

Building a Pacific health workforce in New Zealand: Initial findings from a transition project in first year health sciences at university. A Practice Report

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Abstract

Pacific peoples are a migrant minority ethnic group in New Zealand. They suffer disproportionately from poor health and education outcomes compared to the total population, and share similar socio-economic challenges with Māori the indigenous people of New Zealand. Improving education outcomes can contribute to improving health outcomes. Pacific peoples are poorly represented in the health workforce. The Pacific Orientation Program at Otago (POPO) initiative is a new program seeking to provide a holistic approach to improving academic outcomes for Pacific students in health sciences in New Zealand. The program involved setting up systems for support, monitoring performance and addressing concerns early in the first year at university. This article outlines the development of the program, lessons learnt, and early indications of its usefulness in improving academic outcomes for Pacific students studying first year health sciences at university.

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Background

Pacific peoples living in New Zealand are a migrant minority ethnic group (Statistics New Zealand, 2010) and are over-represented in poor health statistics and socio-economic determinants of health when compared to the total population (Ministry of Health, 2008; Statistics New Zealand, 2010). Pacific peoples share many concerning socio-economic factors which influence health with Māori, the indigenous people of New Zealand (Ministry of Health, 1999). Education is an important determinant of health, and addressing this will assist in improving outcomes (National Health Committee, 1998). Pacific health professionals make up 1% of doctors, 2.8% nurses, 0.7% physiotherapists, 0.5% dentists, and 0.2% pharmacists in the New Zealand health workforce (Ministry of Health, 2004). Increasing the number of Pacific peoples successfully completing health education training will contribute to improving outcomes, and provide a diverse workforce for a multi-ethnic society in New Zealand. The issues involved however are complex and influenced by student development and preparation prior to university (Ministry of Education, 2006), transition and experiences at university (Kantanis, 2000) and socio-economic and cultural factors (National Health Committee, 1998).

Students who wish to enter a health professional course at the University of Otago are required to enrol in the competitive Health Science First Year (HSFY) course (University of Otago, 2010a). The academic requirements for entry into a health professional course vary across different programs within the Division of Health Sciences (University of Otago, 2010b). Some health professional

courses in the Division have Affirmative Action Programs for minority groups, which seek to increase the entry of students from under-represented minorities. Similar programs are offered in the USA and UK universities (Searle, 2003; Yergan, et al., 1988). The number of Pacific students successful in entering health professional courses following the HSFY course however is low, and numbers have not increased over the past decade (University of Otago, 2009).

Previous studies have outlined the importance of the “first-year experience” for students in Universities (Krause & Coates, 2008; Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008). Many tertiary institutions in the USA, UK and more recently in Australasia have used national student surveys focussing on “student engagement” to identify areas associated with successful academic outcomes (Coates, 2010; Kuh, 2003; Mann, 2001). “Engagement” is the extent to which students devote to educationally purposeful activities and the policies and practices that institutions use to encourage students to take part in these activities (Krause & Coates, 2008; Kuh, et al., 2008).

Aim of project

This project looked at a holistic intervention approach, targeting ways to improve engagement and outcomes for Pacific students studying health sciences first year at the University of Otago: the Pacific Orientation Program at Otago (POPO). The word POPO has three meanings in the Samoan language that captures the essence of this new initiative.

Popo – a mature coconut from which new life emerges (“new life” is symbolic)

of new students with aspiration to grow and be successful in the higher education environment);

Pōpō – to nurture (represents the hope education institutions will “nurture” the abilities of Pacific students, so they can reach their full potential);

Popō – to capture (is an invitation to Pacific students to “capture” all opportunities and support provided for them by education institutions, their families and communities).

Intervention

All first year health science students who identified as Pacific from the University data base in February 2011, were sent a package two weeks before orientation containing information about the POPO initiative. The initiative had an “opt-out” approach. Pacific students were included in the program unless they indicated they did not wish to participate. Students were met by Pacific staff at course enrolment during the orientation week. They were welcomed by the Dean, staff and the local Pacific community at the official launch of the program prior to the start of the academic year. The POPO initiative was a collaborative effort between the Health Sciences Division, Student Learning Centre and the Pacific Islands Centre with support from the Pacific community. The POPO initiative was funded by the Ministry of Health and conducted during the first semester.

Peer educators

Peer educators who were senior students from the Pacific Islands Health Professional Students’ Association (PIHPSA) ran the program. They were given initial training

prior to engaging with first year students. Peer educators met with POPO students each week to provide general guidance, academic support and information about other support networks and systems within the University and the local community. The general outline of the program is in Table 1. Peer educators also met weekly for an hour for further de-brief sessions with staff during the program.

Monitoring of engagement and performance

A monitoring system was developed where data on students’ attendance at laboratories, internal assessments and access to Blackboard¹ were obtained. Attendance of students at tutorials was also monitored. Early warning systems identified students who needed more assistance. The local Pacific community worked together with University staff in the provision of a holistic support network approach.

Academic performance during the first semester for Pacific students involved in the POPO program was obtained and compared to Pacific students not involved in the program. Academic achievements in science subjects at high school were also obtained to assess preparedness prior to attending university.

¹ Blackboard is a learning management system.

