cares about your wellbeing.

Please REPLY with a number from 0-10 to tell [redacted] how POSITIVE you are feeling about university life (0=not at all, 10=extremely). Responses are confidential.

The University of Sydney cares about your wellbeing.

Let us know how you are feeling about university life in < 1min in by clicking this secure survey link. Your responses are anonymous.

Figure 2. Draft SMS items used during second round interviews.

Table 1. Student demographics across both rounds of cognitive interviews. Includes domestic/international student status, degree progression and faculty of enrolment.

First Round (N = 38)		Second Round (N = 36)	
	n		n
International	10	International	11
Domestic	25	Domestic	14
Not Recorded	2	Not Recorded	11
Undergraduate	34	Undergraduate	18
Postgraduate	2	Postgraduate	6
Not Recorded	1	Not Recorded	12
Architecture	1	Architecture	5
Arts & Social Science	8	Arts & Social Science	4
Business	2	Business	4
Engineering	8	Engineering	2
Law	2	Law	2
Medicine	1	Medicine	4
Music	1	Music	0
Not Recorded	2	Not Recorded	11

Furthermore, between first and second round interviews, the research team received new information regarding the technical logistics of sending a bulk-SMS. We originally planned for students to receive an SMS from a phone number with an identifiable contact name (the name of the university) which would ask students to provide data by typing an SMS response. However, following first round interviews, we became aware that due to Australian legislation surrounding the use of bulk-SMS, it would only be possible for students to respond via text if the SMS was sent from an unknown number.

Hence, we explored whether students would prefer a) to respond by clicking on an external survey link embedded in an SMS from a named sender (the University) (One-way responding), or b) to respond by replying directly to an SMS received from an unknown number, purporting to be the University (Two-way responding). Students were presented with both options upon commencing the interview. See [Figure 2](#).

Participants

Thirty-eight participants were interviewed (Mean age = 20.4, Range = 18–24) during the first round and 36 were interviewed during the second (Mean age = 21.5, Range = 18–30). Interviews were conducted with students from all faculties at the university. Incomplete participant demographics were recorded on some occasions, most notably during the second round of interviews where one interviewer did not record demographics for 10 participants. See [Table 1](#).

Analytic strategy

Due to the brevity of interviews and field notes, the data was analysed and presented narratively. This narrative approach was appropriate considering the research aims of providing an overall impression of student sentiments and summarising feedback received regarding the wording of the SMS wellbeing check.

Results

Acceptability of conducting an SMS wellbeing check

The vast majority of students who provided feedback felt the concept of a university-wide SMS wellbeing check was acceptable and efficient. A few students actively supported the initiative. These students felt that the SMS could serve as a conversation starter for discussing student

wellbeing and that it would indicate that the university cares about supporting students. Most students were less effusive, with the majority simply indicating that they had no qualms with the concept of university-wide SMS wellbeing check. Four students expressed some form of opposition to the initiative. These students opined that the SMS was unnecessary, beyond the university's remit and could potentially be seen as intrusive. Aside from this paucity of negative comments, students were predominantly open to the idea of a university-wide SMS wellbeing check. Critiques primarily focused on the wording and presentation of the SMS item, rather than the concept itself.

Preferred wording of SMS item

Round 1: Feedback to Likert scale and emoji SMS survey options

During first-round interviews, students provided feedback on the Likert scale and SMS emoji options. Feedback was mostly negative for the Likert scale option which asked, 'In general, how satisfied are you with your life as a university student?'. While a small number of students thought the item was acceptable, the prevailing sentiment was that the wording was vague and confusing. A recurrent observation was that it was difficult to differentiate between 'your life' and 'your life as a university student'. Many participants were confused about what specifically the question was asking them to consider, for instance, whether the question pertained only to academic experiences or if it included other facets of university life.

Students tended to prefer the wording of the Emoji SMS option. Notably, the phrase 'your university life' was perceived as easier to understand than 'your life as a university student'. Feedback was mixed on the use of emojis to depict the response options. Multiple students felt that the emojis made the SMS visually engaging and fun, which would increase their likelihood of responding. Inversely, several students suggested that the emojis made the SMS harder to understand. Students indicated that it was unclear whether the emojis should be understood as having consistent intervals, or if they were meant to represent discrete categories. Students also reported that the emojis did not cover their full range of experiences, making it difficult to choose which emoji represented their current experience.

Round 2: Feedback to iteratively revised SMS survey option

The emoji option was omitted following round one feedback. The original Likert scale item was reworded so that it now asked students to respond with a number between 1 and 10 to the question 'How POSITIVE are you feeling about your university life?' (See [Figure 2](#).)

This item received almost exclusively positive feedback. Students felt the new wording was clear and most did not provide negative critiques. Consistent with the intended interpretation, students typically interpreted the question as asking for a general or holistic overview of their satisfaction with their university lives. A few students perceived the question as vague, but this critique was far less common than in the first round of interviews. Students were asked whether alternative phrasing such as 'happy' or 'satisfied' might be clearer than the word 'positive'. The vast majority felt positive was the better word choice.

Perceived feasibility of SMS wellbeing check depending upon survey format

Preferences between email and SMS delivery

Multiple students correctly surmised that the SMS wellbeing check was intended as an alternative to the more typical email survey. Overall, the majority of respondents who provided feedback expressed a preference towards wellbeing data being collected via SMS compared to email, although some students said that they would prefer emails. Students usually preferred the SMS option as they saw it as quicker and easier than an email survey. Some students

described feeling over-surveyed via email and appreciated the comparative brevity of the SMS option. Inversely, a few students stated that they would prefer to provide wellbeing data via email, mostly due to greater familiarity with being asked for survey feedback through their student email. Multiple students stated that they would respond to neither an SMS nor an email.

Preference between one-way and two-way SMS formats

The second round of interviews explored student preferences between the 'one-way' and 'two-way' SMS options. In support of the two-way option, students invariably preferred responding via text over clicking a link, as this method was seen as more convenient. However, in support of the one-way option, students were also unanimous that they would prefer to receive the SMS from a number with a recognisable contact name compared to an unknown number.

When deciding which option they preferred, most students appeared to weigh the benefit of replying via text against the detriment of the unknown number. Some noted that the optimal solution would be having both an identifiable contact number and allowing text response. While several students preferred the 'one-way' option, the majority advocated for the 'two-way' option in which they would text a response to an unknown number. Some students indicated no preference, concluding that they felt similarly about both options.

Perceived barriers to response

Likelihood of the SMS being perceived as a scam

Across both rounds of interviews students expressed concerns that the wellbeing SMS check may be perceived as a scam. Students often predicted that their likelihood of responding would be heavily influenced by doubts surrounding the legitimacy of the SMS. Students were vigilant about SMS scams and conscious of potential negative consequences arising from engaging with scams. Some students observed that the proposed SMS looked similar to scams they had received which purported to be sent by recognisable public institutions, such as postal services.

Students predicted that using an unknown number would increase the chance of the SMS being seen as a possible scam and therefore ignored. However, students also felt that an SMS requesting that they click a link seemed more typical of an SMS scam than one asking for a text response. Multiple participants disclosed that they typically ignore all unfamiliar text messages due to the volume of scam texts they receive. The overall impression was that students were open to responding, but that they would ignore the SMS wellbeing check out of caution if they had any doubts over its legitimacy.

Discussion

Involving end-users in the development of survey items helps confirm that these items are acceptable from the perspective of the survey's intended recipients (Connell et al. 2018; Patrick et al. 2011). Cognitive interviews were conducted with a sample of university students to guide the development of an SMS item assessing satisfaction with university life. Feedback was received from 74 students across two rounds of interviews. First round feedback helped revise item wording and presentation. The revised item received predominantly positive feedback during second round interviews. Additionally, these interviews revealed student perspectives on the acceptability of collecting student wellbeing data via a bulk-SMS, as well as predictions of potential obstacles which may limit the success of such data collections.

Key findings

Acceptability of an SMS wellbeing check

Student wellbeing research is primarily conducted using email recruitment. Since collecting wellbeing data via SMS would be unfamiliar to students, this study firstly sought to confirm the acceptability in-concept of a university wide SMS wellbeing check. Encouragingly, we found that students were predominantly receptive to receiving an SMS requesting wellbeing data. The handful of negative comments mostly related to the SMS being somewhat unnecessary, instead of representing a view that the SMS might be harmful. This provides initial evidence for the acceptability of an SMS wellbeing check from a student perspective.

Convenience of responding as the key benefit of an SMS approach

Developing this SMS wellbeing check is predicated on the hope that SMS methods could receive higher response rates than email approaches. While SMS methods often receive higher response rates than emails in health research (DiCarlo et al. 2023; Premkumar et al. 2019; Romeiser et al. 2021), it is not known whether the same would apply in university contexts. For SMS approaches to be worthwhile, the increased response rate must offset the cost of using a single-item measure and the consequent risk of increased measurement error and lack of nuanced or fine-grained understandings of student wellbeing.

Student feedback supported the theory that the key advantage of SMS data collection over email approaches is increased time efficiency and response convenience. This aligns with existing qualitative research (Cheung and Lucas 2014; Nippita et al. 2015) and relevant theoretical frameworks (Becker 1974; Davis 1989). Students indicated that even the very slightly increased time burden of clicking an extra link would tangibly decrease response likelihood. This suggests that in research situations where increasing the overall response rate is crucial, and where the concession of using a single-item outcome is defensible, researchers might consider using an SMS approach that allows responding via text. However, naturally pilot testing is required to evaluate whether the theorised response rate benefit of SMS approaches over emails is realised in practice.

Considerations for implementation

Students also identified possible barriers to responding. These barriers should be recognised when attempting to implementing bulk-SMS data collection within university contexts and could be incorporated within a structured implementation guideline such as the Consolidated Framework for Implementation Research (Damschroder et al. 2022). First and foremost, students predicted that uncertainty surrounding the legitimacy of the SMS would diminish the likelihood of responding and that using an unknown number would increase concerns that the SMS may be a scam. It is established that SMS messaging receives higher response rates than email in healthcare contexts where participants typically opt-in to receiving texts from healthcare providers (Shimoni, Nippita, and Castaño 2020). However, the proposed SMS wellbeing check would be unsolicited, likely increasing concerns about legitimacy. Therefore, a key challenge for implementing a bulk-SMS data collection in university contexts is ensuring that students trust the SMS and feel it is safe to respond. Universities might consider using announcements on official university platforms and newsletters, flyers and electronic billboards to reaffirm the SMS as an official university initiative and clarify the reasoning behind the data collection.

Additionally, as indicated by one participant, students may perceive the SMS as unexpected or intrusive, which could reduce response likelihood. Students may also feel uncomfortable providing sensitive wellbeing data via SMS, which could further reduce response likelihood, although the same may also be true of email approaches.

Limitations

This study has several limitations. Only 74 students were sampled which casts doubt over sample representativeness. Students who agreed to participate in on-campus interviews may be unusually outgoing and willing to engage with university initiatives. This sample may have been more receptive to the SMS wellbeing check relative to the broader student population. Given that all participants attended the same university, students from other institutions may have different perspectives on the idea of an SMS wellbeing check which further limits the generalisability of our findings.

Assessing wellbeing via a single-item entails the limitations inherent to using single-item measures and will not provide a fine-grained and multi-dimensional measure of wellbeing. Instead, this item will provide insights into a student's general level of satisfaction with their university life. The inclusion of a quantitative measure assessing degree of favourability for the SMS wellbeing check could have also enhanced understandings of perceived acceptability.

Due to the noisy on-campus locations in which interviews were conducted, field-notes were taken instead of audio recordings. While interviewers noted down key points, these field notes did not provide complete transcripts. Therefore, our method of data collection and interviewing did not allow a richly detailed exploration of student perspectives. Future researchers might consider exploring the same topic using recorded semi-structured interview approaches. Similarly, in analysing and presenting the data narratively we have been able to summarise student responses and comment on the overall acceptability and comprehensibility of the SMS wellbeing check. However, more in-depth interviews would allow more sophisticated analysis. Interviews were also conducted by interviewers with differing levels of experience which led to variability in the conducting and recording of interviews and in one case the non-collection of participant demographic information.

Future directions

The current study described the co-design process behind the development of an SMS item assessing student satisfaction with university life. Feedback indicated that the majority of students felt the revised item was easy to understand and that it asked for a holistic appraisal of the various facets relevant to university life. This aligned with the intended interpretation and suggested that the item has face validity. The primary goal for future research is to assess whether this SMS would receive a higher response rate compared to comparable email methods. Naturally, the practical next step is to pilot this SMS in a university-wide sample and compare the response rate to existing email studies.

Conclusion

There is a need to consider ways of improving the response rates for wellbeing research conducted on whole-of-university samples. The current paper describes the co-design process behind a novel SMS-based approach for assessing student wellbeing. Cognitive interviews were conducted with 74 university students. These interviews affirmed both the acceptability of collecting wellbeing data via bulk-SMS and the comprehensibility of a novel single-item SMS student wellbeing measure. Future researchers can pilot this initiative to observe whether this SMS methodology receives a higher response rate relative to traditional email approaches.

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ORCID

Angus H. Gilmore  <http://orcid.org/0009-0005-2413-6986>

Nick Glozier  <http://orcid.org/0000-0002-0476-9146>

Matthew Sunderland  <http://orcid.org/0000-0001-8452-364X>

Claire E. Ashton-James  <http://orcid.org/0000-0001-5547-4295>

CRediT author contribution statement

AG: Conceptualisation, Formal Analysis, Writing, Original Draft Preparation, Investigation, Data Curation. NG: Conceptualisation, Reviewing, Methodology. MS: Conceptualisation, Reviewing, Methodology. CAJ: Supervision, Formal Analysis, Conceptualisation, Reviewing, Project Administration, Methodology.

Data availability statement

Data will be made available upon request.

Informed consent

Submission of survey was taken as indicating consent to participate in this research.

Ethics approval

Ethics approval was gained from the relevant Human Research Ethics Committee at The University of Sydney on 10th of August 2022 [2022/149].

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Chapter 5. The moderating role of academic faculty in predicting student wellbeing: findings from a novel university-wide SMS wellbeing check.

Preface

This chapter reports the findings of the first university-wide wellbeing survey to be delivered via SMS messaging. As described in chapters 2 and 4, improving response rates to whole university wellbeing surveys represents a key future research direction. Chapter 2 also identified a dearth of research examining which sub-sets of Australian university populations are at-risk of poor wellbeing. Identifying at-risk student groups can guide allocation of limited university resources. Comprehensively identifying at-risk groups requires whole-university wellbeing data.

Limited existing research has sought to identify at-risk students by comparing levels of wellbeing either across academic disciplines (e.g law vs psychology), or across key student demographic qualifiers (e.g international vs domestic, male identifying vs female identifying) (e.g McLafferty et al., 2022; Skead & Rogers, 2015; Skromanis et al., 2018; Stallman, 2010). However, there is good reason for thinking that differences in wellbeing between key student demographics may vary depending upon academic disciplines (e.g some academic disciplines may be unusually threatening or supportive to the wellbeing of particular ‘types’ of students). Elevating understandings of which student groups are at-risk of poor wellbeing requires examining the potential moderating role of academic faculty. To our knowledge, no existing study has conducted such an analysis. This paper therefore had dual aims. We sought to examine the response rate that would be received via a university-wide SMS wellbeing check. We also aimed to use this whole-university wellbeing data to assess whether academic faculty moderates wellbeing differences between key student groups.

This chapter addresses the following research questions underlying this thesis:

Research Question 1. *What factors appear to be associated with the wellbeing of Australian university students?*

Research Question 2. *What strategies could assist in improving the response rates received by wellbeing surveys of Australian university students?*

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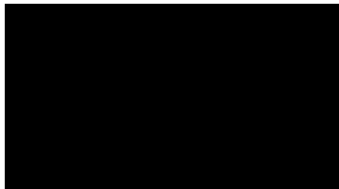
AUTHORSHIP STATEMENT

The co-authors of the paper “Gilmore A, Costa, D & Ashton-James C. *The moderating role of academic faculty in predicting student wellbeing: findings from a novel university-wide SMS wellbeing check*” confirm that Angus Hamilton Gilmore has provided the following contributions to the study:

- conception and design of the research
- data collection and interpretation of the findings
- writing of the manuscript and critical appraisal of the content

As the primary supervisor for the candidate upon which this thesis is based, I can confirm that the authorship attribution statements above are correct.

Signed:



Associate Professor Claire Ashton-James

Date: 25th February 2025

**The Moderating Role of Academic Faculty in Predicting Student
Wellbeing: Findings from a Novel University-Wide SMS Wellbeing Check**

Angus H. Gilmore^{a*}, Daniel Costa^b, Claire E. Ashton-James^a

^a*Sydney Medical School, Faculty of Medicine and Health, The University of Sydney, Sydney, Australia*

^b*School of Psychology, The University of Sydney, Sydney, Australia*

Abstract

Clarifying whether certain subsets of student populations are at-risk of poor wellbeing could guide university resources towards students most in need of support. While previous research has sought to identify at risk student groups by comparing student wellbeing between academic faculties (e.g., law versus medicine) or between demographic groups (e.g., female-identifying vs. male-identifying), the primary aim of the current study is to use moderation analysis to explore whether demographic differences in student wellbeing are consistent across faculties. Furthermore, university-wide student wellbeing surveys conventionally recruit participants using email invitations. Such approaches tend to receive very low response rates, diminishing confidence in data representativeness. A secondary aim of the current study is to examine whether surveying the wellbeing of whole university samples using SMS text messaging might enhance response rates. 4232 students at an Australian university provided responses to a single-item measure of student wellbeing sent via SMS text message. Analyses revealed that academic faculty significantly moderated wellbeing differences across demographic groups. This novel finding has substantive implications for future efforts to identify student groups at-risk of poor wellbeing. This SMS survey received a valid response rate of 9% which appears comparable to existing equivalent email approaches. Strategies for improving response rates to SMS wellbeing surveys in university contexts are suggested.

5.1 Introduction

Universities are facing increasing pressure to develop effective approaches for supporting student wellbeing (Lipson et al., 2022; Upsher et al., 2022). Clarifying whether certain subsets of student populations appear especially at-risk of poor wellbeing could enhance the effectiveness of university initiatives by guiding university resources towards students who stand to benefit most (Allen et al., 2022; Erekson et al., 2023; Lipson et al., 2022; McLafferty et al., 2022).

Previous research has sought to identify differences in wellbeing between student demographic groups or between academic faculties. For example, previous faculty comparisons have identified arts (Allen et al., 2022; Erekson et al., 2023; Larcombe et al., 2016; Lipson et al., 2016; McLafferty et al., 2022) and law students (Leahy et al., 2010; Lewis & Cardwell, 2020; Schofield et al., 2016) as reporting worse wellbeing (broadly defined) relative to students from other faculties. Within Australian contexts, postgraduate students have reported greater wellbeing relative to undergraduates across multiple samples (e.g Dodd et al., 2021; Stallman, 2010), while female-identifying students have typically reported either worse or comparable levels of wellbeing to male-identifying students (e.g Fullerton et al., 2021; Skromanis et al., 2018). Furthermore, several studies have compared the wellbeing of domestic and international students, with inconsistent findings (Dingle et al., 2024; Dodd et al., 2021; Knapp et al., 2024; Larcombe et al., 2024; Sanci et al., 2022; Skromanis et al., 2018).

5.1.1 Do demographic differences in wellbeing vary between academic faculties?

To our knowledge, no previous study has examined whether demographic differences in wellbeing are consistent across academic faculties. This represents an important omission from the literature. On the face of it there is good reason why one might expect demographic differences in wellbeing to vary between faculties. For instance, within English-speaking

universities, some faculties will demand greater English fluency than others. Such faculties may disproportionately threaten the wellbeing of international students who are more likely to speak English as a second language (Marangell & Baik, 2022). Furthermore, there may be academic faculties in which social environments are more conducive to the wellbeing of particular gender identities, and there may be faculties in which the inherent stress of postgraduate courses differs from undergraduate courses.

Identifying at-risk students should therefore involve assessing whether demographic differences in wellbeing vary depending upon faculty (i.e moderation analysis). Limiting analysis to aggregated ‘main effect’ comparisons, (e.g comparing overall differences between domestic and international students without confirming that these differences are consistent across faculties), could result in failures to accurately identify at-risk subsets of student populations.

5.1.2 Challenges in measuring student wellbeing

Comparing patterns of student wellbeing between and within academic faculties requires collecting wellbeing data from whole-university samples. Unfortunately, whole-university wellbeing surveys receive particularly low response rates, diminishing confidence in data representativeness (Gilmore, McNeilage, & Ashton-James, 2025). In the United States, response rates to two nationally representative annual wellbeing surveys have declined from 23% (Duffy et al., 2019) and 19% (Lipson et al., 2022) in the early 2010’s, to 11% and 9% in the most recent iterations, (ACHA, 2024; Eisenberg et al., 2024). Large scale wellbeing (or wellbeing adjacent) surveys conducted in specific Australian universities often receive response rates lower than 10% (Knapp et al., 2024; Liu et al., 2021; Mulder & Cashin, 2015; Skromanis et al., 2018; Stallman, 2010; Watson et al., 2015). Whole of-university (or comparable) wellbeing surveys reporting higher response rates typically use extensive marketing campaigns and/or participation incentives which limit capacity for

repeated data collections (Farrer et al., 2016; Larcombe et al., 2021; Sanci et al., 2022; van Agteren et al., 2019). Furthermore, given statistical power considerations, increasing sample size allows greater specificity of data analysis, which would empower recognition of at-risk student groups (van Agteren et al., 2019). Developing efficient and repeatable methods for collecting representative whole-university wellbeing data is therefore a key research challenge.

