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The middle years slump: addressing student-reported barriers to academic progress

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ABSTRACT

First-year university student attrition has been widely explored. However, there is a gap in our understanding when it comes to later years. Why do students who successfully navigate the hurdles of transition into university become at risk of exclusion in the middle years of study because of poor academic progress? This qualitative project develops a student-centred understanding of the problem of attrition through academic failure. It investigates the reasons given by students wishing to avoid involuntary exclusion from their course. Specifically, we address why middle-year students say they fail when they wish to succeed by examining self-reports. We find six main self-reported themes in three categories. The problems faced by mid-degree undergraduates are broader and more complex than those encountered in the first year. Our findings contrast with previous work on first-year attrition, which found that negative expectations of their own ability to succeed were a major factor in students' decisions to drop out, although our study is constructed differently in that we analyse people wishing to continue their studies. The results expand our understanding of student involuntary attrition in the middle years. The overarching major issues in the themes we identified were financial, family/personal issues and health problems. In particular, mental health issues were remarkably apparent. This has significant implications for future student support. We find that there are commonly multiple reasons underlying each student's at-risk status and provide suggestions for managers of programs that help students succeed.

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Introduction

Australia has a rigorous and fair undergraduate admission system; students who gain admission through this process have shown their ability to study and do well in exams at the school level. Considerable work (for example, Gale & Parker, 2011; Kift, 2009; Willcoxson, Cotter, & Joy, 2011) has gone into the first-year experience and supporting transition into university. The body of research into later-year attrition is smaller but has found distinctly different causes of student dissatisfaction between first and later years (Juillerat, 2000; Willcoxson, 2010). This dissatisfaction can lead to students dropping

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out – voluntary attrition. There has even been a study showing differences between semesters in reasons for student withdrawal (Peel, Powell, & Treacey, 2004). However, there has been less research on students who wish to continue their studies despite poor academic results raising the possibility of exclusion from university. We investigate whether students facing academic progress sanctions in the middle years – involuntary attrition – have different contributing factors to those considering voluntary attrition. We define involuntary attrition as 'a student being discontinued from study by their university against their wishes'. Attrition through academic progress procedures is an important aspect of student life to research because the students concerned are demonstrating an interest in continuing by asking to be allowed to remain enrolled despite academic failure; they are trying to avoid attrition.

Transitioning into the middle period of an undergraduate academic program poses new challenges for students, especially as an increasing proportion of students is entering university through non-school pathways, such as mature age entry or vocational education courses. This project examines the reported experiences of students during the middle years of their degree and seeks systematic insights into the reasons they provide for being at risk of exclusion from their degree.

Attrition is of great interest to researchers of higher education. It has been shown that stronger prior academic performance can correlate with lower student attrition (Bean, 1980; Martínez, Borjas, Herrera, & Valencia, 2015). High variation exists across universities with some universities commonly retaining nine out of 10 students while others 'lose' a quarter of their commencing cohort annually (Pitman, Koshy, & Phillimore, 2015). We studied students at a business school in an Australian research-intensive university with accreditations from US, UK and European bodies. Completion rates overall in Australia rose from 81% in 2001 to 84% in 2011 (ACER, 2011) but dropped marginally following the removal of limits on Government funding of bachelor-degree students at public universities (DET, 2017) that allowed universities to respond to student enrolment demand, improving access and participation. The need to better understand student attrition is important given the financial, social and emotional costs and also recent Australian government scrutiny (HESP, 2017). Attrition varies across a wide range of factors including mode of attendance, Australian Tertiary Admission Rank – the end of high school qualification determining university admission – gender, age, indigeneity, language background, and socio-economic status (DET, 2017). Possibly related to these factors, attrition also varies by institution (HESP, 2017) with a nine-year attrition rate ranging from under 10% (the University of Melbourne) to over 50% (University of Southern Queensland). These universities have significantly different cohorts of students, perhaps best illustrated by the attrition rates being broadly proportional to the amount of the former Higher Education Participation and Partnerships Program Federal Government funding for students of low socio-economic status as a proportion of student population. The direct costs to institutions are significant: unsatisfactory academic progress procedures make great demands on university staff, and support services for students are a major expense. Commercial education service provider Hobsons estimated the annual financial cost (adding lost tuition fees to wasted recruitment expense) of overall attrition across Australian universities at close to $1.4 billion (Adams, Banks, Davis, & Dickson, 2010; Mestan, 2016). Much of this attrition is voluntary, and this attrition – by choice – is not the subject of this study. For students who simply realise part-way through their degree that they

have lost interest in it and have no other factors constraining their study, voluntary attrition is a good thing. As has been pointed out in the American context,