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Table 1 Six week structured POPO program

When	Primary Focus	Other foci
Week 1	<ul style="list-style-type: none"> Understanding university and course expectations. Peer Educators get their students to “unpack” course outlines and discuss their understanding. <p><i>Message: High school and university are different</i></p>	<ul style="list-style-type: none"> Making students aware that course can be changed. <p>Enrolling in Pacific Island Centre or College tutorials</p>
Week 2	<ul style="list-style-type: none"> On track? Use <i>Academic Health Check-up</i> Cornell Method of ongoing note-taking revision Setting up study groups <p><i>Message: Research can teach us what study approaches work & study skills can be learned</i></p>	<ul style="list-style-type: none"> Information over-load <p>Making students aware that courses can be changed</p>
Week 3	<ul style="list-style-type: none"> Note-taking and making students bring examples of the last two weeks. Cornell used? Other note-taking approaches <p><i>Message: Success is not due to chance</i></p>	<ul style="list-style-type: none"> Home sickness <p>Making students aware that courses can be changed</p>
Week 4	<ul style="list-style-type: none"> Dealing with being over-whelmed and keeping motivated. Strategies for adaptive help-seeking <p><i>Message: Seeking support/help is normal</i></p>	<ul style="list-style-type: none"> Last week for course change.
Week 5	<ul style="list-style-type: none"> Dealing with assignments. Mid-term test preparation <p><i>Message: Study groups are effective</i></p>	<ul style="list-style-type: none"> There are guidelines for effective group work
Week 6	<ul style="list-style-type: none"> Staying on track – refined time planning for the second half of the semester How to use existing resources <p><i>Message: Success is not due to chance</i></p>	<ul style="list-style-type: none"> A “tour” of the many printed study skills sources
Week 7-13	Determined by the needs of the cohort.	

Table 2 NCEA Science subject results of Pacific students studying first year health sciences compared to all health science students at Otago in 2011

	Biology	Chemistry	Physics	All three subjects
Pacific students	32.95	21.21	18.79	72.95
All health science students	45.78	42.50	35.26	123.54

Table 3 Comparison of academic results of POPO students to Pacific students who did not participate in the program in the first semester, 2011

First semester 2011 exam results	POPO students	Non-POPO students
Number of Pacific students	39	9
A/B grade average	15(39%)	0
C-/C+ average	10(26%)	5(56%)
Fail	14(36%)	4(46%)

Table 4 Comparing the performance difference for Pacific students in the POPO program

No of POPO sessions attended	N	Mean	SD
0	6	45.13	14.49
1-6	20	53.91	16.65
7-11	16	63.94	16.75
Total	42	56.48	17.33

Results

There were 48 Pacific students in the first year health sciences at the University of Otago in 2011. Of these students, 39 (81%) participated in the POPO initiative. POPO students identified as needing more help were offered additional assistance. Peer educators reported an appreciation of the additional support from POPO students. Many felt the engagement with senior students provided an extended family environment in their first year at university. This enabled them to settle in quickly in the new learning environment.

Table 2 outlines the achievements of Pacific students in science subjects prior to entering university. The values shown are the means for the weighted NCEA² results in high schools for three science subjects. These results indicate Pacific students were considerably less well prepared for the first year at university compared to All health sciences first year students.

Academic results following first semester exams are shown in Table 3. This is the average of results from all exams in the first semester. Students who participated in the POPO program would appear to have better grades compared to those who did not participate in the program.

The first semester results were compared with the attendance figures for the POPO

² New Zealand's National Certificate of Educational Achievement. During their last year at high school, students accumulate three credits in a range of subjects. They can achieve these at the level of "achieve", "merit" or "excellence". Where NCEA scores are reported as "weighted", this means that the accumulated credits are weighted by level of achievements (by factor of 2,3,4, respectively).

program. Table 4 suggests there may be a positive relationship between the number of sessions attended and the calculated mean mark for the four units of study. For six students the marks were not available for all four subjects (this could be for a variety of reasons, e.g. students may have been offered a re-sit). These students are not included in Table 4 explaining the difference with the numbers in Table 3.

Discussion

The POPO initiative was helpful for Pacific students' transition into the first year health sciences at university in New Zealand. The program enabled students to feel welcomed and to develop networks and new friendships which helped their transition into the new environment. Evaluation data suggested that the POPO program could have contributed to a slightly better academic performance of students. However, the program could not bridge the gaps in the required knowledge in science subjects from high school. Table 2 outlines the differences in achievements of Pacific students in the science subjects compared to all other health sciences students. The greatest predictor of success in first year health sciences at university level were the students' NCEA performance in science subjects at high school. A comparison with results of the 2010 cohort was not appropriate because the characteristics of students were too different. The 2010 cohort had fewer students with NCEA scores and the mean scores for the 2011 cohort were approximately 25% higher.

Discussions from the First Year in Higher Education (FYHE) 2011 conference presentation suggested that involving

families and communities is vital in the success of these types of initiatives. The importance of working collaboratively with schools and Pacific communities to develop a clear pathway forward in the transition year was acknowledged. Some institutions have developed outreach programs to high schools, which assisted students in the transition from high schools to the higher education environment. These suggestions have been very well received, and will be incorporated in the running of the transition program for Pacific health sciences first year students at the University of Otago. Further changes are being considered to the POPO program for 2012. This may include a greater focus on academic revisions as part of weekly meetings; and these sessions will have extended time. Our tentative title for this added component is "POPO-letics," akin to Athletics, a competitive and interactive way to rehearse course content in a supportive environment.

Conclusion

Higher Education Institutions have a responsibility to provide effective support for all students in the first year at university. Pacific students studying health sciences require more support because they are less prepared compared to all other students. Providing clear pathways for these students in health sciences from high schools to universities ought to be considered. A coordinated approach involving high schools and tertiary institutions is required. This is likely to increase the success of Pacific students in health sciences at the tertiary education level, and to provide a pathway to increasing the number of Pacific peoples in the New Zealand health workforce.

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