International students on the edge: The precarious impacts of financial stress

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GQ2 Abstract
GQ4 International students are an important global cohort of 'non-citizens' whose experiences are cen-
GQ5 tral concerns for urban sociologists and migration scholars. Drawing on survey fieldwork con-
ducted among international students in the private rental sector in Sydney and Melbourne
during 2019, this article provides new knowledge about the hardships experienced by interna-
tional students who report financial stress. Using a modified scale developed by the Australian
Bureau of Statistics, we highlight the accelerating role of high levels of financial stress in producing
disruptive events such as housing evictions and fears of homelessness, as well as reliance on inad-
equate housing like 'hot-bedding'. Financial stress is significantly more likely for students from low-
GNI (gross national income) countries and higher stress reduces wellbeing. Access to paid

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employment, however, does not 'protect' against higher financial stress. We conclude that higher education policymakers need tools and policies to prevent disruptive life events among international students related to financial stress, particularly those associated with housing.

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Introduction

Until Covid-19, Australia was a major study destination for international students. The OECD placed it equal-second alongside the UK, with an 8% global share, while the US remained first with 18% (2020, p. 227). Students choose Australia because of its safe and stable democracy, an energetic focus on student recruitment, and the growing reputation of Australian universities in global rankings. By 2021, however, this reputation had been severely damaged. Following border closures and lockdowns in 2020, the federal government offered little support for international students with the prime minister telling international students they should go home. The government's failure to facilitate the return of students combined with a slow vaccination program prevented any recovery in 2021 (Bothwell, 2021; Millar & Schneiders, 2020; Vincent, 2020; Zhou, 2021). Prospects for 2022 and beyond remain uncertain with signs of international student return.

Excessive tuition fees and high housing costs – particularly in Sydney and Melbourne – create hardship for students who access varying degrees of family and government scholarship support. Those with fewest resources are vulnerable to precarity (Hastings et al., 2021). Often, students 'make do' by working precariously and residing in poor-quality housing (Berg & Farbenblum, 2020; Morris et al., 2021a; Nasreen & Ruming, 2019). These problems are made worse by exclusions arising from 'non-citizenship' status (Goldring & Landolt, 2011; Landolt & Goldring, 2015) derived from visa conditions, lack of local information, and limited work rights and social security (Hastings et al., 2021, pp. 4−7). In turn, these conditions increase risks of underpayment (Clibborn, 2018) and danger in the workplace, as well as overcrowded and poor-quality housing (Morris et al., 2021a; Nasreen & Ruming, 2019).

Financial struggles for students can be rationalised as part of the life-course: valued qualifications are the reward for temporary sacrifice. For international students, however, support is often more minimal. The absence of family leaves some students vulnerable. Moreover, the implied 'contract' between students and education providers operates on self-reliance: Australia provides opportunities to gain credentials in global labour markets, but students are expected to cope privately with fees and living costs (Ramia, 2017). Additionally, students have had no access to Australia's social security system, a reality harshly confirmed during the 2020 lockdowns, and limited labour market access (Hastings et al., 2021; Marginson et al., 2010). Minimal social protection means that students experience deeper precarity once initial support from family or a scholarship diminishes or ends, or when employment stops, or when hours are cut. In 2021, the federal government relaxed some social security exclusions, granting international students access to disaster payments during lengthy NSW and Victorian lockdowns.

This article provides new insights into how financial stress disrupts the lives of international students and what precarious 'events' become more likely as finances deteriorate. First, we survey the literature to build a framework that identifies three key domains of precarity rooted in migration, exclusionary institutions, and limited coping resources. We then test the specific impact of *financial insecurity* on the incidence of a range of precarious experiences (i.e. disruptions) using survey data collected from international students in Sydney and Melbourne in 2019. The questionnaire asks respondents about a range of destabilising events – evictions and 'hot-bedding', for example – or disruptions to emotional and social wellbeing. Central to our inquiry is the use of a modified version of an ABS scale of financial insecurity (Australian Bureau of Statistics, 2017). Following the presentation of the data and models, we discuss findings that show how financial stress interacts with destabilising student experiences and – centrally for our research program – in ways related to housing. We conclude by making three main findings and advance some policy recommendations that flow from these.

International students, financial stress, and the experience of precarity: literature review and framework

As stated, we investigate the extent of financial insecurity reported by international students to show how this financial stress contributes to precarious or disruptive experiences. The literature review focuses on themes and evidence across various literatures that identify three domains of precarious experience. These contribute to a single framework for exploring the impact of financial stress. The first domain is the 'background' social profile of students with a focus on family and country-level resources. The second is the experience of employment and housing markets, where the destabilising impacts of 'noncitizenship' (Landolt & Goldring, 2015, pp. 856–7) are apparent. The third domain relates to the 'social resources' of students – that is, connections and wellbeing (Morris et al., 2021b). Financial insecurity may contribute to depleted social resources and worsening social exclusion. Combined, this framework guides statistical analysis and model construction, informing choice of variables derived from survey data.

Financial stress as central to the precarity experienced by international students

Given the size of the international student population, and its significance to Australian higher education, we need to know more about what drives financial insecurity among students and then what precarious life-experiences are associated with it. Prior to the pandemic, Australia sustained just over 758,000 full-fee paying student visa-holders (Australian Government, 2019). Student activity added billions in exports, underwriting the expansion of higher education as well as adding to social diversity. Australia had gained a reputation for a good quality of student life, with students expressing solid satisfaction in surveys with living and study conditions (Austrade, 2020; Morris et al., 2020, p. 61). However, as this cohort has expanded, reports of distressing situations have increased (Han, 2015; Khawaja & Stallman, 2011; Yu & Wright, 2016). These problems

became dramatically visible during the 2020 Covid-19 lockdowns, with widespread hardship for international students remaining in Australia (Hastings et al., 2021; Morris et al., 2020).

Financial stress is defined as 'difficulty meeting basic financial commitments due to a shortage of money' (Australian Government, 2020). It is necessarily a core feature of *disruptive* precarity, contributing to a wide-range of social and psychological problems (Odle-Dusseau et al., 2018; Zheng et al., 2021). Experienced chronically, financial stress is associated with 'negative life events' (such as divorce or becoming widowed) and is implicated in depressive conditions as well as unhealthy behaviours such as smoking (Lantz et al., 2005; Mittnik & Semmler, 2013; Siahpush et al., 2003). Because financial stress disrupts wellbeing, it disturbs human functioning. In findings relevant to student academic performance, research has found that financial stress reduces cognitive 'capacity' in workers (Meuris & Leana, 2018). Research on financially stressed students in the US also suggests they do worse in their studies, with one study identifying work pressures as a factor (Bennett et al., 2015; Joo et al., 2008).

This article measures the extent of financial stress on international students as well as its key social correlates. But it takes a further step by identifying life *disruptions* associated with financial stress. As a cohort of temporary migrants, international students experience financial stress across several domains. Lack of access to family resources to sustain study is an obvious source, but there are others located in the experience of (mostly) temporary migration. Here, we focus on insecure jobs and housing in the production of precarious events, as well as the contribution made by social exclusion – that is, language barriers and weak social connections. Looked at another way, the impact of financial stress can be viewed *as a staged process* that draws in different domains of social life, one rooted in the migration experience itself and then added to by the experience of labour and housing markets as well as the social resources required to cope with adversity.