> Our ability to help students stay in college and graduate depends not just on our being able to help them continue to the second year but to do so with the credits, knowledge and skills required for success … [which] depends on their education, not merely their retention. (Tinto, 2012, pp. 147–148)

Having been developed in the more fee-driven North American market, many student support systems are designed with a focus on 'customer' retention which lacks empathy for individual students' objectives and needs. A more tailored system would better accommodate student diversity as called for in item 2.2.1 of the (Australian) Higher Education Standards Framework, echoing the finding by McKenzie and Schweitzer (2001) that with the expansion of Australian universities over the last decade to provide equal access to all, an increasing diversity of student needs and characteristics has developed. Dobele et al. (2012, p. 4) find that 'there is little research that considers students who are at-risk but have not yet dropped out or been excluded' and show that the students at the Singapore campus of an Australian university who are at risk of exclusion found that employment pressures and family problems were the major reported causes of student underperformance. The Singaporean experience is unlikely to be representative of Australian or other Anglo-European cultures, but a transnational comparison is outside the scope of this paper. We focus on students who wish to continue despite the evidence of their poor academic record, and note the psychological and emotional costs for the student as well as many significant others associated with the student's candidature. These compound the financial costs of involuntary attrition.

This study reviews responses made by students to a university Academic Progress Committee (APC) which has asked them to explain why they should not be excluded on the grounds of poor academic performance. We analyse and classify their responses and draw conclusions for future researchers and academic managers.

Literature review

Attrition in the first year has been well studied (e.g., Gale & Parker, 2011; Willcoxson et al., 2011). However, at-risk students in subsequent years are yet to attract the same level of attention. Dobele et al. (2012, 2013) classified a university's at-risk program as part of its system of pastoral care, designed to assist struggling students to successfully complete their studies. The program had some success in assisting students to improve their academic performance (defined as the students not being identified as at risk of attrition in future semesters), although other variables were also identified. They pointed out that much of the previous research focused on actual attrition while their work focused on those at risk of attrition. This article therefore builds on Dobele et al.'s (2012, 2013) stream of research by expanding the focus on students beyond an initial at-risk notification stage. We add to this work and differentiate our project from Māori (2007) by focusing on students who wish to remain at university.

The literature on the first-year experience provides a helpful underpinning. In broad terms, Willcoxson (2010) describes first-year attrition factors as 'person-environment fit', as they relate to individual factors unique to each student as well as the specific

environment of the university. The most commonly described factors directly related to the university environment are:

- commitment to the specific degree (Bean, 1980; Cabrera, Nora, & Castaneda, 1993; James, Krause, & Jennings, 2010; Krause, Hartley, James, & McInnis, 2005; Peel et al., 2004; Quinn et al., 2005; Willcoxson, 2010; Willcoxson et al., 2011)
- integration into academic life (Bean, 1980; Cabrera et al., 1993; James et al., 2010; Krause et al., 2005; Peel et al., 2004; Quinn et al., 2005; Tinto & Pusser, 2006; Willcoxson et al., 2011)
- social engagement (Cabrera et al., 1993; James et al., 2010; Māori, 2007; Quinn et al., 2005; Willcoxson et al., 2011)
- grade-point average (Harvey & Luckman, 2014; James et al., 2010; Krause et al., 2005; Willcoxson et al., 2011)
- academic confidence (Bean, 1980; Cabrera et al., 1993; James et al., 2010; Krause et al., 2005; Willcoxson et al., 2011) and
- teaching and support expectations (Krause et al., 2005; Peel et al., 2004; Quinn et al., 2005; Tinto & Pusser, 2006; Willcoxson, 2010).

