Student Health and Well-being in the Pacific: Findings from a diverse regional population

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Abstract

The mental health challenges among college students are a rising global concern. Systematic monitoring of student health can inform campus services, identify students at risk and understand changing trends and stressors in young people. The University of South Pacific is ideally placed to provide this data across a geographically, culturally and contextually diverse population. The present study aims to provide an initial assessment and investigation of student health and well-being in the Pacific Island Countries. The study uses standardized measures to explore mental health and subjective wellbeing, physical health and diet behaviors, and sources of academic stress. A total of 2229 students completed a survey from 13 regional campuses. The findings suggest Pacific students are physically active, low on alcohol and tobacco use, and relatively high on subjective wellbeing. However, there are indicators of concern around health knowledge, high levels of academic performance anxiety and clear signs of psychological distress in some Pacific students. There was also a significant concealment of personal distress suggesting more needs to be done to normalize the discussion of emotional suffering, not simply providing counselling support. This is the first large scale Pacific student survey and highlights the potential for regular monitoring of health and wellbeing among Pacific students. The findings are discussed in terms of avenues for future research and using an evidence-based approach to strengthening university-based support services.

Keywords: Health; Mental Health; Pacific Islands; University Students; Wellbeing

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Introduction

Several large studies have highlighted the growing mental health crisis among college students globally. For example, Eisenberg et al. (2018) found 11% of respondents reported suicidal ideation and 21% reported active self-harm across US Colleges and only half of the 34% of students reporting a mental health diagnosis were receiving any form of formal support. Similarly, in a UK survey of 37000 students (Pereira et al., 2019) nearly 10% had considered self-harm at some point; 33% suffered from loneliness; and a third self-reported significant personal or emotional health problems coming into university. In a multi-national study, Auerbach et al. (2018) reported on year one student survey data from 19 colleges in eight countries (all western countries) and found 35% of the respondents screened positive for a lifetime mental health disorder and 31% for a disorder in the past year. Importantly, students experiencing distress and mental illness are at higher risk of withdrawal from studies (NZUSA, 2018; Lipson & Eisenberg, 2018).

Moreover, studies globally have reported significantly higher rates of depression and anxiety in college students as a result of the COVID-19 pandemic (Li et al., 2021). Indeed, one study undertaken in France found college students to be at higher risk of depression, stress and suicidal ideation during the COVID-19 pandemic than non-students in the same time period and even when comparing similar age groups (Arsandaux et al., 2021). Similarly, the UK national student mental health survey showed significant increases in self-harm and students needing professional help for psychological distress since a 2018 survey (Pereira et al., 2020). Within the Oceania Pacific region, surveys of tertiary students in Australia found rates of psychological distress as high as 65%, and 35% of respondents reported thoughts of self-harm (Browne et al., 2017; Rickwood et al., 2017). Moreover, a review of adolescent (15-24yrs) mental health in New Zealand highlighted the higher prevalence of suicide among Pacific Islander (Maori) students (Johns, 2017). As a response to this, Sopoaga et al. (2020) describe a protocol for an in-depth study to be undertaken of the mental health and wellbeing of first year Pacific students in a New Zealand tertiary context.

Taken together these studies suggest college students experience relatively high levels of stress, particularly during the COVID-19 pandemic, which makes them vulnerable to mental health disturbances such as anxiety and depression compared to others in a population. Moreover, studies of the diaspora of Pacific Islander students in other countries suggests there may be particular needs and attitudes towards mental health and university stress that need to be better understood. It is

therefore important that the mental health of college students is monitored regularly to understand the specific risk and protective factors that can be used to strengthen support initiatives within the University setting.