Theme 1: International student 'backgrounds' as a domain of precarity

The risk of financial insecurity begins with the student migration experience itself, emerging from student backgrounds. Contrary to perceptions that international students are always affluent, evidence points to socio-economic stratification. Two influential factors are family (class) and country-of-origin backgrounds. Family backgrounds matter because they represent 'mediated class locations' (Wright, 2000), determining the financial capacity to sustain study-related migration. The literature suggests that family-class background is influential in several ways: a higher-class position in the country of origin correlates with pre-migration accumulation of English language proficiency as well as post-migration success for students from non-English-speaking backgrounds (Kim, 2020). Conversely, lower-class positions of international students in Australia are linked to employment vulnerability (Marginson et al., 2010). More recent evidence finds that international students from working-class and poorer-country backgrounds, as well as those studying at non-university providers, experience more financial stressors (Hastings et al., 2021) and confirms that more needs to be understood about these patterns.

Country status acts similarly to family-class background, mediating access to financial resources through GDP per capita as well as the purchasing power of currencies. Country-level affluence improves capacity of families to assist students (who have comparatively high living costs) but it also functions in the other direction, determining whether families anticipate remittance income from students' employment in the host country.[1]

Theme 2: 'Non-citizenship' – housing and labour markets as a domain of precarity

A second domain of financial stress emerges from 'exclusions' imposed by the host country on students. Globalising opportunities for migration and travel have been met with regulatory responses from host governments that have limited rights and protections for temporary migrants. Goldring and Landolt explain: 'the global age of migration … [is] revamping the regulatory and normative framework that organizes citizenship and migrant legal status as a source of state control and employer strategies of exploitation and labor market segmentation' (2011, p. 326).

In the Australian context, this 'framework' of non-citizenship results in policies that both *minimise* responsibilities for students (Berg & Farbenblum, 2019; Hastings et al., 2021) and that *constrain* access to market institutions in ways that enhance employer and landlord advantage. Policy creates no obligations on governments or providers to provide financial support and/or access to low-cost housing and social protection. For example, students purchase private medical insurance separate from Medicare (government provided health care). And, although education providers maintain some purpose-built student housing facilities, this accommodation is residual to the housing infrastructure and, before Covid-19, the expansion of these facilities mostly involved unsubsidised private sector supply (Newland & Switz, 2020). At the same time, government *limits* the ability of students to deal with life contingencies *within* markets by, for example, constraining access to paid employment (to 20 hours per week during semesters). These limits were selectively relaxed as a concession to the conditions of the pandemic (Australian Government, 2021), a subject we return to in the final section.

Low-income households are more likely to experience the insecurities related to employment and housing *simultaneously*. Scholars characterise those experiencing simultaneous disruption as a 'double precariat' (Beer et al., 2016; Bentley et al., 2019). The exclusions of non-citizenship add to the risks of double precariousness for international students because they broaden and multiply the impacts of disadvantage. Exclusions are built into *norms* (i.e. expectations of 'self-reliance' and the devalued status of a 'temporary migrant worker'); *information asymmetries* about housing and employment rights, such as those described by Clibborn (2018); *limits to market access* (i.e. laws on maximum hours of employment); *weak regulation* (in employment and housing); and *discriminatory social practices*.

Evidence of the dis-equalising impacts of exclusions is now substantial. International students are frequently paid sub-minimum wage rates (Berg & Farbenblum, 2020; Campbell et al., 2020; Clibborn, 2018), compounding the financial problems produced

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by working hours limits. Drawing on interview data, Clibborn notes: 'international students … [are] … effectively locked into a labour market separate from the one that legal institutions were intended to create and maintain' (2018, p. 350). Equally, international students are exploited by landlords in a poorly regulated rental sector, a problem made worse by the lack of student awareness of their limited rights (Berg & Farbenblum, 2019; Morris et al., 2021a). Excessive rents, overcrowding, and the conversion of common areas, balconies and garages into bedrooms are not unusual occurrences (Morris et al., 2021a; Nasreen & Ruming, 2019; Rabe, 2019). At the same time, modest income flows from work and family remittances limit housing market choice. In late 2019, median weekly rents for Sydney apartments were AU $510 and in Melbourne, AU $420 (Heagney, 2020). A student living alone would barely cover the weekly rent in this scenario, assuming their only source of income was earnings from working the maximum of 20 hours per week during term at Australia's minimum wage of AU $20 per hour (Fair Work Ombudsman, 2021). These realities necessitate the planning of 'compromises' to manage life contingencies. Coping strategies depend on part-time jobs; crowded and insecure housing (Morris et al., 2021a); intact 'survival networks' (Small & Gose, 2020); and reluctant claims on family resources.

Theme 3: Social exclusion as a domain of precarity

The final domain of precarity is the availability of social-psychological resources to sustain study-based migration. Students are socially and psychologically strained by relocation and the risks and opportunities of new environments. Like material and legal exclusions, the impact of social exclusions is multi-layered. Loneliness is a widely recognised problem for international students, with disconnection from local community emerging as one element (Fincher & Shaw, 2009; Morris et al., 2021b; Sawir et al., 2008) along with the 'individualism' of Australian living arrangements as another (Humphrey & Forbes-Mewett, 2021). Researchers investigating student adaptation to new environments (i.e. 'acculturative stress') have also found language and cultural barriers can be significant problems, and that supportive social institutions in the host country become particularly critical (Gomes et al., 2021, p. 14; Lee et al., 2004; Sullivan & Kashubeck-West, 2015). Financial stress adds to coping and adjustment problems for international students via several possible pathways. Coping with poor-quality jobs, low incomes, and time pressures as well as substandard housing is exhausting (Morris et al., 2021a). Moreover, chronic financial stress or 'negative income shocks' (Weller, 2018) such as losing a job or − during Covid-19, some *combination* of losing a job, a home, and assistance from family − are particularly taxing. Research on 'survival networks' demonstrates that financial stress reduces opportunities for social participation, partly by contributing to feelings of shame and/or defensiveness on the part of those in hardship (Lubbers et al., 2020).

A framework for analysis

We have presented a framework attending to three domains (or 'sources' or 'stages') of student precarity rooted in migration, exclusionary institutions, and social exclusion.

We argue that financial stress is associated with each of these. This framework allows us to group hypotheses about the impact of financial stress on the available data and based on insights from our initial analysis (Morris et al., 2020). These are set out as follows:

(i) That financial stress is higher for students from lower-income countries, those enrolled in non-university sectors, and with weaker English proficiency;
(ii) That financial stress is higher for students with limited/no access to family support and is associated with higher dependence on paid work;
(iii) That financial stress is associated with major housing disruption – that is, poor-quality accommodation and risks of eviction and homelessness;
(iv) That financial stress is associated with social exclusion: greater loneliness and social isolation and lower wellbeing – along with less satisfaction with study.