5.1.3 A novel approach for assessing the wellbeing of whole-of-university samples

Whole-of-university wellbeing surveys are conventionally disseminated via student email lists (Gilmore, McNeilage, & Ashton-James, 2025). Given the value of increasing response rates, it is appropriate to consider whether alternative data collection approaches might receive greater response. Surveys delivered via SMS text message receive higher response rates than email surveys in healthcare settings (DiCarlo et al., 2023; Premkumar et al., 2019; Romeiser et al., 2021). This appears attributable to SMS responding being seen as more convenient (Chang et al., 2014; Nippita et al., 2015). However, no study has evaluated whether SMS methods might receive higher response rates than emails within university contexts.

In prior research we sought feedback from university students to evaluate the acceptability and feasibility of an SMS-delivered student wellbeing survey. While students found the concept acceptable, feedback indicated that even very minute increases in participant burden, such as clicking a survey link rather than responding via text, would tangibly diminish response likelihood. Allowing text responding to a single item was identified as the optimal survey format. For the full rationale on this approach see (Gilmore, Glozier, et al., 2025).

5.1.4 Research Aims

The following reports on the findings of a single-item whole-of-university wellbeing survey delivered via SMS. The present study has the following two aims.

- 1) To examine whether differences in wellbeing between key student demographic groups (*domestic vs international, postgraduate vs undergraduate, female-identifying vs male-identifying*) vary significantly depending on the faculty a student is enrolled in.
- 2) To examine the response rate received by an SMS-delivered university-wide wellbeing survey.

5.2 Method

5.2.1 Measure

The SMS item reads: “The [university name] cares about your wellbeing. Tell us how you feel about university life by replying with a number from 0-10 (0 = not at all positive, 10 = extremely positive)”. Co-design feedback indicated that this item had face-validity and that students typically perceived it as asking for a global evaluation of satisfaction with one’s life as a university student (Gilmore, Glozier, et al., 2025). Due to Australian legislation, allowing SMS responding required the SMS wellbeing check to be sent from an unknown number, *Spam Act 2003* (Aus). Co-design feedback indicated that the use of an unknown number would diminish response likelihood by making the SMS resemble a text-message scam. However, this format was preferred to the alternative of clicking a link to an external survey embedded in an SMS delivered by a recognisable sender (Gilmore, Glozier, et al., 2025).

5.2.2 Recruitment and Data Storage

All currently enrolled students at a large metropolitan public university who had provided a valid Australian phone during their pre-enrolment questionnaire were sent the SMS during October 2022. The SMS was marketed via a university-wide newsletter article and a banner notification on the university’s primary e-learning platform.

The bulk-SMS was sent via a university-affiliated research centre. SMS responses were linked to administrative demographic data including gender-identity (male, female, other), domestic/international status, degree type (undergraduate coursework, postgraduate coursework, postgraduate research) and primary faculty of enrolment. The university comprises eight relatively autonomous faculties: Architecture, Arts and Social Sciences, Business, Engineering, Law, Medicine and Health, Music, and Science. Students undertaking double degrees can enrol in multiple faculties. In such cases, administrative data assigns a 'primary' faculty.

Mobile numbers and names were deleted after linking SMS responses to administrative data. This produced a non-identifiable dataset which was stored on a secure university administered server. Retrospective ethics approval was acquired to report the findings of this de-identified dataset [2024/HE000599].

5.2.3 Data Analysis

Data analysis was conducted using SPSS 29. Independent samples t-tests compared student wellbeing between male and female-identifying students, domestic and international students and undergraduate and postgraduate students. A composite postgraduate group was computed due to low numbers of postgraduate research students ($n = 191$, $M = 5.30$, $SD = 3.29$). Sensitivity analyses found no changes in significance decisions depending on inclusion or exclusion of postgraduate research students.

Eleven participants identified their gender as 'other' and were excluded from analyses comparing male and female-identifying students. 169 participants had missing faculty data due to being either exchange students or being enrolled in non-faculty specific enabling or non-awards courses.

Faculty comparisons were conducted using a one-way ANOVA and contrast analyses. Main effect contrasts compared the mean wellbeing of each individual faculty to the average

of all other faculties. Family-wise type-one error rate was controlled using the Scheffe method (Scheffe, 1953).

Three separate two-way analyses of variance assessed whether faculty of enrolment would moderate wellbeing differences between levels of the three binary demographic variables of gender-identity, domestic/international status and undergraduate/postgraduate status. Music students were omitted from the latter two analyses due to low group sizes. Interaction contrasts compared differences in student wellbeing between levels of the binary demographic variables within one faculty to the averaged difference across all other faculties. Significant interaction contrasts were further qualified by simple main effect analyses.

5.2.4 Sample Characteristics and Response Rate

SMS messages were sent to 50156 mobile numbers, with 47095 messages sent successfully. 4232 valid responses were received (an integer between 0-10). This represented a 9.0% valid response rate to successfully sent SMS messages, and an 8.4% valid response rate to all attempted messages. Proportions of responses from different student groups were largely comparable to the broader student population who had provide an Australian mobile phone number, although international student were slightly under-represented. See Table 1.

Table 1.

Proportion of responses received from each demographic group compared to proportion of students enrolled in semester 2 2022 who had provided an Australian mobile number

SMS Wellbeing Check Responses		University Population	
	n (sample %)		n (population %)
Faculty			
Architecture	170 (4.2%)	Architecture	2548 (4.9%)
Arts & Social Sciences	983 (24.3%)	Arts & Social Sciences	11569 (22.5%)
Business	489 (12.0%)	Business	6743 (12.8%)
Engineering	567 (14.0%)	Engineering	6903 (13.2%)
Law	152 (3.7%)	Law	2053 (3.9%)
Medicine and Health	741 (18.3%)	Medicine and Health	11314 (21.6%)
Music	103 (2.5%)	Music	1162 (2.2%)
Science	847 (20.9%)	Science	9081 (17.7%)
Gender			
Male	1706 (42.1%)	Male	22452 (42.8%)
Female	2346 (57.8%)	Female	29806 (56.8%)
Other	11 (0.1%)	Other	100 (0.1%)

Residency			
Domestic	3264 (80.0%)	Domestic	37374 (71.2%)
International	873 (20.0%)	International	14984 (28.5%)
Degree Type			
Undergraduate	2828 (69.8%)	Undergraduate	32332 (61.8%)
Postgraduate Course	1044 (28.8%)	Postgraduate Course	16363 (31.3%)
HDR	191 (4.7%)	HDR	3663 (7%)

Note: Postgraduate Course = Postgraduate Coursework, HDR = Higher Degree by Research.

5.3 Results

5.3.1 Does student wellbeing differ depending on student demographic characteristics?

The difference in wellbeing between male and female-identifying students was non-significant. International and postgraduate students displayed significantly higher wellbeing than domestic and undergraduate students respectively, both with small-moderate effect sizes. Student wellbeing differed significantly depending on faculty of enrolment, with a small effect size. See Table 2. Table 3 reports mean responses across student groups.

Table 2.

Differences in student wellbeing between demographic categories.

	F/t _(df)	p	Effect Size
Gender	t ₍₄₁₂₄₎ = -1.84	.065	d = -.058
Domestic/International	t ₍₄₁₃₅₎ = -6.66	<.001	d = -.254
Undergraduate/Postgraduate	t ₍₄₁₃₅₎ = -7.18	<.001	d = -.244
Faculty	F _(7,4055) = 4.39	<.001	η _p ² = 0.008

Note: *d* = standardised mean difference (Cohen's *d*), η_p² = partial eta squared.

Two faculties, law and business, reported aggregated student wellbeing that differed significantly from the combined average of all other faculties. Specifically, law students displayed unusually low wellbeing ($F_{(1,4055)} = 9.57$, $\eta_p^2 = 0.002$), while business students displayed unusually high wellbeing ($F_{(1,4055)} = 19.66$, $\eta_p^2 = 0.005$), both with small effect sizes.

5.3.2 Do differences in student wellbeing between demographic groups vary depending on faculty?

All omnibus interaction effects were significant, see Table 4. This indicates that differences in student wellbeing between male and female-identifying, domestic

Table 3.

Mean (standard deviation) student wellbeing scores (0-10) depending on faculty of enrolment and student demographics.

	M (SD)	n		M (SD)	n		M (SD)	n	M (SD)	n	
Architecture	4.52 (2.51)	170									
			<i>Male</i>	4.44 (2.53)	63	<i>Domestic</i>	4.40 (2.52)	122	<i>Undergraduate</i>	4.24 (2.49)	106
			<i>Female</i>	4.56 (2.52)	107	<i>International</i>	4.84 (2.49)	49	<i>Postgraduate</i>	5.00 (2.48)	65
Arts	4.45 (2.91)	983									
			<i>Male</i>	4.33 (2.98)	318	<i>Domestic</i>	4.30 (2.94)	834	<i>Undergraduate</i>	4.27 (2.84)	773
			<i>Female</i>	4.50 (2.87)	665	<i>International</i>	5.30 (2.62)	153	<i>Postgraduate</i>	5.12 (3.08)	214
Business	5.16 (2.99)	489									
			<i>Male</i>	4.67 (3.19)	219	<i>Domestic</i>	4.76 (3.03)	302	<i>Undergraduate</i>	4.39 (2.91)	287
			<i>Female</i>	5.55 (2.76)	270	<i>International</i>	5.78 (2.83)	188	<i>Postgraduate</i>	6.23 (2.77)	203
Engineering	4.53 (3.01)	567									
			<i>Male</i>	4.56 (2.99)	409	<i>Domestic</i>	4.24 (2.96)	389	<i>Undergraduate</i>	4.42 (2.90)	440
			<i>Female</i>	4.48 (3.06)	158	<i>International</i>	5.15 (3.01)	180	<i>Postgraduate</i>	4.90 (3.32)	129
Law	3.92 (2.87)	152									
			<i>Male</i>	4.80 (3.04)	50	<i>Domestic</i>	3.95 (2.90)	116	<i>Undergraduate</i>	3.90 (2.93)	42
			<i>Female</i>	3.49 (2.69)	102	<i>International</i>	3.82 (2.78)	32	<i>Postgraduate</i>	3.92 (2.86)	110
Medicine & Health	4.70 (3.09)	741									
			<i>Male</i>	4.76 (3.27)	249	<i>Domestic</i>	4.76 (3.09)	651	<i>Undergraduate</i>	4.50 (2.81)	353
			<i>Female</i>	4.67 (3.00)	492	<i>International</i>	4.16 (3.08)	92	<i>Postgraduate</i>	4.86 (3.32)	390
Music	4.79 (2.77)	103									
			<i>Male</i>	4.65 (2.80)	60	<i>Domestic</i>	4.82 (2.82)	100	<i>Undergraduate</i>	4.89 (2.80)	95
			<i>Female</i>	4.98 (2.76)	43	<i>International</i>	4.75 (1.71)	4	<i>Postgraduate</i>	4.00 (2.50)	9
Science	4.55 (2.71)	847									
			<i>Male</i>	4.29 (2.81)	338	<i>Domestic</i>	4.46 (2.68)	727	<i>Undergraduate</i>	4.40 (2.67)	732
			<i>Female</i>	4.72 (2.64)	509	<i>International</i>	5.06 (2.85)	120	<i>Postgraduate</i>	5.49 (2.68)	115
Total	4.60 (2.93)	4232									
			<i>Male</i>	4.51 (3.00)	1706	<i>Domestic</i>	4.47 (2.91)	3241	<i>Undergraduate</i>	4.38 (2.80)	2828
			<i>Female</i>	4.67 (2.85)	2346	<i>International</i>	5.12 (2.88)	822	<i>Postgraduate</i>	5.11 (3.10)	1235

Figure 1.

Mean student wellbeing (0-10) defined by faculty and male-identifying vs female-identifying status. Error bars represent ± 1 standard error.

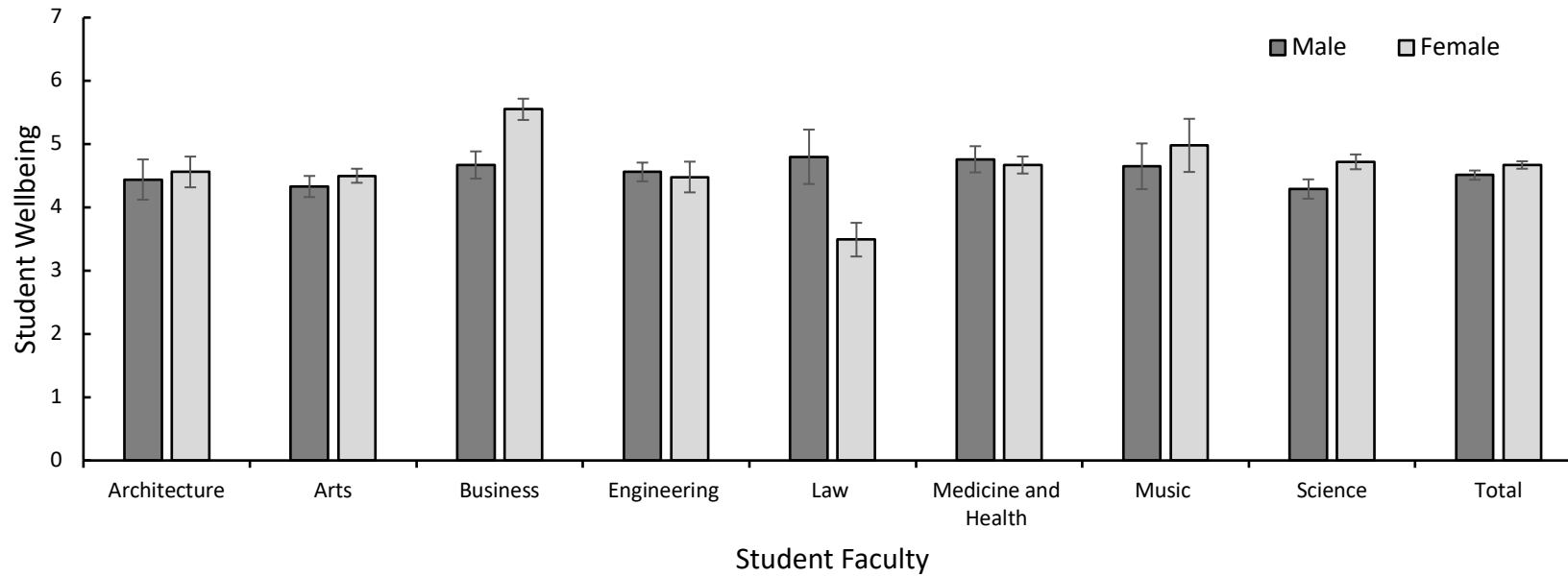


Figure 2.

Mean student wellbeing (0-10) defined by faculty and domestic vs international status. Error bars represent ± 1 standard error.

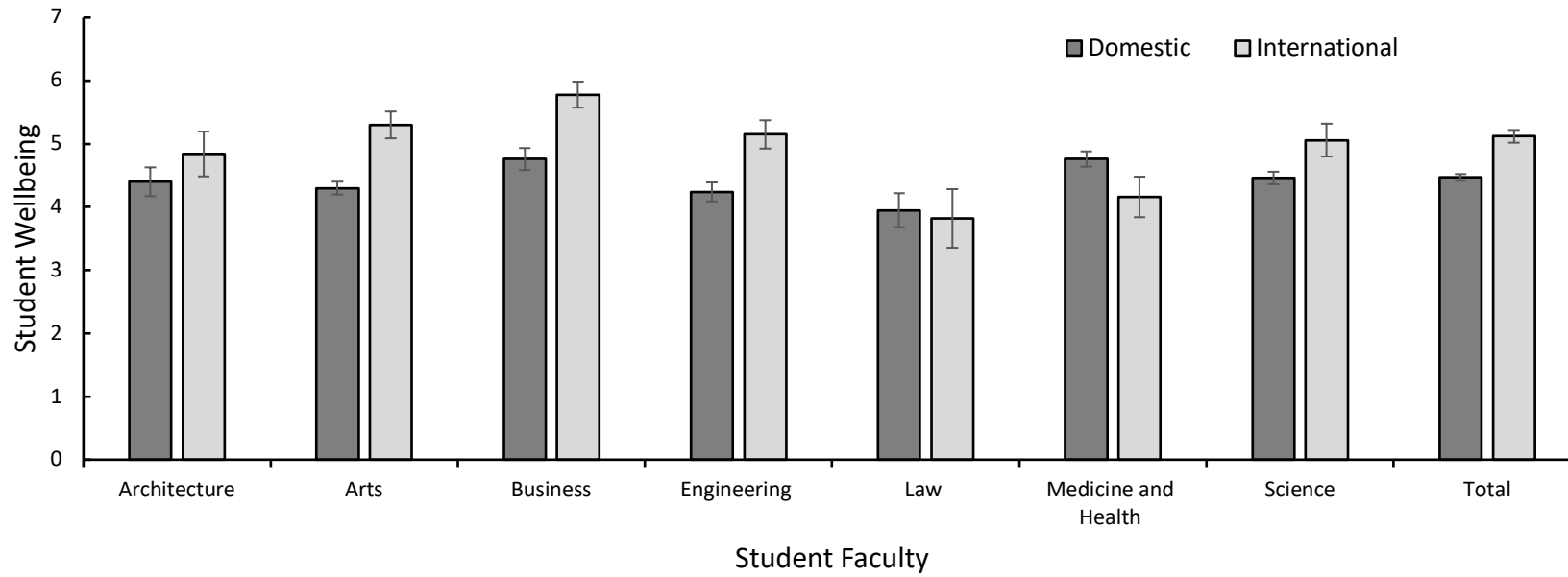
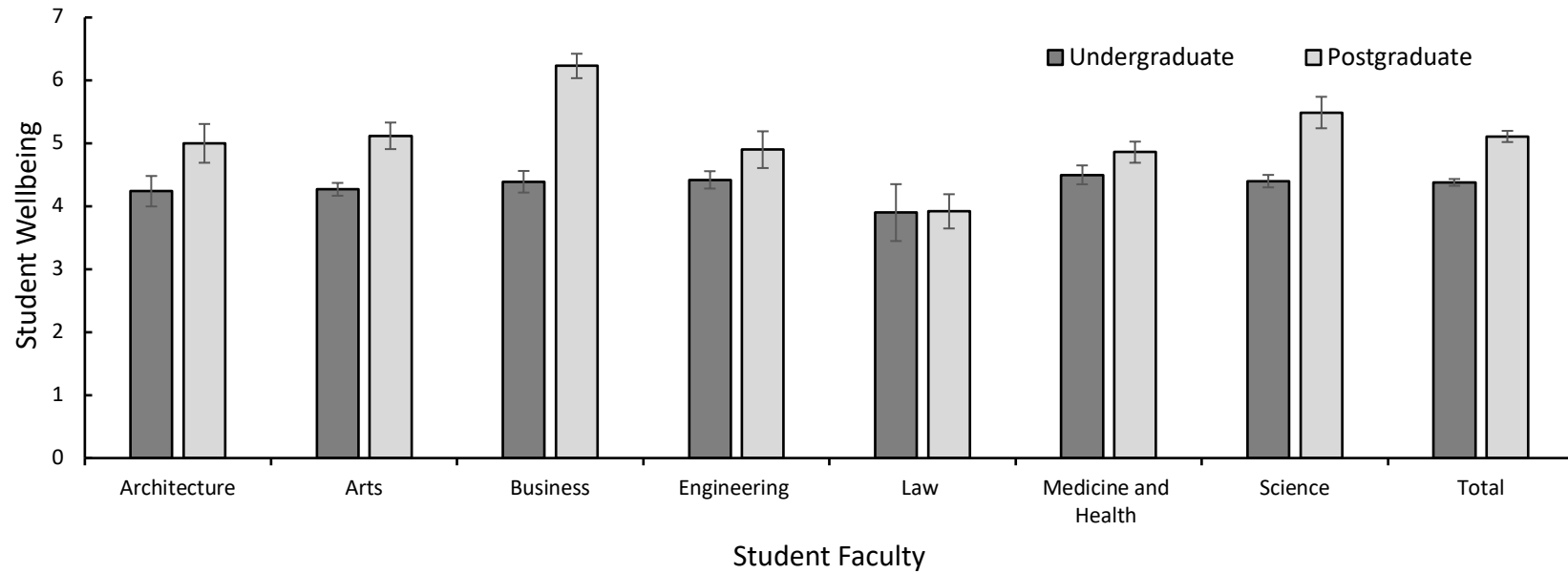


Figure 3.

Mean student wellbeing (0-10) defined by faculty and undergraduate vs postgraduate status. Error bars represent ± 1 standard error.



and international, and undergraduate and postgraduate students differed significantly depending on faculty. See Figures 1-3.

Interaction contrasts qualified significant omnibus findings. Specifically, these contrasts assessed whether differences in student wellbeing between levels of binary demographic variables within a specific faculty differed significantly from the same difference averaged across all other faculties. See appendix 3 for complete contrast analysis results. Four significant interaction contrasts were found. Significant interaction contrasts were subsequently qualified by simple main effect analyses.

Table 4.

Omnibus tests of interactions between faculty and each binary demographic variable.

	F(df)	p	Effect Size
Male/Female Identifying x Faculty	$F_{(7,4036)} = 2.83$	<.01	$\eta_p^2 = 0.005$
Domestic/International x Faculty*	$F_{(6,3945)} = 3.67$	<.01	$\eta_p^2 = 0.006$
Undergraduate/Postgraduate x Faculty*	$F_{(6,3945)} = 3.99$	<.001	$\eta_p^2 = 0.006$

*Denotes an ANOVA in which Music students were omitted due to low cell sizes

5.3.2.1 Do differences in student wellbeing between male and female-identifying students change depending upon faculty?

Averaged across all faculties, the difference in student wellbeing between female and male-identifying students was non-significant. However, interaction contrasts indicated that gender differences diverged significantly from this normative trend among business and law students.

