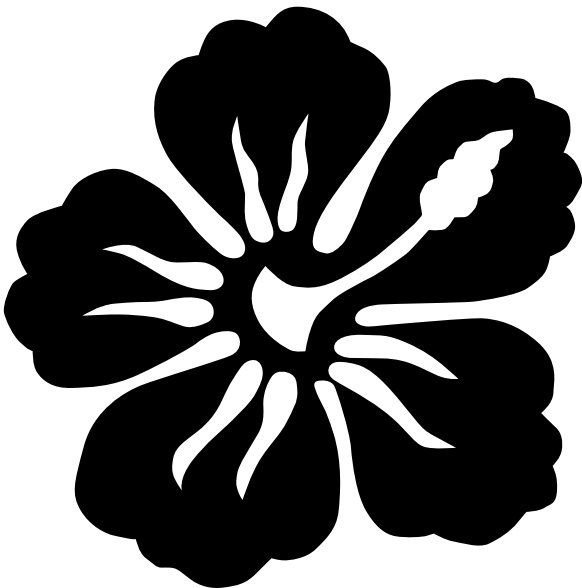
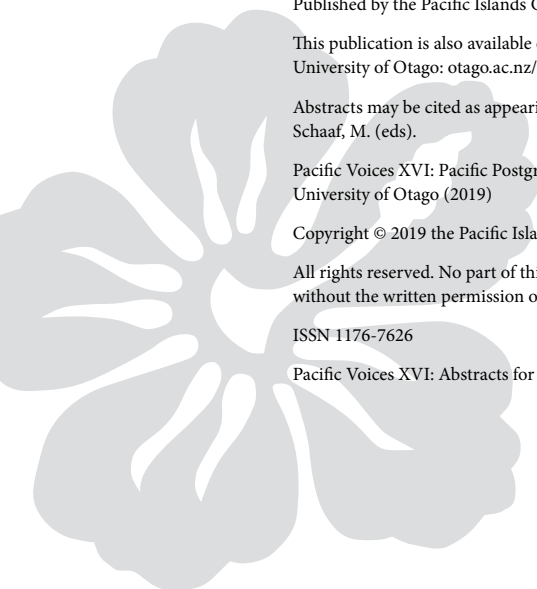


Pacific Voices XVI

PACIFIC POSTGRADUATE SYMPOSIUM

26 SEPTEMBER 2019





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Pacific Voices XVI: Abstracts for the Pacific Postgraduate Symposium

Foreword

A warm Pacific welcome to the *Pacific Voices XVI* Postgraduate Symposium 2019! This symposium showcases research by Pacific postgraduate students. At the University of Otago we are fortunate to have a very talented group of Pacific postgraduates whose research will make a significant contribution to a range of fields, with widespread application to the Pacific region and beyond. Congratulations to those students whose work features in these Proceedings for the *Pacific Voices XVI* Postgraduate Symposium. Their research is inspiring, impressive and importantly, it will make a difference!

The participants of *Pacific Voices XVI* Postgraduate Symposium, 2019 are all part of a vibrant graduate research community. These postgraduate students and their supervisors push the boundaries of knowledge, with new ideas, creativity and enthusiasm.

I am sure that readers of *Pacific Voices XVI* will be impressed with the quality and variety of research that is reported in this volume. In 2019 the presentations span a range of disciplines across the University including microbiology and immunology, psychology, peace and conflict studies, environmental sciences, international health, marketing, theology and religion, physiotherapy, nursing, physiology and education. The topics range from 'Youth and Spirituality in the Pacific' to 'Climate Change, Conflict and the Pacific Islands' and 'Otago: Fighting Tuberculosis on the Home Front'. These are just a few of the presentations that are included in this Symposium. Geographically, the research being reported includes issues in Tonga, Samoa and the Pacific in general, as well as issues related to Pacific Islanders in Aotearoa/New Zealand.

Finally, on behalf of the University, I would like to thank all those responsible for *Pacific Voices XVI*, and in particular Tofilau Nina Kirifi-Alai and Alison Finigan. As we celebrate the University's 150th year, we applaud this symposium and we look forward to continuing to strengthen and develop Otago's involvement in the Pacific region.



Professor Harlene Hayne ONZM, PhD, HonDSc, FRSNZ
Vice-Chancellor

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JOANNA HO YIN CHAN (陳可妍)

.....

Nō Hong Kong hoki ōku tīpuna. Kei te mihi ahau ki te maunga, ko Kahuranaki. Kei te mihi ahau ki ngā awa, ko Ngaruroro rāua ko Tukituki. Kei te mihi ahau ki te mana whenua, ko Ngāti Kahungunu ki Heretaunga. I whānau mai au i Heretaunga Hastings koia tōku tūrangawae. Ko Araiteuru tōku marae. Ko Chan tōku whanau.

Joanna is New Zealand Chinese, born and raised in Heretaunga (Hastings, Hawke's Bay). She is currently undertaking a PhD in Psychology, funded by a University of Otago Doctoral Scholarship. Joanna's research focuses on addressing the sociodemographic inequities within clinical psychology training across Aotearoa so that the workforce can meet the mental health needs of our diverse communities.

Academic department: Psychology

Division: Humanities

Supervisors: Dr Damian Scarf
Associate Professor Jackie Hunter

Email: joanna.chan@postgrad.otago.ac.nz

SOCIODEMOGRAPHIC DIVERSITY AND INCLUSIVITY WITHIN CLINICAL PSYCHOLOGY TRAINING

Joanna Ho Yin Chan, Damian Scarf, Jackie Hunter

Diversity includes differences in age, gender, ethnicity, sexuality, national origin, socioeconomic background, religion, physical and mental abilities, and individuality. Given the state of Aotearoa New Zealand's mental health status, the current socio-demographic makeup of clinical psychology trainees and psychologists within the workforce highlights the urgent need for diversity and inclusivity within clinical psychology training, so that the mental health needs of our diverse communities can be adequately met by the profession. Insight into clinical psychology programmes indicate that training content appears to be predominately Eurocentric¹, while disparities are present within the socio-demographic makeup of students: European females are substantially over-represented in the training programmes, while every other socio-demographic group are significantly under-represented².