Data and methods

Data sources

This analysis draws on data from a large email survey conducted in the second half of 2019 as part of a mixed methods project investigating housing precarity of international students resident in Australia.[2] It was conducted using an online methodology, utilising Qualtrics software. The survey explored dimensions of precarious housing among international students from the three main sectors – universities, the VET (vocational training) sector, and the ELICOS (English language) sector. The questionnaire surveyed aspects of employment, neighbourhood, study, experience, and wellbeing. Fieldwork relied on cooperation from 43 education providers, including 10 universities, 24 VET providers, and 7 ELICOS providers. The number of valid responses totalled 7,084 with an over-representation of university students (82.9% versus 50.1% nationally). Providers were asked to distribute the survey to their full international student population to better approximate conditions of 'randomisation' (Agresti, 2018) in the final sample. Representativeness of the respective national cohorts of international students residing in Australia was good, noting an over-representation of Chinese-speaking students attributable to the fielding of a separate Chinese-language questionnaire (Morris et al., 2020, pp. 7–8).

Data analysis and modelling strategy

Our quantitative approach involves bivariate and multivariate (regression) analysis, described below. Coding decisions are as follows. The dependent variable is a measure of *financial stress*. We draw on a validated scale measure developed by Travers and Robertson (1995), adapted for use by the Australian Bureau of Statistics (2017) in their surveys of income adequacy of Australians. We excluded an original item – 'household spends more money than it gets (over the past 12 months)' – because households are hard to define for international students. We also dropped the item 'could not pay car registration or insurance on time', for obvious reasons, as well

as the item 'unable to raise $2,000 in a week for something important'. The latter involved larger amounts of money – sums unlikely to be requested by international students. We additionally simplified the item 'could not pay electricity, gas or telephone bills on time', to focus on electricity bills, which are high in Australia and now distinct from phone bills. We expanded measures on heating costs to include a separate measure on 'cooling costs', which has become a significant expense as the climate warms. We also added a new item – 'could not afford to buy prescribed textbook/s' – to capture cohort-specific indicators of financial stress, resulting in a total of eight questions. Table 1 reports the full question and response categories.

Independent variables drawn from the survey data were selected based on the hypotheses presented above. These are briefly described as follows (further survey item and coding details are also in Table 1). Consistent with our framework and hypotheses, the variables included in the model are grouped. The first set of independent variables include those demographics and social characteristics that we hypothesise are associated with financial stress. In addition to *gender* and *age*, we include a measure of the *country GNI* (gross national income) or relative income of students' countries of origin. This measure is categorised according to the World Bank 2020 GNI per capita classifications (World Bank, 2020). For example, the 'Low/lower middle-income' (US $3,995 per capita or less) category includes Afghanistan, Nepal, India, Philippines, Bangladesh, Indonesia, Pakistan, and Vietnam; the 'Upper middle-income' (US $3,996 to $12,375) category includes Brazil, China, Colombia, Malaysia, Sri Lanka, South Africa, and Thailand; and the 'High-income' category (US $12,376 or more) includes Canada, United States, Taiwan, Hong Kong, Singapore, and the countries of northern Europe. International students are categorised as *non-university* if they are enrolled in either English language (ELICOS) or vocational training (VET). Students are classified as having *good English* if they self-assessed their proficiency as 'Good' or 'Very Good' on a 5-point scale.

The second set of variables – work and family – are statistics for *paid employment* and *family allowance* that reflect the proportion of students nominating these as one of their top three income sources, noting that these categories are not mutually exclusive. The family allowance item in the questionnaire did not ask the respondent to specify the amount.

The third set of variables measure associations between financial stress and experiences of housing precarity described in the literature or identified in our research (Morris et al., 2021a). Given our broader research program, we include several housing indicators that test precarious experiences. The survey items are as follows: reliance on *hot-bedding*; *homelessness fears*; reporting *eviction*; renting *housing in good condition*; and experiences of *discrimination in renting*. Also consistent with our hypotheses, we include measures of loneliness (*feeling lonely*), difficulty making close friends, and social/study satisfaction (*enjoying Australia*). These items are coded to reflect positive responses to Yes/No questions or to an 'Agree' or 'Strongly Agree' response (on a 5-pt Likert scale) to a statement. Table 1 has descriptions of question items and coding decisions. Finally, the *wellbeing score* is derived from the Personal Wellbeing Index (PWI). There are seven questions about financial, social, emotional, and health-related

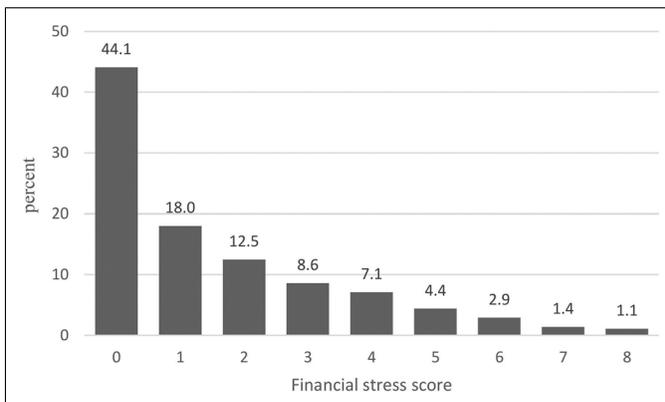Table 1. Variable descriptions and coding decisions

Variable	Details/coding
Financial stress	Modified ABS measure. Question: 'Over the past year, since you started renting, have any of the following happened to you because of a shortage of money?' Responses to the following summed to score 0 to 8: Had trouble paying your electricity on time; Pawned or sold something to get money; Went without meals; Unable to heat your home adequately; Unable to cool your home adequately; Asked welfare/community organisations for help; Had to borrow money from friends or family; Could not afford to buy prescribed textbook/s.
Female	Coded into 1 versus all others 0
Age	Coded into 3 categories: 18–21 yrs; 22–25 yrs; and 26+ yrs
Country GNI	Country of origin coded into low income (<US$3,995), low-middle (US$3,996 to US$12,375), and high income (>US$12,376) countries based on World Bank (2020)
Non-university	Respondent enrolment in VET or ELICOS (versus University)
Good English	Question: 'How would you rate your English language ability?' Responses: 5-pt scale ('Very Good' to 'Very Poor')
Family allowance	Question: 'What are your main sources of income?' Response (multi-choice from 6 categories): Allowance from family / family support
Paid work	Question: 'Do you do paid work?' Responses Yes = 1; No = 0
Hot-bedding	Question: 'Do you have to hot-bed' (i.e. your bed is only available for a few hours of the day/ night)? Responses Yes = 1; No = 0
Homelessness fears	Question: 'In the last year, have you ever felt that you could become homeless?' Responses Yes = 1; No = 0
Evicted	Question: 'Have you ever been evicted or forced by the landlord / real estate agent / property manager to leave a rental property in Australia?' Responses Yes = 1; No = 0
Housing good condition	Question: 'The property I rent is in good condition.' Responses: 5-pt scale ('Strongly Agree' to 'Strongly Disagree')
Discrimination renting	Question: 'I experienced discrimination when applying for rental properties.' Responses: 5-pt scale ('Strongly Agree' to 'Strongly Disagree')
Wellbeing score (Personal Wellbeing Index)	Question: 'How satisfied are you with … ?' Responses to the following on an 11-pt scale summed to score 0 to 70: Your standard of living; Your personal health; What you are achieving in life; Your personal relationships; How safe you feel; Feeling part of your community; Your future security
Hard to make close friends	Question: 'It's been hard to make close friends in Australia.' Responses: 5-pt scale ('Strongly Agree' to 'Strongly Disagree')
Feeling lonely	Question: 'I feel lonely in Australia.' Responses: 5-pt scale ('Strongly Agree' to 'Strongly Disagree')
Enjoying Australia	Question: 'I enjoy living and studying in Australia.' Responses: 5-pt scale ('Strongly Agree' to 'Strongly Disagree')

factors of wellbeing, each answered on an 11-pt scale from 0–10, then added together to obtain a score from 70 (International Wellbeing Group, 2013).