Within the business faculty, female-identifying students displayed significantly higher wellbeing than male-identifying students ($p < .001$). Further, while business students reported unusually high student wellbeing overall, this changed depending on gender identity. Specifically, female-identifying business students displayed significantly higher wellbeing relative to other female-identifying students $F_{(1, 2238)} = 29.81$, $\eta_p^2 = 0.013$, whereas male-identifying business students did not differ significantly from other male-identifying students $F_{(1, 1698)} = 1.06$, $\eta_p^2 = 0.000$.

Conversely, male-identifying law students reported significantly higher student wellbeing than female-identifying law students ($p < .01$). While law students displayed unusually low wellbeing overall, this also depended upon gender-identity. Specifically, male-identifying law students did not differ significantly from other male-identifying students $F_{(1, 1698)} = .391$, $\eta_p^2 = 0.000$, whereas female-identifying law students displayed significantly worse wellbeing relative to other female-identifying students $F_{(1, 2238)} = 19.46$, $\eta_p^2 = 0.008$.

5.3.2.2 Do differences in student wellbeing between domestic and international students change depending upon faculty?

The wellbeing difference between domestic and international students deviated significantly from the normative trend within the faculty of medicine and health. Specifically, the normative wellbeing benefit of international student status was significantly less pronounced among medicine and health students to the extent that there was no longer a wellbeing benefit to being an international student $F_{(1, 3945)} = 12.11$, $\eta_p^2 = 0.003$.

The difference in student wellbeing between domestic and international medicine and health students was marginally non-significant ($p = .06$). Further, while the overall wellbeing of medicine and health students did not differ significantly from the average of other faculties, this changed depending on domestic/international status. Specifically, domestic medicine and health students displayed significantly higher wellbeing relative to other domestic students $F_{(1, 3134)} = 8.96$, $\eta_p^2 = 0.003$, whereas international students within the faculty of medicine and health displayed significantly lower wellbeing relative to other international students $F_{(1, 811)} = 6.57$, $\eta_p^2 = 0.008$.

5.3.2.3 Do differences in student wellbeing between undergraduate and postgraduate students change depending upon faculty?

The greater wellbeing among postgraduate students compared to undergraduates was significantly more pronounced among business students relative to the averaged difference of

other faculties $F_{(1, 4036)}=9.17$, $\eta_p^2=0.002$. While business students displayed unusually high student wellbeing overall, this changed depending upon degree progression. Postgraduate business students displayed significantly greater student wellbeing relative to other postgraduate students $F_{(1,1219)}=31.01$, $\eta_p^2=0.025$. However, there was no significant difference between business undergraduates and non-business undergraduates $F_{(1,2726)}=.317$, $\eta_p^2=0.000$.

5.4 Discussion

This is the first study to examine whether demographic differences in university student wellbeing are consistent across academic faculties. The finding that academic faculty moderated wellbeing differences between male-identifying and female-identifying, domestic and international, and postgraduate and undergraduate students has substantive implications for identifying student groups at-risk of poor wellbeing. This is also the first study to collect wellbeing data from a whole-university population via SMS. As reviewed below, our valid response rate of 9% appears relatively comparable to existing email-delivered surveys. Further research into the possible response rate benefits of SMS over email approaches is warranted.

5.4.1 Demographic differences in student wellbeing

Student wellbeing varied significantly between faculties, which aligns with extant research in Australian and overseas (Allen et al., 2022; Larcombe et al., 2016; Leahy et al., 2010; Lewis & Cardwell, 2020). While arts and law students have previously been identified as at-risk of poor wellbeing (Charles et al., 2022; Erekson et al., 2023; Larcombe et al., 2016; Lewis & Cardwell, 2020; Lipson et al., 2016), we observed unusually poor wellbeing among law students only. Furthermore, business students displayed unusually high aggregated wellbeing, affirming limited existing research (Erekson et al., 2023; Lipson et al., 2016).

Postgraduate and international students tended to have better wellbeing than undergraduates and domestic students respectively. The overall difference between male and

female-identifying students was non-significant. These findings generally conform with existing Australian research (R. H. Dodd et al., 2021; Rachael H. Dodd et al., 2021; Larcombe et al., 2016; Liu et al., 2021; Stallman, 2010; van Agteren et al., 2019).

International students reporting higher wellbeing than domestic students is perhaps least expected, although previous studies have reported similar findings (Dingle et al., 2024; Larcombe et al., 2024; Sanci et al., 2022).

5.4.2 Academic faculty moderating demographic differences in student wellbeing

Crucially, differences in wellbeing between levels of all three binary demographic variables varied depending on academic faculty. Failing to assess the moderating influence of academic faculty may result in oversimplified understandings of how wellbeing varies within university populations.

To highlight some key insights, law students reported worse wellbeing relative to non-law students, which aligns with several existing studies (Leahy et al., 2010; Lewis & Cardwell, 2020; Schofield et al., 2016; Skead & Rogers, 2015). However, male law students reported marginally the highest male faculty average, suggesting they were not ‘at-risk’. Female law students had worse wellbeing relative to male law students to such a degree that the faculty ranked last overall. This implies that female law students specifically may be at-risk of poor wellbeing, rather than law students in general.

The overall wellbeing of medicine and health students did not differ significantly from the university norm. However, within the faculty, international students reported unusually poor wellbeing, while domestic students reported unusually high wellbeing. Moreover, while international students typically displayed better wellbeing than domestic students, this was not the case within medicine and health. This suggest that some combination of disciplinary stressors and/or self-selection biases are thwarting the normative benefit of international student status within this faculty.

The business faculty reported the highest overall mean. However, this appears largely attributable to especially high wellbeing among postgraduate and female business students. Once again, the aggregated faculty mean over-simplifies the wellbeing profiles within the faculty.

5.4.3 Limitations

Interpretations of the above findings must be contextualised by the following limitations. For reasons discussed below, these findings should not necessarily be expected to generalise to other institutional contexts, or across other outcome measures. Rather, this study provides preliminary evidence for the moderating role of academic faculty which warrants further examination across different research contexts.

This study was conducted in a single, large, metropolitan, public Australian university. Variations in levels and predictors of university student wellbeing have been observed between different institutions and across national contexts (Eisenberg et al., 2013; Li et al., 2022; Maercker et al., 2015; Skead et al., 2020). Wellbeing profiles within a university may derive partly from characteristics that are relatively particular to that institution, such as student backgrounds, pedagogical approaches, physical environments and so forth (Eisenberg et al., 2013). Therefore, trends in student wellbeing within this university should not necessarily be assumed to generalise to other universities, either in Australia or overseas. Moreover, effect sizes were small, questioning the practical relevance of these differences.

This study also reports means of a novel single-item measure evaluating student's satisfaction with their lives as university students. Co-design feedback indicated that this item had face-validity (Gilmore, Glozier, et al., 2025), and university students often perceive their wellbeing as inextricably intertwined with their university experiences (Douwes et al., 2023; Riva et al., 2020; Stanton et al., 2016). However, the convergent validity between this novel

domain-specific measure and existing single-item or multiple-item wellbeing measures is undetermined. The use of a novel item also prevents benchmarking with existing studies. Differences in sizes of student groups also meant that some comparisons involved small sample sizes (See Table 3). For example, the law student gender difference finding involved comparing 50 male-identifying students to 102 female-identifying students.

5.4.4 Implications for future research

The above limitations notwithstanding, the fact that academic faculty moderated wellbeing differences across all assessed demographic categories is an intriguing and novel observation. Our analytic approach identifies at-risk student groups with more granular detail than simple faculty or demographic comparisons (i.e main effects). The key recommendation is that future researchers conduct similar analyses to detect whether comparable moderation is present within other university contexts. Such research could extend understandings of which student groups are most at-risk of poor wellbeing and therefore most in need of university support (Allen et al., 2022; Erekson et al., 2023; Lipson et al., 2022; McLafferty et al., 2022).

Qualitative research into the experiences of at-risk student groups could subsequently inform tailored university approaches (Baik et al., 2019). For example, this study implies a need for exploratory qualitative research examining why female law students at this university reported especially poor wellbeing. Additionally, exploring why female and postgraduate business students report atypically high wellbeing might identify existing university experiences that empower wellbeing, and which could potentially be extended to other sectors of the university.

5.4.5 Interpretation of response rates

The secondary aim of this study was to examine the response rate received by a university-wide SMS wellbeing check. We received a valid response rate of 9%. Comparing

this to an equivalent email approach is challenging. We did not conduct a simultaneous equivalent email survey which would have provided an ideal comparator. Therefore, tentatively interpreting this response rate is best done via comparisons with existing studies.

A recent scoping review reported that email-delivered wellbeing surveys sampling Australian whole university populations have received an average combined response rate of 5.6% (number of studies = 4, range = 4.7-9.1%) (Gilmore, McNeilage, & Ashton-James, 2025). In support of the SMS approach, our response rate of 9% is towards the higher end despite the SMS including no reminder messages or participation incentives, alongside minimal marketing. Furthermore, studies receiving particularly poor response rates may choose not to report response rates or may simply not be published

However, a handful of email-delivered Australian whole-university (or comparable) surveys not included in the above review have reported higher response rates. To our knowledge the highest valid response rate to an Australian whole-university wellbeing survey is 22%. This survey used an unusually extensive marketing campaign, lottery incentives and eight reminder emails (Sanci et al., 2022). Other Australian whole-university surveys assessing wellbeing-adjacent concepts have received response rates of 16% (Schofield et al., 2016), >12% (Larcombe et al., 2021), and 11.6% (Farrer et al., 2016). These studies also used comprehensive promotional strategies.

Recent US multi-institution student wellbeing surveys delivered by email have received 11% and 9% response rates (ACHA, 2024; Eisenberg et al., 2024), while higher response rates (23-31%) have been reported by nation-wide Norwegian surveys throughout the 2010s (Sivertsen et al., 2019). One multi-national student mental health study reported response rates ranging between 7–17% among nations recruiting whole-institutions via email. Australian students provided the lowest response rate, possibly indicating particularly low response propensity within Australian universities (Auerbach et al., 2018).

While we are unable to conclusively determine whether SMS delivered whole-university wellbeing surveys will normatively receive higher response rates than email equivalents, this study suggests further research into this possibility is warranted. As this was a novel approach, future researchers could seek to optimise implementation and improve response rates. Feedback received from students during survey development indicated that non-response may arise from concerns surrounding the legitimacy of the SMS, particularly given the unknown mobile number (Gilmore, Glozier, et al., 2025). Email surveys delivered via official university email addresses would logically elicit less suspicion. Future marketing strategies could prioritise reassuring students of the legitimacy of the SMS. Incorporating participation incentives may also be particularly efficacious given the negligible time burden of responding.

5.5 Conclusion

The present study reports a novel finding that differences in student wellbeing between key demographic groups are moderated by academic faculty. Further research is required to clarify whether the moderating influence of academic faculty is observed across different contexts and outcomes. This is also the first study to collect wellbeing data from a whole university sample via SMS text messaging. Further research is warranted to explore whether the theorised response rate benefits of SMS data collection over email can be realised in practice within university contexts.

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Chapter 6. The law school game: using reflexive thematic analysis to explore the influence of law school environments upon law student wellbeing

Preface

This chapter presents the findings of a semi-structured interview study which examined the lived experiences of a sample of Australian law students. This study was motivated by the chapter 5 finding which indicated that law students, or specifically female law students, may be especially at-risk of poor wellbeing. We conducted an experientially focused and inductive reflexive thematic analysis to explore the ‘feeling’ of being a law student in as much depth as possible. The richness of the interview data alongside the experiential focus of the analytic approach paints a vivid picture of the lives of law students at the university. This depth of understanding provides actionable insights into tailoring university wellbeing initiatives to the specific needs of this student group.

This chapter addresses the following research questions underlying this thesis:

Research Question 1. *What factors appear to be associated with the wellbeing of Australian university students?*

Research Question 3. *What are the lived wellbeing experiences of Australian university students who appear at-risk of poor wellbeing?*

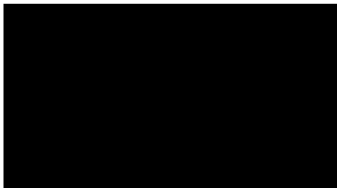
AUTHORSHIP STATEMENT

The co-authors of the paper “Gilmore A, McNeilage A, Graham, N & Ashton-James C. *The law school game: using reflexive thematic analysis to explore the influence of law school environments upon law student wellbeing*” confirm that Angus Hamilton Gilmore has provided the following contributions to the study:

- conception and design of the research
- data collection and interpretation of the findings
- writing of the manuscript and critical appraisal of the content

As the primary supervisor for the candidate upon which this thesis is based, I can confirm that the authorship attribution statements above are correct.

Signed:

A solid black rectangular box redacting the signature of the supervisor.

Associate Professor Claire Ashton-James

Date: 25th February 2025

**The Law School Game: Using Reflexive Thematic Analysis to Explore the Influence of
Law School Environments Upon Law Student Wellbeing**

Angus H. Gilmore^{a*}, Amy G. Mcneilage^a, Nicole Graham^b Claire E. Ashton-James^a

^a*Sydney Medical School, Faculty of Medicine and Health, The University of Sydney, Sydney, Australia*

^b*Sydney Law School, The University of Sydney, Sydney, Australia*

Abstract

Law students display poor rates of wellbeing and the importance of developing effective strategies to support law students is well recognised. The current study employed in-depth semi-structured interviews with 21 students from a top-ranking Australian law school to elucidate the lived experiences of law students and the ways that law school environments shape wellbeing. A reflexive thematic analysis of interview transcripts produced four themes that frame the law school experience as a game to be played and won: 1) '*Pressure to play the game*': Hyper-competitive environments and the law student experience, 2) '*Rules of the game*': Academic expectations as both unachievable and unclear, 3) '*Not a level playing field*': Inequities between students in the law school context, and 4) '*Finding your team*': Restorative impact of togetherness and support. The implications of these themes for developing student-centred initiatives to support law student wellbeing are discussed.

6.1 Introduction

Law students display worse wellbeing than both the general population (Bergin & Pakenham, 2015; Flynn et al., 2019; Kelk et al., 2010; Lester et al., 2011; O'Brien et al., 2011; Rabkow et al., 2020; Skead et al., 2018; Soh et al., 2015) and university students from other academic disciplines (Kelk et al., 2010; Leahy et al., 2010 c.f Larcombe et al., 2013; Lewis & Cardwell, 2020; Schofield et al., 2016; Skead & Rogers, 2015; Soh et al., 2015). Importantly, longitudinal studies suggest that law students do not enter law school with atypically poor wellbeing. Rather, their wellbeing appears to decline to atypical levels during the first year of law school (Lester et al., 2011; McLafferty et al., 2022; O'Brien et al., 2011; Pritchard & McIntosh, 2003; Sheldon & Krieger, 2004). This suggests that the challenges imposed by studying law may be detrimental to wellbeing and that transitioning into law school is likely an especially critical stressor (Larcombe et al., 2013; Moore & Drisceoil, 2023).

Reports of poor law student wellbeing have prompted calls for more effective support strategies (Field & Duffy, 2012; Larcombe, 2016; McKeown, 2023; O'Brien, 2016; Tang, 2016). Designing such initiatives requires understanding the elements of law students' lives that may diminish wellbeing (Tang, 2016). Many factors are thought to influence law student wellbeing, including: competitive environments and academic pressure (Jones, Sharpe, & Barrett, 2023; O'Brien, 2011; Skead et al., 2020; Stallman, 2012; Tani & Vines, 2009), difficulty managing high workloads (Armstrong & Sanson, 2012; Bergin & Pakenham, 2015; Flynn et al., 2019; Stallman & Duffy, 2016), lack of clear assessment guidance and feedback (Armstrong & Sanson, 2012; Field & Kift, 2010; Zacharopoulou & Turner, 2013), difficulty transitioning into unfamiliar law school environments (Armstrong & Sanson, 2012; Field, 2016; Field & Meyer, 2020; Jones & Strevens, 2023; Moore & Drisceoil, 2023; Stallman & Duffy, 2016), over-emphasis of status and prestige (Jones, Sharpe, & Barrett,

2023; O'Brien et al., 2011; Yau et al., 2020), narrow and competitive views of 'success' (Stallman & Duffy, 2016; Strevens, 2020; Yau et al., 2020), job uncertainty (Yau et al., 2020), and the individualistic nature of studying at law school (Field & Meyer, 2020; Zacharopoulou & Turner, 2013). Encouraging students to 'think like a lawyer' and adopt analytical and adversarial ways of viewing the world may also be deleterious to wellbeing (Foley & Tang, 2016; James, 2008; O'Brien, 2011; Stallman & Duffy, 2016). Several authors have used the framework of Self-Determination Theory (SDT) (Ryan & Deci, 2000) to argue that law school environments are not conducive to students experiencing autonomy, relatedness, and competency, which diminishes intrinsic motivation and wellbeing (Field, 2016; Field & Meyer, 2020; Fried, 2023; Sheldon & Krieger, 2004, 2007; Skead et al., 2020; Strevens, 2020).

However, it has been suggested that the literature has yet to comprehensively explain *why* law students display poor wellbeing (Baron, 2016; McKeown, 2023; Young, 2021). Authors have called for further qualitative research that centres the student voice as a crucial step towards understanding factors affecting law student wellbeing and, ultimately, developing effective wellbeing strategies (Tang, 2016; Young, 2021).

Existing qualitative studies have highlighted that law students often face challenges in handling demanding academic workloads (Jones, Sharpe, & Barrett, 2023; O'Brien et al., 2011) and in adjusting to environments where their previously strong academic self-confidence is shaken by comparatively lower grades and negative social comparisons with other high-achieving peers (Armstrong & Sanson, 2012; Bleasdale & Humphreys, 2020; O'Brien et al., 2011). The implications of competitiveness in law schools are well recognised, with academic competition, competition for jobs, and grading curve systems felt to undermine collegiality between students (Larcombe et al., 2013; Stallman, 2012; Young, 2021). Law students also frequently report a lack of clear guidance on how to study and

prepare for assessments, which they perceive as detrimental to their wellbeing (Armstrong & Sanson, 2012; Jones, Sharpe, & Barrett, 2023; Larcombe et al., 2013; Zacharopoulou & Turner, 2013).

6.1.1 The Current Study

The current study aims to extend the literature towards a more holistic and robust understanding of present-day law student experiences. Much of the existing qualitative literature into law student wellbeing has either used brief text-response methods (Jones, Sharpe, & Barrett, 2023; Larcombe et al., 2013), has focused on a specific issue or concept within law schools (Armstrong & Sanson, 2012; Bleasdale & Humphreys, 2020; Stallman, 2012; Yau et al., 2020; Zacharopoulou & Turner, 2013), or has primarily sought student recommendations, rather than understandings of student experiences (Larcombe et al., 2013). There is a growing appreciation of the need to conceptualise law school as a complex environment which shapes the values and experiences of those residing within it (Jones, Sharpe, & Barrett, 2023; Stallman & Duffy, 2016; Yau et al., 2020).

To address these issues, we conducted in-depth one-on-one interviews with law students to explore the lived experiences of navigating law school environments. In doing so, we hoped to improve understandings of *how* and *why* attending law school impacts wellbeing, in turn providing student-driven insights into potential strategies for supporting law students (Jones, Samra, & Lucassen, 2023; Tang, 2016).

6.2 Method

6.2.1 Setting

The study was conducted at a top-ranking law school at a large public Australian university in Sydney. This law school offers both a five-year undergraduate double degree (Bachelor of Laws), and a three-year graduate law-intensive degree (Juris Doctor). At the time of writing, this law school was the 16th highest ranked law school in the world (QS

International, 2024). This prestige is accompanied by a stringent admission criterion, with domestic undergraduate entrance only guaranteed to the top 0.5% of Australian high school graduates.

6.2.2 Design and Recruitment

Ethics approval was granted by the host institution, and participants were recruited via advertisements on law school social media and newsletters. Advertisements informed prospective interviewees that they would be asked about their “experiences at law school and the factors that influence their wellbeing”. Twenty-one interviews were conducted via Zoom during October-November 2023 and March-April 2024 (20 conducted by first author, 1 by second). See Table 1 for a demographic summary of participants. Participants were reimbursed for their time with a \$15 supermarket gift-voucher.

A semi-structured interview design was used. Initial questions asked students to explain why they chose to study law, to provide an overview of their experience at law school, and to consider whether their experience was typical of most students. Participants were then asked to reflect on factors that influence their wellbeing, their perception of the law school culture, and on ways their wellbeing could be better supported by the university. The full interview schedule is available in appendix 4. Interviews ranged from 15 to 54 minutes (Mean = 29). All interviews were transcribed by an AI program. Transcripts were checked against audio recordings to ensure verbatim transcription.