This project aims to explore the experiences of under-represented groups within clinical psychology training so that barriers to achieving equity within the profession can be addressed. Further, the extent that the course material of training programmes reflect the needs and aspirations of our diverse communities in achieving mauri ora (flourishing wellness) will also be explored. We aim to repeat Abbott and Durie's (1987) study to document how clinical psychology training programmes and policies have changed since then, while also capturing other dimensions of socio-demographic diversity such as social class, sexuality, and gender identity.

Keywords: Sociodemographic diversity, inclusivity, clinical psychology training, mental health

-
- 1 Abbott, M.W., & Durie, M.H. (1987). A whiter shade of pale: Taha Māori and professional psychology training. *New Zealand Journal of Psychology*, 16, 58-71.
 - 2 Scarf, D., Waitoki, W., Nikora, L.W., Britt, E., Macfarlane, A.H., Macfarlane, S., ... & Abbott, M. (2019). Holding a mirror to society? Sociodemographic diversity within clinical psychology training programmes across Aotearoa. *New Zealand Medical Journal*, 132, 79-81.



MINO CLEVERLEY

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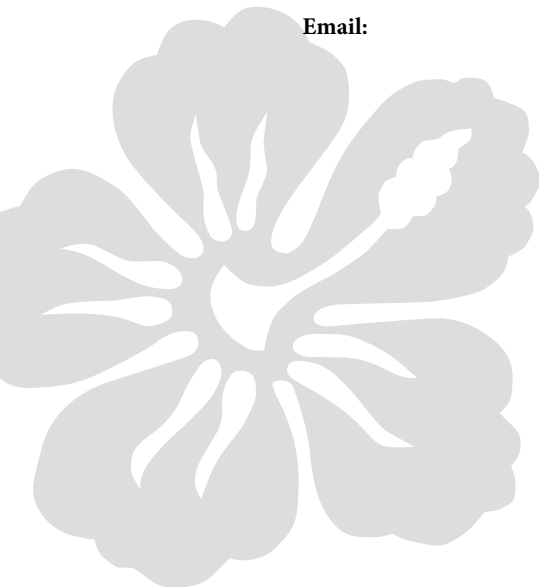
Mino Cleverley commenced his PhD with the National Centre for Peace and Conflict Studies, University of Otago, in 2019. A qualified Civil Engineer, Mino wants his research to be of practical assistance to Pacific Island countries adapting to the effects of climate change.

Academic Department: National Centre for Peace and Conflict Studies

Division: Humanities

Supervisors: Dr Sung Yong Lee
Dr Ria Shibata

Email: mino.cleverley@postgrad.otago.ac.nz



CLIMATE CHANGE CONFLICT AND THE PACIFIC ISLANDS

Mino Cleverley, Sung Yong Lee and Ria Shibata

This thesis examines the pathway from climate impacts to conflict in the Pacific Islands. Researchers have not agreed on the extent climate plays in triggering conflict, but a recent authoritative report synthesising the views of an international panel of experts spanning social science disciplines (economics, geography and environmental sciences), epistemological approaches and previous diverse conclusions about climate and conflict agreed climate variability, hazards and trends have affected organised armed conflict within countries. However, the report stated factors such as low socioeconomic development, state capability, intergroup inequality and recent violent conflict were much greater drivers of conflict than climate. The voices of indigenous peoples were a notable absence in the report.

This project attempts to address this gap by focussing on Samoa and exploring mechanisms and contextual factors such as loss/erosion of land, forced relocation, changes to agricultural output and the role of institutions as well as responses to policy that may link climate change to conflict and insecurity. Samoa's Community Integrated Management Plans, as blueprints for climate change intervention will be explored together with the views of interviewees from a select group of participants in Samoan villages and Government Departments.

Keywords: Climate change adaption, conflict, indigenous, Samoa

3 J. Mach, Katharine & M. Kraan, Caroline & Adger, W & Buhaug, Halvard & Burke, Marshall & Fearon, James & Field, Christopher & S. Hendrix, Cullen & Maystadt, Jean-Francois & O'Loughlin, John & Roessler, Philip & Scheffran, Jürgen & A. Schultz, Kenneth & von Uexkull, Nina. (2019). Climate as a risk factor for armed conflict. *Nature*. 571. 10.1038/s41586-019-1300-6.



KAKAU FOLIAKI

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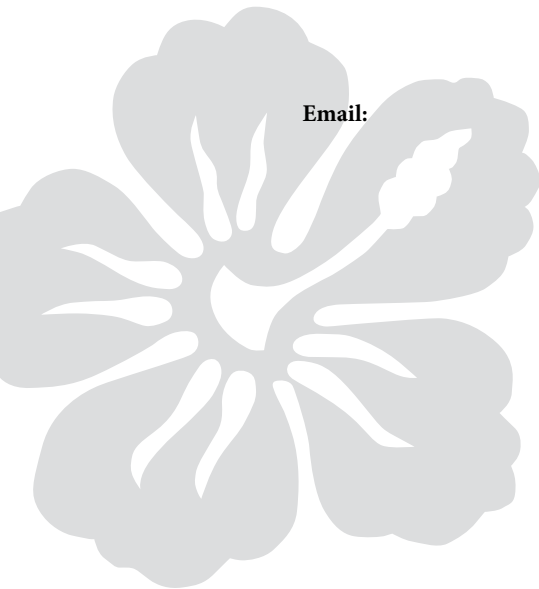
Kakau is from Tonga, studying towards his PhD in Energy Policy at the University of Otago, supported by a New Zealand Aid scholarship. He holds a BSc in Biology and Chemistry from the University of the South Pacific (2008) and a Master of Environment (Energy Efficiency) from the University of Melbourne (2013).