Our analysis first provides a distribution of financial stress for the student sample. We then present bivariate descriptive analysis of student background, experiences, and wellbeing variables – clustered according to the domains of precarity identified in the conceptual framework – and their association to the *financial stress* score (Chi-square test of association). We divide financial stress scores into three ordinal levels of intensity: none (0), some (1–5) and high (6–8)) to aid identification of patterns in the bivariate results and support their interpretation. Finally, we test the relative strength of the relationship between financial stress and our independent variables via a series of logistic regression models. After confirming the poor suitability of ordinal logistic regression (model failed the parallel regression proportional odds assumption tests), we find that multivariate logistic regression offers superior fit to the data. It enables us to estimate the size of non-linear relationships between indepen- dent variable and each increment in financial stress. Details of the decisions taken in our sequential analysis are incorporated in the next section, on findings. Analyses were conducted in StataIC v.15.

Main findings

AQ5 Chart 1 shows that a high 44% of international students experienced no *financial stress* on our modified scale. This finding only partly confirms a perception that international students are a secure or privileged cohort. Around 50% of the sample report 'some' level of financial stress (scores 1–5), with around 5% reporting 'high' levels of stress (scores of 6 to 8).[3] As detailed below, thresholds matter: the experience of disruptive precarity rises as financial stress scores reach 5 and over (that cohort is around 10% of the sample).

AQ14 Chart 1. Distribution of *financial stress* scores on a modified ABS measure, 2019, %

Financial stress and student backgrounds/experiences: bivariate analysis

Next, we present bivariate associations between *financial stress* and: characteristics of respondents and their backgrounds; dependence on paid work; disruptions associated with housing in particular; and expressions of social exclusion – i.e., loneliness and poor wellbeing. Table 2 presents three levels of financial stress (none, some, and high) as described above. It shows that financial stress is stratified: males studying at non-university institutions as well as students from lower-income countries are over-represented in the highest categories of financial stress (scores from 6 to 8). Conversely, having a family allowance and coming from a higher-income country are associated with reduced financial stress. Some 68.9% of the sample received an allowance; that declines to 54.1% for students for the highest financial stress category. Lower-income country students make up 31.8% of the total sample, but 55.2% of the highest stress category.

Employment and housing experiences are strongly associated with *financial stress*. Those reliant on paid employment are *more* likely to experience high levels of financial stress – some 57.2% of students scoring between 6 and 8 were in paid work compared to 35.9% of the total sample. This finding suggests that paid employment is driven by hardship but that employment does not fully alleviate financial stress. Higher *financial stress* scores (i.e. between 6 and 8) are associated with all our selected housing indicators. Financially stressed students more commonly rent accommodation in poorer condition or that is severely overcrowded. 'Hot-bedding' (i.e. bed-sharing arrangements) represents a severe form of overcrowding, with a total of 3.2% of the total sample reporting this practice. However, a much higher 13.0% of students with *financial stress* scores between 6 and 8 report hot-bedding arrangements. Higher financial stress is also associated with increased likelihood of eviction and fears of becoming homeless. Similarly, reported eviction approximately *triples* on the same comparison (7.3% versus 20.9%). Homelessness fears rise from 17.4% for the overall sample to over 70% for the high stress cohort.

Higher levels of financial stress are also associated with social exclusion and poor wellbeing. Financially stressed students report decreased ability to make close friends, lower enjoyment of living and studying in Australia, and greater loneliness. Even more markedly, students with high levels of financial stress have lower PWI scores: students scoring between 6 and 8 on *financial stress* had average wellbeing scores of 27.9, compared to 43.1 for the overall sample. Finally, perceptions of discrimination also rise with financial stress. The survey question asks about perceptions of discrimination in searching for rental properties; highly stressed students are more than *twice* as likely to report discrimination.

Multivariate analysis: an ordered logistic regression model

To compare the relative strengths of relationships between financial stress and the independent variables, we fitted an ordered logistic regression model to the data. The output is for the same 8-point measure of *financial stress* (higher score = higher stress) and coefficients are expressed as odds ratios.

Table 2. Associations of financial stress score (none, medium, and high) with student characteristics, experiences, and wellbeing, %

Description	N	%	None (score = 0)	Some (1–5)	High (6–8)	Sig. (chi2)
	Full sample		Respondents in each financial stress category (n)			
Demographics						
Gender – Female vs. male	6,569	53.8	55.6	53.0	45.3	.001
Age						
18–21 years	2,038	30.9	32.9	29.8	24.3	.000
22–25 years	2,722	41.2	42.7	39.6	44.3	
26 years and over	1,840	27.9	24.4	30.6	31.4	
Background						
Country GNI low/lower middle	2,085	31.8	22.3	37.9	55.2	.000
Country GNI upper middle	3,323	50.7	60.5	44.6	32.9	
Country GNI high	1,150	17.5	18.3	17.5	11.9	
Enrolment – Non-university (ELICOS, VET) vs. university	6,557	16.4	15.0	17.1	22.4	.001
Good English (self-assessed)	6,582	65.5	59.9	69.6	73.3	.000
Income						
Income source – Family allowance (Yes)	6,720	68.9	74.7	65.5	54.1	.000
Income source – Paid employment (Yes)	6,720	35.9	23.9	44.2	57.2	.000
Housing						
Have to 'hot-bed' (Yes)	6,762	3.2	2.2	3.0	13.0	.000
Felt could become homeless (Yes)	6,810	17.4	5.7	22.0	70.3	.000
Ever been evicted (Yes)	6,811	7.3	4.6	8.1	20.9	.000
Property I rent is in good condition (Total agree)	6,810	77.5	83.4	74.6	56.6	.000
Discrimination applying for rental properties (Total agree)	6,814	18.0	11.0%	20.6%	51.1	.000
Social and wellbeing						

(continued)

Table 2. Continued

Description	N	%	None (score = 0)	Some (1–5)	High (6–8)	Sig. (chi2)
Personal Wellbeing Index (PWI) score (0–70)	6,458	43.5 (sd 14.3)	48.2 (sd 12.6)	41.0 (sd 13.8)	27.9 (sd 16.0)	
I enjoy living and studying in Aust (Total agree)	6,817	77.8	81.5%	76.0%	64.1%	.000
Hard make close friends (Total agree)[a]	6,816	46.7	38.3	51.4	70.7	.000
I feel lonely in Australia (Total agree)	6,816	34.3	25.2	39.4	61.3	.000
Total respondents (% and frequency in each category of financial stress)			44.1 (3,007)	50.6 (3,443)	5.4 (368)	

Note: [a] Dropped from regression analysis due to high correlation with 'I feel lonely in Australia'.