Table 1. Participant Demographics

Interview #	Age	Gender	Domestic / International	Undergraduate / Graduate	Year of Study
1	24	Female	International	Undergraduate	Fourth
2	22	Male	International	Undergraduate	Third
3	19	Male	Domestic	Undergraduate	Second
4	28	Male	International	Undergraduate	Missing
5	19	Male	Domestic	Undergraduate	First

6	19	Female	International	Undergraduate	First
7	20	Female	International	Undergraduate	Third
8	21	Female	International	Undergraduate	First
9	23	Female	Domestic	Undergraduate	Fourth
10	24	Female	International	Undergraduate	Fourth
11	27	Female	International	Graduate	First
12	21	Female	Domestic	Undergraduate	Third
13	25	Female	Domestic	Graduate	Second
14	22	Male	Domestic	Undergraduate	Fourth
15	25	Female	Domestic	Graduate	Fourth
16	20	Female	Domestic	Undergraduate	Third
17	19	Female	International	Undergraduate	Second
18	33	Female	International	Graduate	Second
19	19	Female	Domestic	Undergraduate	Fourth
20	19	Male	Domestic	Undergraduate	First
21	21	Female	Domestic	Undergraduate	Fourth

6.2.3 Data Analysis

Our analytic approach was informed by recent publications regarding the importance of “knowing” researchers and conceptual coherence in qualitative research (Braun & Clarke, 2022, 2023; Finlay, 2021). Broadly, these publications posit the need for philosophical assumptions, methods of data collection, and analytic approaches to be clearly explicated and consistent with the overarching goals of the research. This study aimed to examine the lived experiences of law students and the ways that studying law might influence wellbeing. We pursued a rich and predominantly experiential analysis as we believed exploring the ‘feeling’ of being a law student would allow nuanced insights into improving law student wellbeing.

Semi-structured interviews were used to pursue an in-depth and fluid exploration of the narratives of each participant. Reflexive thematic analysis (RTA) was chosen as the most appropriate analytical methodology. In line with Braun and Clarke (2022), we recognised that

RTA is best understood as a broad and flexible methodology, rather than a rigid method. We hoped to use RTA to ‘give voice’ to student experiences (Braun & Clarke, 2022). Consequently, our analytic focus was largely experiential and semantic, although several codes captured latent meanings. We used a critical realist framework to construe the experiences of our participants as real and valid, while acknowledging that our capacity to make meaning of these experiences is influenced by the situatedness of the researcher and the complex social context in which the research takes place (Braun & Clarke, 2022; Pilgrim, 2014).

Additionally, wellbeing is a multifaceted concept, with many different conceptualisations and no universally recognised definition (Dodge et al., 2012). We did not instruct participants to understand “wellbeing” according to any specific model or definition (e.g Diener, 1984; Ryff, 1989; Seligman, 2011). Therefore, different participants would likely have interpreted the term in different ways.

The first author read the transcripts multiple times before systematically coding all data using NVivo 14. Codes described specific aspects of the overall experience of being a law student, with particular focus given to the intersection between law student status and wellbeing. Candidate themes were created and revised in consultation with the fourth author. Suitability of candidate themes was checked against relevant quotations and the dataset as a whole before being further revised.

6.2.4 Reflexivity Statement

Both analysts were academic psychologists, one (first author) a PhD candidate and the other (fourth author) a highly experienced social psychologist. Both were familiar with the university student wellbeing literature but had not extensively researched law student wellbeing prior to data analysis. This was an intentional choice to encourage more inductive analysis (Braun & Clarke, 2022). Neither analyst holds a law degree, and therefore we

represented an outsider perspective on life in the law school. While this outsider status allowed for analysis that was not influenced by personal experiences of studying law, this lack of experience may also have detracted from our ability to fully understand participant experiences.

Furthermore, the first author had recently completed undergraduate studies at the same university as the participants. I therefore approached these interviews with an awareness of stereotypes associated with law students at this university (e.g high academic expectations, verbosity, and airs of intellectual superiority). Furthermore, being from a similar age and background to my interviewees likely led me towards projecting my personal tertiary experiences onto student's narratives. Therefore, while we aimed to produce a thematic analysis which authentically gave voice to student's lives, my own experiences at the university undoubtedly coloured my analysis of their stories.

6.3 Results

Our analytic process culminated in the development of four themes: 1) *'Pressure to play the game'*: Hyper-competitive environments and the law student experience, 2) *'Rules of the game'*: Academic expectations as both unachievable and unclear, 3) *'Not a level playing field'*: Inequities between students in the law school context, and 4) *'Finding your team'*: Restorative impact of togetherness and support. The law student experience was often described in terms of competition and the pursuit of personal glory, akin to a 'game' or sport. Thus, we conceptualised these themes as exploring different aspects of the law school 'game'.

6.3.1 *'Pressure to play the game': Hyper-competitive environments and the law student experience*

The law school environment was first and foremost characterised as competitive. Many narratives focused on challenges engaging with, and existing within, this hyper-

competitive setting. An initial explanation is that students compete academically because prestigious legal jobs demand excellent marks. Urgency of academic competition is intensified by perceived job scarcity.

I feel like for law students as well, it does matter quite more significantly than other, um, subjects or careers, because from what I've seen for law students, they always want a distinction [weighted average mark] or as a specification or requirement on the job description. They're always like, we want someone with superior grades or excellent results – 19, Male, Domestic, Undergraduate, Second-Year (#3)

Students identified that the most conventional legal professional path would be to apply for summer clerkships during their penultimate year, as these clerkships functionally guarantee ongoing graduate positions. Clerkships at top-tier corporate law firms are coveted, and application success depends largely on academic performance. Prospects of clerkship success was a focal stressor for many students. For some, receiving a prestigious clerkship position might constitute 'winning the game'.

Everyone feels a lot of pressure when it comes to clerkships. And I mean like a lot of pressure, like obviously you will feel pressure like in any like applying for anything. But like clerkships are like the be-all end-all. Or it feels like, there's like definitely a lot of students who like start thinking about it in their first year, literally – 20, Female, Domestic, Undergraduate, Third-Year (#16)

The understanding that academic performance causally affects career prospects would logically incentivise academic competition. However, this was arguably not the primary explanation given for the 'hyper-competitive' law school environment. Instead, students drew

attention to the ‘type of students’ who attend law school. It was recognised that the high admission criteria required students to be unusually driven and competitive to gain admission. Feelings of competitiveness were discussed as stemming largely from environments made up of this self-selecting, academically elite student base.

Another one is definitely the, the very competitive atmosphere, especially when the room is just full of law students, like the competitiveness is just in the air – 24, Female, International, Undergraduate, Fourth-Year (#1)

Interestingly, several students discussed unspoken but pervasive norms of what it means to ‘do law school right’. These norms usually centred around the idea that law students ‘should’ be relentlessly competitive. Students felt pushed to ‘keep up’ with peers in academic, professional, and extracurricular settings throughout each stage of the law school journey, lest they face the indignity of ‘falling behind’. A fourth-year student discussed struggling to not be influenced by such expectations.

Now, there's also a side of really this competitiveness and this sense of scarcity or this sense of like, if we don't do all of these things and all these moots and all these competitions and get the best marks, then we're going to fail and we'll never be lawyers and I'm competing against you. No one says that, but there's that feeling at the back of people, maybe even in the back of my mind a little bit – 23, Female, Domestic, Undergraduate, Fourth-Year (#9)

This pressure to compete permeated throughout student narratives. Even social life was occasionally discussed in competitive overtones, with finding a ‘law friend group’ seen as part of succeeding at law school.

Oh, but law school is so cliquey, and you have to be part of a friend group, or you're not a real law student. You're not validated – 20, Female, Domestic, Undergraduate, Third-Year (#16)

A fourth-year student felt judged for not 'playing the game' and pursuing corporate law positions. She positioned herself as distinct from the 'normal' law student who would theoretically have no such reluctance.

For some of us, it can make us feel a bit, I don't know, a bit judged for not being in that kind of environment or wanting to fight for the position and things like that, because, for example, for myself, it doesn't interest me to be in a corporate firm. You're kind of looked at as doing law school wrong – 25, Female, Domestic, Graduate, Fourth-Year (#15)

Some students felt the law school and student societies tacitly endorsed competition by primarily platforming top-tier corporate firms and celebrating alumni who had achieved prestigious judicial positions. One student felt depicting success in this way encouraged myopic, corporate-oriented career perspectives, as pursuing corporate positions was validated more readily than non-corporate career pathways.

The law student society keeps promoting flagships, commercial laws, and then law school kind of encourages or indirectly encourages the culture of maybe being competitive, too much focus on commercial law, not much support on being collective or promoting social justice in general – 28, Male, International, Undergraduate (#4)

A fourth-year student felt pursuits which did not tangibly advance one's legal prospects were questioned and devalued by peers.

There's just this culture of, like, hyper-competitiveness and toxicity where, oh, you have a part-time job as a barista. Well, that's not actually, like, that's not relevant to your degree. What are you doing? You should be working as a paralegal somewhere. You should be volunteering at, like, X, Y, and Z legal centres. – 21, Female, Domestic, Undergraduate, Fourth-Year (#19)

The above suggests a tendency to view all elements of student's lives through a utilitarian lens, appraising actions in terms of potential benefit to the law school 'game'.

Crucially for wellbeing, competitiveness coloured, and usually degraded, relationships between students. A recurring sentiment was that law school felt individualistic, as if students are 'on their own'.

But I definitely know none of my friends, none of us have ever gone into a room after a class and been like, OK, cool. This is what I struggled with. Can someone help me and go through it? So I think it's very much like an individualistic kind of culture – 25, Female, Domestic, Graduate, Fourth-Year (#15)

The structure of law classes contributed to feelings of individualism and isolation, with content taught very quickly and little time allocated to inter-student discussion. Several students contrasted the individualistic feeling of law classes with more collegial non-law units. Assessment called 'on-calls' were identified as particularly stressful and individualistic.

On-calls are a form of assessable classroom participation in which assigned students are intermittently called upon to answer questions about class content.

It's very competitive. So, and I feel like people just stick with their groups and so if they're in the class, I feel it's, it's very private. Like they don't tend to share notes or, um, help or anything. Um, like my other major is French and the class is just very like social, very relaxed people talk and joke around and everything. – 19, Male, Domestic, Undergraduate, Second-Year (#3)

Many students described interactions with non-supportive and self-serving peers. The framing of other students as rivals led to unwillingness to be collegial. Participants suggested that some peers seemed calculating, dishonest, and secretive. Occasionally this sense of duplicity made participants wonder whether students might sabotage one another, eroding trust and goodwill between peers.

It really does feel like it's an every man for, like, himself kind of atmosphere where you kind of question whether the people who you're approaching or who are approaching you might have your best interests at heart – 21, Female, Domestic, Undergraduate, Fourth-Year (#19)

At times students sensed that peers were pretending to be more assured and confident than they truly were. Multiple participants discussed peers 'putting on fronts' to outwardly conform to an idealised law student image. One participant characterised this phenomenon as students behaving like "little professionals", while another used "playground corporates".

Like when you enter a law school you really think that everybody's very put together and everybody knows what's happening but when I sit into a class I realise that nobody knows what's going on, everybody just pretends – 20, Female, International, Undergraduate, Second-Year (#17)

Intriguingly, interviewees noted that students were incentivised to appear competent because many subjects assessed classroom participation. On-call marks were also determined by whether a student appeared to understand assigned content. Therefore, the need to 'perform' intelligence was perceived as embedded in curricula.

In law, it's more, more serious. Um, you get judged on your week or your participation as well. So there's a lot of competitive people who just like raise their hand and say smart things. – 19, Male, Domestic, Undergraduate, Second-Year (#3)

Relatedly, several participants expressed reluctance to appear vulnerable, as this would reveal that they were struggling with law school. This reluctance appeared partly predicated on the concern that admitting vulnerability would be met with judgment from peers, rather than support.

I think sometimes it doesn't feel like you can ask for help at law school during those times, because I think maybe it's like students don't want to look like they're struggling, don't want others to know what's going on. But I think a lot of people do go through the same thing – 25, Female, Domestic, Graduate, Fourth-Year (#15)

A fourth-year student described how her peers responded to a fellow student whose struggles with mental illness had disrupted their studies.

On the surface, we're all very, like, progressive in terms of mental health... We want to create an illusion of support almost. But then when you see someone who's genuinely struggling with depression, anxiety, any kind of mental illness, really, and it has a, like, significant toll on their ability to complete their studies, to, like, come to these law society events, to, like, actively participate in these, like, cliques, then they kind of get slammed because it's not freely presented in a way that's, that's cute or manageable –

21, Female, Domestic, Undergraduate, Fourth-Year (#19)

Here, the peers seemed to have reacted negatively to a failure to ‘play the game’ and successfully present as impervious and highly competent. The same student had earlier described feeling that law students “aren’t supposed to be weak”.

Finally, being surrounded by overtly intelligent and competitive peers prompted negative social comparisons. A recurrent sentiment was that the law school environment caused students to lose belief in themselves. Several students felt they had lost confidence due to an inability to compete with their cohort. Pride at previous academic performance was contrasted with dishearteningly poor performance at law school. Participants discussed peers who routinely provided erudite contributions during class to ostentatiously display their intelligence, work ethic, and grasp of the content. Amusingly, various pejorative terms existed to describe these students, such as “gunners” or “sweats”. Concerns surrounding inability to ‘keep up’ with peers, both academically and professionally, were widespread. Participants often observed that other students seemed to manage law school with relative

ease and questioned why they personally experienced greater difficulty. However, as stated above, students also recognised that peers might partly be pretending to find law school easy.

Throughout my whole, like, education journey, I was, I regard myself as, you know, as a rather outstanding person when it comes to academics. But since I entered into law school, that kind of pride has just basically faded away. Like, you just feel like you are such an ordinary individual in this community. – 24, Female, International, Undergraduate, Fifth-Year (#10)

6.3.2 ‘Rules of the game’: Academic expectations as both unachievable and unclear

As discussed above, students feel pressured to ‘play the game’ of law school. Given the importance of the ‘game’, it is worth considering its ‘rules’, meaning the academic demands and day-to-day tasks of being a law student. Narratives about the academic experience of law school centred two key perspectives. Firstly, the academic demands placed upon law students require so much time that managing workloads often feels impossible. Secondly, many students feel they do not receive adequate guidance on how to prepare for assessments and how to manage the challenges of law school, causing stress as students do not know ‘how’ to play the game.

When asked to reflect on the experience of attending law school, many students immediately drew attention to the academic workload, particularly the volume of readings. Students described constant pressure to keep up with readings and the frenetic pace with which content is taught. The tension of fitting hundreds of pages of readings into busy weekly schedules was often viewed as a defining feature of law school life.

It's the workload in terms of massive amounts of reading and just, yeah, the content, like for even certain subjects where you have two seminars a week, it's like one seminar is a whole topic, next seminar, a whole other topic. So I think it's just, there's this, I guess, imbalance with needing to teach us a lot of information in a short time. But again, this expectation that we somehow can absorb it in this really rushed environment – 25, Female, Domestic, Graduate, Fourth-Year (#15)

A common sentiment was that academic workloads were not just demanding, but often simply felt impossible, especially when trying to maintain study-life balance. Various students described choosing between managing workloads and upholding self-care routines and sleep schedules. Periods where multiple law assessments were scheduled closely together were identified as particularly stressful and as “pushing students to their limits”.

You will constantly be reminded that these are all the readings you need to do. And you have a feeling that you need to finish them. But the reality is that it's just impossible to just keep up with the reading. It's impossible to keep up. And it's impossible to finish them. So yeah, that's like, like one big thing in the whole law culture is that everyone is kind of like shouldering just like too many readings, and like, not knowing whether they were able to even, able to finish them – 24, Female, International, Undergraduate, Fourth-Year (#1)

Inability to finish readings was problematised by classes designed on the assumption that students have completed the readings beforehand. Therefore, students feel unable to complete readings prior to classes, diminishing the benefit of attending class, causing them to

fall further behind. The above and below quotations both portray this inability to keep up as ingrained in law student culture.

It's like a catch 22 where if you don't read before you like, go there, then you kind of won't understand what the person is saying. But then if you do that, and then you go, like, then it's like impossible to try and because you literally have one day in between to do the reading for the next one....But I think for a lot of other people, it's just, you know, it's just, it's just accepted. Like, okay, you're just gonna not be like up to date. And I think that's generally the like, I would say that's like the majority approach. -
Female, Domestic, Undergraduate, Fourth-Year (#21)

Evidently, the challenge of managing intense workloads is s a major aspect of day-to-day life. Another stressful element of academic life is that students were often confused about 'how' to study effectively. This confusion was mostly expressed through complaints about marking transparency and assignment feedback. A first-year student recounted his surprise at the lack of guidance he had received on his first assessments.

I think a lot of people are very confused about where they get their grades from and how things are marked. And I think more transparency in terms of that could definitely help improve well-being, because I think it's really hard when you're trying to strive for something high, and then whenever it's just, you don't even know how you're able to achieve that – 19, Male, International, Undergraduate, First-Year (#20)

The student portrays this confusion as broadly felt amongst his first-year peers. Indeed, multiple students from later years described slowly 'figuring out' what was rewarded

in assessments by trial and error, rather than having this made clear by teachers or markers. It was recognised that most units focused more on teaching their specific content, than on teaching the writing skills required for good marks. Several students suggested that marking felt punitive. The following student conveyed a sense of mysticism surrounding what constitutes a 'good' assessment response.

I would really love to see like, well, what an HD (High Distinction) essay looks like, or what an HD problem question response is. I feel like that'd be really, really helpful
– 19, Male, Domestic, Undergraduate, Second-Year (#3)

Confusion regarding assessment expectations was compounded by sentiments that assessment feedback was often limited and did not clarify how to improve in future.

There needs to be more feedback. Like there are some units where you get basically three lines of mid-sem feedback too late to act on it and you don't actually get your final exam back at all, unless you voluntarily go to a review session for the purposes of appealing your mark. So like the first few years of law school, I basically felt like I was fumbling around because I would get marks where I'd lost a lot of marks, but I would have absolutely no idea as to why – 22, Male, Domestic, Undergraduate, Fifth-Year (#14)

Participants illustrated a difficult, uncertain, and stressful relationship with their academic work. As discussed previously, students place considerable significance on academic performance as a key metric for success in the broader law school game. However,

students were confused about what is required to achieve this desired performance.

Figuratively, students feel pressured to ‘play the game’ but the ‘rules of the game’ are unclear.

Unsurprisingly, participants expressed gratitude for resources that helped clarify optimal study approaches. In particular, Peer Assisted Study Sessions (PASS) were identified as beneficial by many students. In these sessions high-performing students from later years would guide group study sessions for early law subjects and provide advice on how to navigate law school.

6.3.3 ‘Not a level playing field’: Inequities between students in the law school context

Students were quick to reject the idea of law school being a ‘level playing field’. Various marginalities were felt to meaningfully alter the difficulty of the law school game. The image of the ‘typical’ student at the law school being affluent and privately educated was prevalent, with the public high school/private high school divide a recurring differentiator between ‘types’ of students. Wealthy private school students were consistently portrayed as the most confident and visible student group.

My impression of the cohort is essentially it's mostly private school educated people. They seem like they're enjoying themselves, like they're very involved in events and whatnot and very, I guess, vocal in general. I think that the general consensus, especially from people from my sort of background who are not super well off socioeconomically, is that it's not great and the culture of the community is pretty bad as well – 22, Male, Domestic, Undergraduate, Fifth-Year (#14)

Importantly, being wealthy and privately educated was felt to make succeeding in law school easier, especially for students with family in the legal profession. An international

student recognised the number of students with familial legal connections while engaging in extra-curricular competitions.

You can tell whether the student's parent is a lawyer or not in a social event, especially in competitions or mootings, because they're much more well-equipped. Or if you go into their LinkedIn profiles, they were in debating teams since high school, they have clerkships or interns in first year or working in a law firm with the same last name of the firm... You can see these differences – 28, Male, International, Undergraduate (#4)

Familial legal connections no doubt increase likelihood of finding legal jobs during the early years of law school, a key step in 'keeping up' in the law school game. A publicly educated student discussed her experience interacting with private school students, describing how familiarity with the legal profession and affluent social settings established insider/outside dynamics between students.

The kind of public school, private school divide. And I was from a public school. And they, all the private school kids, like there was just this lingo. And I knew I had a lot of friends from college as well. And it really felt like a different world... So when I first started, and I go to my friends, like mansions in North Sydney, and like their parents houses, I was just like, wow, and their parents were lawyers, and I'd hear their parents speaking and know the legalese – 23, Female, Domestic, Undergraduate, Fourth-Year (#9)

Conversely, lack of socioeconomic privilege creates many additional barriers to law school success. Students highlighted the option of not working alongside university as particularly advantageous given law school workloads.

I remember the law school sent out an email, I think it was maybe last year, where they very openly said that it's best if the students don't, like, have jobs, like, that they're only committed to their studies so that they can get good grades and excel. But I feel like that is, like, beyond elitist to expect that. – 21, Female, Domestic, Undergraduate, Fourth-Year (#19)

Additionally, several students described feelings of 'otherness' and difficulty fitting in as having substantially diminished their wellbeing and sense of belonging at law school. Otherness was usually discussed in contrast to the hegemonic image of the 'typical' law student who is privileged, self-assured and outwardly exceptional. A fourth-year student from a low SES background explained her difficulty finding respect and belongingness within classroom settings. She had earlier identified male private school students as particularly overbearing, an impression shared by multiple participants. Ironically, she questioned her intelligence during this particularly eloquent social commentary.

It kind of affirms that we can't really take up as much space in the classroom setting. I'm thinking of the classroom as the default kind of space. And I guess in a way it makes me think that any kind of contribution that you do make, it doesn't really have the same validity or gravity compared to what our counterparts might be saying. And then I guess you can just get deeper and deeper and just think, oh, being from (non-affluent suburb), maybe, is it actually true that these stereotypes, might they actually

have some weight in regard to my intelligence and my ability to work as hard as everyone else, my ability to keep up? – 21, Female, Domestic, Undergraduate, Fourth-Year (#19)

Otherness and inequity were discussed most often by international students. Language barriers were identified as particularly disadvantageous in law school due to the volume of readings and emphasis on written argument. International students also experience practical challenges such as visa uncertainties and absence of government support.