Other factors include domestic or international student status (DEST, 2004; James et al., 2010), previous higher education experience (DEST, 2004; James et al., 2010) and perceived status of the institution (Willcoxson, 2010). Students may be unclear about why they are enrolled at university (Danaher, Bowser, & Somasundaram, 2008), or not see the relevance between their studies and their career or life goals. Integration into academic life is closely related to social engagement on campus (Fernandes, Ford, Rayner, & Pretorius, 2017); indeed, student engagement is so important it has been proposed as a quality assurance measure (Coates, 2005). Affording extras and becoming financially independent were the main reasons students gave for working, but 'nearly two-thirds of students work to afford basic needs' (James et al., 2010, p. 49). In addition to this financial pressure, Willcoxson et al. (2011) suggested that some students who are feeling ambivalent towards their studies may also choose to take up employment. James et al. (2010, p. 54) found that 'there is clear evidence that working 16 hours or more per week is related to negative experiences of university and poorer academic progress'. These students can also experience reduced engagement in academic and social life due to their work commitments. Krause et al. (2005, p. 17) found that lower achieving students 'are more likely to identify a wide range of factors contributing to their uncertainty about continued study', suggesting that there is no one single factor influencing student academic underachievement. For example, a student who is receiving low grades and lacks academic confidence may feel hesitant to ask for support, leading into a self-rotating spiral ending in failure and withdrawal or exclusion.

Factors less easily influenced by the university affecting first-year student attrition have been reported as:

- work commitments (James et al., 2010; Krause et al., 2005; Willcoxson et al., 2011)
- financial problems (Krause et al., 2005; Willcoxson et al., 2011)
- being the first in a family to attend university (James et al., 2010; Quinn et al., 2005)
- time management issues (James et al., 2010; Willcoxson, 2010) and
- daily travel and family commitments (James et al., 2010).

The family may be supportive, but without prior knowledge of higher education, this support may not be best directed to the students' needs (Quinn et al., 2005). Work and financial pressures cannot help but impact on a student's time management as matching work and academic schedules can be challenging. Students with family commitments, mainly 'rural students, female students, mature students over 25 years and Indigenous students' (James et al., 2010, p. 24) feel particular pressure to choose between studies and commitments outside the university.

The literature discussed above largely addresses students' motivations to study. This article considers students who do want to continue their studies but whose poor academic performance is putting their continued enrolment at risk. Second- and later-year students have fewer difficulties with motivation and a more diverse range of problems. In contrast to first-year students' concerns with integrating into university life and adapting to competing demands, Willcoxson et al. (2011) found that second-year students are more concerned with their difficulties and the support they do or do not receive from academic and administrative staff in response. Second-year students may feel a lack of confidence in their ability to pass their course. Third-year students may also experience the same issues, but could also be facing questions regarding their future post graduation and whether their course will help them find the type of employment they desire. Peel et al. (2004) echoed these findings, stating that 'later-year students are a little more concerned with the outcomes of their course' (p. 242) than first-years, who are more concerned with integrating into university life.

Gracia and Jenkins (2002) examined the role of affect in student failure and explained that 'failure is internalized by students creating their view of failure as some form of personal deficiency' (p. 98). They also note that students who are struggling tend to engage less with learning situations and want their tutors to 'feed' them, so that students can engage in more passive styles of learning. Willcoxson et al. (2011) and Peel et al. (2004) both found that students who chose not to continue their studies perceived a lack of academic or administrative support, so both actual levels of institutional support and student affect may be at play. It is difficult to know which comes first in the question of student difficulty and engagement with institutional support. Rather than a student having academic difficulty and thus not engaging with the institution, it could be that circumstances such as needing to work or being unaware of available support prevent the student engaging with the institution and thus experiencing difficulties that lead to them suffering academic failure and being required involuntarily to do so.

The reasons that students do not succeed at university are, therefore, complex and multifaceted. In this article, we focus on students who are motivated to continue their studies despite being notably unsuccessful. Specifically, this research asks: what themes do Australian middle-year students provide as reasons for being at risk of failure?

Method

The data set, research design and data analysis procedures will now be introduced.

Data set

The data set was 90 student responses to a warning of potential involuntary exclusion for poor academic progress. Students had completed a minimum of a calendar year of

enrolment and had repeated failures in a core unit, or failed more than half of their enrolment. Each student completed a student response form (SRF) to an APC. To comply with ethics requirements, each SRF was independently de-identified prior to analysis to ensure anonymity was respected and maintained. All data were stored in locked facilities when not being analysed and will be confidentially shredded at the end of the project.