Table 3. Ordered logistic regression (financial stress score) and parallel regression tests

Financial stress score (0–8)	Odds ratio	St. err.	p	Brant test p values
Demographics				
Female	0.939	.046	.201	.473
Age 18–21 years (ref.)				.098
22–25 years	1.060	.062	.323	
26 years and over	1.178	.078	.014	
Background				
Country GNI Low (ref.)				.082
Medium	0.515	.032	.000	
High	0.703	.051	.000	
Non-university	0.941	.063	.365	.141
Good English	1.336	.079	.000	.068
Work and family				
Family allowance	0.899	.052	.068	.113
Paid work	1.913	.104	.000	.004
Housing				
Hot-bedding	1.928	.273	.000	.022
Homelessness fears	4.251	.294	.000	.008
Evicted	1.398	.133	.000	.810
Housing good condition	0.670	.040	.000	.073
Discrimination renting	1.706	.111	.000	.003
Social and wellbeing				
Wellbeing score	0.961	.002	.000	.008
Enjoying Australia	1.051	.066	.422	.954
Feeling lonely	1.278	.071	.000	.205
N	6,233			
Proportional odds assumption				
Likelihood test	Chi2(105)	=222.08		
	Prob.	=0.000		
Brant test (whole model)	Chi2 (105)	=207.89		
	Prob	=0.000		

An initial investigation presented in Table 2 (as well as box plots comparing the distribution of *financial stress* score with these indicators) shows that the relationship between some indicators and financial stress is non-linear. Patterns in the bivariate analysis already indicate that the likelihood of adversity 'accelerates' once financial stress reaches particular thresholds. Therefore, we tested the parallel regression (proportional odds) assumption using the Brant test from Stata package *spost13* and a likelihood ratio test from Stata package *omodel* (Scott Long & Freese, 2005). The results of the regression and post-estimation analyses are given in Table 3. The model fails both tests, confirming that the proportional odds assumption is violated (i.e. that the estimates of coefficients between each pair of outcomes across the response levels are not the same). Moreover, there is important statistical as well as sociological information in the varying significance patterns across the variable-level Brant test results. For

Table 4. Multinomial logistic regression (financial stress score)

Financial stress score (ref. = 0)	Cat. 1	Cat. 2	Cat. 3	Cat. 4	Cat. 5	Cat. 6	Cat. 7	Cat. 8
	Relative risk ratios							
Demographics								
Female	0.94	1.03	0.93	0.78**	1.03	0.89	0.92	0.66
Age 18–21 years (ref.)								
22–25 years	1.08	0.10	0.88	0.94	1.31	1.24	2.28**	1.43
26 years and over	1.17	1.25*	1.34**	1.14	1.22	1.45	3.30***	0.56
Background								
Country GNI Low (ref.)								
Medium	0.70***	0.61***	0.47***	0.36***	0.27***	0.24***	0.21***	0.32***
High	0.78**	0.76**	0.53***	0.67**	0.70*	0.37***	0.28***	0.86
Non-university	1.08	1.08	0.92	0.83	0.73	0.76	1.31	1.87*
Good English	1.23**	1.39***	1.41***	1.73***	1.70***	1.43*	1.29	0.97
Work and family								
Family allowance	1.02	0.93	1.02	0.97	0.66***	0.81	0.96	0.40***
Paid work	1.47***	2.09***	2.39***	3.07***	2.97***	3.16***	3.21***	1.14
Housing								
Hot-bedding	0.97	1.24	1.32	1.30	3.48***	3.54***	4.50***	7.79***
Homelessness fears	1.73***	2.80***	3.90***	5.75***	9.95***	12.79***	22.99***	52.68***
Evicted	1.12	1.16	1.37***	1.64**	1.56*	1.31	2.14**	1.80
Housing good condition	0.96	0.73***	0.83***	0.33***	0.32***	0.42***	0.33***	0.77
Discrimination renting	1.21*	1.25*	1.47***	1.90***	2.41***	2.73***	4.41***	7.86***
Social and wellbeing								
Wellbeing score	0.98***	0.96***	0.96***	0.95***	0.93***	0.92***	0.90***	0.94***
Enjoying Australia	1.12	1.07	1.02	1.04	0.96	1.18	0.10	1.09
Feeling lonely	1.16*	1.34***	1.65***	1.55***	1.28	1.72***	1.30	1.06

AQ13

* p ≤ 0.1; ** p ≤ 0.05; *** p ≤ 0.01.

example, the assumption was violated most significantly for the following: homelessness fears; hot-bedding; (reliance on) paid work; discrimination renting; and the wellbeing score.

Multivariate analysis: multinomial logistic regression model

To investigate non-linear relationships between independent variables and each 'step' of increasing financial stress, the same data was fitted as a multinomial logistic regression model. Table 4 reports outcomes expressed as relative risk ratios (RRRs) with the zero (0) *financial stress* as the reference category. This strategy overcomes violations of ordered logistic regression, capturing precise impacts of disruption from high financial stress.

Beginning with country-of-origin (GNI) data, the multinomial model confirms strong demographic associations. Respondents with higher *financial stress* are increasingly less likely to be from middle-income countries, compared with low-income countries (RRR ranges from 0.70 to 0.32 as financial stress increases to a score of 8). The pattern is less stable for students from high-income countries, but this cohort is still significantly less likely to experience higher financial stress than students from low-income countries. Non-university respondents do not report consistently greater risk than university respondents; the non-significance of this result (contradicting bivariate results) suggest that the social characteristics of non-university students – rather than their education status – explain their relative hardship. There is an interesting (and harder to interpret) pattern of association between self-reported *English language* proficiency and financial stress. English language competency predicts *higher* relative risk of financial stress, though this association holds up only to a certain point.

Table 4 also confirms the association between adverse experiences and financial stress once demographic variables are controlled for. The likelihood of students being *engaged in paid work* increases as financial stress increases (compared to those with no financial stress). The need to work increases particularly at the *financial stress* score of 4 and higher (RRR>3 for scores 4–7). This result confirms the bivariate findings: paid employment is related to efforts to avoid hardship.

Measures of housing insecurity and overcrowding reveal even more: higher financial stress 'accelerates' the likelihood and impact of adverse outcomes. The condition of property rented by students steadily worsens as their financial stress increases (RRR of *housing good condition* falls from 0.96 to 0.35, relative to the reference categories, as financial stress increases). The relative risk of *hot-bedding* (i.e. extreme overcrowding) only starts to accelerate for students scoring 5 or more on *financial stress* (i.e. RRRs increase from 1.30 for category 4 to over 3 for category 5 and above). Indeed, the rate of increase in hot-bedding continues to rise as the scores get higher (RRR = 7.79 for category 8). A similar 'acceleration' of risk occurs with *homelessness fears*: these perceptions rise more steeply for scores of 4 and higher. This association is even more pronounced for students with scores of 7 or 8 on the *financial stress* measure. These students are a staggering 20-to-50 times more likely to fear homelessness compared with students reporting no financial stress.

Last, social exclusion and wellbeing measures suggest more about the non-linear impact of financial stress. The rate at which the risk of discrimination occurs accelerates, particularly for students reporting *financial stress* scores of 7 or 8 (RRR rises from 1.90 to 7.86 between categories 4 and 8). The data also indicate that students with higher financial stress experience lower scores for *personal wellbeing* up to category 7. However, these declines are more linear.

