Research

Mental health and wellbeing of Pacific students: Protocol of a Prospective cohort study

Faafetai SOPOAGA 1, Shyamala NADA-RAJA 2, Tracie LECKIE 3, Ari SAMARANAYAKA 4

ABSTRACT

**Introduction:** Mental disorders are a significant health concern and an increasing burden for Pacific youth in New Zealand. Approximately 30,000 (30%) of Pacific youth aged 18-24 years are enrolled in tertiary studies with sparse information about their mental health and wellbeing. There is increasing recognition of the impact of stressors and emotional problems faced by students in tertiary institutions internationally. This paper sets out the protocol for the Ola Malohi study which seeks to determine Pacific tertiary students’ mental health and wellbeing, their expectations and experiences, as well as determining risk and protective factors, access and barriers to using health services and their impact on students’ academic progress.

**Methods:** All Pacific students enrolling for the first time and in their first year of study at the University of Otago in 2019 will be invited to participate in this study and be followed for three years. A mixed-method research approach will be used with a survey obtaining information from all eligible students. Of those that participate in the survey, 30 students will be randomly selected to participate in four interviews over the study period.

**Findings/Outcomes measure:** The primary mental health measures are the Kessler 10 (distress), PHQ-9 (depression) and the GAD-7 (anxiety). The primary wellbeing measure utilises a validated Pacific Identity and Wellbeing (PIWBS-R) scale and the WHO-5 (subjective wellbeing). Secondary measures include alcohol use, students’ experience and academic progress. Interviews will provide in-depth perspectives of the students’ journeys, and the relationship to their mental health and wellbeing, including the impact on students’ academic progress.

**Conclusions:** This research seeks to better understand the factors that influence the mental health, wellbeing and academic success of Pacific students in tertiary institutions. The findings will be used to inform advocacy approaches and guide targeted support efforts.

**Key words:** Pacific health, mental health, wellbeing, protocol, cohort

INTRODUCTION

The overall purpose of this prospective Pacific students’ mental health study is to a) determine the factors that impact on university undergraduate Pacific students’ mental health, wellbeing and academic success in higher education, b) qualitatively explore with students their experiences and expectations as they transition into and engage within the tertiary environment and c) describe enablers and barriers to accessing mental health and support services.

Significance of the proposed research

Mental disorders are a significant health concern and an increasing burden for Pacific peoples particularly among youth in New Zealand (NZ). 1-7 The NZ Mental Health Survey for adults 16 years and over reported the prevalence of mental illness in Pacific peoples to be 25% compared to 21% for the total population. 8

Corresponding author: Faafetai Sopoaga, tais.sopoaga@otago.ac.nz.
1. Assoc. Professor, Head, Vaá o Tautai, Associate Dean (Pacific), Health Sciences University of Otago, Dunedin, New Zealand
2. Senior Research Fellow, Centre for Pacific Health
3. Assistant Research Fellow, Centre for Pacific Health
4. Statistician, Division of Health Sciences

Rec: 08.08.2018 Accept: 01.09.2019 Publish: 30.01.2020

The most common hospital admissions for young Pacific people in the 15-24 years age group included depression and bipolar disorders. The Ministry of Health (MoH) has reported that the suicide rates for Pacific youth aged 15-24 years were significantly higher compared to all other ethnic groups.

To address this burden, this study builds on our foundational work on the mental health and wellbeing of Pacific youth in tertiary studies. We are utilising Pacific research methodologies and the Fonofale Model of Health to guide our approach (Figure 1). The Fonofale Model is used to select the measures of mental health, wellbeing, and related factors to be examined. The outcomes will be used to advocate for institutional policy changes, and assist in developing suitable targeted intervention programmes to improve the mental health and wellbeing of Pacific youth in the tertiary environment.

Figure 1. Fonofale Model of Health. Reproduced with permission.

Access to services and receiving the appropriate level of care is also an important area to examine. To ensure equitable health outcomes, equitable access to health is required. Evidence suggests that this is not the reality for many ethnic minorities. For example, Pacific peoples are less likely to access mental health services.

The Pacific population in NZ is young and rapidly growing, making up 7.4% of the total population. At least one quarter (26%) of the Pacific population is aged 15 to 29 years compared to 20% for the total population. The Ministry of Education reported that 11% (30,250) of Pacific peoples were enrolled in the tertiary sector.