One important factor associated with the promotion and assessment of overall mental health is subjective well-being (SWB; Keyes, 2006). There has been a growing movement internationally to understand the sources of well-being and happiness in populations and to actively promote human flourishing (United Nations General Assembly, 2011). This has indeed been incorporated into the National Household Surveys in Pacific Islands such as Vanuatu (VNSO, 2021) and Tonga (Moore et al., 2005). Notably, a recent cross-campus US survey found less than half the students would meet criteria for 'flourishing' (Eisenberg et al., 2018). This suggests that even though most students may not show clinical mental health issues, only a minority are actively living to their full potential and health. Furthermore, Machado et al. (2019) found simple self-care interventions that raised SWB in college students were associated with a decrease in measures of common mental disorders such as anxiety and depression. These findings indicate that understanding the SWB in college students and considering the ways in which promotion of SWB through non-clinical self-help strategies may lead to reductions in more serious mental health disturbances in this vulnerable population. Finally, in a recent meta-analysis, Bucker et al., (2018) found a significant (though small) association between SWB and academic performance. That is, a happy and flourishing student is more likely to be confident, resilient to stress, optimistic about the future and goal directed. Overall, there is growing awareness and evidence of the importance of also monitoring and assessing subjective wellbeing as an indicator of mental health and predictor of academic flourishing in populations.

University life presents several unique stressors and pressures which impact students putting some at higher risk of mental health disturbances as well as potentially leading to burnout and low academic achievement for many others (Portoghese et al., 2018). Specific factors include balancing studies and work or personal responsibilities, financial pressures and high academic demands (Hamaideh, 2011; Stallman & Hurst, 2016) as well as inter-personal relationships and long distance travel to reach classes (Amanya et al., 2018; Reddy et al., 2018). Furthermore, there is some indication that burnout caused by stress during university may be linked to later life work burnout (Portoghese et al., 2018) and poor performance (Salmela-Aro et al., 2009). An obvious source of stress for all students is exams, and anxiety levels are likely to be higher across the whole student body during exam time. However, some students may be intrinsically higher in test anxiety traits and so experience

significant emotional and physiological distress during exams that is likely to impact performance (Spielberger, 2010). Given the range of university stress factors impacting students in the global literature, it is clear that identifying psychologically vulnerable students, as well as the sources of university stress experienced within the local context is vital for designing support systems to enable student retention and success.

Finally, the present study includes consideration of physical health as it has an impact on both psychological health and academic performance. For example, meta-analysis of research studies has shown a significant association between higher physical activity and lower risk of depression across populations (Mammen & Faulkner, 2013). Regular exercise is also known to promote general well-being and build resilience to stress (Childs & DeWit, 2014). Similarly, a recent literature review found significant overall role of healthy dietary habits in reducing depressive symptoms (Ljungberg et al., 2020). In addition to specific mental health disorders, several studies have indicated a relationship between poor health behaviors and academic performance in university students (Deliens et al., 2013; El-Ansari & Stock, 2010; Larson et al., 2016). The study by Larson et al., (2016) found 21% of the variance in GPA was predicted by various health and mental health factors. The assessment of physical health as it may relate to mental health and wellbeing is particularly important for populations in the Pacific Islands which are known to have some of the highest global rates of obesity and Non-communicable Diseases (NCDs) (Chand et al., 2020; Worldbank, 2014).

The Present study

The above discussion indicates the global crisis in mental health among college students and the impact it is having on student retention and achievement. While no large scale data on student health and mental health currently exists across the Pacific Island Countries, there are reports of significant mental health issues within the region. In particular, suicide rates are found to be high in the region especially among youth populations (Mathieu et al., 2021). In addition, the Pacific Island populations have among the highest obesity and diabetes rates in the world (Hawley & McGarvey, 2015; Hendriks et al., 2015). Given the need to build better understanding of health and mental health among Pacific Island Countries, The University of the South Pacific (USP) is ideally placed, as the largest tertiary institution in the Pacific to provide this vital data from its student population. In addition, as a regional university, there is an opportunity to explore student health, wellbeing and academic stress across a geographically, culturally and contextually

diverse population.