Comparing risks from financial stress

Two charts display the relative risks of disruptive events associated with financial stress. AQ6 To focus discussion, Chart 2 illustrates the relationship between financial stress and key background factors that drive it. It displays RRRs (on a logarithmic scale) for: low-GNI versus medium countries (inversely transformed); having good English; and being in paid work. As revealed by the slope of the line, students with higher levels of financial stress are increasingly (i.e. exponentially) likely to come from lower GNI countries. Likewise, reliance on paid work is associated with rising financial stress – in other words, employment appears driven by hardship without necessarily resolving it. Further research is needed to establish the relationship between high levels of financial stress and the qualitative dimensions of work precarity – i.e. insufficient hours, underpayment, and exposure to dangers. One puzzling result is the *strengthening* relationship between financial stress and self-assessed English proficiency up to category 6, though we note that this relationship becomes non-significant at the highest levels of stress.

Chart 3 compares relationships between financial stress and disruptive experiences that depict the central discoveries of this article. The chart presents relative risk relationships (plotted on a logarithmic scale) between higher financial stress and six adverse experiences mostly related to housing. So that all the regression coefficients show *rising* effects, not falling ones, coefficients for the condition of housing and wellbeing have been inversely transformed. The chart shows that risks of homelessness ('fears'), hot-bedding, discrimination when renting, and living in poor housing conditions all increase at an exponential rate with increased financial stress. This evidence highlights sharply increased risks of adverse outcomes at certain 'breakpoints' on the financial
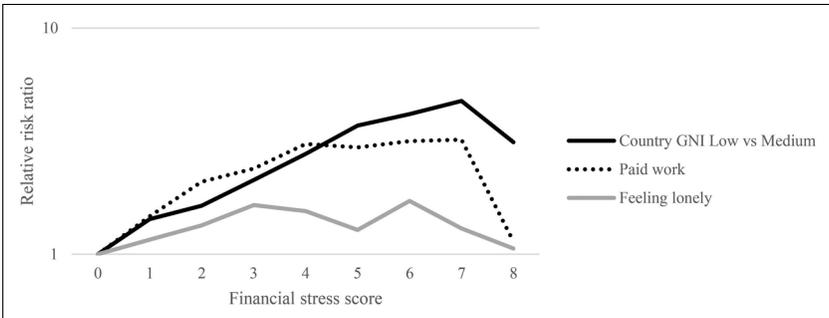

Chart 2. Selected relative risks associated with rising financial stress (logarithmic scale)
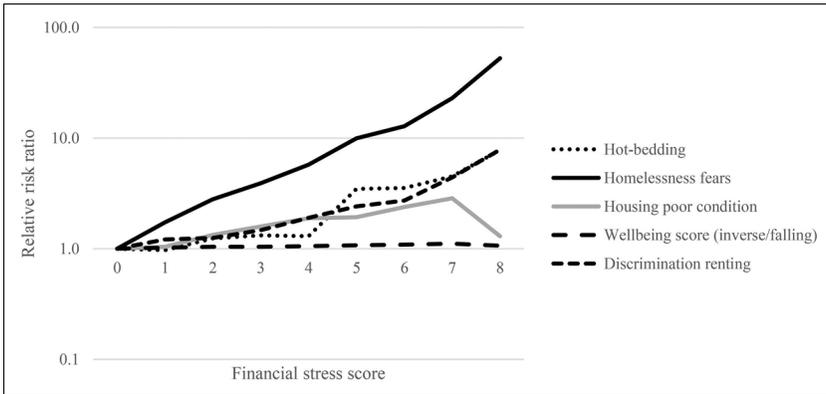
Chart 3. Relative risk of precarious experiences associated with rising financial stress (logarithmic scale)

stress scale. In particular, the slope of the lines representing hot-bedding, discrimination, and fears of homelessness all become steeper at stress scores between 4 and 6, depending on the individual measure. By contrast, Chart 3 shows that loss of wellbeing proceeds more linearly as financial stress rises. Still, the downward trend is clear and statistically significant. Similarly, self-reported loneliness also rises in a linear relationship with higher financial stress.

Discussion and conclusions

We conclude by highlighting three implications of these findings and identify policy recommendations. First, our results suggest some financial stress (i.e. low scores on financial measure) appears tolerable for students, with few signs of adverse impacts. High levels of financial stress, however, precipitate more serious experiences of precarity. The relationships can be characterised as *accelerating* risks of negative outcomes with each 'stepped' increase in financial stress. For the 5–10% of respondents scoring highly on financial stress (depending on cut-off points), exposure to the risk of adverse experiences rises dramatically. Given our research design – one centred on accommodation problems – outcomes mostly focus on three adverse housing experiences: evictions, the threat of homelessness, and hot-bedding. However, a broader sweep of precarious experiences in future research may identify similar patterns between financial stress and risks of adversity, particularly in employment. Here, we are referring to 'events' such as underpayment, danger, and workplace aggression supported in the literature (Berg & Farbenblum, 2020; Campbell et al., 2016; Clibborn, 2018).

Second, we find that students from low-GNI countries face additional risks from financial stress – a result reported in recent research (Malet Calvo et al., 2021). Access to Australia's labour market, however, does not resolve these issues. In fact, when financially stressed students turn to paid employment as a panacea, the exclusionary conditions

of 'non-citizenship' (visa conditions and exploitative labour market niches) reduce student capacity to address money worries. Elsewhere, our research has documented qualitatively problems that financially stressed students encounter at work (Hastings et al., 2021; Morris et al., 2020). Moreover, Clibborn (2018) has advanced our understanding of how exclusion works: students tolerate underpayment, for example, because their 'frames of reference' (2018, p. 350) rely on experiences of a narrow group of peers (2018, p. 349). He concludes that students 'lacked any peer reference group other than students experiencing similar underpayment at work' (Clibborn, 2018, p. 349). Combined, these observations make more sense of how the institutional and social exclusion of international students are mutually reinforcing.

Revisiting work rights for international students in a similar fashion to improved policies for labour market access during the pandemic (i.e. relaxing hours limits during the semester) is one possibility. This recommendation builds on pre-existing calls for intervention and the provision of more information about rights (Clibborn, 2018). We are mindful, however, of our own findings in making this recommendation: paid work brings limited benefits to financially stressed students and has implications for academic performance (i.e. disruptions from excessive working hours).

Third, we demonstrate a central role of housing breakdowns – i.e. evictions and hot-bedding – as a consequence of financial stress. These findings are not a surprise, given that international students are mostly housed in a rental sector where exploitation is frequent (Morris et al., 2021a; Nasreen & Ruming, 2019). Severe housing insecurities faced by students are a wider problem for policymakers and education providers alike. Given the destabilising role of housing crises for financially stressed students, both governments and providers need better tools to identify these risks and a commitment to invest in housing for students at risk. One recommendation is that, once students are admitted, education providers use – appropriately and ethically – a financial risk assessment tool. If providers seek to assist students to avoid the worst kind disruptions to wellbeing and study, they need to know more about student exposure to financial stress.