**Pacific tertiary students’ mental health**

It might be expected that students in higher education have better mental health than the general population. Research suggests otherwise with concerns around significant stressors and emotional problems faced by students in tertiary institutions internationally. Along with rising demands on student health services. In addition, the types of services that students are seeking help for have changed from minor concerns to more severe psychological problems.

The mental health of Pacific students in the United States is reported to be an increasing concern. In Micronesia, the suicide rates were the highest in young people aged 15-29 years. While 40% of university students in Guam reported moderate to severe anxiety. Despite the mounting international evidence, there is very little known about the availability of mental health services and/or students’ access to these services in tertiary institutions and how these impact on wellbeing and academic achievement. There is even less information about the mental health and wellbeing of Pacific youth in tertiary institutions in NZ. Le Va, a Pacific mental health and wellbeing organisation, has contributed to limited data.

Of direct relevance to the proposed study is recent research with 91 Pacific students in Health Sciences at a University in NZ, that found 45% reported feeling depressed during the academic year. However, 33% of these students delayed seeking health care because of costs.

This research aims to improve outcomes for Pacific students in tertiary institutions by identifying ways to improve their mental health and wellbeing and academic success.

**METHODS**

Pacific students who enrol for the first time, and are in their first year of study at the University of Otago in 2019 are eligible to participate. The specific objectives of the study are to:

1. describe the mental health and wellbeing of Pacific students in the first three years at university.
2. determine the risk and protective factors that influence their mental health and wellbeing.
3. examine students’ expectations and experiences in accessing support services to identify the access and barriers to these services.

4. determine the role of access to health and other support services on mental health and wellbeing, and their impact on students’ academic progress.

The study cohort will be followed for three years. Data will be collected using a mixed-method research approach. Quantitative (surveys) and qualitative (interviews) methods will be used. The survey will obtain information on students’ background such as age, gender, ethnicity, religion and family context. It will also use validated measures to capture students’ mental health, wellbeing, expectations and experiences at the university. We will explore students’ use of health and support services including barriers to access. Interviews will provide rich and in-depth knowledge and an understanding of the students’ journeys and the relationship to their mental health and wellbeing over the study period. In addition, the impact of all of these factors on academic progress will be examined.

Inclusion criteria

The inclusion criteria are all first year students who identify with at least one Pacific ethnicity and enrol for the first time at the University of Otago in 2019. We estimate there will be approximately 300 Pacific students who will fulfil these criteria in 2019. From our experience in previous research, we expect 80% participation for the quantitative component (survey) in the first year, retaining 70% over 3 years. For the qualitative component (interviews), we aim to recruit 30 participants and expect to retain 90% over 3 years.

Advisory Groups

Three advisory groups provide support for the development and progress of this study. These are the Pacific Advisory Group (PAG), Technical Advisory Group (TAG) and the Student Advisory Group (SAG). The PAG consists of local Pacific community leaders from the six largest Pacific ethnic groups and is chaired by a community leader. The TAG consists of University staff with psychiatric and medical expertise, directors and staff of student wellbeing committees, including those who have a specific role for the provision of support for Pacific students. This group is chaired by the manager of the University’s Pacific Islands Centre. The SAG consists of representatives of the eight established on-campus Pacific students’ organisations, and is chaired by the president of the Pacific Student’s Council.

Quantitative component methods and analysis

Research approach

Two surveys will be conducted in each of the three years with recruitment methods based on previous studies. The key to the success of the recruitment process is the early involvement of University Pacific staff and student organisations in the process and sustained and effective engagement with these groups during the study.

Recruitment process and consent

There are two semesters in an academic year each consisting of 13 weeks. In Week 4 of Semesters 1, all eligible Pacific students will receive an invitation email including an information sheet (Figure 2). Students will be recruited for the survey over one month. Those who do not complete the survey within two weeks will receive a reminder email. During the final two weeks of recruitment, students who have yet to complete the survey will be sent weekly reminders. We estimate having 300 Pacific students starting university studies in 2019, and expect 80% retention rate each year (Table 1). All first year students (300) in 2019 will be invited to complete the surveys and 30 for the interviews.

Table 1. Number of Pacific students expected to participate in the surveys and interviews from 2019 to 2021.