Therefore, the present study aims to provide an initial assessment and investigation of student health and well-being in the Pacific Island Countries. The study will measure a range of variables to explore the prevalence of mental health disorders and university stressors as well as beginning to consider risk and protective factors in this population. Given the above discussion, this will include broad assessment of mental health symptoms, subjective well-being, academic stress (practical sources of stress, studying and exam anxiety), and physical health (diet, substance use and physical activity). The aim is to provide some initial findings which can be used to design more focused future investigations on student mental health in the Pacific Islands as well as developing targeted and evidence-based university-based support strategies.

Methods

Participants

A survey link was disseminated through University emails, campus coordinators and the Campus Life office over the course of Semester 1, 2021. Students were invited to participate and offered compensation through a series of cash prize draws. Prize draws were separated by campus to encourage participation from regional students at the smaller campuses. As the survey was not able to ask directly about ethnicity (see discussion below), students were labelled by campus. As the survey was undertaken during the COVID-19 pandemic where students would be studying from their home countries the campus label was taken as an indicator of country of residence and as some probable estimation of nationality (though this could not be confirmed by the data). However, it is not possible to estimate from the current data the country ethnic group representation.

A total of 3135 students engaged with the online survey during the study period, representing 11.09% of the total USP student population. However, approximately one-third of the respondents (904) had to be removed from the final dataset due to incompletion, error, or voluntary withdrawal. The final dataset of completed surveys was 2229 across 13 USP campuses. This represented 7.89% of the total USP student population during the given semester. See Tables 1 and 2 for demographic breakdown by campus. The final dataset includes a majority of students from the Fiji Campus populations. While this reflects the campus enrolments of the university as a whole, it is noted that the present sample is somewhat biased with 76.93% of the sample enrolled at Fiji campuses compared with 58.56% Fiji enrolments in the overall student population for that semester. Among the regional campuses, there

was fair representation of around 10% of the total enrolled students from Tonga, Samoa, and Cook Islands, (and from the main Fiji based Laucala campus itself), but less than 5% representation from other campuses. It is also noted that no students completed the survey from Tokelau campus (total student population: 109).

Table 1. Sample by USP Campus and Gender

USP Campus	Total	% of study total	% of campus population	Gender		
				Female	Male	Non-binary
Fiji (all)	1708	76.93	10.32	1145	555	8
Fiji Laucala (main Viti Levu campus)	*1550*	*69.82*	*11.30*	*1022*	*520*	*8*
Fiji Lautoka (West Viti Levu Campus)	*110*	*4.95*	*5.84*	*88*	*22*	*-*
Fiji Labasa (Vanua Levu Campus)	*48*	*2.16*	*5.05*	*35*	*13*	*-*
Vanuatu	131	5.90	4.37	91	40	-
Tonga	165	7.43	10.08	131	34	-
Samoa	54	2.43	9.82	42	12	-
Solomon Islands	107	4.82	2.78	53	54	-
Cook Islands/ Kiribati/Marshall Islands / Nauru / Niue / Tuvalu*	55	2.48	2.14	43	12	-
Totals**	**2220**	**-**	**-**	**1505**	**707**	**8**

* Cook Islands (24, 13.64% of campus); Kiribati (13, 0.72% of campus); Marshall Islands (6, 4.54% of campus); Nauru (4, 5.48% of campus); Niue (4, 6.78% of campus); Tuvalu (4, 1.27% of campus)

**9 students did not declare a campus: 5 female, 4 male, total in analyses 2229

Table 2. Demographic variables of the total sample

Full Sample (N= 2229)		% of study sample
Gender	Female	67.8
	Male	31.9
	Non-binary	0.3
Age	16-25	67.3
	26-35	21.8
	36-45	9.0
	46-55	1.6
Study mode	Full time study	79.9
	Part time study	20.1
Student level	Foundation	11.7
	BA – new student	13.1
	BA –continuing student	65.2
	Post graduate studies	10
Employment status	Unemployed	70.4
	Part time work	8.3
	Full time work	17.1
	Unpaid volunteer work	4.1
Halls of residence	Halls of residence	10.2
	Live off campus	89.8
Who live with	Live alone	10.3
	Live with friends	12.3
	Live with parents	56.9
	Live with spouse/kids	20.6

Materials

The survey comprised of 6 sections including a set of demographic questions relevant to the USP student context, as well as 5 health and mental health sections each taken from standardized questionnaires found in the literature (see Table 3 for breakdown).