Research design and data analysis

Firstly, the entire set of SRFs was open-coded. Subsequently, where students had offered a supplementary free-text response ($n = 38$), it was analysed in phase 2 using Leximancer. The Leximancer map contains collections of words which are clustered together into themes that show collections of words that 'travel together' in a given text document frequently. Frequently occurring words are presented within themes with the most common word in that collection – or cluster – of words becoming the title of the theme. Each theme is represented as a single sphere (shown in Figure 1), which represents a collection of words.

Phase 1: Open coding of stated reasons for failure ($N = 90$).

Many students included multiple reasons (for example, health problems as well as financial challenges) and were coded accordingly.

Phase 2: Leximancer analysis of free-text responses ($n = 38$). This group ($n = 38$) was a subset of the original group of participants whose data were analysed in Phase 1. All free-text supplementary response documents were collectively analysed with Leximancer to develop a visual representation of the reasons offered.

Results and discussion

Table 1 shows the range of self-reported reasons why attrition was experienced by middle-year students ($N = 90$).

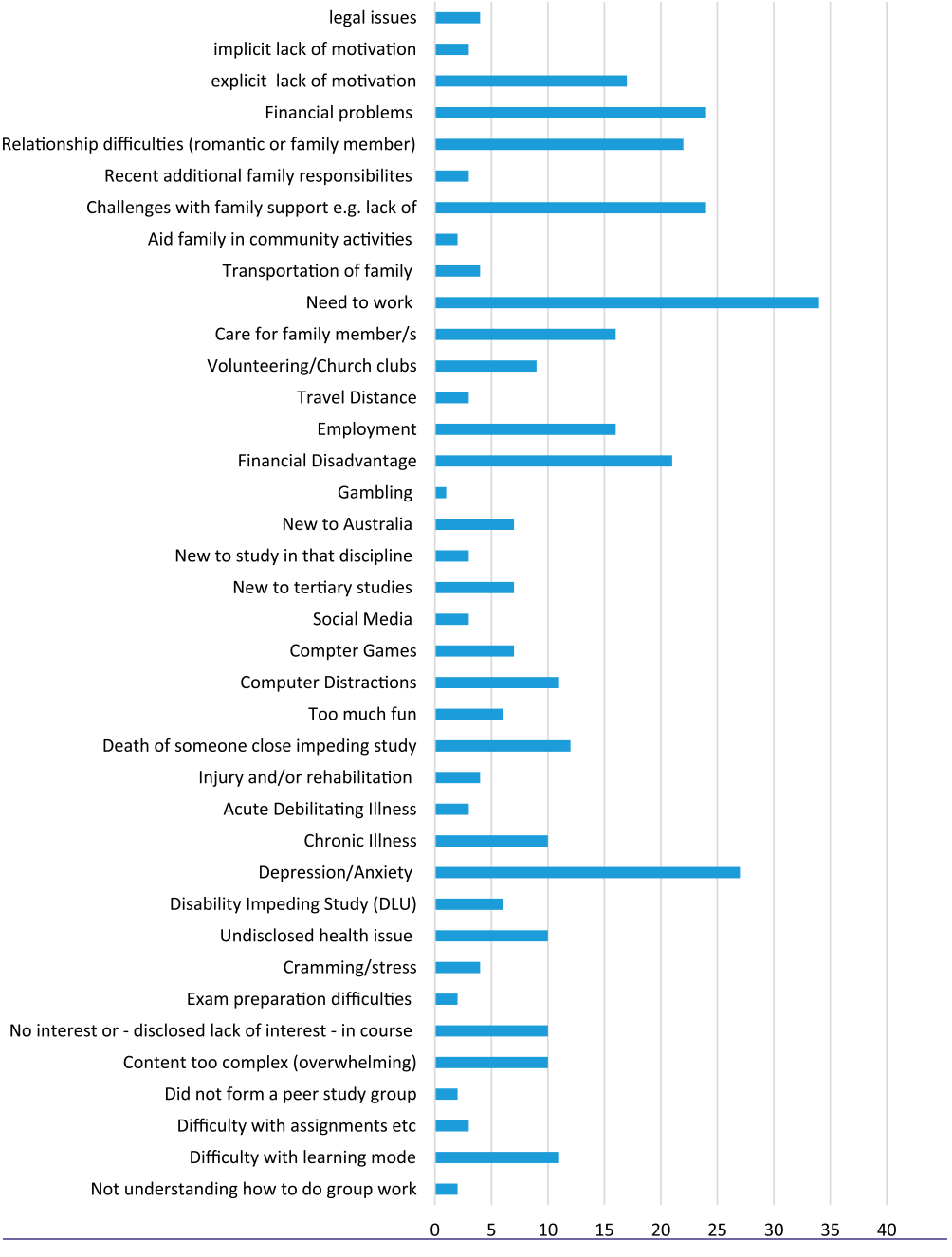
It is immediately apparent that there is a wide range of reasons provided by students seeking re-admission. Many of these were overlapping, and most students listed multiple reasons. This indicates a level of complexity that supports the considerable investment of resources made by the university in individual support for each student.