Academic department: Geography
Centre for Sustainability (CSAFE)

Division: Humanities

Supervisors: Dr Janet Stephenson
Dr Ben Anderson
Dr Patrick Vakaoti (Sociology, Gender Studies and Criminology)

Email: kakau.foliaki@postgrad.otago.ac.nz



UNDERSTANDING THE ENERGY CULTURES OF TONGAN HOUSEHOLDS: IMPLICATIONS FOR EFFECTIVE ENERGY EFFICIENCY POLICY

Kakau Foliaki, Janet Stephenson, Ben Anderson and Patrick Vakaoti

Energy efficiency is a low-cost strategy for mitigating global warming while ensuring energy security. The government of Tonga recently developed its 10-year Energy Efficiency Master Plan to promote energy efficiency development. While the government acknowledges the benefit of energy efficient technologies, supported by financial incentives, it has been short-lived. Energy consumers tend to revert to energy inefficient habits. The limited research on energy efficiency in Tonga has also contributed to the lack of energy efficiency improvement. This research argues that energy behaviour is the missing link for long-term energy efficiency improvement. We need to understand the factors that shape the behaviour of energy consumers. Hence, this research draws on the Energy Culture Framework (ECF), an interdisciplinary approach that brings various disciplines such as psychology, engineering, culture, religion, economics, science and health into energy research in order to understand energy issues. We designed household surveys, interviews and a time-use diary using the ECF key variables; (i) material culture (appliances) (ii) energy practices (cooking etc.), (iii) social norms (culture, traditions, belief, value etc.) and (iv) external factors (government tax, policies, fuel price etc.) to suit the country context. While this research is at its early stage of data collection, it is anticipated that the outcomes will provide a better understanding of energy behaviour in Tongan households and uncover the barriers that limit effective practices (or effective uptake) of energy efficiency and thereby improve energy efficiency policy in Tonga.

Themes: - Integrated planning and policy approaches
- Integrated strategies for increasing sustainable energy in both generation and end-use sectors, including reducing demand and behavioral change

Keywords: Energy efficiency, energy behaviour, household energy consumption, energy policy, small island states.



TUMANU FUTU

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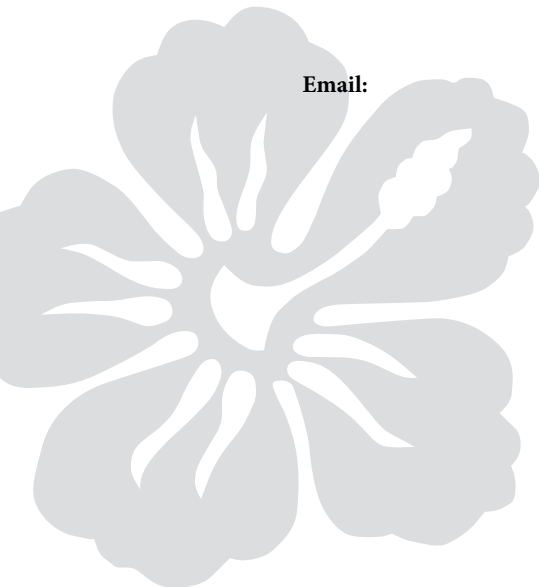
Tumanu Futi is of Samoan descent. She is studying towards a MSc degree in Physiology. Tumanu completed her BSc and PGDipSc in the Department of Physiology. This year she is researching the cause of earlier admission of Pacific and Māori into Dunedin Hospital for cardiac surgeries. Her MSc is being funded by HRC.

Academic department: Physiology
School of Biomedical Sciences

Division: Sciences

Supervisors: Dr Zoe Ashley
Dr Regis Lamberts
Dr Andrew Bahn

Email: tumanu.futi@postgrad.otago.ac.nz



IS CARDIAC FIBROSIS ASSOCIATED WITH AN EARLIER REQUIREMENT OF SURGICAL CARDIAC INTERVENTION IN MĀORI AND PACIFIC PATIENTS?

.....
T Futi, Isabelle von Hout, Ingrid Fomison-Nurse, Andrew Bahn,
Zoe Ashley and Regis Lamberts
.....

Cardiovascular disease is the leading cause of death worldwide. In New Zealand, Pacific and Māori populations carry the heaviest burden of disease and require cardiac surgery at much younger ages, compared to NZ Europeans (56 and 62 vs. 79 years, respectively). Fibrosis is the excessive deposition of collagen within tissue, often following cardiac injury. Cardiac fibrosis increases the stiffness of the heart, eventually leading to cardiac impairment and reduced quality of life. This study aimed to determine whether cardiac fibrosis is the factor driving the earlier requirement for intervention for Pacific and Māori.

With informed consent, right atrial appendages (RAA) from male cardiac surgery patients were collected (28 total). Patients were allocated into specific ethnicities: Pacific, Māori, and two groups of NZ European. One NZ European cohort was the average NZ European age, and the second was a cohort age-matched to the Pacific group.

The amount of collagen present in the RAA samples was quantified by Picric Sirius Red histological staining of frozen sections. Percentage collagen was determined by colour specific analysis of digital images.

No significant difference in collagen deposition in the RAA samples across the ethnicities was found; [Pacific: $22 \pm 14.0\%$; Māori: $40.6 \pm 22.9\%$; NZ European Average: $34.1 \pm 13.2\%$; NZ European Matched: $28.1 \pm 12.7\%$] (mean \pm SD, $p=0.1946$, ANOVA). Also, there was no correlation between collagen and age ($R^2=0.01105$ and $p=0.5944$). Interestingly, within the Māori group, a correlation was observed between collagen and body mass index ($R^2=0.5498$, $p=0.0282$), which was not observed in the other cohorts.

This data indicates that cardiac fibrosis is not different in these patient cohorts requiring earlier surgical intervention. However, analysis does highlight differences between Pacific and Māori populations, and these cohorts should, therefore, be considered as separate entities, rather than combined.