I think if I'm a native speaker, I can focus more on the logic of law or something like that, but now I'm struggling with the vocabulary or how to understand the whole long sentence – 27, Female, International, Graduate (#11)

Increased social difficulties faced by international students were also acknowledged as disadvantageous in law school due to the importance of networking. A fourth-year international student described feeling 'inferiority' within law school social settings.

I mean, other than the academic stuff, I think being international is about the, it's not, it's more of a social thing... But I think this social thing is probably one of the important factors. And, you know, because a lot of good, you don't get, like, a lot of, like, important or valuable information or opportunities actually comes from social networking. So I think that feeling inferior on that side has also impacted my wellbeing. There's just feeling of inferiority all the time – 24, Female, International, Undergraduate, Fourth-Year (#1)

6.3.4 'Finding your team': Restorative impact of togetherness and support

To complete the metaphor of law school as a game, students felt considerably more able to manage law school when their studies felt more like a 'team game' rather than an 'individual game'. By this we mean that students felt safer and more equipped when they felt supported by others, as feeling supported diminished the sense of facing law school on their own. Feelings of support took many forms but largely derived from positive and humanising interactions with peers and law school faculty.

The suggestion that social support protects student wellbeing is hardly groundbreaking. What was intriguing was how students articulated the benefits of social support. As previously mentioned, many students found law school individualistic and felt peers could seem inauthentic and self-serving. Several students felt their capacity to manage law school was revolutionised by finding small groups of likeminded peers with whom they could have honest and supportive connections. These genuine connections were contrasted with the disingenuous interactions usually experienced with the broader cohort.

I don't want to paint an image of the law school as, like, the ninth circle of hell or anything. But, like, I've been lucky to find, like, two good friends who are also on the same wavelength as me. They've also had these kind of negative experiences with people. So, like, when we are together I think it's very humanising where, like, we can talk about our struggles and we can talk about, like, if we failed an exam or not. And they weren't, they're not judgmental or anything. They're quite supportive. – 21, Female, Domestic, Undergraduate, Fourth-Year (#19)

Feelings of social support extended beyond small tight-knit friendships circles. As mentioned above, many students felt peers were often non-supportive. While in our sample

this was probably the majority perspective, this view was far from universal. Several students felt their cohort was generally supportive and identified feelings of camaraderie and “going through it together” as vital to their capacity to navigate law school. PASS programs were identified as enabling opportunities for camaraderie.

As we got into second semester people started just being honest about like I'm behind and I'm stressed and that massively increased the sense of like camaraderie and actual and safety um around other people. Whereas I felt very cold-shouldered by some people whenever I would try and be vulnerable um in first semester – 25, Female, Domestic, Graduate, Second-Year (#13)

Support between students was also facilitated by extra-curricular student societies. A second-year international student identified her involvement with student law society programs as providing a sense of belongingness that transformed her university experience.

(As an) International student being a female identifying person going to law school which is very outside my territory it was it was really frightening because I didn't I didn't know if I would belong there or not. But I really really found my group here in my second year.... I just I think we need to like motivate people to just sign up for (student societies), even if they're like overwhelmed – 20, Female, International, Undergraduate, Second-Year (#17)

Teachers provided another avenue by which law students could feel supported. Students generally described very positive experiences with law school faculty who were

seen as passionate and highly intelligent. Some students identified specific inspirational and compassionate teachers as enabling them to persevere with their studies.

And the teachers are very. I used to think. I used to feel. Before I came I thought it would be too traditional. But it's not really daunting, full of Oxbridge types... But they're all super nice. They're all like. You don't have to be perfect. It's okay. We understand this challenge. I was constantly surprised. How supportive they are. – 33, Female, International, Graduate, Second-Year (#18)

Conversely, teachers were occasionally seen as dismissive or ambivalent. A fourth-year undergraduate student felt some teachers would become adversarial or “lawyer-like” when responding to student queries. The description evoked a sense of students and teachers existing as opposing parties.

If you're the subject of one of those condescending emails, for example, that you reach out, you ask a question and you get back this passive aggressive sort of email talking down on you, you're not really going to feel super comfortable going to class with that teacher anymore. – 22, Male, Domestic, Undergraduate, Fifth-Year (#14)

Moreover, at times teachers were perceived as needlessly strict and harsh, particularly when students appeared unprepared. Multiple students described instances during on-calls where classmates were publicly castigated for poor responses, although these stories were caveated by assurances that such incidents were uncommon. A second-year graduate student recounted the following incident with a lecturer.

Basically, yeah she just kind of publicly shamed me because I was reading right before class and she thought that I was not prepared and she just had lots of really disparaging things to say about our cohort, and like it's getting dumbed down and no one's as good as they used to be and you should all stop complaining, the readings used to be worse – 25, Female, Domestic, Graduate, Second-Year (#13)

In general, teaching staff occupied a dynamic space in student lives. Empathetic and compassionate teachers contributed to the sense of students having ‘a team behind them’. At other times, teachers compounded the feeling of law school being an individual game by acting adversarial and disinterested towards students.

6.4 Discussion

This study’s aims were two-fold. Firstly, we hoped to extend the literature towards a more richly felt understanding of present-day law student experiences. Secondly, by considering these experiences, we hoped to reflect upon possible approaches for supporting law students (Tang, 2016). Pertaining to the second aim, it is especially important to consider factors that could feasibly be addressed by law schools (Larcombe et al., 2013). The below discusses potential strategies for supporting law student wellbeing while considering the ways such strategies might intersect with the complexities of our sample’s law school experiences (Jones, Samra, & Lucassen, 2023; Stallman & Duffy, 2016; Yau et al., 2020).

6.4.1 Improving academic guidance, marking transparency and assessment feedback as a means of supporting law student wellbeing

A recurring narrative was that students felt surprised by a perceived lack of direction on how to prepare for assessments in early years. Students would frequently receive worse marks than anticipated and assessment feedback would not clarify how to improve, a process felt to compromise wellbeing. Reviewing the literature following data analysis revealed the

ubiquity of such feedback from law students (Armstrong & Sanson, 2012; Jones, Sharpe, & Barrett, 2023; Larcombe et al., 2013; O'Brien et al., 2011; Zacharopoulou & Turner, 2013). Similar feedback has been observed in general university samples (Baik et al., 2019; Jones et al., 2021; Upsher et al., 2023).

Legal academics have argued that clearer and more timely feedback, transparency around assessment marking, and guidance on 'how' to study could support law student wellbeing (Armstrong & Sanson, 2012; Field & Kift, 2010). However, no empirical research has evaluated such initiatives. This study provides further insights into why such policies may be effective. While this is a generalisation, our sample characteristically placed immense significance, both extrinsically and intrinsically, on their academic performance, were highly driven academically, and were unlikely to have experienced meaningful academic failure prior to law school. Several studies have echoed these law student characteristics (Armstrong & Sanson, 2012; Bleasdale & Humphreys, 2020; Jones, Sharpe, & Barrett, 2023; Moore & Drisceoil, 2023; O'Brien et al., 2011). Confusion around assessment expectations may be particularly stressful for law students given these sensibilities. Further, our sample often contrasted the perceived lack of academic guidance and marking transparency at law school (e.g. absence of exemplar responses, marking rubrics, past-papers, pre-assessment feedback) with the greater direction they were accustomed to from high school. This implies such concerns may be particularly widespread in undergraduate law cohorts.

Law school environments appear deleterious to the three basic psychological needs of Self-Determination Theory (Sheldon & Krieger, 2007; Strevens, 2020). Naturally, it would be difficult to experience competence, the sense that one can pursue mastery and succeed (Ryan & Deci, 2020), for students who receive poor marks and who also lack a clear vision for how to improve in future. For our sample, confusion surrounding the 'rules of the game', essentially a lack of academic self-efficacy, appeared to have substantial implications for

wellbeing. Therefore, comprehensive initiatives designed to clarify the rules of the game may be an effective approach for supporting wellbeing. In particular, increased clarity surrounding assessment methods, marking transparency, and best practice for studying in law school during the first semester could ease the transition into law school, the period when longitudinal studies suggest wellbeing declines (Armstrong & Sanson, 2012; Lester et al., 2011; O'Brien et al., 2011; Sheldon & Krieger, 2004). Fortunately, law schools are ideally situated to address marking transparency and assessment guidance (Armstrong & Sanson, 2012; Larcombe et al., 2013). Field & Kift (2010) offer several suggestions for increasing assessment and feedback clarity within law schools.

6.4.2 Importance of addressing competitive environments within law schools

It is well recognised that law schools are competitive, and that this competitiveness has implications for student wellbeing (Skead et al., 2020; Stallman, 2012). For our sample, competitiveness was a defining feature of the law school environment. Our sample also suggested that competitiveness was largely propagated by interactions between highly driven law students and perceived scarcity of graduate employment opportunities. Deconstructing competitive law school environments is therefore likely a complicated task. Furthermore, competition is not necessarily negative, and law students have indicated that competitive environments can be motivating and help prepare them for the legal profession (Stallman, 2012). It is perhaps most worthwhile to consider the specific aspects of competitive environments that may endanger wellbeing.

Considering student narratives, competitive environments appeared to degrade wellbeing for three main reasons: 1) normalising narrow and largely unobtainable ideas of 'success', 2) encouraging negative social comparisons that threaten self-confidence, and 3) making it difficult for students to form supportive relationships. Considering these facets of

competitive environments allows a nuanced understanding of why the following approaches may be efficacious within law school contexts.

6.4.2.1 Expanding ideas of ‘success’ in law school

Previous research has described an ‘information gap’ where law students have limited understanding of the breadth of career opportunities available to them (Yau et al., 2020). It has been argued that disproportionate visibility of high-tier corporate firms in law schools (for instance at career fairs or sponsored events), may equate ‘success’ with gaining corporate clerkships and may diminish the awareness and prestige afforded to non-corporate career pathways (Moore & Drisceoil, 2023; Yau et al., 2020). This view resonated with our participants. Pursuing non-corporate career paths required resisting the ‘pressure to play the game’. To illustrate the disproportionate visibility of top-tier corporate firms, the law school library is named after a prestigious Sydney-based corporate law firm.

Top-tier clerkship positions demand excellent marks which will only be received by a minority of students. This ensures that most students will fail to obtain this metric for success (Yau et al., 2020). Additionally, this myopic and highly competitive idea of success encourages relentless career mindedness, the ‘pressure to play the game’, which is likely detrimental to intrinsic motivation and wellbeing (Stevens, 2020).

Therefore, it is crucial to expand notions of what constitutes ‘winning the game’ in law school. Platforming and advocating the benefits of more academically attainable and diverse graduate positions could reduce the contingency between grades and career prospects and, by extension, the academic competition this contingency incentivises. Furthermore, expanding awareness of ‘what a lawyer can be’ could enhance autonomy in career choice (Moore & Drisceoil, 2023; O'Brien et al., 2011; Stevens, 2020; Yau et al., 2020).

6.4.2.2 Creating classroom environments that reduce negative social comparisons

Consistent with existing research, many students felt that being surrounded by exceptional peers prompted negative social comparisons which eroded self-confidence (Bleasdale & Humphreys, 2020; Moore & Drisceoil, 2023; O'Brien et al., 2011). The classroom was the locale for many negative social comparisons, with students questioning their competence relative to vocal and outwardly capable peers. Some students worried that peers seemed to find law school 'easier' than them, while simultaneously recognising that law students tend to conceal their struggles.

A 2016 study indicated that a majority of law students felt that assessable classroom discussion (ACP) enhanced learning, made classes more interesting, and improved oral communication skills (Huggins & Steel, 2016). The current study suggests that, while ACP likely has several positive pedagogical outcomes, its use may increase the frequency with which law students make negative social comparisons. Participants identified ACP as incentivising the 'performance' of intelligence. Students could be academically rewarded for presenting as highly capable during class and, conversely, students would be discouraged from revealing lack of understanding or preparedness. Classroom contexts such as these appear to have contributed to feelings on intellectual inferiority and loss of self-belief.

Several authors have called for reforms designed to make law classroom environments more conducive to honesty and collegiality between students (Larcombe, 2016; O'Brien et al., 2011; Strevens, 2020). Such reforms could focus on features of classroom environments and curricula which may foster negative social comparisons, particularly features that discourage students from displaying lack of understanding.

6.4.2.3 Fostering supportive relationships between law students through collaborative learning

Finally, competitive environments appeared to undermine relationships between students. The capacity for social support to protect student wellbeing is established (McIntyre

et al., 2018). Furthermore, the propensity for law students to see each other as rivals to be 'beaten' rather than peers to be supported is well documented (O'Brien et al., 2011; Stallman, 2012). A key challenge for supporting law student wellbeing is to encourage supportive rather than adversarial relationships between students (O'Brien, 2011). One approach could be to provide structural opportunities for law students to work together in non-assessed contexts. Our sample suggested that the individualistic nature of studying in law school reduced collegiality and perpetuated adversarial thinking (O'Brien et al., 2011). Law classes were consistently identified as more individualistic and less conducive to developing friendships than non-law classes. Contrastingly, Peer-Assisted Study Sessions (PASS) were repeatedly identified as enhancing feelings of community. These sessions provide academic guidance, which students greatly desire, as well as rare opportunities for students to work together in a non-assessed environment.

A 2016 chapter reviewed the implementation of an SDT informed PASS system at an Australian university and relayed the logistical difficulty of accommodating the sheer demand for these sessions (Watson, 2016). There appears to be an appetite for non-assessed collaborative learning within law schools (O'Brien et al., 2011; Zacharopoulou & Turner, 2013). Given the feedback that many students struggled with the isolating and individualistic nature of legal study, PASS may be particularly beneficial to law students. Well-organised and comprehensive PASS programs for incoming students could help facilitate the formation of tight-knit friendship groups which several students identified as instrumental to law school survival. Returning to Self-Determination theory, collegial learning opportunities such as PASS could enhance law school wide feelings of relatedness, which is construed as essential for wellbeing (Ryan & Deci, 2020).

6.4.3 Further approaches

Student narratives highlighted several more approaches for supporting law student wellbeing, including auditing workloads to reduce overall time-demands (Armstrong & Sanson, 2012; Larcombe, 2016), avoiding scheduling assessments close together, and encouraging supportive relationships between students and law faculty (Larcombe et al., 2013; O'Brien et al., 2011). Broadly, this study provides further evidence for the capacity for qualitative methods to centre the student voice and enhance the appropriateness of student wellbeing initiatives (Baik et al., 2019; Hughes & Spanner, 2019; Jones et al., 2021).

6.4.4 General vs Context-Specific Approaches to Supporting Law Student Wellbeing

A key question for supporting law student wellbeing is establishing the extent to which wellbeing policies should be tailored to specific law school contexts or whether universal initiatives are appropriate (Fay & Skipper, 2022; Larcombe, 2016; McKeown, 2023). Answering this involves evaluating the degree to which factors underlying student wellbeing differ across law school contexts. Naturally, our sample was comprised of a sub-set of students from a single university. Many of our sample's narratives resonated closely with existing literature, indicating that the described experiences are common to many law school contexts. However, a number of important factors appeared relatively particular to this specific law school.

Firstly, notions of success were heavily entangled with the landscape of Sydney law firms. Secondly, for many students, 'otherness', or difficulty fitting in at law school, had a major bearing on wellbeing. While difficulty fitting in has been discussed in previous studies (Bleasdale & Humphreys, 2020), our sample's description of otherness seemed heavily shaped by high rates of international students in Australia and by Sydney's unusually extensive private and public-selective secondary school systems (OECD, 2024). A widespread sentiment was that the advantages afforded by private school education and familial legal connections created inequities which were detrimental to the wellbeing of less

privileged students. One would expect this specific inequity to be less foregrounded in law schools attracting fewer highly privileged students.

These context-specific inequities indicate that context-specific policies may be appropriate. Field & Meyer (2020) suggested that a key challenge of transitioning into law school is acquiring “threshold concepts”, meaning disciplinary concepts required to understand a particular field. In law school this involves learning the concepts, terminology, discourse, and processes which make up the legal profession. Lack of understanding of threshold concepts makes disciplines feel alienating, whereas understanding promotes belongingness, competency, and autonomy (Field & Meyer, 2020). Our student narratives suggested that privileged students, particularly those with family in the legal profession, arrive at law school with greater pre-existing familiarity with these threshold concepts. Rigorously communicating threshold concepts in early years may be particularly important for law schools likely to experience this inequity. Doing so could promote belongingness amongst more marginalised students transitioning into daunting law school spaces.

Our sample felt high admission criteria contributed to competitive environments. This begs the question of whether competitive environments would express themselves comparably in law schools with less stringent admission criteria. Much of the qualitative law student wellbeing literature has been conducted in Australia, of which most studies have been conducted in highly prestigious law schools (c.f. Armstrong & Sanson, 2012; Larcombe et al., 2013; O'Brien et al., 2011; Stallman, 2012; Yau et al., 2020). Quantitative evidence suggests perceived law school competitiveness may be more predictive of poor wellbeing in more academically prestigious law schools (Skead et al., 2020), and students from specific high-ranking law schools have reported higher distress relative to aggregated law student data (Kelk et al., 2010; Leahy et al., 2010; Soh et al., 2015). This suggests that rates of wellbeing and the factors influencing wellbeing may vary depending upon law school features. Future

research should further consider this possibility given the implications for the design and implementation of wellbeing initiatives.

6.5 Conclusion

In conclusion, the current study builds upon existing qualitative research to extend the literature towards a more holistic understanding of the lived experiences of law students and the ways that law school environments shape wellbeing. Our sample described the complexities involved in navigating their law degrees. Richly appreciating these complexities enhances our understanding of potential approaches for supporting law students (Tang, 2016). This study demonstrates the value of incorporating student voices to inform broader efforts to create law school environments which empower rather than diminish wellbeing.

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7. Discussion

Elevating capacities for universities to support student wellbeing requires extending the empirical evidence base (Barkham et al., 2019; Hughes & Spanner, 2019; Upsher et al., 2023). This thesis presents five interrelated studies which contribute towards expanding this literature within the Australian context. Together these studies seek to address three key research questions. This chapter summarises key findings and discusses implications for future research and policy directions. The chapter then concludes by considering the overall strengths and limitations of this thesis.

7.1 Overview of key findings

7.1.1 Research Question 1: What factors appear to be associated with the wellbeing of Australian university students?

Developing effective wellbeing initiatives requires understanding the factors that underlie student wellbeing (Barkham et al., 2019; Beiter et al., 2015; Pedrelli et al., 2015; Upsher et al., 2023). An important step towards reaching such an understanding is to synthesise the existing evidence to clarify what is currently known. As such, chapter 2 reported the findings of the first scoping review into wellbeing research conducted upon Australian university students. Encouragingly, 160 studies met the broad inclusion criteria of reporting a “wellbeing” finding derived from data provided by Australian university students. Together these studies reported 242 distinct factors as associated with wellbeing. These factors were conceptually grouped into domains of psychological, social, demographic, university-specific, lifestyle, work-related/financial, and aversive life-experiences.

However, the scoping review also identified substantive limitations within the existing evidence base. Firstly, non-representative sampling pervaded the literature. Very few studies attempted to recruit samples that were representative of Australian university students as a whole. The normative sampling approach was to recruit students from specific academic

disciplines within a single institution, with psychology and medicine students both over-represented. Furthermore, quantitative studies displayed substantial inconsistency in the operationalisation of wellbeing. Most notably, many studies claiming to investigate “wellbeing” operationalised wellbeing using psychometrics designed to capture clinically relevant negative experiences. This psychometric approach is at odds with the relatively well-accepted conceptual perspective that experiencing wellbeing requires the presence of positive psychological experiences alongside the relative absence of negative experiences (Iasiello et al., 2020). Taken together, these two limitations made it challenging to summarise the “factors associated with Australian university student wellbeing”. Furthermore, despite associations being reported between wellbeing and 242 distinct factors, key knowledge gaps remained. We found relatively few insights into which student groups were at-risk of poor wellbeing, as well a need for further research examining relationships between university-specific factors and wellbeing.

Chapter 3 sought to contribute to the existing qualitative evidence base by providing students with a platform to describe the factors they qualitatively perceive as influencing their wellbeing. A qualitative content analysis revealed the factors students most frequently identified as influencing wellbeing. Aligning with both existing research and the chapter 2 scoping review, consistently identified factors included social interactions, teaching quality, academic stress, and study/life balance (Campbell et al., 2022; Hurst et al., 2013; Linden & Stuart, 2020). The key finding was that academic workload was identified more than twice as often as any other factor. This finding was extended via a relational analysis which tallied frequencies of cause-and-effect statements wherein students described one factor ‘causing’ another. Academic workload once again emerged pre-eminent, being the causal factor in 61% of all causal statements. Excessive academic workloads were described as exacerbating

academic stress, compromising study/life balance, diminishing satisfaction with academic performance, and limiting social opportunities.

Intriguingly, despite the primacy given to academic workloads in student responses throughout chapter 3, the chapter 2 scoping review found relatively little research into the relationship between academic workload and wellbeing. The deleterious effect of excessive academic workloads upon wellbeing was also consistently discussed by law students throughout chapter 6. This suggests that the direct and indirect wellbeing impacts of academic workloads may be under researched (Smith, 2019).

Finally, a key knowledge gap identified in Chapter 2 was that relatively few studies had explored whether demographic factors, such as international/domestic status or academic discipline, predicted variability in levels of wellbeing. Surprisingly, only one study included in the review had compared levels of wellbeing between academic disciplines (Skead & Rogers, 2015). Chapter 5 addressed this knowledge gap by looking at the relationships between demographic factors and wellbeing within an Australian whole-university sample. On average, international and postgraduate students reported higher wellbeing relative to domestic and undergraduate students respectively. The average difference between male and female-identifying students was non-significant. Wellbeing also differed significantly between faculties. The above generally aligns with existing research both in Australia and overseas.