Table 3. Published Measures used for present survey

Survey Section	Measures Taken from	Citation
1: Demographics	NUS survey ; The KeiTaPei survey	Headspace UK (2016); NZ-University Student Association (2018);
2: Physical health	The ACHA National College Survey; Monitoring The Future survey; USP Dietary control studies	ACHA (2018); Johnston et al. (2019); Buksh et al., (in preparation)
3: Mental health	Student mental health UK(modified scale) survey; The Kessler 6 questionnaire	Insight Network (2019); Headspace (2016); Kessler et al. (2002); Prochaska et al (2012)
4: Subjective well being	The Personal Wellbeing Index-A; Self rating happiness Items	International Wellbeing Group (2013); Lambert et al. (2014); Moldovan (2017); Abdel-Khalek (2006)
5. Academic perceptions	The Test Anxiety Inventory (short form); The University Stress Scale	Taylor & Deane (2002); Stallman (2008); Stallman & Hurst (2016)
6. Perceived performance	Standard measure	Adapted by Johnson

The section on demographics included: campus/country location, age, gender, programme information and questions about campus residence status and household. A question about ethnicity was removed from the survey following ethical review due to its association with political sensitivity in some Pacific Island Countries. Physical health items asked about perceived weight and any active weight management (ACHA, 2018). Students who indicated a motivation to lose weight were asked about dietary control behaviors used to reduce weight. Health and Nutrition awareness was measured through self-rated Daily consumption of fruits and vegetables, weekly consumption of fast food, and weekly physical activity levels (Johnson et al., 2019). Finally, a series of questions asked about lifetime use and frequency of current substance use of tobacco, alcohol and kava. One question asked

specifically about the frequency of Binge Drinking, defined as five or more drinks in a row.

Mental health measures included three self-rating items on the frequency of experiencing loneliness, sleep disturbance and self-harm (Pereira et al., 2019). This was followed by three single items asking about any lifetime mental illness diagnosis, and any suicidal ideation (yes/no response) and an item asking about experience of concealing personal distress due to stigma (Rickwood et al., 2017). The Kessler 6-item scale measured frequency of anxiety and depression (hopelessness, worthlessness, nervous, fidgety, depressed, effortful) with a total score between 0-24 (Kessler et al., 2002). Subjective well-being was measured using two single item questions rating life satisfaction and happiness on a 1-10scale (Abdel-Khalek, 2006; Moldovan, 2017). A single question was also included about the impact of COVID-19 on wellbeing.

Academic specific measures included the University stress scale (14 items, total score range 0-42) with a score of 13 or above being reported as excessive stress in the literature (Stallman & Hurst 2016). In addition, the Test Anxiety scale-short form (Taylor & Deane, 2002; 5-items, total score range 5-20) and a measure for perceived academic performance/competence using an agree/disagree Likert scale in which low scores indicate high perceived competence. (8 items, total score range 8-40).

Results

As sample sizes across campuses varied significantly with less representation achieved in regional campuses (compared to the Fiji campuses) for this initial student health and wellbeing survey, the below result summaries are presented for the Pacific student sample as a whole. Indicators for cross-campus differences will be discussed in the discussion section as potential avenues of targeted analysis in future surveys.

Mental health and subjective wellbeing

The mean scores indicate students experience loneliness on average between 'sometimes- regularly' on the Likert scale (mean=1.84), sleep loss was reported between 'sometimes-about half the time' (mean 2.12), and self-harm between 'never- rarely' (mean 0.74). The Kessler scale mean score was 9.24, below the mid- point on the scale. However, 24.4% reported suicidal ideation during their lifetime (27% females, 19% males; 7.8% prefer not to say), 31.6% reported seeking professional help for mental health problems (32% females, 31% males; 13.1% responding as prefer not to say), and 46.6% reporting active concealment of personal

distress due to stigma (48% females, 44% males; 8% prefer not to say).