The six most common reasons in order of reported prevalence were:

(1) a 'need to work',
(2) health issues most commonly described as depression/anxiety,
(3) financial problems, for example, unanticipated debt,
(4) family challenges, for example, a lack of family support,
(5) relationship difficulties such as romantic or family problems and
(6) financial disadvantage, for example, an ongoing requirement to support a sibling's or parents' living costs.

Since this research was not interactive the researchers could not probe deeper to establish any underlying factors for a reported reason other than written statements. 'Need to work' could, and does, cover a wide range of contexts, ranging from a need to work to cover a car repair bill, to a need to earn money to provide basic food and shelter for students living away from home.

Table 1. Breadth of reasons given for slump year challenges ($N = 90$).



Participant 13 'There were also financial issues at home and I felt responsible to work as much as I could so my parents didn't have to support me, even days before my exams'

Participant 33 reported that the gearbox on his car 'blew up and [prestige European marque] wanted $8000 to replace it'

Participant 33 is of course unusual among students in the scale of the financial problem he faces, and one could imagine that the vehicle itself was more expensive than most students (or indeed staff) could afford, but the issue was nevertheless real and serious for this individual even though it was a different order of magnitude to that experienced by most students. International students often report that the cost of food in Australia is much higher than in their home country, and if this is not budgeted for it can cause financial problems. As a domestic student example from this end of the scale:

> **Participant 8** reported that she had to couchsurf for two months before exams as she 'lost her Centrelink [social security] allowance and could not afford rent or internet bills'.

Close interpersonal relationships were frequently mentioned; family and romantic concerns are prevalent with undergraduate students so this is not surprising. Importantly, since mental and physical health can be adversely affected by lack of family support there could be a causal relationship adding to the complexity.

> **Participant 15** '[Late last year] my partner and I separated and this left a big impact on my mindset and health; this made it very hard to concentrate on studying for exams for semester two, as I was emotionally and mentally unstable'

Other family issues included conflict between a student's parents – the modal five-year age category for divorce in Australia is 45–49 for males and 40–44 for females (Australian Bureau of Statistics [ABS], 2015b), possibly coinciding with a child reaching university age. Furthermore, conflict between parent(s) and student, for example over the choice of disciplines being studied or the amount of time needed to study adequately can cause problems. Quotes from two participants illustrate this:

> **Participant 7** 'problems with accommodation (parents threaten eviction constantly)'

> **Participant 19** 'Last year provided a few challenges to my academic performance due to both issues with family life and changes in environment as well as having to balance study around a new highly challenging work environment'

Participant 19 is reporting multifaceted and complex reasons for student underperformance, which was not uncommon in overall findings. Likewise, Participant 7 shows both practical (lack of accommodation and implied resultant financial pressure) and emotional (lack of family support) obstacles to success. Though financial disadvantage was the least frequently mentioned in the top six categories, we have evidence of this causing problems for participant 13, above, and Participant 8's short-term social security funding problem may well have been consequent upon longer-term financial disadvantage.