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester</th>
<th>Survey numbers</th>
<th>Interview numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>1</td>
<td>240</td>
<td>30</td>
</tr>
<tr>
<td>2019</td>
<td>2</td>
<td>240</td>
<td>30</td>
</tr>
<tr>
<td>2020</td>
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<td>192</td>
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<tr>
<td>2020</td>
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<td>192</td>
<td></td>
</tr>
<tr>
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<td>1</td>
<td>150</td>
<td>19</td>
</tr>
<tr>
<td>2021</td>
<td>2</td>
<td>150</td>
<td></td>
</tr>
</tbody>
</table>

Participants who complete a survey have the chance of winning one of five $100 prize vouchers. Participants will also be invited to a catered function to acknowledge their participation at the end of each year.

All participants are required to provide informed consent prior to completing the survey. Data
collected will include students’ ID, which will be used to link data for the same person from multiple sources, after which the student ID will be replaced with a non-identifiable study identification number. This unique study identification number (study ID) will be used for purposes such as tracing students who have yet to complete the survey in following occasions, and checking for duplications with prior consent from the students.

The research team will have access to the de-identified data (for eg, survey, interview, and academic achievement data), but only the primary investigator has access to the link between student ID and study ID, to maintain the confidentiality of participant’s responses.

**Principal assessment measures** (Figure 3).

The primary mental health measures are: the Kessler K10 (psychological distress) which provides a summed score for the 10 items, with high scores indicative of high psychological distress. The PHQ-9 (depression) uses responses summed across the nine items to produce a total score to assess the severity of depression. For the GAD-7 (anxiety), scores are summed with high scores indicating severity of a Generalised Anxiety Disorder. The PHQ-9 and the seven-item GAD-7 have been used in similar contexts to assess and screen for common mental health problems in tertiary students.

These are indicators of the mental health component in the Fonofale model.

**Figure 3. Principal assessment measures to test the Fonofale model**

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**Figure 2. Timeline for surveys and interview recruitment processes**

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester 1</th>
<th>Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2020</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Mid-year

Key:
- X Survey (semester weeks 4–7)
- I Interviews (semester weeks 9–12)

The primary wellbeing measure is a validated Pacific Identity and Wellbeing (PIWBS-R) scale. There are six components in the PIWBS-R scale, a culturally informed self-reported measure for wellbeing. The PIWBS-R scale uses lines of enquiry which explore participants’ sense of belonging within the family and NZ context, connectedness to the Pacific community, perspectives on church and religion, and identity and engagement within their own cultural

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context. These are indicators of the family, culture, and spirituality components in the Fonofale model. In addition, we will use the five-item World Health Organisation Wellbeing Index (WHO-5), 40 to assess overall wellbeing and examine its associations with the Pacific measure (PIWBS-R) and mental health measures.

A secondary outcome measure is students’ academic progress. Permission will be obtained from participants to access their academic records over the study period. This information will be used in combination with the students’ self-reported perceived academic achievement to provide a measure of academic progress.

Covariate measures related to mental health and wellbeing include: alcohol use assessed by the Alcohol Use Disorders Identification Test (AUDIT-C) using a scale of 0–12. 49 Other covariates such as social connections, expectations and experiences, self-rated health, will be assessed by questions that have been used previously with Pacific health science students. 10 These measures will be used to assess the components of physical, context, and environment attributes of the Fonofale model. Standard demographic information such as age, gender and socioeconomic status indicators will also be collected as indicators of the ‘Other’ component in the Fonofale model. The time component from the Fonofale model is included by following students over the three year period.

Quantitative component analysis

For objective 1, descriptive statistics will be used to outline and summarise any changes in students’ mental health and wellbeing over the three years.

For objective 2, 3 and 4, univariate measures such as means (for continuous measures) and proportions (for categorical or grouped measures) with associated confidence intervals, and bivariate statistical methods such as chi-square test will be used to screen socio-demographic and other characteristics likely to be predictive of poor outcomes. Given the prevalence of mental health issues is expected to be in the 13%-25% range, 50 with the student cohort of 300 and 80% participation rate, we will be able to estimate poor mental health with a margin of error of 5%.

This sample size also allows us to estimate the prevalence of wellbeing issues with slightly lower precision of 6% due to its higher prevalence expected to be about 30% to 35%. 51

We will then develop regression models that are aligned with, and test the Fonofale Model. Generalised linear models for continuous outcomes and modified Poisson regression with robust standard errors for binary outcomes 52 for each of the main outcomes will be used to examine the direct effects of the postulated predictors, after adjustment for a wide range of confounders. Decisions around the inclusion (or not) of predictors and potential confounders will be informed by existing literature, previous analyses 10 and findings from univariate analyses above.