Our findings also affirm the value of the three-domain framework for understanding financial pressure on international students, one that tracks the vulnerability rooted in the migration and visa process, the exclusionary features of employment, housing, and social protection, and the emotional/social resources to sustain study-related migration. Future analysis utilising such a framework can explore further a range of background social characteristics in revealing more about the demography of extreme financial stress as well as tracking a wider array of disruptive events that financial stress contributes to. Moreover, this framework invites greater quantitative exploration of the *mutually reinforcing* role of each domain in accelerating the risk of precarious events.

Broader reforms are necessary to address exclusionary conditions in work and housing markets that create risks of serious disruption in the first place. If countries like Australia – with deregulated housing and labour markets – are to realise the progressive potentials of educating students from low-income countries and regions, more must be done to monitor and prevent extreme financial stress.

Declaration of conflicting interests

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Notes

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2. Research for this article was supported by the Australian Research Council Discovery Project 'The experience of precarious housing among international students in Australia' (DP190101073).
3. We follow Siahpush et al. (2003) in differentiating between levels of financial stress so that the characteristics of high levels of stress can be specifically examined. Their article uses a 'dichotomous' variable; we opt for three levels of financial stress.

References

Agresti, A. (2018). *Statistical methods for the social sciences*. Pearson.
Austrade (2020, July). *Austrade Report Summary: Onshore international student sentiment.* https://www.austrade.gov.au/australian/education/news/austrade-update/key-findings-from-the-first-onshore-international-student-sentiment-survey-national-report
Australian Bureau of Statistics (2017). Deprivation and financial stress indicators, 6503.0: Household expenditure survey and survey of income and housing, user guide, Australia, 2015–16. https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/6503.0~2015-16~Main%20Features~Deprivation%20and%20financial%20stress%20indicators~12
Australian Government (2019). *End of year summary of international student data 2019.* Department of Education, Skills, and Employment. https://internationaleducation.gov.au/research/International-Student-Data/Documents/MONTHLY%20SUMMARIES/2019/December%202019%20End%20of%20year%20summary.pdf
Australian Government (2020). Financial stress. https://www.dese.gov.au/integrated-data-research/benefits-educational-attainment/financial-stress
Australian Government (2021). Temporary relaxation of working hours for student visa holders. Department of Home Affairs. https://immi.homeaffairs.gov.au/visas/getting-a-visa/visa-listing/student-500/temporary-relaxation-of-working-hours-for-student-visa-holders
Beer, A., Bentley, R., Baker, E., Mason, K., Mallett, S., Kavanagh, A., & LaMontagne, T. (2016). Neoliberalism, economic restructuring and policy change: Precarious housing and precarious employment in Australia. *Urban Studies*, *53*(8), 1542–1558. https://doi.org/10.1177/0042098015596922

Bennett, D., McCarty, C., & Carter, S. (2015). The impact of financial stress on academic performance in college economics courses. *Academy of Educational Leadership Journal*, *19*(3), 25–30.

Bentley, R., Baker, E., & Aitken, Z. (2019). The 'double precarity' of employment insecurity and unaffordable housing and its impact on mental health. *Social Science & Medicine*, *225*, 9–16. https://doi.org/10.1016/j.socscimed.2019.02.008

Berg, L., & Farbenblum, B. (2019, December). *Living precariously: Understanding international students' housing experiences in Australia*. University of Technology Sydney. https://static1.squarespace.com/static/593f6d9fe4fcb5c458624206/t/5ddf5c9d51c72e2c5ef38b64/1574919334303/Living+Precariously_2019.pdf

Berg, L., & Farbenblum, B. (2020, June). *International students and wage theft in Australia*. University of Technology Sydney. https://static1.squarespace.com/static/593f6d9fe4fcb5c458624206/t/5ef01b321f1bd30702bfcae4/1592793915138/Wage+Theft+and+International+Students+2020.pdf

Bothwell, E. (2021, 3 February). Australian universities in deep trouble as borders stay closed. *Times Higher Education*. https://www.timeshighereducation.com/news/australian-universities-deep-trouble-borders-stay-closed

Campbell, I., Boese, M., & Tham, J.-C. (2016). Inhospitable workplaces? International students and paid work in food services. *Australian Journal of Social Issues*, *51*(3), 279–298. https://doi.org/10.1002/j.1839-4655.2016.tb01232.x

Cheng, Z., Mendolia, S., Paloyo, A. R., Savage, D. A., & Tani, M. (2021). Working parents, financial insecurity, and childcare: Mental health in the time of COVID-19 in the UK. *Review of Economics of the Household*, *19*(1), 123–144. https://doi.org/10.1007/s11150-020-09538-3

Clibborn, S. (2018). Multiple frames of reference: Why international student workers in Australia tolerate underpayment. *Economic and Industrial Democracy*, *42*(2), 336–354. https://doi.org/10.1177/0143831X18765247

Fair Work Ombudsman (2021). Annual wage review 2021. https://www.fairwork.gov.au/about-us/news-and-media-releases/website-news/annual-wage-review-2021

Fincher, R., & Shaw, K. (2009). The unintended segregation of transnational students in central Melbourne. *Environment and Planning A*, *41*(8), 1884–1902. https://doi.org/10.1068/a41126

Goldring, L., & Landolt, P. (2011). Caught in the work–citizenship matrix: The lasting effects of precarious legal status on work for Toronto immigrants. *Globalizations*, *8*(3), 325–341. https://doi.org/10.1080/14747731.2011.576850

Gomes, C., Hendry, N. A., De Souza, R., Hjorth, L., Richardson, I., Harris, D., & Coombs, G. (2021). Higher degree students (HDR) during COVID-19: Disrupted routines, uncertain futures, and active strategies of resilience and belonging. *Journal of International Students*, *11*(S2). https://doi.org/10.32674/jis.v11iS2.3552

Han, E. (2015, 16 June). Illegal accommodation: City of Sydney cracks down on black market syndicates. *Sydney Morning Herald*. https://www.smh.com.au/national/nsw/illegal-accommodation-city-of-sydney-cracks-down-on-black-market-syndicates-20150615-gho8ie.html

Hastings, C., Ramia, G., Wilson, S., Mitchell, E., & Morris, A. (2021). Precarity before and during the pandemic: International student employment and personal finances in Australia. *Journal of Studies in International Education*. https://doi.org/10.1177/10283153211065136

Heagney, M. (2020). Melbourne rents hold steady in December quarter 2019: Domain Rental Report. https://www.domain.com.au/news/melbourne-rents-hold-steady-in-december-quarter-2019-domain-rental-report-921000/

Humphrey, A., & Forbes-Mewett, H. (2021). Social value systems and the mental health of international students during the COVID-19 pandemic. *Journal of International Students*, *11*(S2). https://doi.org/10.32674/jis.v11iS2.3577

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Humphries, N., Brugha, R., & McGee, H. (2009). Sending money home: A mixed-methods study of remittances by migrant nurses in Ireland. *Human Resources for Health*, 7(1), 1–12. https://doi.org/10.1186/1478-4491-7-1

International Wellbeing Group (2013). *Personal wellbeing index* (5th edn). Australian Centre on Quality of Life, Deakin University.

Joo, S. H., Durband, D. B., & Grable, J. (2008). The academic impact of financial stress on college students. *Journal of College Student Retention: Research, Theory & Practice*, 10(3), 287–305. https://doi.org/10.2190/CS.10.3.c

Khawaja, N., & Stallman, H. (2011). Understanding the coping strategies of international students: A qualitative approach. *Journal of Psychologists and Counsellors in Schools*, 21(2), 203–224.