Life Satisfaction was reported as mean 6.17 on the 1-10 scale (6.05 females, 6.43 males, 4.83 non-binary) and happiness was mean 6.69 (6.55 females, 6.99 males, 5 non-binary). The majority of respondents reported none or positive change in well-being as a result of Covid-19 (41.5% no change, 27.2% positive) with 21.2% reporting slightly worse and 9.6% significantly worse. Of the students from the Fiji campuses which was most affected by Covid-19 restrictions at the time of the survey 40.9% reported no change to well-being and 31.4% reported overall worse well-being (10.3% significantly worse).

Academic stress and performance

Overall academic stress was relatively high with average test anxiety at 13.87 and University stress scale at 14.38. Perceived academic performance was high at mean 31.26 (31.02 females, 31.82 males, 27.43 non-binary) indicating very low overall perceived competence at academic study skills and motivation. Of the specific stressors listed in the University stress scale, the ones most rated as stressful among the sample were finance and money, parental expectations, study/life balance and academic demands.

Demographic variables associated with Mental health, wellbeing and stress

Living on-campus showed a significantly higher rating for loneliness (mean 2.09; $t = -2.83$, $df = 2215$, $p<0.001$) and sleep disturbance (mean 2.32; $t = -2.096$, $df = 2209$, $p<0.05$) compared to living off-campus. Comparisons of age groups showed younger students (16-25 and 26-35yrs) were significantly higher on loneliness than older students and had higher university stress scores. As could be expected, living with both spouse and children associated with lower loneliness and university stress and higher life satisfaction particularly compared to students living alone. Also those in full time employment reported higher life satisfaction and lower overall stress than those who were unemployed or working part time or unpaid volunteer work.

Positive response to suicidal ideation was significantly higher in females (chi-sq = 29.93, $p<0.001$) and the two younger age groups (16-25yrs: 26.5%; 26-35yrs: 24.3%; chi-sq = 31.52, $p<0.001$). A positive suicide response was also higher in those living with parents (28.4%), especially within the 26-35 age group (51.92% responded yes).

Physical health

In total 46% of the sample self-reported as slightly or significantly (8.6%)

overweight, of which 71% reported they were actively trying to lose weight. There was a relatively high level of reported weekly exercise with on average five sessions (cardiovascular and weighted exercises) per week (6.28 males; 4.32 females). In terms of self-reported diet, the majority of students reported one to two fast food meals in a week and 17% reported eating fast food three to four times per week and 3.5% daily. In contrast the average daily intake of fresh fruit and vegetables was reported to be between zero to two servings (total). Among those wishing to lose weight the most common activities were drinking water, reducing snack foods, eating low calorie foods and skipping meals. Some also reported active fasting and excessive exercise. Students living on campus had slightly less frequent daily fruit and veg servings (93.4% 0-2 daily servings) than those living off campus (88.7% 0-2 daily servings).

Students reported relatively low substance use with 62.4% stating they had never smoked tobacco (10.1% smoking 10+ cigarettes per day), 65% did not drink kava (22.8% occasional-regular kava use), and 22% reported having successfully stopped previous use of tobacco. Furthermore, 48.2% had never used alcohol with only 8.2% drinking alcohol regularly each week. However, among the students who did report drinking alcohol in the past month (N=728), the majority also reported binge drinking behavior (more than 5 drinks at one time) with 16.6% of this group saying they binge drink once a week and 8.1% saying they binge drink twice or more in a week.

Discussion

This study provides the first comprehensive investigation of health and wellbeing measures from a regional Pacific university student sample. As such the aim was to provide an initial exploration of mental health and wellbeing variables seen in the international literature on college students and assess their prevalence and trends in the Pacific students. This included assessment of mental health symptoms and how they may relate to demographic variables which could be used to identify at-risk students. In addition, to explore related factors of subjective wellbeing and physical health behaviors that are known to impact overall mental health. Finally, to understand the specific sources of academic stress for students in the Pacific Islands.