Moving beyond the top six categories, lack of motivation is also explicitly mentioned relatively frequently, which is interesting considering that these students are engaging in a process to allow them to continue their enrolment. It can often be in the second year, when study gets a bit tougher and more specialised and students gain experience of different disciplines, that students realise that they have made a bad degree choice and want to study something else. Our data support this suggestion but since we are investigating the statements of students seeking readmission to their course this is, unsurprisingly, only to a limited extent. Students who have realised that they want to study

something else or drop out altogether and have no external or family pressures to maintain enrolment do not engage with the APC process so these causes of attrition are largely excluded from this study.

Another perhaps surprisingly under-reported area was that of social activities. These included volunteering/church clubs, community activities, social media, computer games, 'too much fun' (perhaps summarised as 'non-digital socialising') and other distractions. Of course, these activities overlap with and may well be causally correlated to motivational issues. Further, it could be speculated that these are under-reported by students who might fear that admitting to such frivolities might damage their case for readmission. These distractions are not evident in the literature on first-year student transition.

Some of these issues are more readily addressed by a university than others.

Academic problems such as not forming a peer study group, difficulty with assignments, difficulty with learning mode (including being new to a given discipline, especially as some business disciplines may not be not taught in any great depth at secondary school), group work, content being too complex and overwhelming and exam preparation are clearly areas that universities can, and do, provide support for. Exam preparation is an interesting reason to list, since the research-intensive university concerned has relatively high academic entry standards and one would expect that students would have developed good exam technique by virtue of having gained the score necessary for admission. Financial disadvantage is also an interesting reason, in this case, because it gives rise to reflection about the very purpose of a university and the balance between its need to raise funds and its educational responsibility to society as a whole.

Many family issues are not the direct responsibility of universities which cannot control the health issues of students' significant others. Universities can, however, support students' management of these issues should the students seek to engage with the services on offer. The 2017 'Respect. Now. Always' campaign by Australian universities alerted students to the support available for students who suffer assaults off-campus; the Australian Human Rights Commission (AHRC, 2017) showed that two-thirds as many students experienced sexual harassment on public transport travelling to or from the university as experienced it on campus.

Student mental health issues were among the most common problems reported.

> **Participant 12** 'Due to my mental health I was unable to focus on work and became unmotivated, I could not justify spending hours to do assignments'

> **Participant 16** 'I had suffered mental illness in 2011–2013 which resulted in me moving out of home. Supporting myself was difficult while having full time study'

> **Participant 23** 'On top of my ongoing battle with depression and anxiety, when it came to exam time, I just could not cope with all the stress, and so, broke down, in a way.'

For these three participants, diagnosed mental health issues were clearly overwhelming. However, other life events can weigh heavily on students' wellbeing, for example:

> **Participant 21** 'Factors which affected my studies included difficulties in a break up in a long term relationship, it had hindered my performance because it had affected heavily on my mental health'

Phase 2

Phase 2 of the research analysed supplementary text provided by some students ($n = 38$). Figure 1 shows Leximancer results from this analysis. The map shows that the most predominant reasons were being unable to meet the course requirements, managing time and work commitments, as well as personal and family issues. This subset showed a more detailed explanation of sensitive issues that were reported as contributing to attrition. They tended to show less emphasis on financial aspects, though need to work was mentioned and is shown between 'course' and 'time' on Figure 1.

Leximancer presents links between concepts and that the size of the 'theme' reflects the number of times the concepts that make up the theme are mentioned. The most frequent, and therefore for the purposes of this analysis most important, concept mentioned by this subset of students again relates to time. However, when concepts are clustered together into themes, the largest cluster is a group of concepts characterised by the 'course', including university, studies, units. This is not a surprising explanation on the face of it, although if a student is having difficulty with course content, this may well not be a compelling argument for continued enrolment. There was a strong connection between being unable to meet course requirements and time devoted to work commitments, consistent