.....
Keywords: Cardiovascular disease, fibrosis, Pacific and Māori health



**LUPEOLETALALELEIAMAIMA
ISAIA**

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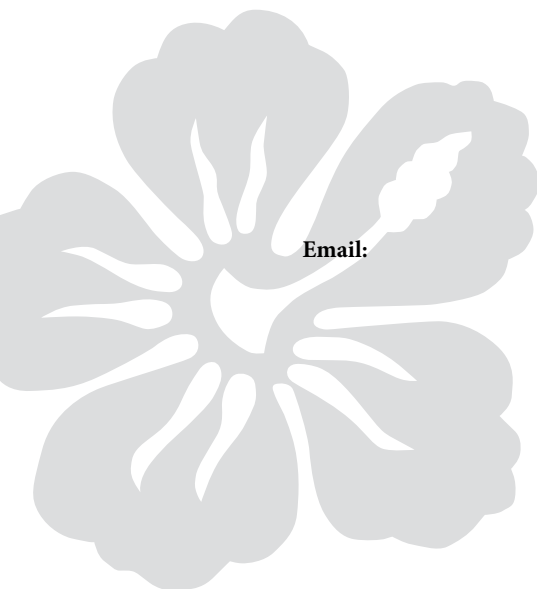
Lupe is a medical laboratory scientist from Samoa. She obtained her Bachelor of Medical Science and Master of Science in Medicine (Infection and Immunity) from the University of Sydney. She is a recipient of the University of Otago Doctoral Scholarship, and her research is focused on antibiotic resistance in Samoans.

Academic department: Centre for International Health
Preventive and Social Medicine

Division: Health Sciences

Supervisors: Professor Philip C. Hill
Dr James Ussher
Department of Microbiology
and Immunology
Associate Professor Scott Beatson
School of Chemistry and Molecular
Biosciences
University of Queensland

Email: isalu545@student.otago.ac.nz



ANTIMICROBIAL RESISTANCE IN CRITICAL PATHOGENS FROM SAMOA

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Lupeoletalalelei Isaia, James Ussher, Scott Beatson, Philip C. Hill
.....

Antimicrobial resistance (AMR) is one of the biggest challenges facing global public health today, with incidence of each resistant bacteria varying greatly between and within countries. Little information is currently available about the prevalence and mechanisms of resistance in Samoa. In this study, the incidence of antibiotic resistance in 356 non-duplicate critical pathogens collected from the Tupua Tamasese Mea'ole Hospital (TTMH) between December 2016 – January 2019 was investigated. Identification was confirmed by MALDI-ToF and antibiotic susceptibility testing conducted using disk diffusion and interpreted using European Committee on Antimicrobial Susceptibility Testing (EUCAST) guidelines (2019).

Data from the TTMH laboratory 2016-2018 show resistance to third-generation cephalosporins, gentamicin, and ciprofloxacin was observed in 24.1%, 16.1%, and 25.6% of all *Enterobacteriaceae* isolates respectively. These resistance rates are higher than those reported by the World Health Organisation (2014), and paper-based reports from the TTMH Laboratory in the last 2 years indicate these rates are increasing. Of the 168 isolates that were positive for extended spectrum β -lactamase (ESBL) production, 116 (68%) were from inpatients, 50 (31%) from outpatients/community, and 2 (1%) from unspecified clinic. Finally, 27% (17/63) of all carbapenem-resistant isolates were positive for a carbapenemase by phenotypic testing.

These results highlight the need for ongoing local surveillance of circulating strains to create awareness and assist with targeted intervention strategies. The need for stricter antimicrobial stewardship is necessary to ensure optimal use of available antimicrobials for treatment of severe infections.

.....
Keywords: Antimicrobial resistance, critical pathogens, extended-Spectrum- β -Lactamase (ESBL), carbapenemase
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MARY JANE KIVALU

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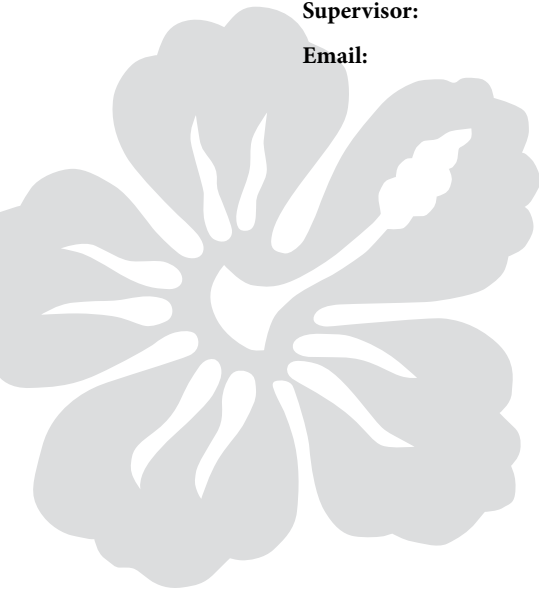
Mary Jane is of Tongan descent and grew up in Otago, South Auckland. She has completed a Bachelor of Commerce as well as a Master of Business Administration. She is now completing her Doctor of Business Administration, which is focused on cultural intelligence. She has worked in a number of research roles at the University of Otago, the most recent being as Research Assistant in the School of Geography.

Academic department: Otago Business School DBA Program

Division: Commerce

Supervisor: Sarah Carr

Email: tauma603@student.otago.ac.nz



CHILDHOOD IN A CHANGING PACIFIC

Mary Jane Kivalu, Claire Freeman, Michelle Schaaf, Christina Ergler, Anita Latai, Tuiloma Susana Tauaa, Mailo Helen Tanielu.

This paper presents research from a joint undertaking between researchers at the National University of Samoa and the University of Otago. The research is situated in Apia, Samoa and Dunedin, New Zealand but traces the Pacific diaspora which has strong ties to Australian and New Zealand cities.