Chapter 5 presents the first study to examine whether academic faculty moderates wellbeing differences between key student demographic groups. This analysis allowed more precise identification of at-risk students compared to conventional ‘main effect’ analyses. To illustrate, on average law students reported worse wellbeing relative to other faculties, which aligns with previous research both in Australia and overseas (Leahy et al., 2010; Lewis & Cardwell, 2020; Schofield et al., 2016). However, moderation and subsequent simple main

effect analyses indicated that female law students specifically appeared at-risk, rather than law students in general.

7.1.2 Research Question 2: What strategies could assist in improving the response rates received by wellbeing surveys of Australian university students?

Chapter 2 also presented the first synthesis of response rates received by wellbeing surveys of Australian university students. Excluding whole-university studies, the overall response rate was 37.7%. Response rates differed depending on the population being sampled. There was a clear trend towards higher response for surveys sampling specific subsets of student populations, with the most prevalent approach being to recruit students from specific academic disciplines. Whole universities surveys received the lowest response rates (5.6%). Response rates also varied depending upon survey format. In-class surveys (57.3%) have received higher response rates than those conducted via email invitation (24.8% excluding whole-university studies, 7.7% including). In-class surveys invariably sampled specific student groups. The extent to which higher response rates to in-class surveys are due to the benefit of sampling specific student groups (or vice versa) is unclear.

Low response rates to whole university surveys were deemed problematic, partly because comprehensively identifying at-risk student groups requires collecting wellbeing data from whole university populations. We noted that existing whole university wellbeing surveys have conventionally recruited via email invitations. SMS approaches have received higher response rates than emails in healthcare contexts, likely due to the increased convenience of SMS responding (Chang et al., 2014; DiCarlo et al., 2023; Nippita et al., 2015; Premkumar et al., 2019; Romeiser et al., 2021). No previous study had used SMS methods to collect wellbeing data from a large university sample.

As described in chapter 4, we sought student feedback to confirm the acceptability of a whole-university wellbeing SMS and to engage in a co-design process to determine

preferred format and wording. While a small minority of students expressed reservations, the majority felt the concept was acceptable.

The majority of interviewees predicted that they would be more likely to reply to an SMS than an email. However, students also felt that uncertainty surrounding whether the SMS was a scam would diminish overall response rates. Suspicions regarding SMS legitimacy were amplified by the need to use an unknown contact number.

Chapter 5 reports the pilot testing of this survey. The overall valid response rate was 9%. Comparing this to an email approach was challenging. In support of the approach, our response rate was roughly equivalent to limited existing Australian whole-university (or comparable) email-delivered wellbeing surveys, despite having relatively sparse marketing and no participation incentives or response reminders (Farrer et al., 2016; Larcombe et al., 2021; Liu et al., 2021; Mulder & Cashin, 2015; Sanci et al., 2022; van Agteren et al., 2019). Our response rate also comfortably exceeded a recent emailed whole-university wellbeing survey which used comparably inobtrusive marketing alongside five response reminders (Liu et al., 2021). However, there are multiple existing whole-university studies reporting higher response rates than the SMS wellbeing check despite requiring substantially greater time from participants (e.g Larcombe et al., 2021; Sanci et al., 2022). These surveys used particularly extensive marketing and participation incentives.

7.1.3 Research Question 3: What are the lived wellbeing experiences of Australian university students who appear at-risk of poor wellbeing?

After identifying law students, or more accurately female law students, as potentially at risk of poor wellbeing, we conducted an interview study exploring the lived experiences of law students. The interview schedule included a question asking students whether they felt female law students experienced unique challenges at law school. Intriguingly, students

predominantly disagreed with the notion that studying law was structurally more threatening to the wellbeing of female students.

After twenty-one interviews the data was sufficiently rich to allow for a reflexive thematic analysis examining the ‘feeling’ of being a law student. Law students felt that various university-related factors substantively shaped their wellbeing, including unmanageable academic workloads, competitive and adversarial university environments, and confusion surrounding assessment requirements and feedback. Furthermore, law students often interpreted their wellbeing as influenced by relatively discipline-specific factors, rather than factors experienced comparably by all students at the university. For example, the hyper-competitive environment was viewed as quite particular to the law school.

Law students also provided recommendations for how universities could support their wellbeing, including clearer guidance on ‘how’ to study, improved assessment feedback, and expansion of existing systems of peer-assisted study sessions.

7.2 Implications and Future Directions

7.2.1 Several factors that university students perceive as influencing their wellbeing are also factors that universities are uniquely equipped to intervene upon

Chapter three reported that students viewed difficulties surrounding academic workloads as central to their experience of wellbeing. Time scarcity and stress surrounding academic time-management was also a recurring feature of law student narratives. Furthermore, students throughout chapters 3 and 6 consistently described other university-specific factors such as pedagogical approaches, curriculum designs, teaching quality, overlapping and inflexible assessment schedules, classroom environments, and communication of assessment requirements and feedback as influencing wellbeing.

A crucial and encouraging implication of this research is that many of the above university-related factors are logically factors that universities are ideally and uniquely placed

to intervene upon. The two excerpts below provide an insight into how universities could go about reforming university experiences to better support wellbeing. The first excerpt is a response from a chapter 3 participant. The second is taken from the “University Mental Health Charter” produced by UK based charity Student Minds. The second excerpt is reflecting upon the potential for academic challenges to threaten wellbeing.

The workload as a first-year student is just unacceptable. I am trying to fit in a new country and a new way of life, make new friends but I can't do that if I always have assignments and tests coming up. Sometimes tutors make us do practice presentations to be ready for the actual one, some classes are completely pointless. I would suggest to give less work to students in first year. Trying to settle in a new city is 10 times more difficult with so much work. I haven't had the time to make new friendships because of the work. I didn't expect this. (Gilmore et al., 2025 p. 11)

Is the challenge difficult because it is appropriately academically stretching? Or because it is unclear, the students are unprepared and/ or they lack necessary resources? In the first case, the challenge will be beneficial. In the second, it will be unhelpfully stressful, undermining the student's self-efficacy, confidence, sense of competence and commitment. (Hughes & Spanner, 2019 p. 26)

The above student succinctly describes their ability to experience positive features of emerging adulthood, (e.g., self-discovery, embracing change, new experiences) being thwarted by their university workloads. Furthermore, this student does not merely perceive their workloads as ‘high’. Rather, they perceive their workload as *unnecessarily* high, or as high without a clear rationale.

The phrase ‘appropriately academically stretching’ from the second excerpt captures this issue. It is not that students believe university should entail no challenge or threat to wellbeing. Indeed, qualitative findings suggest that students perceive a point of ‘desirable difficulty’ in their university studies (Upsher et al., 2023). Students also recognise that assessments are an essential component of university life and that for assessment to be meaningful there must be a possibility of failure which can threaten wellbeing (Jones et al., 2021). What is problematic is when the demands of university life are excessively challenging, stressful, or time-intensive without a clearly recognised benefit to learning (Hughes & Spanner, 2019; Jones et al., 2021; Upsher et al., 2023). More succinctly, university should not be felt to be *unnecessarily* threatening to wellbeing.

Universities might seek to reform features of university life that create stress or uncertainty that goes beyond “appropriately academically stretching”. This may not necessarily require drastic measures such as significantly reducing academic workloads or shifting to pass/fail assessments. As suggested in chapter 3, one approach might be ensuring that students understand the pedagogical rationales behind assessments and academic workloads. For the student in the above excerpt, part of their frustration seems to stem from confusion regarding *why* they have received so much academic work. Universities might also prioritise guiding students on ‘how’ to study which could empower them to work more efficiently and successfully adjust to university academic contexts (Armstrong & Sanson, 2012; Baik et al., 2019; Cage et al., 2021). An additional and direct approach proposed during chapter 3 might be for universities to examine whether elements of existing course curriculums may impose academic time demands that exceed what is pedagogically necessary or appropriate. Student feedback within both chapters 3 and 6 suggest that identifying and rectifying such instances could have substantive impacts to student wellbeing.

Finally, authors have expressed concerns about a trade-off wherein supporting wellbeing by changing teaching, curriculum and assessment will come at a cost to educational quality and graduate outcomes (Ecclestone & Hayes, 2019). This perspective may underpin opposition to change amongst educators. On the contrary however, throughout this thesis participants have consistently suggested that wellbeing would be supported *by* improving educational quality.

To illustrate, clear and timely assessment feedback is recognised as an essential component of high-quality education that assists students in improving and remaining academically motivated (Dawson et al., 2019; Fisher et al., 2025). This thesis, along with several previous qualitative studies, suggests that students also feel improving assessment feedback could have the added benefit of supporting student wellbeing (Armstrong & Sanson, 2012; Baik et al., 2019; Cage et al., 2021; Jones et al., 2021; Larcombe et al., 2013; Riva et al., 2020; Sampson et al., 2022; Scanlon et al., 2007; Upsher et al., 2023; Zacharopoulou & Turner, 2013). Additionally, participants throughout chapters 3 and 6 indicated that teaching quality has a major bearing on wellbeing, which is also supported by existing research (Baik et al., 2019; Eloff et al., 2023; Larcombe & Fethers, 2013; Riva et al., 2020; Stanton et al., 2016). Therefore, relationships between wellbeing initiatives and efforts to improve educational quality may often be symbiotic.

To summate, this thesis contributes to a growing body of literature which suggests that university-specific experiences are key determinants of student wellbeing. Despite this understanding, very few interventions have attempted to support student wellbeing via changes to core university experiences (Larcombe et al., 2021; Upsher, Nobili, et al., 2022; Worsley et al., 2022). Addressing this omission is perhaps the most important direction for future research.

In saying this, while this thesis has focused almost exclusively on the experiences of university students, it is important to acknowledge the conditions experienced by university staff and the ways that these conditions impact the feasibility of enacting changes to student experiences. Growth in the size of student populations and corporatisation of university systems has led to greater time demands and responsibilities being placed upon university staff, which can increase work-related stress and threaten wellbeing (Brewster et al., 2022; Fontinha et al., 2019). Attempting to support student wellbeing via mandating changes to feature of university experiences such as assessment, pedagogy and auditing course curricula could place even greater time demands on already overworked staff.

Furthermore, at times this thesis has operated upon the (possibly naïve) assumption that, if researchers hypothetically succeeded in identifying effective approaches for improving overall student wellbeing, then universities would unilaterally dedicate sufficient resources towards implementing these approaches. Naturally, universities policy makers are not monolithic in terms of their levels of interest and investment in student wellbeing. Previous attempts to implement student wellbeing support have been constrained by inconsistent investment towards student wellbeing both between and within universities (Browne et al., 2022). Attempts to improve university student wellbeing should be designed with an appreciation of the need to avoid applying increased strain upon university staff, and with a realist perspective on the complex corporate structures and priorities of universities.

7.2.1.1 Designing appropriate and informed university wellbeing approaches calls for rich and experientially focused qualitative research into student wellbeing

As aforementioned, robustly understanding the factors underlying student wellbeing is essential for developing effective wellbeing approaches (Barkham et al., 2019; van Agteren et al., 2019). Reaching such an understanding calls for qualitative research that leverages the status of university students as the ‘experts’ in their own experiences (Baik et al., 2019).

Qualitative research into the wellbeing of university students in the United Kingdom has proliferated in recent years (Brewster et al., 2022; Cage et al., 2021; Jones et al., 2021; Riva et al., 2020; Sampson et al., 2022; Upsher et al., 2023). Chapters 3 and 6 contribute towards expanding the Australian qualitative evidence base. However, fully realised qualitative understandings of university student wellbeing are yet to be reached.

Furthermore, frameworks for best practice in university wellbeing policy have identified ‘centring the student perspective’ and engaging students as co-designers as essential throughout the development, implementation and evaluation of wellbeing initiatives (Browne et al., 2022; Hughes & Spanner, 2019). Student codesign is especially appropriate for informing changes to features of learning, teaching, and assessment, which, as argued above, should form a key aspect of university wellbeing approaches (Healey et al., 2016; Jones et al., 2021; Upsher et al., 2023).

While there is a somewhat more established tradition of utilising university students as co-designers of learning innovations (Cook-Sather & Luz, 2015; Healey et al., 2016), engaging students as co-designers of university wellbeing policy is a fairly nascent approach (Sampson et al., 2022). Some previous research, including chapter 3 of this thesis, has used text-response formats to briefly canvass student perspectives, for instance asking students for recommendations for university wellbeing approaches (Baik et al., 2019) or future research directions (Sampson et al., 2022). While these methods allow for feedback from larger student samples, this comes at the drawback of more shallow explorations of student experiences.

This thesis suggest that future researchers might prioritise in-depth and open-ended qualitative approaches which provide rich data over brief approaches which provide relatively shallower insights. The same applies to developing wellbeing policies via student

codesign, wherein utility of student insights may be increased by greater depth of qualitative inquiry.

To illustrate, chapter 6 employed open-ended, semi-structured interviews which firstly asked law students to tell their stories. The data received was analysed via a reflexive thematic analysis which adopted an inductive and experiential focus in order to examine the ‘feeling’ of being a law student. This research methodology provided a depth of understanding which afforded more nuanced insights than could be gained by briefer, more surface-level approaches to data collection and analysis.

If we had asked law students for brief text-response recommendations for wellbeing approaches, we would likely have received requests for expanding peer-assisted study sessions. This would have provided the relatively limited information that students enjoy peer-assisted study sessions. Exploring broader student narratives illuminated *why* these sessions might be so impactful to wellbeing.

Law students described navigating a highly competitive environment with limited opportunities for students to work together. Students also identified the formation of small, close-knit social circles as essential for coping with the otherwise isolating and individualistic law school experience. Law students additionally described tension stemming from placing immense significance on academic performance while simultaneously feeling uncertain about the optimal approaches for achieving desired academic performance. Students appeared to appreciate peer-assisted study sessions because they helped ameliorate all of the above concerns.

This depth of understanding could guide implementation. Peer-assisted study sessions should firstly be designed with the above considerations in mind. Furthermore, understanding student narratives could help co-ordinate these sessions as part of a comprehensive suite of changes across the law school. For example, in addition to expanding peer-assisted study

sessions, the law school could seek to improve communication of assessment expectations and feedback to empower academic self-efficacy, while also platforming a wider range of graduate positions to deconstruct the myopic views of success that incentive relentless academic competition. Taken together these changes could address university experiences which cumulatively appeared to degrade law student wellbeing.

The cohesiveness of the above strategies is afforded by the richness of understanding provided by our qualitative approach. Therefore, future qualitative researchers might consider prioritising depth of inquiry when examining student wellbeing experiences. In practical terms, this calls for in-depth and open-ended interview data being analysed using experientially focused, inductive methodologies, such as the reflexive thematic analysis described in chapter 6.

7.2.1.2 Appropriateness of tailored, discipline-specific wellbeing initiatives as a key component of broader ‘whole university’ approaches

The University Mental Health Charter advocates for a “whole university” approach to student wellbeing, defined as a “multi-stranded approach which recognises that all aspects of university life can support and promote mental health and wellbeing” (Hughes & Spanner, 2019 p.10). As the name implies, the whole university approach calls for the mobilisation of the ‘whole university’ towards the common goal of supporting student wellbeing (Browne et al., 2022; Hughes & Spanner, 2019; Upsher, Nobili, et al., 2022). It is therefore recognised that whole university approaches will inevitably involve interventions addressing core academic experiences relating to pedagogy, curriculum, and assessment (Cage et al., 2021; Jones et al., 2021; Upsher et al., 2023).

An important consideration for a whole university approach is establishing the extent to which wellbeing initiatives should be consistent across the breadth of an institution, or tailored to specific areas of a university, such as individual faculties or schools (Browne et

al., 2022). Different academic disciplines confer unique disciplinary stressors while also likely attracting students with varying propensities for poor wellbeing (H. K. Allen et al., 2022; Lewis & Cardwell, 2020; Lipson et al., 2016; McLafferty et al., 2022). Illustrating these discipline-specific sensibilities, Baik et al., (2019) asked 2776 Australian students for recommendations on how universities could support student wellbeing. An intriguing finding was that the types of wellbeing support students requested differed between faculties. For instance, law student recommendations related to assessments roughly 2.5 times more consistently than non-law students. This was taken as evidencing “a strong case for developing and implementing wellbeing initiatives at the faculty or school level” (Baik et al., 2019 p.684).

This thesis supports this view. ‘Whole-university’ approaches should partly involve interventions addressing disciplinary-specific concerns (H. K. Allen et al., 2022; McLafferty et al., 2022). Many of the academic experiences identified as influencing wellbeing, such as overall academic workloads, assessment formats, classroom environments, and pedagogical approaches are largely dictated by decisions made at the faculty or school level. Appropriate changes to the above would likely need to be determined on a discipline-by-discipline basis, rather than via a proscriptive university-wide mandate (McLafferty et al., 2022). Throughout chapter 6, law students described their university challenges as relatively unique to law school and perceived a need for policies addressing discipline-specific experiences. The chapter 5 finding that academic faculty moderates wellbeing differences between key student demographics further points to the value in considering disciplinary factors when designing wellbeing policies. In practical terms, universities might dedicate resources towards investigating discipline-specific stressors and developing discipline-specific responses. Such approaches could be conducted alongside more general ‘university-wide’ wellbeing initiatives.

Unfortunately, the dearth in Australian research comparing levels of wellbeing between academic disciplines also means there is very little research exploring differences in strengths of wellbeing predictors across academic disciplines. This warrants further research. Such research could provide a stronger quantitative justification for discipline-specific wellbeing approaches.

7.2.2 Importance of improving systems for collecting wellbeing data from whole-university populations

Wellbeing initiatives addressing university-specific factors need to be developed alongside systems for monitoring student wellbeing to allow for identification and dissemination of effective approaches (Bennett et al., 2024; Hughes & Spanner, 2019; van Agteren et al., 2019). Furthermore, changes to core features of university life could have inadvertent negative wellbeing impacts which further necessitates comprehensive wellbeing assessment (Hughes & Spanner, 2019; Jones et al., 2021; Upsher, Nobili, et al., 2022). If university initiatives are intended as ‘whole university’ in scope, this requires whole-university wellbeing measurement.

Evaluating university-wide wellbeing initiatives is challenging (Bennett et al., 2024). Conducting randomly controlled trials is often infeasible, particularly for interventions intended to address wellbeing indirectly via changes to pedagogy, curriculum and assessment (Bennett et al., 2024; Upsher, Percy, et al., 2022). Longitudinal data collections may represent the most feasible method for gaining inferences into efficacy of university-wide wellbeing interventions (Bennett et al., 2024). Pre-post quantitative comparisons could be combined with qualitative student feedback to provide mixed-method insights into efficacy and potential approaches for improving future initiatives (Browne et al., 2022; Upsher, Percy, et al., 2022).

As outlined in chapter 5, whole-university wellbeing surveys also allow identification of sub-sets of student populations who are at-risk of poor wellbeing and who may benefit most from greater allocation of university resources (H. K. Allen et al., 2022; Erekson et al., 2023; Lipson et al., 2022; McLafferty et al., 2022). Different student groups may also have different responses to university wellbeing initiatives. Longitudinal data collections could identify groups displaying unusually pronounced changes in wellbeing, either positively or negatively.

As discussed throughout this thesis, the utility of whole university wellbeing data depends upon data representativeness (van Agteren et al., 2019). Chapter 2 found that whole university surveys received by far the lowest response rates among wellbeing surveys of Australian students (5.6%). While not guaranteeing the presence of non-response bias, these very low response rates suggest clear potential for non-response bias (Groves, 2006). Improving response rates to whole university surveys could also provide adequately powered samples that allow more granular subgroup comparisons (van Agteren et al., 2019).

Chapters 4 and 5 described the development and piloting of a novel approach for collecting wellbeing data from whole university populations. Chapter 4 reported that students felt a whole-of-university SMS wellbeing check was acceptable and more convenient than equivalent email approaches. Maximising this convenience required allowing students to respond via text to a single item. The SMS approach therefore entails the inherent limitations of single-item measurement (M. S. Allen et al., 2022) while also being unable to contribute towards increased consistency in multiple-item measurement of student wellbeing (Barkham et al., 2019; Dodd et al., 2021; Upsher, Nobili, et al., 2022). The theorised response rate benefit of SMS approaches would need to offset these drawbacks.

Whether the theorised response benefit of SMS can be realised in practice remains undetermined. As outlined in chapter 5, the valid response rate of 9% is more promising than

it might appear. Future researchers could seek to optimise implementation and improve response rates to SMS-delivered whole university wellbeing surveys. Given that students felt response likelihood would be most inhibited by concerns that the SMS may be a scam, marketing campaigns that emphasise the legitimacy of the SMS and safety of responding could improve response. Furthermore, engagement may increase as students become more familiar with this approach to data collection (Rogers, 1962).

Our scoping review also found that wellbeing surveys conducted during classes have received the highest average response rate of any delivery format. An alternative approach to ‘whole university’ wellbeing data collection might be to conduct in-class surveys within units of study that approximate a representative whole university sample. One study included in the scoping review used such an approach to recruit a representative sample of first-year undergraduates (Bye et al., 2020).