There is an indication of high subjective well-being across the population as a whole with relatively low scores on items of loneliness, anxiety and depression, and positive scores on life satisfaction and happiness. This is interesting as it directly contrasts to literature on students' subjective well-being in the US (Eisenberg et al., 2018). This does however align with broader reports of population happiness from

Pacific countries such as Vanuatu where the average 0-10 scale rating was 8.45 (VNSO, 2021). This suggests a cultural resilience across Pacific Indigenous populations to maintain a sense of well-being despite daily stressors and socio-economic challenges. Indeed this was somewhat indicated within the current survey where students did not generally report a reduction in well-being as a result of Covid-19 despite the impacts of the pandemic restrictions challenging the fragile economies and industries of many Pacific Island Countries and the Delta Variant being significantly prevalent in Fiji during the time of the survey.

However, there is also a clear subset of students vulnerable to significant psychological distress. For example, one-third of students reports requiring psychological support at some point and around a quarter of the sample reported considering suicide at some point in life, particularly females, young adult age groups, and those living with parents. The latter may reflect the suggestion that academic pressures are a particular cause of suicide in some Pacific populations such as Fijians of Indian descent (Forster et al., 2007). Furthermore, nearly half reported actively concealing personal distress due to fear of stigma. This reflects various literature indicating the role of stigma in blocking help-seeking among Pacific Islanders (Subica et al., 2019) and suggests more needs to be done to normalize the experience of emotional distress and asking for help.

In terms of student physical health, as could be anticipated, many students reported being overweight which reflects the known prevalence of diabetes and obesity in the Pacific Island populations (Conn et al., 2021). However, the student sample also report a strong awareness and intention to manage their weight and showed a relatively high level of weekly exercise and reasonable weekly intake of fast foods. In contrast, there may be some lack of understanding about nutrition and diet – with daily fruit and vegetable intake being substantially lower than recommended rates (Wang et al., 2021) even among those who lived in a family/parental home. In addition, among those motivated to lose weight the strategies were less sustainable behaviors like skipping meals and eating low calorie foods rather than developing a more nutritionally satisfying diet. This may be somewhat surprising for a Pacific Island population many of whom will have grown up in rural, subsistence farming areas. However, given that these students undertaking an online survey (requiring data and device access) were more likely to be those currently residing in urban as opposed to rural village settings, one explanation could be the impact of urbanization on access to and affordability of fresh foods which are purchased rather than grown. While all students had low fruit and vegetable intake this was slightly worse among those living on-campus which may also suggest issues of access. In either case, it

may be important for university campus services to consider their role in developing and facilitating personal health and nutrition awareness as a factor in optimal academic performance and wellbeing (Childs & DeWit, 2014; Larson et al., 2016).

Tobacco and alcohol use was comparatively low in this population relative to western college samples, even among the late adolescent-young adult age groups. Potentially lower alcohol and tobacco use is due to cost and availability as these substances are heavily taxed and imported. In contrast to a sense of moderation from the majority of students, among the students who did report regular alcohol consumption their pattern of drinking still reflected the harmful form of binge drinking seen among students internationally in both developed western and developing non-western countries (Dantzer et al., 2006). This could be due to a lack of understanding about alcohol risks and standards of alcohol consumption as has been associated with hazardous drinking in other studies (e.g. Bendtsen et al., 2011). Although alcohol use may be sensitive to discuss openly in the Pacific populations where religious teachings and morals are highly valued, this does suggest Universities could undertake a role in promoting fact-based knowledge about how to use alcohol responsibly – especially where the campus has an outlet serving alcohol.

Finally, it is interesting to note relatively low Kava use, even among Fiji-based students, as this is locally sourced and traditional to indigenous cultures. One explanation could be that because Kava use is associated with traditional social rituals students do not tend to consume it outside of these traditional contexts, this is despite a growth in 'kava bars' within urban centers in Fiji. Similarly, as Kava is used as a relaxant at these cultural events it may be less appealing to students interested in substance use compared to alcohol which may be more associated with 'partying' socially.