The research aim is to examine Pacific childhoods and children's relationships to community in a mobile, changing and urbanising Pacific. The aim is supported by the following research objectives:

1. To understand the lived experience of childhood for Pacific children in Apia and Dunedin
2. To establish children's knowledge, use of and social connection to their communities
3. To identify factors affecting social connection and identity, including family composition, migration status, ethnicity and places of connection
4. To explore children's sense of belonging to their immediate community and the wider Pacific/ New Zealand community and how they see their lives in terms of place and belonging now and in the future
5. To identify ways of incorporating children's perspectives into developing better understanding of what community means for a changing Pacific community

Participants include: Three groups of children from one church, one family-based and one village-based community in Apia, Samoa, in March 2019, n=36 children, aged 6-13. Three groups of Pasifika children living in Dunedin are currently being interviewed.

Methods:

1. All children are asked to draw a map of their community highlighting features they consider to be important.
2. All children undertake a one-one interview
3. Each child uses an iPad to take 20 photos of places, features and people that are important to them in their home/neighborhood environment.

Preliminary findings from Samoa will be presented. The Dunedin data is being collected and analysed.

Keywords: Childhood, belonging, community, Apia-Samoa, Dunedin-New Zealand



**ERITABETA DOROTHY
KWANSING-FOLIAKI**

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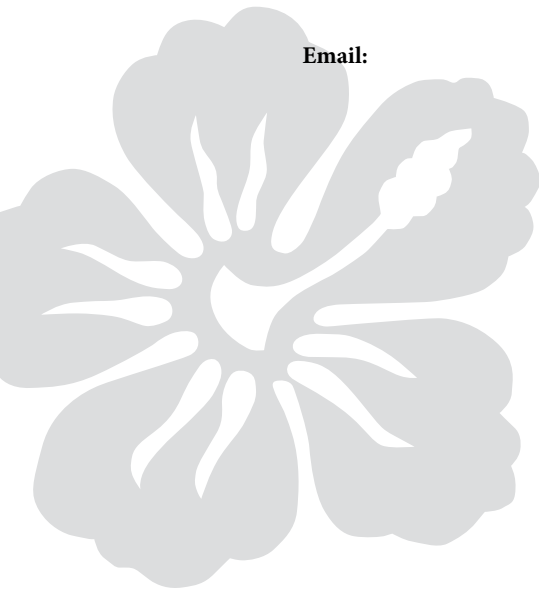
Dorothy is of I-Kiribati descent. She was born and raised in Fiji. In 2008 she graduated with a BSc (Biology and Chemistry) from the University of the South Pacific. She then worked in the Tongan government before receiving a New Zealand Aid scholarship to study towards an MSc in Environmental Management at the University of Otago.

Academic department: Geography

Division: Humanities

Supervisors: Professor Claire Freeman
Professor Emeritus Richard Morgan

Email: dorothy.foliaki@postgrad.otago.ac.nz



THE ROLE OF STRATEGIC ENVIRONMENTAL ASSESSMENT FOR IMPLEMENTING THE SUSTAINABLE DEVELOPMENT GOALS IN THE PACIFIC

Eritabeta Dorothy Kwansing-Foliaki, Claire Freeman and Richard Morgan

Pacific Island Countries (PICs) face distinctive environmental, economic and social concerns as the result of development pressures. These concerns are universal, prompting the United Nations Development Programme to adopt a new sustainability initiative in 2015, commonly known as the Sustainable Development Goals (SDGs). An aspect of operationalising the SDGs involves Strategic Environmental Assessments (SEAs). A SEA is a systematic process that integrates environmental considerations into decision making for sustainable development⁴. This project uses Tonga as a case study to demonstrate how some PICs integrate the SDGs into policy planning and decision-making processes. Two methods were adopted to do this. First an institutional analysis was conducted to understand the current policy planning processes around making the SDGs relevant at the national level. Second, key informant interviews with representatives from government, business and communities involved in national planning and decision making processes were conducted. The interviews showed that although the SEA concept is fairly new to many of the informants, elements of SEA were deemed to be applied in practice. However, SDGs are not fully understood within government, business and communities. Political, cultural and temporal factors may pose challenges for adapting the SEA tool to suit the country context in order to advance SDGs in PICs.

Keywords: Sustainable Development Goals, Pacific Island countries, strategic environmental assessment, policy planning

4 Polido, A., João, E. and Ramos, T. B. (2014) Sustainability approaches and strategic environmental assessment in small islands: An integrative review, *Ocean and Coastal Management*, 96, pp. 138–148.



LATUIVAI KIOA LATU

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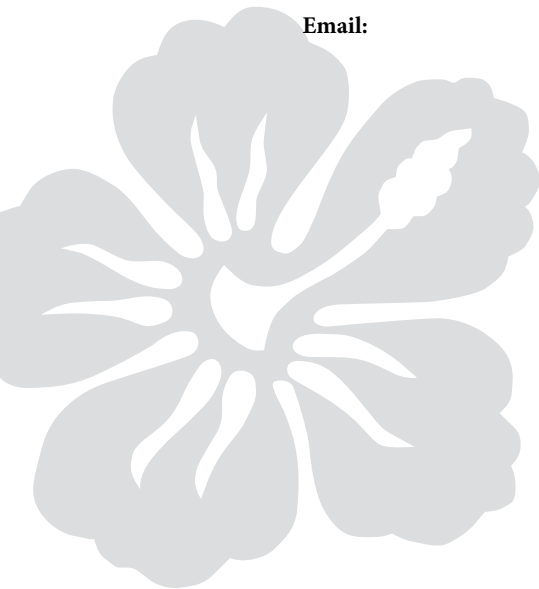
Latuivai Kioa Latu is from Samoa. He graduated from the University of Otago in 2017 with a Master of Theology with Distinction. In 2019 he received a University of Otago scholarship to pursue Doctoral studies. Latu is an ordained Minister of the Methodist Church in Samoa, a practical scholar and contextual biblical theologian.

Academic department: Theology and Religion

Division: Humanities

Supervisors: Professor David Tombs
Rev. Dr John W. Roxborough

Email: latla989@student.otago.ac.nz



SULI THEOLOGY: TOWARDS A POSTCOLONIAL AND RELATIONAL READING OF INHERITANCE IN SAMOA

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Latuvai Kioa Latu, David Tombs and John W. Roxborough
.....