To summate, meaningfully improving student wellbeing will require implementing wellbeing interventions across the whole breadth of university contexts (Hughes & Spanner, 2019). Evaluating such interventions requires measuring the wellbeing of large university populations. Systems of wellbeing measurement will likely need to be multi-faceted and co-ordinated (Upsher, Percy, et al., 2022). Brief evaluations, such as the SMS wellbeing check, should form a key feature of overarching systems of wellbeing measurement. The SMS wellbeing check, or similar approaches, firstly allows identification of at-risk student groups which can help guide allocation of university resources (H. K. Allen et al., 2022; Erekson et al., 2023; Lipson et al., 2016). Brief data-collection approaches entail low participant burden and relatively minimal university resources and therefore lend themselves well to repeated data collections. Longitudinal data collection allows for analysis of temporal trends and could provide tentative insights into the efficacy of university wellbeing initiatives (Bennett et al., 2024). If universities wish to gain greater understanding of wellbeing correlates, they might

consider conducting more resource and time-intensive longer-form surveys (e.g Larcombe et al., 2021; Liu et al., 2021; Sanci et al., 2022; van Agteren et al., 2019). Conducting such surveys in-class appears to be the most dependable way of increasing confidence in data representativeness. Qualitative feedback might also be used to explore student experiences and appraisals of university wellbeing initiatives which could highlight directions for improving future interventions (Upsher, Percy, et al., 2022). Conducting all of the above in an organised and ‘joined up’ approach could provide vitally important data for informing university wellbeing policy, directing university resources, evaluating the effectiveness of university initiatives, and, ultimately, meaningfully improving university student wellbeing.

7.3 Strengths and Limitations

Strengths and limitations specific to individual studies were covered in their respective chapters. The following reviews the overarching strengths and limitations of this thesis as a whole.

7.3.1 Strengths

A clear strength of this thesis is that the research aims and directions of chapters 3-6 were guided by insights derived from the first rigorously conducted scoping review of the Australian university student wellbeing literature (chapter 2). The chapter 2 scoping review has substantial value in and of itself as it summarises the existing evidence base and identifies knowledge gaps which should be addressed by future research. The scoping review also helped ensure that subsequent studies reported in this thesis explored critical knowledge gaps and research directions.

Another strength of this thesis is the variety of research methodologies. Extending this literature requires centring the student voice and leveraging the status of university students as the ‘experts’ in their own experience (Baik et al., 2019; Browne et al., 2022). The use of qualitative methodologies ensured that the perspectives of present-day Australian university

students were foregrounded throughout this research. Chapter 3 presents the first study to use a relational analysis to extend understandings of how Australian university students perceive the factors underlying their wellbeing. Chapter 6 involved conducting an experientially focused and inductive reflexive thematic analysis to examine the lives of law students and to identify targets for university intervention. The student voice was also central to the development of the SMS wellbeing check. Cognitive interviews with student co-designers ensured that the large-scale data collection reported in chapter 5 was acceptable in concept and delivered in a format preferred by the majority of interviewees.

Quantitative approaches were also employed. Chapter 5 reports the first Australian study seeking to identify which student groups are most at-risk of poor wellbeing across a whole university sample. Our moderation analysis moved beyond conventional quantitative approaches reported in the literature and found that differences in wellbeing between major demographic student groups varied depending upon academic faculty. This finding has substantive implications for identifying at-risk student groups and guiding allocation of university resources.

7.3.2 *Limitations*

Perhaps the clearest overarching limitation is that all participants were recruited from the same Australian university. While this thesis aimed to examine ‘Australian’ university student wellbeing, the comparability between students at this particular university, and Australian university students in general is unclear. There is good reason for thinking that this university may not be a perfect microcosm of the Australian universities landscape. The university is large, metropolitan, and part of the prestigious ‘group of eight’ research-intensive universities. As chapter two outlines, this single-institution scope is a limitation this thesis shares with much of the existing literature. The small number of wellbeing studies that have recruited from multiple Australian university rarely make comparisons between

institutions due to divergent research objectives (e.g Usher & Curran, 2018). Australian university stakeholders have suggested that university wellbeing approaches should be tailored to specific institutional contexts on the logic that student experiences and concerns differ between institutions (Browne et al., 2022). While slight variations between institutions in wellbeing and predictors of wellbeing have been reported in limited existing research both in Australia and overseas (Eisenberg et al., 2013; Skead et al., 2020; Stallman, 2010), a thorough comparison of wellbeing profiles across the whole breadth of Australian universities is yet to be conducted.

In addition to the above, the findings of the SMS wellbeing check are limited by the absence of a second annual data point which could have provided insights into stability of profiles of wellbeing within the university. Uncertainty surrounding data representativeness applies to both quantitative and qualitative studies reported in this thesis; just as the host university may not be representative of Australian universities as a whole, our samples may not be representative of the host university. Finally, a potentially substantial limitation is the possible bias of the first author. This thesis extensively utilised inductive qualitative methods which are especially susceptible to researcher bias. Admittedly, I was not ideally situated to objectively and dispassionately interpret student feedback given that I had been an undergraduate student at the same university six months prior to embarking upon this research. I also likely have a disciplinary bias given my background in psychology. I attempted to avoid inserting my own perspectives throughout my analyses and interviewing by practicing reflexivity. While I like to think I managed this as well as could be expected, entirely eliminating researcher bias is likely not possible.⁶

7.4 Conclusions

⁶ In the case of the reflexive thematic analysis reported in chapter 6, “entirely eliminating researcher bias” is also explicitly not seen as aspirational.

See. Braun, V., & Clarke, V. (2022). *Thematic analysis: a practical guide*. SAGE Publications Ltd.

This thesis provides valuable contributions to the literature relating to the wellbeing of Australian university students. The five interrelated studies reported within this thesis contribute towards expanding understandings of the lived experiences of Australian students and ways that universities could better support their students. The studies also introduced a novel approach for measuring student wellbeing and highlighted important knowledge gaps within the existing evidence base which future researchers should seek to address.

Our findings have been disseminated across three peer-reviewed journal articles, with two further articles being prepared for submission. We hope that in producing and disseminating this research we have contributed towards expanding the empirical knowledge base which is recognised as a crucial step towards developing effective university wellbeing initiatives (Barkham et al., 2019; Hughes & Spanner, 2019; Upsher et al., 2023).

To conclude, I would like to briefly return to a practical consideration raised in section 1.3.1. Meaningfully improving student wellbeing will require both time and money. During the development of the “University Mental Health Framework for Australia” university stakeholders raised concerns surrounding resourcing during “every phase” of consultation (Browne et al., 2022 p. 25). Lack of high-quality evidence into university wellbeing initiatives has also been attributed to absence of funding and a consequent lack of researcher expertise (Upsher, Nobili, et al., 2022). Therefore, while this thesis makes important contributions to the academic literature, enacting meaningful change requires universities to increase allocation of financial resources and researcher attention towards student wellbeing. Doing so represents a deeply worthwhile and urgently needed investment.

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Appendices

Appendix 1. Supplementary material for chapter 3

Appendix 2. Supplementary material for chapter 4

Appendix 3. Supplementary material for chapter 5

Appendix 4. Supplementary material for chapter 6

Appendix 1: Supplementary material for chapter three

Supplementary Material

Supplementary A. Ethics Approval

Supplementary B. Participant information statement

Supplementary C. Participant debrief statement

Supplementary D. Survey materials

Supplementary A. Ethics Approval



Research Integrity & Ethics Administration
HUMAN RESEARCH ETHICS COMMITTEE

Monday, 21 March 2022

Dear Claire,

The University of Sydney Human Research Ethics Committee (HREC) has considered your application. I am pleased to inform you that after consideration of your response, your project has been approved.

Details of the approval are as follows:

Project No.: 2022/152
Project Title: Pilot study for the validation of a student wellbeing survey
Authorised Personnel: Ashton-James Claire; Costa Daniel; Gilmore Angus;
Approval Period: 21/03/2022 to 21/03/2026
First Annual Report Due: 21/03/2023

Documents Approved:

Date Uploaded	Version Number	Document Name
14/03/2022	Version 1	Final page of survey
14/03/2022	Version 2	Participant Information Statement v2
18/02/2022	Version 1	Pilot Wellbeing Survey
18/02/2022	Version 1	Email to unit coordinators and students
12/02/2022	Version 1	Debrief Statement

Condition/s of Approval

- Research must be conducted according to the approved proposal.
- An annual progress report must be submitted to the Ethics Office on or before the anniversary of approval and on completion of the project.
- You must report as soon as practicable anything that might warrant review of ethical approval of the project including:
 - Serious or unexpected adverse events (which should be reported within 72 hours).
 - Unforeseen events that might affect continued ethical acceptability of the project.
- Any changes to the proposal must be approved prior to their implementation (except where an amendment is undertaken to eliminate *immediate* risk to participants).
- Personnel working on this project must be sufficiently qualified by education, training and experience for their role, or adequately supervised. Changes to personnel must be reported and approved.
- Personnel must disclose any actual or potential conflicts of interest, including any financial or other interest or affiliation, as relevant to this project.
- Data and primary materials must be retained and stored in accordance with the relevant legislation and University guidelines.
- Ethics approval is dependent upon ongoing compliance of the research with the *National Statement on Ethical Conduct in Human Research*, the *Australian Code for the Responsible Conduct of*

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The University of Sydney
NSW 2006 Australia

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Research, applicable legal requirements, and with University policies, procedures and governance requirements.

- The Ethics Office may conduct audits on approved projects.
- The Chief Investigator has ultimate responsibility for the conduct of the research and is responsible for ensuring all others involved will conduct the research in accordance with the above.

This letter constitutes ethical approval only.

Please contact the Ethics Office should you require further information or clarification.

Sincerely,



Professor Michael Skilton
Chair, Health Review Committee (Low Risk)

The University of Sydney of Sydney HRECs are constituted and operate in accordance with the National Health and Medical Research Council's (NHMRC) [National Statement on Ethical Conduct in Human Research \(2018\)](#) and the NHMRC's [Australian Code for the Responsible Conduct of Research \(2018\)](#)

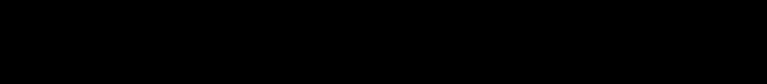
Supplementary B. Participant Information Statement

Participant Information Statement



Research Study: Pilot Study for the validation of a Student Wellbeing Survey

Associate Professor Claire Ashton-James (Medicine and Health) (Responsible Researcher)



1. What is this study about?

We are conducting a research study evaluating the quality of a new student wellbeing survey. We are piloting the survey with approximately 300 students in order to evaluate whether the items in the survey are valid, reliable, and acceptable to students. Taking part in this study is voluntary.

If the survey proves to be valid, reliable, and acceptable to students, it may be used to help universities monitor, understand, and address changes in student wellbeing.

Please read this sheet carefully.

2. Who is running the study?

The study is being carried out by the following researchers:

- Associate Professor Claire-Ashton James (Faculty of Medicine and Health)
- Doctor Daniel Costa (School of Psychology)
- Mr Angus Gilmore (PhD Candidate)

Angus Gilmore is conducting this study as part of his degree of Doctor of Philosophy (Medicine and Health) at The University of Sydney. Angus Gilmore receives a scholarship from The University of Sydney.

3. Who can take part in the study?

We are seeking students currently enrolled at The University of Sydney to take part in this study.

4. What will the study involve for me?

This survey will take approximately 5 minutes to complete. You will respond to questions on various aspects of your wellbeing. These aspects will include your sense of life-satisfaction, your experiences of positive and negative mood and your sense of belonging at university. Additionally, you will be asked about your impressions of how well the university supports your wellbeing, along with a set of demographic questions. You will also be asked to give feedback on the appropriateness of the survey itself. All questions

are optional and can be skipped if you do not wish to complete them. We will interpret missing responses to mean that you do not find the question acceptable. Finally, you will have the option of providing your student email if you would like to be informed of the overall results of this study once we have finished collecting the data.

5. Can I withdraw once I've started?

Being in this study is completely voluntary and your decision to participate is anonymous.

By submitting your survey, you consent to take part in the study. You can withdraw at any time by exiting the survey, however responses that have been submitted cannot be withdrawn.

6. Are there any risks or costs?

We do not expect that there will be any risks or costs associated with taking part in this study.

7. Are there any benefits?

You will not receive any direct benefits from being in the study.

8. What will happen to information that is collected?

By providing your consent, you are agreeing to us including your survey responses in our research.

Your survey responses will be stored securely. Only the researchers listed on this Participant Information Statement will have access to your responses. We will only disclose your responses with your permission unless we are required by law to release this information. We are planning for the study findings to be published. You will not be individually identifiable in dissemination of survey results.

9. Will I be told the results of the study?

You have a right to receive feedback about the overall results of this study. You will be asked if you wish to receive this feedback at the end of this survey. Survey results will be provided in the form of a one-page summary that, if requested, will be emailed to you when this research has been completed.

10. What if I would like further information?

When you have read this information, the following researcher will be available to discuss it with you further and answer any questions you may have: Angus Gilmore, PhD Candidate, [REDACTED]

11. What if I have a complaint or any concerns?

The ethical aspects of this study have been approved by the Human Research Ethics Committee (HREC) of The University of Sydney 2022/152 according to the *National Statement on Ethical Conduct in Human Research (2007)*.

If you are concerned about the way this study is being conducted or you wish to make a complaint to someone independent from the study, please contact the University:

Human Ethics Manager



If you feel distressed at all, please contact Student Counselling Services. Their phone line is available Monday to Friday 9-5pm at: 8627 8433.

If you wish to speak to a counsellor outside of these hours, please call the after-hours University wellbeing support line at: 1300 474 065

If you wish to call an external support service, you may do so via the numbers below
Lifeline: 13 11 14
Mental Health Line (NSW): 1800 011 511

If you consent to participate, please click below to begin the survey

Supplementary C. Participant Debrief Statement

Participant debrief statement



Research Study: Pilot study for the validation of a student wellbeing survey

Associate Professor Claire Ashton-James (Medicine and Health) (Responsible Researcher)



Thank you for participating in this study. This study aims to assess the suitability of this student wellbeing survey. You were asked to respond to several demographic questions and to provide assessments of your life-satisfaction, affective wellbeing, sense of belonging and impressions of university support. You were also given the option of providing text-responses to questions asking about your day-to-day wellbeing and your evaluation of this study. We are interested in assessing the quality of this survey. To achieve this, we will assess response rates, reliability and validity of items and response distributions to establish whether this survey is suitable for a whole-of-university sample. We will measure how long the survey takes students to complete on average and consider all written feedback about the quality of the survey. Furthermore, we will use this survey to assess trends in wellbeing within the pilot sample. We will look at differences in wellbeing according to demographic information. This will include differences between faculty, year of study, domestic/international students, parental education, and non-English speaking backgrounds. We will also compare average wellbeing from this pilot study with population norms.

Your participation is greatly appreciated as this study serves as a necessary step in the development of the university's new 'Student Wellbeing Survey'. The results of this study will help ensure that the final form of the survey is appropriate and will not over-burden students. The implementation of a university-wide wellbeing survey would have far-reaching benefits. By providing clear data on trends of wellbeing within university populations, this research would allow universities to quickly identify and support groups of students who appear particularly at risk of having poor wellbeing.

If you have any questions about this study, please contact us using the email addresses below.

If you feel distressed at all, please contact Counselling and Psychological Services (CAPS). Their phone line is available Monday to Friday 9-5pm at: 8627 8433



Thank you!

Supplementary D. Survey Materials



	1. Extremely Dissatisfied	2. Somewhat dissatisfied	3. Neither satisfied nor dissatisfied	4. Somewhat satisfied	5. Extremely satisfied	Prefer not to say
In general, how satisfied are you with your life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



How much of the time during the past four weeks...

	1. None of the time	2. A little of the time	3. Some of the time	4. Most of the time	5. All of the time	Prefer not to say
1. Did you feel full of life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Have you been very nervous?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Did you feel so down in the dumps that nothing could cheer you up?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Have you felt calm and peaceful?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Did you have lots of energy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Have you felt downhearted and depressed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Did you feel worn out?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Have you been happy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Did you feel tired?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



What most affects your day-to-day wellbeing as a university student?

(Answering this question is optional)

Write your answer in the box below



Through which unit of study were you invited to participate in this survey? Please write the unit of study code (i.e ARTS1000) Skip if not applicable

What is your age?

What is your gender?

Male

Female

Non-binary / third gender

Prefer not to say

What degree are you currently enrolled in?

In what year did you commence your current degree?

Are you a domestic or international student?

Domestic Student

International Student

Are you studying full time (24 credit points or more a semester) or part time (less than 24 credit points a semester)?

Full Time

Part Time

In what country were you born? (Select from the dropdown menu)

What is your nationality? (Select from the dropdown menu)

Is English your first language?

Yes

No

Do you identify as Aboriginal or Torres Strait Islander?

Yes

No

Have you ever been asked to explain unsatisfactory progress in any course while at university?

Yes

No

Appendix 2: Supplementary material for chapter four

Supplementary Material

Supplementary A. Ethics approval

Supplementary B. Ethics modification approval

Supplementary C. Participant information statement

Supplementary D. Participant consent form

Supplementary A. Ethics Approval



Research Integrity & Ethics Administration
HUMAN RESEARCH ETHICS COMMITTEE

Monday, 21 March 2022



Dear Claire,

The University of Sydney Human Research Ethics Committee (HREC) has considered your application. I am pleased to inform you that after consideration of your response, your project has been approved.

Details of the approval are as follows:

Project No.: 2022/149
Project Title: Cognitive Interviews for the Development of an Item Assessing Life-Satisfaction of University Students
Authorised Personnel: Ashton-James Claire; Costa Daniel; Gilmore Angus;
Approval Period: 21/03/2022 to 21/03/2026
First Annual Report Due: 21/03/2023

Documents Approved:

Date Uploaded	Version Number	Document Name
14/03/2022	Version 2	Consent Form v2
14/03/2022	Version 1	Contact Information Survey
14/03/2022	Version 2	Participant Information Statement v2
14/03/2022	Version 1	Revised Approach Script
18/02/2022	Version 1	Cognitive Interviews Item

Condition/s of Approval

- Research must be conducted according to the approved proposal.
- An annual progress report must be submitted to the Ethics Office on or before the anniversary of approval and on completion of the project.
- You must report as soon as practicable anything that might warrant review of ethical approval of the project including:
 - Serious or unexpected adverse events (which should be reported within 72 hours).
 - Unforeseen events that might affect continued ethical acceptability of the project.
- Any changes to the proposal must be approved prior to their implementation (except where an amendment is undertaken to eliminate *immediate* risk to participants).
- Personnel working on this project must be sufficiently qualified by education, training and experience for their role, or adequately supervised. Changes to personnel must be reported and approved.
- Personnel must disclose any actual or potential conflicts of interest, including any financial or other interest or affiliation, as relevant to this project.
- Data and primary materials must be retained and stored in accordance with the relevant legislation and University guidelines.
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Research, applicable legal requirements, and with University policies, procedures and governance requirements.

- The Ethics Office may conduct audits on approved projects.
- The Chief Investigator has ultimate responsibility for the conduct of the research and is responsible for ensuring all others involved will conduct the research in accordance with the above.

This letter constitutes ethical approval only.

Please contact the Ethics Office should you require further information or clarification.

Sincerely,



Professor Michael Skilton
Chair, Health Review Committee (Low Risk)

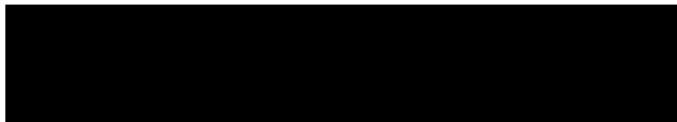
The University of Sydney of Sydney HRECs are constituted and operate in accordance with the National Health and Medical Research Council's (NHMRC) [National Statement on Ethical Conduct in Human Research \(2018\)](#) and the NHMRC's [Australian Code for the Responsible Conduct of Research \(2018\)](#)

Supplementary B. Ethics Modification Approval



Research Integrity & Ethics Administration
HUMAN RESEARCH ETHICS COMMITTEE

Wednesday, 10 August 2022



Dear Claire,

Your request to modify this project, which was submitted on 01/08/2022, has been considered.

This project has been approved to proceed with the proposed amendments.

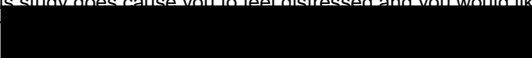
Protocol Number: 2022/149
Protocol Title: Cognitive Interviews for the Development of an Item Assessing Life-Satisfaction of University Students

Annual Report Due: 21/03/2023

Documents Approved:

Date Uploaded	Version Number	Document Name
01/08/2022	Version 2	Interview Script
01/08/2022	Version 3	Participant Consent Form
01/08/2022	Version 3	Participant Information Statement

Special Condition/s of Approval

It will be a condition of approval that the researchers add to section 6 of the participant information statement: "However, if participation in this study does cause you to feel distressed and you would like support, please contact the Student Counsellor on 884 429 (For SMS chat after hours Email 

Please contact the ethics office should you require further information.

Sincerely,



Dr Kathryn Bartimote
Chair
Modification Review Committee (MRC 2)

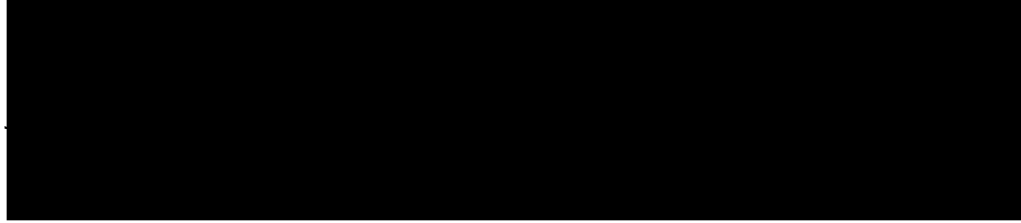
The University of Sydney of Sydney HRECs are constituted and operate in accordance with the National Health and Medical Research Council's (NHMRC) [National Statement on Ethical Conduct in Human Research \(2018\)](#) and the NHMRC's [Australian Code for the Responsible Conduct of Research \(2018\)](#)

Research Integrity & Ethics Administration
Research Portfolio
Level 3, F23 Administration Building
The University of Sydney
NSW 2006 Australia



ABN 15 211 513 464
CRICOS 00026A

Cognitive Interviews for gathering student opinions on an initiative for supporting wellbeing



1. What is this study about?

We are interviewing students about the acceptability of a University-wide wellbeing survey initiative. We are interested in hearing student opinions on a text-message delivered wellbeing check. Taking part in this interview-based study is voluntary.