Following above point-of-time analyses for each of the three primary outcome measures, we will incorporate data from multiple time points to extend the analysis to cope with repeated measurements (i.e. generalised estimating equation models, generalised linear mixed models). This will enable us to characterise subgroups of students with improved (and worsened) outcomes over time. Exposure-by-time interactions will be included, as appropriate, for repeated measures.

Although dropout rate is expected to be small, we will consider multiple imputation or other techniques such as Inverse Probability Weighting to address missingness and conduct sensitivity analyses as appropriate 53.

Qualitative component methods and analysis

Research approach

Face-to-face interviews will be conducted using the Talanoa Pacific research methodology. 54 Talanoa establishes meaningful engagements, encourages connectedness between the researcher and the participant, focusing on the oral nature of sharing knowledge, builds trust in relationships, and encourages development of rich and authentic talanoa (conversations). Developing and maintaining respectful relationships is the key to ensuring meaningful data is obtained. The interviews will be guided by an open semi-structured interview schedule in keeping with the Fonofale model, which allows exploration of participant experiences and views.

It is recognised that conversations around mental health is a sensitive area. The research environment and venue for interviews will be carefully selected to ensure Pacific youth feel comfortable allowing exploration of general issues they consider to be important.

Recruitment & consent process

Thirty participants will be randomly selected among the survey participants in February 2019, stratified by gender, and invited via e-mail to participate in the interviews over three years. Where a potential participant declines involvement, he or she is reassured this is
cally acceptable and the next person randomly selected from the list will be invited. Each participant will be interviewed four times over the three year period (see Figure 2). Two interviews will be conducted in the first year and one in each subsequent year. Respondents will receive a gift to the value of $20 as an acknowledgment after each interview.

The interview will be approximately one hour, audio-recorded, transcribed within three weeks, and provided to participants for checking. The final version will be uploaded to NVivo 11 software, organised into folders from each interview period.

**Qualitative component analysis**

Researchers will review and analyse the data using the inductive approach. Transcripts will be reviewed by two researchers to generate an initial series of coding categories. It is expected there would be about 30 to 40 coding categories that emerge from initial analysis. These categories will be reviewed and analysed by the whole team and further refined. The outcomes from the second step will be discussed with the Research Advisory Groups. Following this, the results will be further refined with 6-8 key themes expected to emerge from the final analysis.

In qualitative research, it is important to acknowledge that interpretations of the data are shaped by the assumptions and experiences of the research team. While every attempt will be made to ensure the themes are developed reflexively in the context of an awareness of the diversity of Pacific values, experiences and models of health, the pan-Pacific and intergenerational nature of this project means that some nuances of responses may be misunderstood. The underpinning of the study design and interview protocols by Pacific processes and values will embrace a diverse range of Pacific perspectives and processes, supporting their integrity in the analysis process.

**Ethics Approval**

Ethics approval has been granted by the University of Otago Human Research Ethics Committee, Reference: H18/119. Participants will provide informed consent for linking their academic marks to the survey and interview responses. The research team is mindful of the power imbalance between the researchers (staff) and participants (students), and will take extra care to ensure safe and respectful processes for all involved. There are risk assessment procedures to assist students who are identified as requiring support as outlined below.

Risk Assessment procedures: where a student is identified as requiring further support from our research;

a) a separate appointment is made with the primary investigator (or relevant team member) to explore further what specific need or service is needed
b) where required, the student is supported to seek further assistance and medical help from Student Health, Pacific support and other relevant services.
c) an information guide is also provided to students about the helpful services available on line and within the University including emergency numbers (who complete the online or hard copy surveys and those involved in interviews).

**EXPECTED OUTCOMES/IMPACT**

There is increasing recognition that mental health concerns such as anxiety and depression need to be better understood among Pacific youth in tertiary institutions. Results will have implications for 1) improved understanding of the mental health and wellbeing of Pacific students in tertiary institutions, 2) improved targeting of health and support services, and 3) improved strategies to support academic success. The findings from the research will assist in influencing decision makers in tertiary institutions about specific areas for targeted efforts, to improve the mental health wellbeing and success of Pacific youth in tertiary institutions.

**CONCLUSION**

This paper sets out the protocol for a study on Pacific tertiary students’ mental health and wellbeing, their expectations and experiences. We are testing the Fonofale Model of Health and its key components with respect to mental health and wellbeing of Pacific students. The findings from the study will assist in supporting the mental health and wellbeing of Pacific students in the tertiary environment.

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