This research adopts a postcolonial and relational hermeneutics to re-examine the Hagar-Ishmael story in relation to the Samoan understanding of *suli* (heirs). In Genesis 21:10-14, the story of Hagar and Ishmael culminates in Ishmael's loss of inheritance through a negative portrayal of his legitimacy. He receives no share of Abraham's inheritance, has no claim on it, and has no historic rights in Canaan. It is significant that this reading of the story appears consistent with the Samoan 'LTRA 2008'⁵ which introduced a single ownership model of customary land instead of communal ownership. The relationship between this legislation and the biblical text provides an example of how the Hebrew Bible can be read in Samoa and its making of *i*-slanders through the internalization of colonial values and assumptions integrated through biblical narratives. In this case, the text resonates with disputes over the issue of 'inheritance' among consanguineal and non-consanguineal members in the Land and Titles Court.

In Samoa, succession depends only on who is the rightful *suli* that renders *tautua* or service including all *faletama*. However, to 'cast out' Hagar was a breach of both surrogacy customs in the Ancient Near East and of Deut 23:7b-8. Also, the dis-election of Ishmael resulted in denying his *suli* rights as Abraham's firstborn and biological son. A Samoan hermeneutical trajectory from a colonial to a postcolonial reading encourages this ancient narrative to be re-read through a Samoan traditional relational lens of *suli*, the highest customary qualifications of traditional or legal heir.

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Keywords: *Suli* (heirs), tofi (inheritance), customary land, postcolonial

5 Land Titles Registration Act 2008.



JAYE MOORS

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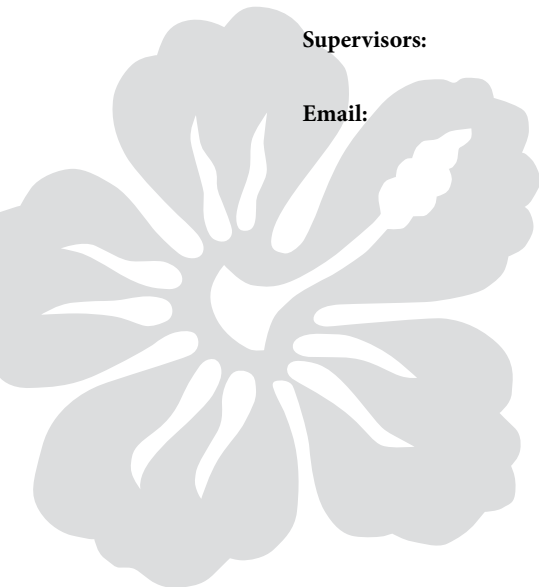
Jaye is in the final year of her PhD in Biochemistry. Her work examines the metabolic health of Pacific teenagers, and the genetics of metabolic disease in people of Polynesian ancestry in Aotearoa, NZ. Jaye grew up in Samoa and has since completed a BSc and PgDip in Anatomy, and a Masters in Biochemistry at the University of Otago. She is also a recipient of the HRC PhD scholarship.

Academic department: Biochemistry
Psychology

Division: Health Sciences
Sciences

Supervisors: Professor Tony Merriman
Dr Mele Taumoepeau

Email: jaye.moors@otago.ac.nz



NOVEL CETP VARIANT ASSOCIATES WITH INCREASED HDL AND LOW LDL IN POLYNESIAN POPULATIONS

J. Moors¹, M. Leask¹, N. Dalbeth², L. Stamp³, J.H. Hindmarsh⁴, T. Merriman¹

¹Department of Biochemistry, University of Otago, Dunedin, New Zealand, ²Department of Medicine, University of Auckland, Auckland, New Zealand, ³Department of Medicine, University of Otago, Christchurch, New Zealand, ⁴Ngati Porou Hauoura, Te Puia Springs, New Zealand.

Cholesterylester transfer protein (CETP), a hydrophobic glycoprotein, plays an important role in lipoprotein metabolism by mediating the transfer of cholesterol esters from high-density-lipoproteins towards very low-density-lipoproteins in exchange for triglycerides. Common variants within CETP are associated with high HDL-cholesterol (HDL-C) levels in most ancestral groups with no studies having examined its effects in people of Polynesian descent. Thus, this study is the first to investigate the effects of CETP on HDL-C among people of Polynesian descent.

~2500 people of Polynesian ancestry were genotyped for Polynesian-specific missense CETP variant *16_57004947* by Taqman[®]. The data were subset into Eastern [EP] (n = 1954), Western [WP] (n = 933) and Mixed Polynesian [MP] (n = 135) and island nation (Cook Island Māori, NZ Māori, Tongan, Samoan) sample sets. Analyses were carried out in R-Studio (v. 1.1.456) and adjusted for potential confounders.

The minor allele (T) frequency was 3%. Findings showed significant association of the T-allele with increased HDL-C ($\beta = 0.25$ mmolL⁻¹, $P = 3.11 \times 10^{-23}$) Polynesian-wide. Likewise, a significant increase in HDL-C, attributed to one copy of the minor allele-T, was evident in WP ($\beta = 0.19$ mmolL⁻¹, $P = 4.34 \times 10^{-6}$), EP ($\beta = 0.32$ mmolL⁻¹, $P = 2.16 \times 10^{-18}$), and MP ($\beta = 0.26$ mmolL⁻¹, $P = 0.01$). A decrease in LDL-C was evident only in EP ($\beta = -0.22$ mmolL⁻¹, $P = 0.03$). Analyses by island nation showed significant increases in HDL-C in Cook Islands ($\beta = 0.40$ mmolL⁻¹, $P = 1.30 \times 10^{-4}$), NZ Māori ($\beta = 0.31$ mmolL⁻¹, $P = 1.05 \times 10^{-14}$), Tongans ($\beta = 0.26$ mmolL⁻¹, $P = 0.001$), and Samoans ($\beta = 0.20$ mmolL⁻¹, $P = 0.001$). A decrease in LDL-C was seen only in NZ Māori ($\beta = -0.26$ mmolL⁻¹, $P = 0.02$).