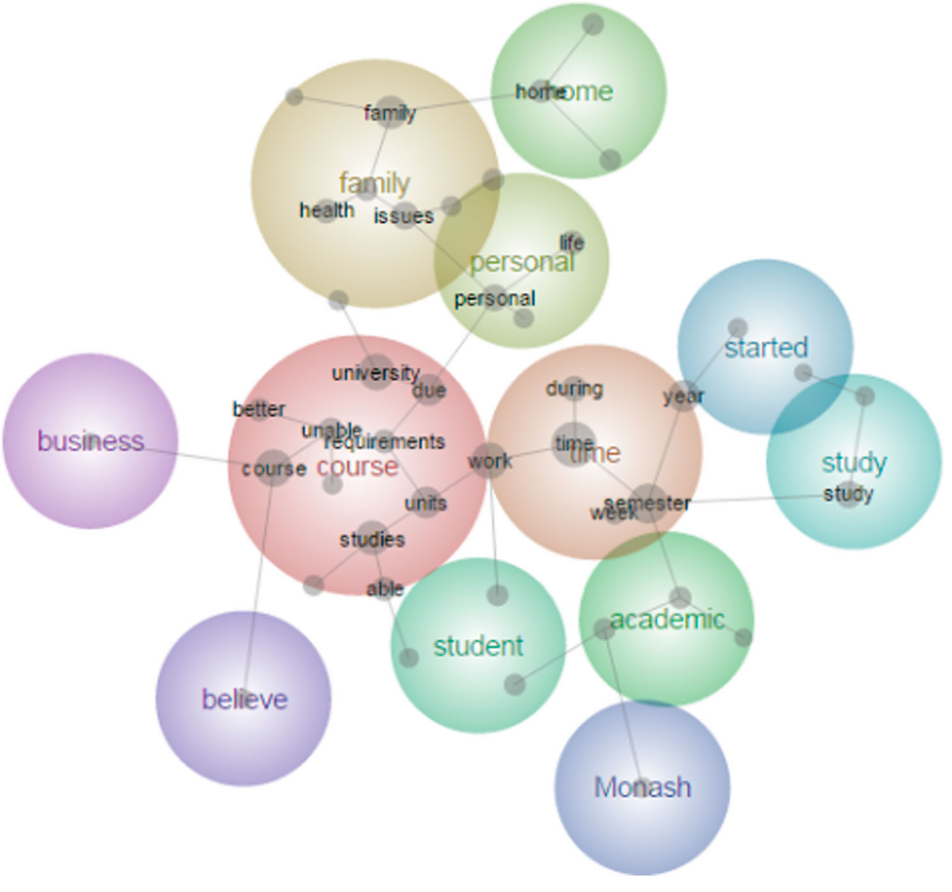


Figure 1 . Relationship between stated reasons for a difficult year ($n = 38$).

with the results of Phase 1. The third most prominent theme was 'family', with visible overlap between the 'family' and 'personal' themes. Family issues include those aligned with 'health' such as a chronically ill or dying family member, but family conflict such as parental separation or intergenerational conflict were less significant than in Phase 1. Health was not strongly related to personal issues in the Phase 2 analysis.

Some detailed examples of reported family problems include:

> **Participant 6** 'My parents divorced 5 years ago and my Mother moved away with her boyfriend, leaving us kids to live with my dad. Recently my dad has had other focuses in life, and his time spent at home has not been consistent, leaving my brother and I to pay for bills, food & rent'
>
> **Participant 9** 'My father had a major illness where he was in a coma for nine months and was fully supported by machines. Both my parents were overseas for a year and a half, and I was in charge of my siblings and our financials'
>
> **Participant 25** 'In 2014 my mother moved into [Catholic private hospital] Palliative care for liver cancer, this was at the start of swot vac and exams for semester 1. At the time I didn't have the mind to stress about Uni so I just didn't do anything'
>
> **Participant 35** 'During the last university year I was overwhelmed with family and financial problems as my parents succumbed to a deep gambling addiction going to the casino about three or four times a week. We struggled to pay our bills which led my parents to continuously borrow money off people'

Considering both phases of the research, there is a clear relationship between the inability to meet course requirements and time spent at work. Students who provided the extra responses analysed in Phase 2 described family issues in more detail, indicating the importance of these issues to this subset.