Please read this sheet carefully and ask questions about anything that you don't understand or want to know more about.

2. Who is running the study?

The study is being carried out by the following researchers:

Associate Professor Claire-Ashton James (Faculty of Medicine and Health)

Doctor Daniel Costa (School of Psychology)

Angus Gilmore (PhD Candidate)

Angus Gilmore is conducting this study as the basis for the degree of Doctor of Philosophy (Medicine and Health) at The University of Sydney.

3. Who can take part in the study?

We are seeking students currently enrolled at The University of Sydney to take part in this study.

4. What will the study involve for me?

If you decide to take part in this study, the interviewer will explain that they want you to 'think aloud' any thoughts you have about the University initiative. You will be shown an image of a wellbeing check text message as it would appear on a mobile phone, as well as the survey which would be accessed via a link in the text message. You will be asked for your feedback on the wording and idea of this novel survey procedure. The interviewer may ask a short number of additional prompts to further explore your impressions and feelings about the SMS initiative.

The interviewer will write notes during the interview to record your feedback. After the interview is completed, you will be asked your current year-level of study, whether you are an undergraduate or postgraduate student, whether you are a domestic or international student, and whether English is your first language. Finally, you will have the option of providing your student email should you wish to be notified of the results of this research once it is completed.

5. Can I withdraw once I've started?

Being in this study is completely voluntary and you can withdraw at any point during the study. During the study you may refuse to answer any questions that you do not wish to answer.

6. Are there any risks or costs?

Aside from giving up your time, we do not expect that there will be any risks or costs associated with taking part in this study.

However, if participation in this study does cause you to feel distressed and you would like support, please contact the Student Counselling Service:



7. Are there any benefits?

In return for being in the study you will be offered a chocolate.

8. What will happen to information that is collected?

By providing your consent, you are agreeing to us collecting information about you for the purposes of this study.

Any information you provide will be stored securely and we will only disclose it with your permission, unless we are required by law to release information. The information collected in this study will be interpreted by academics at The University of Sydney and will inform whether the question is re-worded prior to being included in a wellbeing survey. We are not planning for the study findings to be published. While we will write down your feedback, we will not include your name, making your response anonymous.

9. What if I would like further information?

When you have read this information, the following researcher/s will be available to discuss it with you further and answer any questions you may have:



10. What if I have a complaint or any concerns?

The ethical aspects of this study have been approved by the Human Research Ethics Committee (HREC) of The University of Sydney [2022/149] according to the *National Statement on Ethical Conduct in Human Research (2007)*.

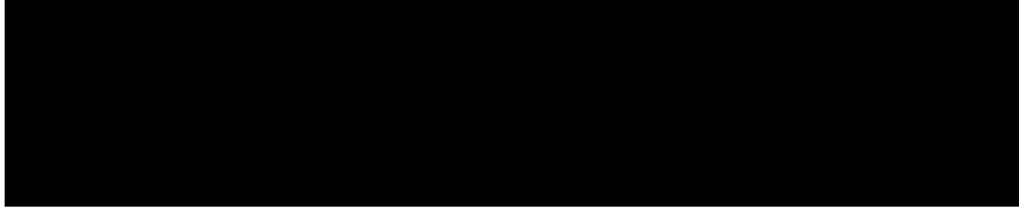
If you are concerned about the way this study is being conducted or you wish to make a complaint to someone independent from the study, please contact the University:



This information sheet is for you to keep

Supplementary D. Participant Consent Form

Cognitive Interviews for gathering student opinions on an initiative for supporting wellbeing



Participant Name _____

I agree to take part in this research study. In giving my consent, I confirm that that:

- The details of my involvement have been explained to me, and I have been provided with a written Participant Information Statement to keep.
- I understand the purpose of the study is to gain student opinions on the idea of a University SMS Wellbeing Check
- I acknowledge that the risks and benefits of participating in this study have been explained to me to my satisfaction.
- I understand that in this study I will be required to both provide my opinion on the idea of a University SMS Wellbeing Check.
- I understand that being in this study is completely voluntary.
- I am assured that my decision to participate will not have any impact on my relationship with the research team or the University of Sydney.
- I understand that I am free to withdraw from this study at any time and that I can choose to withdraw any information I have already provided (unless the data has already been de-identified or published).
- I have been informed that the confidentiality of the information I provide will be protected and will only be used for purposes that I have agreed to. I understand that information about me will only be told to others with my permission, except as required by law.
- I understand that the results of this study may be published, and that publications will not contain my name or any identifiable information about me.
- I understand that after I sign and return this consent form it will be retained by the researcher, and that I may request a copy at any time.

Participant Name _____

Signature _____

Date _____

Appendix 3: Supplementary material for chapter five

Supplementary Material

Supplementary A. Ethics approval pending approval from Deputy Vice-Chancellor (Education)

Supplementary B. Confirmation of approval from Deputy Vice-Chancellor (Education)

Supplementary C. Contrast analysis summary table

Supplementary A. Ethics approval pending approval from Deputy Vice-Chancellor (Education)



RESEARCH INTEGRITY
& ETHICS ADMINISTRATION

HUMAN RESEARCH ETHICS APPROVAL

The University of Sydney confirms that this project meets the requirements of the National Statement on Ethical Conduct in Human Research.

Project identifier:	2024/HE000599
Project title:	Whole of University SMS Wellbeing Check
Version:	0.01
Chief Investigator:	Associate Professor Claire Ashton-James
Authorised project team:	Mr Angus Gilmore Dr Daniel Costa
Date of approval:	Wednesday, 19 June, 2024
Project end date:	18 Jun 2028

Proviso

The use of student data in research requires prior approval from the Deputy Vice-Chancellor (Education). The Ethics Office will arrange this for you, and you will be notified once approval is granted.

Project summary

This application is requesting permission for the transfer and analysis of an existing de-identified dataset. A whole-of-university wellbeing data collection was conducted during Semester 2 2022 as part of the Student Life portfolio's "Student Mental Health and Wellbeing Strategy". All students enrolled at The University of Sydney were sent an SMS message asking them to rate how positively they felt about their university life from 0-10. Responses were linked to demographic data (Faculty, Gender, Degree Progression, Domestic/International Status) to allow comparisons across various student groups.

This data collection was conducted for internal university analysis. The present ethics application is requesting permission to use this existing dataset for research purposes, as the data provides important and novel insights into differential levels of wellbeing across student groups, and into the feasibility of using SMS methods to collect student wellbeing data.

Documents approved

Document type	File name	Document version	Application version
Application Attachment	2024_HE000599 - Project Description.docx	1	0.1
Authorisation or approval	Approval of Data Transfer by PVC Student Life - Letter to Human Research Ethics Committee.pdf	1	0.1

Conditions of Approval

- Research must be conducted according to the approved proposal.
- An annual progress report must be submitted on or before the anniversary of approval and a final report on completion of the project.

HUMAN RESEARCH ETHICS APPROVAL

The University of Sydney confirms that this project meets the requirements of the National Statement on Ethical Conduct in Human Research.

Project identifier:	2024/HE000599
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Conditions of Approval

- Research must be conducted according to the approved proposal.
- An annual progress report must be submitted on or before the anniversary of approval and a final report on completion of the project.

Supplementary B. Confirmation of approval from Deputy Vice-Chancellor (Education)

[2024/HE000599] DVC-E Review: Use of student data approved



23/07/2024 12:50 PM

Application identifier: 2024/HE000599

Application title: Whole of University SMS Wellbeing Check

If you need to make revisions because of feedback in this email and your application has already been approved, you must [submit an amendment to your approved project](#). If your application is still under review you must contact the [Ethics Office](#) to discuss how to make your changes.

Regards,
myResearch Ethics

The University of Sydney
Research Integrity & Ethics Administration | Research Portfolio



We recognise and pay respect to the Elders and communities - past, present and emerging - of the lands that the University of Sydney's campuses stand on. For thousands of years they have shared and exchanged knowledges across innumerable generations for the benefit of all.

Supplementary C. Contrast Analysis Summary Table

Results of contrast analysis

Label	F	P	Ψ	η_p^2
Architecture vs Other	.06	.80	.06	.000
Arts vs Other	1.53	.22	.14	.000
Business vs Other	19.67	<.001	-.66	.005
Engineering vs Other	.18	.67	.06	.000
Law vs Other	9.57	<.01	.75	.002
Medicine and Health vs Other	.98	.32	-.13	.000
Music vs Other	.87	.35	-.27	.000
Science vs Other	.09	.76	.04	.000
Architecture vs Other*Male vs Female	.02	.89	.07	.000
Arts vs Other*Male vs Female	.29	.59	.13	.000
Business vs Other*Male vs Female	9.59	<.01	.94	.002
Engineering vs Other*Male vs Female	.25	.62	-.15	.000
Law vs Other*Male vs Female	9.17	<.01	-1.55	.002
Medicine and Health vs Other*Male vs Female	.37	.54	.16	.000
Music vs Other*Male vs Female	.28	.60	.31	.000
Science vs Other*Male vs Female				
Architecture vs Other*Domestic vs International	.004	.95	.03	.000
Arts vs Other*Domestic vs International	4.41	.04	.63	.001
Business vs Other*Domestic vs International	4.35	.04	.65	.001
Engineering vs Other*Domestic vs International	3.03	.08	.53	.001
Law vs Other*Domestic vs International	1.48	.22	-.69	.000
Medicine and Health vs Other*Domestic vs International	12.11	<.001	-1.24	.003
Science vs Other*Domestic vs International	.25	.62	.16	.000
Architecture vs Other*Undergrad vs Postgrad	.00	.99	-.01	.000
Arts vs Other*Undergrad vs Postgrad	.12	.73	.09	.000
Business vs Other*Undergrad vs Postgrad	16.96	<.001	1.24	.004
Engineering vs Other*Undergrad vs Postgrad	1.13	.29	-.34	.000
Law vs Other*Undergrad vs Postgrad	2.68	.10	-.88	.001
Medicine and Health vs Other*Undergrad vs Postgrad	3.37	.07	-.47	.001
Science vs Other*Undergrad vs Postgrad	1.32	.25	.37	.001

Note: Scheffé critical F = 7.07 for main effect and gender interaction contrasts. Scheffé critical F = 6.06 for domestic/international and undergraduate/postgraduate interaction contrasts. Significant contrasts are indicated by bold text.

Appendix 4: Supplementary material for chapter six

Supplementary A. Ethics approval

Supplementary B. Advertisement Script

Supplementary C. Expression of interest survey materials

Supplementary D. Correspondence email with interested participants

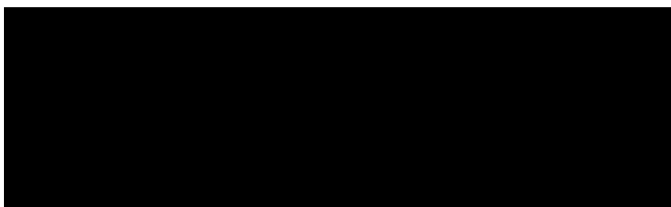
Supplementary E. Participant information statement

Supplementary F. Interview schedule

Supplementary A. Ethics Approval



Research Integrity & Ethics Administration
Human Research Ethics Committee



Dear Claire,

The University of Sydney Human Research Ethics Committee (HREC) has considered your application.

After consideration of your response to the comments raised your project has been approved.

Approval is granted for a period of four years from **13/10/2023** to **13/10/2027**

Project No.: 2023/583

Project Title: Semi-structured interviews investigating the wellbeing of Australian law students

Authorised Personnel: Ashton-James Claire; Sharifi Naz; Gilmore Angus;

First Annual Report due: 13/10/2024

Documents Approved:

Date Uploaded	Version Number	Document Name
09/10/2023	Version 1	PIS Clean
09/10/2023		Study Materials (Clean)

Condition/s of Approval

- Research must be conducted according to the approved proposal.
- An annual progress report must be submitted to the Ethics Office on or before the anniversary of approval and on completion of the project.
- You must report as soon as practicable anything that might warrant review of ethical approval of the project including:
 - Serious or unexpected adverse events (which should be reported within 72 hours).
 - Unforeseen events that might affect continued ethical acceptability of the project.
- Any changes to the proposal must be approved prior to their implementation (except where an amendment is undertaken to eliminate *immediate* risk to participants).

Research Integrity & Ethics Administration
Level 2, Margaret Telfer Building (K07)
The University of Sydney
NSW 2006 Australia



ABN 15 211 513 464
CRICOS 00026A

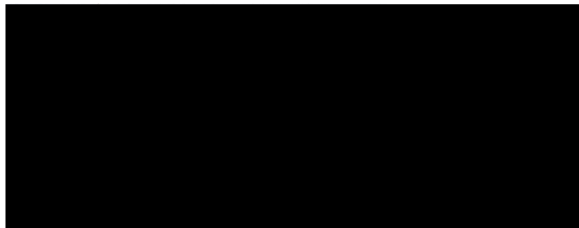


- Personnel working on this project must be sufficiently qualified by education, training and experience for their role, or adequately supervised. Changes to personnel must be reported and approved.
- Personnel must disclose any actual or potential conflicts of interest, including any financial or other interest or affiliation, as relevant to this project.
- Data and primary materials must be retained and stored in accordance with the relevant legislation and University guidelines.
- Ethics approval is dependent upon ongoing compliance of the research with the *National Statement on Ethical Conduct in Human Research*, the *Australian Code for the Responsible Conduct of Research*, applicable legal requirements, and with University policies, procedures and governance requirements.
- The Ethics Office may conduct audits on approved projects.
- The Chief Investigator has ultimate responsibility for the conduct of the research and is responsible for ensuring all others involved will conduct the research in accordance with the above.
- The Clinical Trials Support Office has been notified as outlined in the University's Clinical Trials Policy where a clinical trial is being undertaken.

This letter constitutes ethical approval only.

Please contact the Ethics Office should you require further information or clarification.

Sincerely,



The University of Sydney HRECs are constituted and operate in accordance with the National Health and Medical Research Council's (NHMRC) current National Statement on Ethical Conduct in Human Research (2018) and the NHMRC's current Australian Code for the Responsible Conduct of Research (2018).

Supplementary B. Advertisement Script

STUDY OF LAW STUDENT WELLBEING: PARTICIPANTS WANTED

The University of Sydney is participating in a study of Law Student wellbeing. We are seeking current Law Students to participate in a 20-minute Zoom interview with researchers from The University of Sydney. Participants will be asked about their experiences of Law School and factors that impact on their wellbeing. Interview feedback will be anonymous.

This research will help us to understand the experiences of our students. Participants will receive a \$15 Coles gift voucher for their time.

To express interest in participating in this study, please click on this link: https://sydney.au1.qualtrics.com/jfe/form/SV_1YMS5yVyw2UZKtM

We hope to hear from you.

A/Prof Claire Ashton-James, The University of Sydney

Prof Nicole Graham, Associate Dean of Education, Sydney Law School, The University of Sydney

Supplementary C. Expression of interest survey materials



Thank you for your interest in this study. Participating will involve completing a 20-30 minute interview via zoom at a time of your choosing.

If you would like to express interest in participating in this study please provide your student email below and fill out these demographic questions.

Are you a Domestic or International Student?

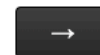
Domestic Student

International Student

What is your age?

What degree are you enrolled in?

What is your student email?



Supplementary D. Correspondence email with interested participants

Dear (Student)

Thank you for expressing interest in participating in an interview about your experience as an Australian law student. We expect the interviews to take between 20-30 minutes and interviewees will receive a \$15 Woolworths e-voucher for participating.

To learn more about the study, please read the Participant Information Statement attached.

If you would like to participate in this study, please indicate which of these times below suits you best to complete the interview via zoom

Insert Calendly link

Kind regards,
Angus Gilmore

Supplementary E. Participant Information Statement

Participant Information Statement



Semi-Structured Interviews Investigating the Wellbeing of Australian Law Students



1. What is this study about?

We are conducting a research study about the wellbeing of Australian law students. We are interested in interviewing law students to hear about their experiences of attending law school as well as their view on the factors which influence the wellbeing of law students. The purpose of this research is to gain a nuanced understanding of the experiences of present-day law students which can help inform university policies for supporting law student wellbeing. We also hope to use the findings from these interviews to help design a quantitative survey which will be conducted in law schools nation-wide. Taking part in this study is voluntary.

Please read this sheet carefully and ask questions about anything that you don't understand or want to know more about.

2. Who is running the study?

The study is being carried out by the following researchers:
Associate Professor Claire-Ashton James (Faculty of Medicine and Health – The University of Sydney)
Angus Gilmore (PhD Candidate – The University of Sydney)
Amy Mcneilage (Research Assistant)

Angus Gilmore is conducting this study as the basis for the degree of Doctor of Philosophy (Medicine and Health) at The University of Sydney.

This study is being funded by The University of Sydney Law School

3. Who can take part in the study?

We are seeking students who are currently studying law at four different Australian universities. We have chosen to advertise this study to law students at The University of Sydney, The University of Newcastle, Western Sydney University and University of Technology Sydney. These universities have been chosen to ensure that we hear student perspectives from a range of law schools. All students studying law at these universities are eligible to participate in this study.

4. What will the study involve for me?

If you decide to take part in this study, you will be asked to participate in a one-on-one zoom interview about your experiences as a law student. You will be able to choose the time and date of your interview by using the link in the text of the email in which you were sent this Participant Information Statement. The interview will ask about your personal story of studying law, your impression of the culture of your law school and your perspective on which factors influence the wellbeing of law students. We anticipate that this interview will take between 20-30 minutes. The audio of the interview will be recorded and later transcribed.

5. Can I withdraw once I've started?

Being in this study is completely voluntary and you do not have to take part.

Your decision will not affect your current or future relationship with the researchers.

If you take part in an interview you may refuse to answer any questions that you do not wish to answer. If you choose to withdraw, we will not collect any more information from you. Please let us know at the time you withdraw what you would like us to do with information we have collected about you up to that point.

6. Are there any risks or costs?

Aside from giving up your time, we do not expect that there will be any risks or costs associated with taking part in this study.

7. Are there any benefits?

As a gesture of thanks for your time and effort in participating in this study you will receive a \$15 Woolworths e-voucher. You will not receive course credit for participating in this study.

8. What will happen to information that is collected?

By providing your consent, you are agreeing to us collecting information about you for the purposes of this study.

Any information you provide us will be stored securely and we will only disclose identifiable information with your permission, unless we are required by law to release information. We are planning for the study findings to be published.

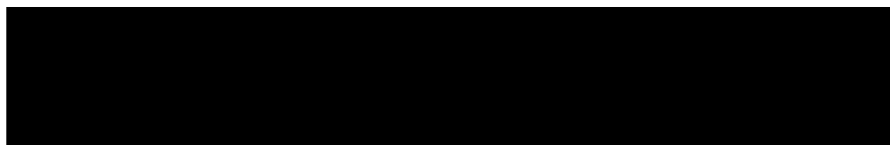
Every effort will be made to protect your identity, however there is a risk you may be identifiable in these publications. The audio of the interview will be recorded and transcribed. The transcripts will be anonymous, however it is possible that you may be identifiable by your responses in the interview depending on the information you disclose.

The recording will be deleted following transcriptions and the transcripts will be stored securely on an online drive which requires two-factor authentication for access.

9. Will I be told the results of the study?

You have a right to receive feedback about the overall results of this study. If you wish to be sent a brief lay summary of the study once the study is completed you can verbally request this at the conclusion of your interview. This lay summary will be sent to the email address you have provided.

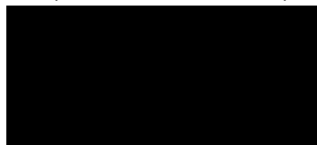
10. What if I would like further information?



11. What if I have a complaint or any concerns?

The ethical aspects of this study have been approved by the Human Research Ethics Committee (HREC) of The University of Sydney [2023/583] according to the *National Statement on Ethical Conduct in Human Research (2007)*.

If you are concerned about the way this study is being conducted or you wish to make a complaint to someone independent from the study, please contact the University:



This information sheet is for you to keep

Supplementary F. Interview Schedule

Introduction:

Thank you for taking the time to participate in this part of our study. Your feedback is valuable to us as it helps us to understand your experience. This interview is being recorded with audio only and will be transcribed.

Verbal consent:

Do you give your consent for this interview to be recorded, transcribed and used as part of the study?

Questions:

1. Can you start by telling me your story – why did you choose to go to law school, and what made you choose your university?
2. What has been your experience at your university's law school so far?
 - a. Can you tell me more about what has made it a [good/difficult/challenging/negative] experience?
 - b. Would you say your experience is typical of other students in your law school?
3. Are there any groups of students that you think might have a different experience? Why is that?
 - a. Do you think there are any unique challenges associated with law students identifying as female or non-binary?
4. Have you engaged in any extracurricular activities or societies while at law school?
5. As a Law Student, what influences your day-to-day wellbeing?
 - a. In what ways/how do these factors affect your wellbeing?
6. Can you think of ways in which the Law School or your University could make changes to improve your wellbeing?
7. How would you describe the culture at your law school?
 - a. Does this culture impact on your wellbeing as a student? If so, how?
 - b. How do you think it affects other students?
 - c. Are there any students who might find this culture more or less positive?
8. What are your plans after Law School?
 - a. What do you hope to achieve with your law degree?