Our findings show that CETP associates with increased HDL-C, and decreased LDL-C. This discovery suggests that CETP influences lipid and lipoprotein particle metabolism in Polynesian populations in a manner consistent with lower CETP activity. Further genetic and functional analyses are required to illuminate and illustrate the true underlying influence of CETP in people of Polynesian descent.

Keywords: Genetics, Lipid transfer, Cholesteryl Ester Transfer Protein (CETP), Pacific and Māori health



BERNADETTE SAMAU

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Bernadette is of Samoan descent. She holds an MBA in Operations Management and Marketing, a BBus in Marketing and Tourism, a Diploma in Cultural Travel and Tourism from Auckland University of Technology, and a Certificate of Training and Assessment from the Australia Pacific Technical College. She is a Marketing and Management lecturer at the National University of Samoa and is currently studying towards a PhD in Marketing Management. Bernadette is supported by a University of Otago/National University of Samoa PhD scholarship.

Academic department: Marketing

Division: Commerce

Supervisors: Associate Professor Ben Wooliscroft
Dr Alexandra Ganglmair-Wooliscroft

Email: samma600@student.otago.ac.nz



LOOKING BEYOND PHOTOGRAPHS: HOW CULTURE RELATES TO THE EXTENDED SELF THROUGH FAVOURITE AND DESIRED CLOTHING IN TWO DIFFERENT COUNTRIES

Bernadette Samau, Ben Wooliscroft and Alexandra Ganglmair-Wooliscroft

The private meanings of possessions that consumers consider part of their Extended Self goes beyond a possession's functional or utilitarian value. Possessions are incorporated into the Extended Self through appropriating an object for personal use, by creating it and by knowing it. Literature on the Extended Self suggests culture plays a significant part in the meanings that consumers attach to possessions. Most of the empirical work on Extended Self has been examined in the context of Western cultures.

The purpose of this study is to understand how culture relates to the Extended Self in the context of favourite and desired clothing. Through the application of the Transfer of Meaning Model and Projective Photo Elicitation, a total of 900 photographs were collected from 90 Samoan respondents living in Samoa and New Zealand. By investigating the Instruments of Meaning Transfer (IMT) applied by respondents to construct the private meanings of favourite and desired clothing, the analysis of the results derived seven Study Themes: 1) Me being me, 2) Sense of Belonging, 3) Group Boundaries, 4) Keeping Meaningful Experiences Alive, 5) Embracing Identity, 6) The Ideal me, 7) Display Ritual.

This study contributes to literature on personal possessions and the Extended Self by investigating cultural elements that relate to the Extended Self from a Pacific perspective. It also contributes to literature on clothing and its relationship to the Actual and Ideal Self.

Keywords: Culture, *fa'asamoa*, Extended Self, clothing, Actual Self, Ideal Self



TAHERE SIISIIALAFIA

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Tahere is from Samoa. She holds a BA in Psychology and Sociology from the University of the South Pacific and a Masters of Social Work from the University of the West Indies. She commenced her PhD in Sociology in 2019 and is a recipient of an Otago Pacific Islands Students Scholarship. Tahere worked as a lecturer at the National University of Samoa and is the Chairwoman of the Pacific Youth Council (PYC), which promotes and advocates for the interests of young people in the Pacific region.

Academic department: Sociology, Gender Studies and Criminology
Te Puna Papori – School of Social Sciences

Division: Humanities

Supervisors: Dr Patrick Vakaoti
Dr Marcelle Dawson

Email: tsiisiialafia.89@gmail.com



YOUTH AND SPIRITUALITY IN THE PACIFIC

Tahere Siisiialafia, Dr Patrick Vakaoti and Marcelle Dawson

Youth development has become a significant approach to working with young people in the Pacific. However, current youth development frameworks heavily focus on capacity building and programmes aimed at addressing symptoms of poor socio-economic outcomes. Whilst these are valued little emphasis is placed on the intrinsic aspects of life that embody young people's experiences and identities. One such aspect is spirituality, fundamental to Pacific people yet undervalued in current youth development frameworks. Thus, this research draws inspiration from reflections on the role of faith-based institutions in fostering spiritual development in Pacific young people and whether young people feel the need to extend spirituality to contemporary youth development strategies. It seeks to answer these two questions; what does spirituality mean to young people in the Pacific and what is the role of spirituality in current Pacific youth development approaches? To facilitate this work, a qualitative study will be adopted drawing on in-depth online interviews and focus-groups with youth leaders and constituencies of the Pacific Youth Council spanning across thirteen Pacific Island countries.

Keywords: Spirituality, secularization, spiritual development, mainstream youth development



CHARLEEN SILCOCK

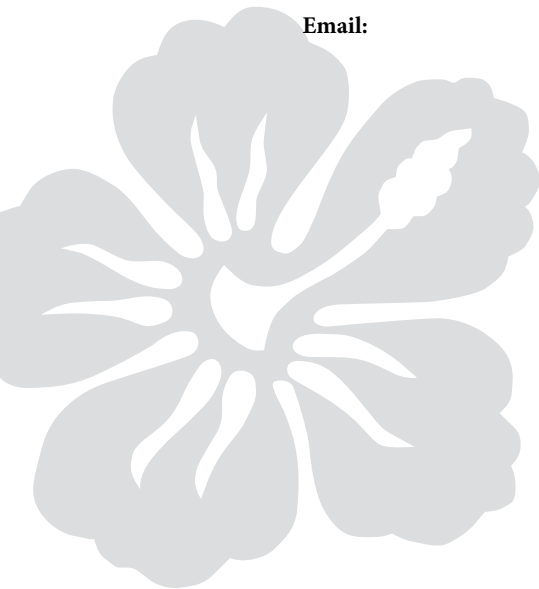
Charleen, who is of Cook Islands descent, qualified as a physiotherapist in 2003 supported by an HRC Health Workforce Scholarship, and is currently working towards her Masters in Sports Physiotherapy. She has worked with numerous elite Cook Island teams, including rugby, and has attended the Commonwealth Games. Charleen has a keen interest in Sports Physiotherapy in the Pacific.