However, the Phase 2 responses mentioned student mental health issues much less than in Phase 1. We can only speculate why this might be; it could be that students are unwilling to provide further written details of their mental health issues beyond the mandatory sections of the response form. Should this be the case, it suggests that a damaging stigma is still associated with mental health problems, making it even more important that universities address them both through counselling for the individual students concerned and also communications to the broader student population. It is clear that mental health issues are much more significant to the population we have investigated than has been reported by previous studies. Field (2014) proposed strategic curriculum changes to address the high rate of psychological distress in law students and broader attention has been paid to curriculum and teaching innovations to support student mental wellbeing (Baik et al., 2017). The Centre for the Study of Higher Education at the University of Melbourne held a summit in 2011 and a symposium in 2016 on student mental health, focusing on how to support suffering students. It has been shown that university students are at a very high risk for mental disorders, with a rate of psychological distress nearly three times that of the national average in Australia (Stallman, 2010), a finding that is echoed in other countries (Baik et al., 2017), higher even than the rate in the population-wide age-group characteristic of undergraduate students (18–24) which has the highest incidence of mental health issues (ABS, 2015a; Norton, 2017). University students experience a range of demographic and psychosocial stressors that increase their risk of depression and generalised anxiety disorder with demographic risk factors including: being female,

in the first year at university, experiencing financial stress, and psychosocial factors such as feeling too much pressure to succeed and/or a lack of confidence (Farrer, Gulliver, Bennett, Fassnacht, & Griffiths, 2016). This suggests that a combination of fixed demographic and modifiable attributes contribute to mental health problems among university students. However, health (including mental health) has not previously been studied as a direct factor in attrition, whether voluntary or involuntary.

Conclusion

This article provides evidence of the reasons that students give for being at risk of involuntary student attrition, which has been publicly acknowledged (HESP, 2017) as a gap in our understanding that should be addressed.

The literature on voluntary attrition shows that there are distinct differences between students' decisions to withdraw – voluntary attrition – depending on their year of study, but personal circumstances do not figure highly. In this study of student submissions to be allowed to re-enrol despite poor academic performance, we find that their arguments against involuntary attrition are very different. We also find a difference between Dobele et al.'s (2012, 2013) work with students facing involuntary attrition in Singapore (work and family commitments) and in Australia. There are two categories of interpersonal challenges; parental (or equivalent) support, and the issues associated with peer relationships; inter- and intra- generational relationship issues.

There are three distinct financial factors. In addition to a broad 'need to work', there are also cases of short-term financial crisis and long-term financial disadvantage. Most universities have social justice programs to address these issues, but in an ideal world, more financial support would be available to students to allow them to reach their potential. Further work is needed to establish what criteria students use in establishing a 'need' to work, and if this has changed since the findings of Krause et al. (2005) over a decade ago. The increasing proportion of international students from non-English speaking backgrounds can also be exploited by unscrupulous employers who avoid Australian employment law by underpaying students and not recording actual hours worked, sometimes exacerbated by students' higher than expected living costs. We also show that students and their families, if unfamiliar with higher education, can underestimate university workload commitments so this continues to be an important communication task.

In response to the HESP (2017) acknowledgement that their analysis, based on statistical regression, 'fail[s] to capture the influence of many other factors … these factors are not readily measured and hence not captured by regression models' we provide nuanced insights into the problems students report, and show clearly that no factor can be a sole predictor of difficulty. This interconnectedness of multiple factors adds a further layer of complexity for university managers trying to plan limited budgets to provide the most cost-efficient and effective support for students in difficulty. In providing further insight, we acknowledge that we analyse reasons that students give for poor performance as they try to justify continued enrolment, which gives a specific emphasis in our data that are unlikely to be representative of the student population as a whole, only those at risk of failure.

Most importantly, we find that student mental health issues are much more prominent than those reported in previous literature. This may be because this study investigates

students facing involuntary attrition, or it may reflect an increased willingness to speak about mental health matters, or it may reflect a real increase in mental health problems and the interconnectedness of mental health issues with a remarkably wide range of other factors. In most cases, the claims made about mental health were properly supported by letters from medical professionals. We acknowledge the constraints of this project, which was conducted only in the business school of one research-intensive university in Australia and that our data consist of student self-reports. However, an inescapable and significant conclusion to our findings is an increasing need for student mental health support. This has significant managerial implications for universities. While further work is also needed to assess the generalisability of this work to students in other universities in Australia and worldwide, our data suggest that consideration be given to placing mental health services at the front line of support for students at risk of involuntary attrition. Since, ideally, these mental health professionals have a network of additional support services for students appropriate to the individual's needs, for example, financial, such a structure would offer students immediate support for a highly likely contributor to their difficulties and, in essence, provide a triage service for further professional support.

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