This study found high levels of psychological stress among pacific students related to their academic studies. For example, the perceived academic performance showed that the vast majority of students rated themselves as less competent in their study strategies, ability to cope with studies and motivation to study. This aligned to the most reported sources of university stress such as academic demands and parental expectations. In addition, there was a clear concern around finances and work/life balance which was also reflected in the significant (though low effect size) correlations between employment status and measures of psychological distress. Pacific Island tertiary institutions may need to do a lot more to support academic *confidence* and not just the skills themselves. This adds to the discussions about the need to develop academic motivation and engagement in pacific students through

positive student-tutor interactions (e.g. Lillis et al., 2015) which may also help to build confidence and reduce the stress of academic studies. In addition, the findings indicate the importance for Pacific Island institutions to more directly acknowledge and account for the external responsibilities many pacific students have alongside their studies. It may also suggest models of education and assessment as a whole need to be modified to allow for different academic motivations and different external responsibilities.

Limitations

The present study represents the first large-scale, systematic survey of student health and wellbeing across the Pacific Island Countries. As such it adds significantly to the predominantly western international literature on student mental health by providing data from an LMIC context and with students representing the residents of a range of non-western small island nations. However, the findings discussed must take into account that the sample still only achieved 7.89% of the total USP population. In addition, there was some over-representation from students enrolled in the Fiji campuses. While almost all campuses had some participation, in many of the regional campuses the sample was less than 5% of the total students at that campus. This was despite strategies to target and increase regional campus participation during data collection. This meant that analyses were collapsed across all campuses to reflect 'Pacific Island students' as a whole and the data could not be used to make meaningful comparisons from students in different nations. This reduces the utility of the findings somewhat.

In addition, the removal of ethnicity from the survey as part of the research ethical review meant that this important mental health variable could not be evaluated. It is therefore suggested that, should this form of monitoring survey be continued in future, the survey should remain open until at least 10% of the total student population has been achieved. As there were a large number of respondents removed from the dataset due to errors, there needs to be consideration about how to encourage better engagement during the survey as well as keeping the survey open longer to allow more overall participation. In addition, more needs to be done to strengthen cross campus representation and to include some appropriate way of indicating ethnic group (at least as an optional item).

Conclusion and future studies

The findings from the present study include some positive indicators of Pacific students being physically active, low on alcohol and tobacco use, and relatively high

on subjective wellbeing. However, there are some causes for concern for example around dietary awareness and patterns of substance use that suggest a need for more knowledge-focused and open factual discussions nutritional choices, eating habits and different patterns of alcohol use. Similarly, the mental health measures show clear symptoms of distress and suicidal ideation among a subset of students across the Pacific. Moreover, the significant concealment of personal distress suggests more needs to be done to normalise talking about mental health and distress, not simply making counselling services available. Finally, the high levels of academic performance anxiety among Pacific students found here suggests the need for more in-depth investigation of the specific causes of this within this population. For example, academic non-confidence and performance anxiety could reflect some social pressure relating to the value of education among Pacific communities; or cultural values of humility; or the nature of institutions bringing internationally accredited programmes to students from a broad range of indigenous educational backgrounds. These potential factors could be further explored through quantitative and qualitative research. Once the underlying nature of this stressor has been further elucidated it can be more specifically addressed not only through enhanced pastoral care but also through separate support initiatives to general wellbeing, coping and resilience development as well as academic and study skill building.

Overall, this first Pacific student survey highlights the potential for annual monitoring of student health and wellbeing and the utility of quantitative data from standard survey measures in this population. As an initial exploration of relevant variables, the study indicates several avenues for more targeted assessments in future research. In particular where more representative cross campus comparisons can be made and where ethnicity as a key mental health factor can be included. The present data also provide some indication of how university-based support services could be strengthened to include more informational guidance around health behaviour and diet choices, promotions to normalise experiencing periods of mental distress, and focused campaigns around study and assessment anxiety.

Acknowledgments

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