Kim, Y. (2020). Classed education trajectories and intimate partnering of international students: A case of Chinese international undergraduate students in the United States. *Journal of Ethnic and Migration Studies*. https://doi.org/10.1080/1369183X.2020.1828841

Landolt, P., & Goldring, L. (2015). Assembling noncitizenship through the work of conditionality. *Citizenship Studies*, 19(8), 853–869. https://doi.org/10.1080/13621025.2015.1110280

Lantz, P. M., House, J. S., Mero, R. P., & Williams, D. R. (2005). Stress, life events, and socioeconomic disparities in health: Results from the Americans' changing lives study. *Journal of Health and Social Behavior*, 46(3), 274–288. https://doi.org/10.1177/002214650504600305

Lee, J. S., Koeske, G. F., & Sales, E. (2004). Social support buffering of acculturative stress: A study of mental health symptoms among Korean international students. *International Journal of Intercultural Relations*, 28(5), 399–414. https://doi.org/10.1016/j.ijintrel.2004.08.005

Lubbers, M. J., Small, M. L., & García, H. V. (2020). Do networks help people to manage poverty? Perspectives from the field. *Annals of the American Academy of Political and Social Science*, 689(1), 7–25. https://doi.org/10.1177/0002716220923959

Malet Calvo, D., Cairns, D., França, T., & de Azevedo, L. F. (2021). 'There was no freedom to leave': Global South international students in Portugal during the COVID-19 pandemic. *Policy Futures in Education*. https://doi.org/10.1177/14782103211025428

Marginson, S., Nyland, C., Sawir, E., & Forbes-Mewett, H. (2010). *International student security*. Cambridge University Press.

Meuris, J., & Leana, C. (2018). The price of financial precarity: Organizational costs of employees' financial concerns. *Organization Science*, 29(3), 398–417. https://doi.org/10.1287/orsc.2017.1187

Millar, R., & Schneiders, B. (2020, 29 April). Australia gets poor score on international students. *Sydney Morning Herald*. https://www.smh.com.au/national/australia-gets-poor-score-on-international-students-20200428-p54nur.html

Mittnik, S., & Semmler, W. (2013). The real consequences of financial stress. *Journal of Economic Dynamics and Control*, 37(8), 1479–1499. https://doi.org/10.1016/j.jedc.2013.04.014

Morris, A., Hastings, C., Wilson, S., Mitchell, E., Ramia, G., & Overgaard, C. (2020). *The experience of international students before and during COVID-19: Housing, work, study and wellbeing*. University of Technology Sydney. https://opus.lib.uts.edu.au/bitstream/10453/142533/2/internationalstudentsandhousing%20report%20ss.com%3A2020%3A08%3Ainternational-students-and-housing-survey-report-final-no-logos-5-aug-2020.pdf

Morris, A., Mitchell, E., Wilson, S., Hastings, C., & Ramia, G. (2021b). Loneliness within the home among international students in the private rental sector in Sydney and Melbourne. *Urban Policy and Research*. https://doi.org/10.1080/08111146.2021.2005017

Morris, A., Wilson, S., Mitchell, E., Ramia, G., & Hastings, C. (2021a). International students struggling in the private rental sector in Australia prior to and during the pandemic. *Housing Studies*. https://doi.org/10.1080/02673037.2021.1961695

Nasreen, Z., & Ruming, K. (2019). Room sharing in Sydney: A complex mix of affordability, over-crowding and profit maximisation. *Urban Policy and Research*, *37*(2), 151–169. https://doi.org/10.1080/08111146.2018.1556632

Newland, C., & Switz, P. (2020). Australian student accommodation 2020. Savills. https://www.savills.com.au/research_articles/167771/198722-0

Odle–Dusseau, H. N., Matthews, R. A., & Wayne, J. H. (2018). Employees' financial insecurity and health: The underlying role of stress and work–family conflict appraisals. *Journal of Occupational and Organizational Psychology*, *91*(3), 546–568. https://doi.org/10.1111/joop.12216

OECD (2020). *Education at a glance*. OECD.

Rabe, T. (2019, 9 July). International students pushed into 'dark corners' of Sydney's rental market. *Sydney Morning Herald*. https://www.smh.com.au/national/nsw/international-students-pushed-into-dark-corners-of-sydney-s-rental-market-20190708-p525aw.html

Ramia, G. (2017). Higher education institutions and the administration of international student rights: A law and policy analysis. *Studies in Higher Education*, *42*(5), 911–924. https://doi.org/10.1080/03075079.2017.1293878

Sawir, E., Marginson, S., Deumert, A., Nyland, C., & Ramia, G. (2008). Loneliness and international students: An Australian study. *Journal of Studies in International Education*, *12*(2), 148–180. https://doi.org/10.1177/1028315307299699

Scott Long, J., & Freese, J. (2005). *Regression models for categorical outcomes using stata* (2nd edn). Stata Press.

Siahpush, M., Borland, R., & Scollo, M. (2003). Smoking and financial stress. *Tobacco Control*, *12*(1), 60–66. https://doi.org/10.1136/tc.12.1.60

Small, M. L., & Gose, L. E. (2020). How do low-income people form survival networks? Routine organizations as brokers. *Annals of the American Academy of Political and Social Science*, *689*(1), 89–109. https://doi.org/10.1177/0002716220915431

Sullivan, C., & Kashubeck-West, S. (2015). The interplay of international students' acculturative stress, social support, and acculturation modes. *Journal of International Students*, *5*(1), 1–11. https://doi.org/10.32674/jis.v5i1.438

Travers, P., & Robertson, F. (1995). *Deprivation Standards Project: Report prepared for the Department of Social Security*. Flinders University.

Vincent, M. (2020, 30 June). International students facing 'perfect storm' of exploitation and coronavirus could make it worse. ABC News. https://www.abc.net.au/news/2020-06-30/international-students-wage-theft-exploitation-coronavirus/12405332

Weller, C. E. (2018, June 26). Working class families are getting hit from all sides. Center for American Progress. https://www.americanprogress.org/issues/economy/reports/2018/07/26/453841/working-class-families-getting-hit-sides/

World Bank (2020). Country gross national income classifications. https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups

Wright, E. O. (2000). *Class counts: Student edition*. Cambridge University Press.

Yu, B., & Wright, E. (2016). Socio-cultural adaptation, academic adaptation and satisfaction of international higher degree research students in Australia. *Tertiary Education and Management*, *22*(1), 49–64. https://doi.org/10.1080/13583883.2015.1127405

Zheng, J., Morstead, T., Sin, N., Klaiber, P., Umberson, D., Kamble, S., & DeLongis, A. (2021). Psychological distress in North America during COVID-19: The role of pandemic-related stressors. *Social Science & Medicine*. https://doi.org/10.1016/j.socscimed.2021.113687

Zhou, N. (2021, 3 June). Alan Tudge tells universities Covid's impact on international student enrolments not as bad as expected. *The Guardian*. https://www.theguardian.com/australia-news/2021/jun/03/alan-tudge-tells-australian-universities-covids-impact-on-international-student-enrolments-not-as-bad-as-expected