Academic department: Physiotherapy

Division: Health Sciences

Supervisor: Professor John Sullivan

Email: pamch205@student.otago.ac.nz



PASIFIKA RUGBY AND PHYSIOTHERAPY: AN EXPLORATION OF PHYSIOTHERAPY INVOLVEMENT ACROSS MOANANUI

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Charleen Silcock and John Sullivan
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Rugby union is a popular sport played by both men and women in many Pacific nations. With the advent of professional rugby there is now a developing career pathway for players, both within nations and abroad, with national teams now very much part of the world stage. An important element of the professional game is the sports medicine support these teams have with physiotherapists playing a major role in reducing and rehabilitating injuries⁶. The purpose of this project is to investigate whether national Pacific Rugby teams are supported by physiotherapists. This study used a systematic web search methodology^{7,8} to locate the official websites of the Pacific rugby nations and examine the content to establish if physiotherapists are identified as part of the sports medicine support team.

Of the 18 countries designated as Pacific rugby playing nations, the search strategy identified only four as having an official rugby website. Of these, three identified sports physiotherapists as being associated with teams. Fiji identified the physiotherapist for their national team, while Samoa listed their physiotherapist as supporting the “A” grade squad, age grade teams and women’s teams. The link on the Tongan site was not active.

These preliminary results highlight the need for the recruitment of physiotherapists to work with national teams and for reviewing the use of their websites as communication channels. More importantly the data identify career opportunities for appropriately qualified physiotherapists to work with Pacific nations and spark the interest of young Pacific peoples to exciting career pathways within health professions such as physiotherapy.

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Keywords: Sports Physiotherapy, Pacific rugby, internet, sports medicine

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- 6 Silcock, C (2019) The Touring Cookie! Sports Physiotherapy in the Pacific. Retrieved from: <https://blogs.bmj.com/bjbm/2018/01/19/touring-cookie-sports-physiotherapy-pacific/>
 - 7 Ahmed, O. H., Sullivan, S. J., Schneiders, A. G., & McCrory, P. R. (2012). Concussion information online: evaluation of information quality, content and readability of concussion-related websites. *British Journal of Sports Medicine*, 46(9), 675. doi:10.1136/bjbm.2010.081620
 - 8 Forbes, E. J., Swarbrick, C. L., Van Turnhout, C. H. W., Sullivan S. J. (2019). Sports and Exercise Medicine (SEM) professionals supporting New Zealand rugby teams: a visible public face? *New Zealand Journal of Sports Medicine* (In Press).



JORDAN TAUAI TAYLOR

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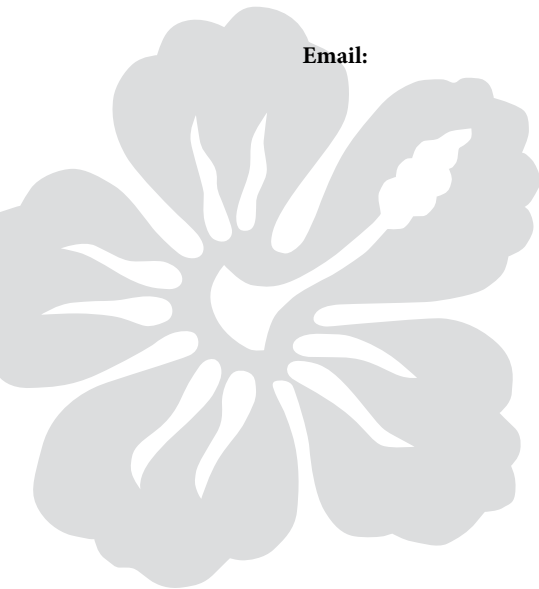
Jordan is a Cook Island Māori microbiologist who is completing his Honours project on tuberculosis in the Pacific, focusing on the gut microbiome. Jordan is supported by an HRC scholarship, and is investigating the disproportionate rates of atopic dermatitis within Pacific infants. He is developing a rapid diagnostics tool to combat transmission of tuberculosis within Pacific communities.

Academic department: Microbiology and Immunology

Division: Health Science

Supervisors: Dr Htin Lin Aung
Gregory Gimenez

Email: jordan.taylor@postgrad.otago.ac.nz



OTARA: FIGHTING TUBERCULOSIS ON THE HOME FRONT

Taylor, J.T, Cook G.M, Gimenez, G, Aung, H.L

Mycobacterium tuberculosis is the causative agent of tuberculosis (TB). As one of the oldest recorded human diseases, TB remains a global threat, resulting in more deaths than any other disease, and features some of the highest rates of antimicrobial resistance (AMR). Since World War II, New Zealand has experienced a significant reduction in the rates of tuberculosis. However, despite the low prevalence within European communities, and a gradual decline within Māori, Pacific experience disproportionately high rates of TB. Since 2007, Pacific represent nearly 15% of all cases within NZ with rates within Pacific communities remaining high with no improvement. Within Auckland City, where the single largest population of Pacific people reside, Pacific account for over 20% of cases; this equates to rates 22-fold higher than European residents. Of the three endemic strains of TB within NZ, *Otara* has been geographically restricted to South Auckland, while *Southern Cross* has been found in Auckland and parts of the Pacific. Remarkably, Pacific are the only susceptible population to these endemic strains. Using whole genome sequencing (WGS) of these endemic strains, unique genetic markers are being exploited in this study for the development of a rapid clinical diagnostics tool. Within a clinical setting, such an approach would enable positive identification within 24 hours of patient presentation, substantially reducing the turnaround time of 3-4 weeks using current culturing methods. Equipping the public health sector with such a tool would translate to reducing further transmission of TB, thereby ultimately alleviating health disparities within Pacific communities.

Keywords: Tuberculosis, Pacific health, transmission, bioinformatics



LUPESILIVA TU'ULUA

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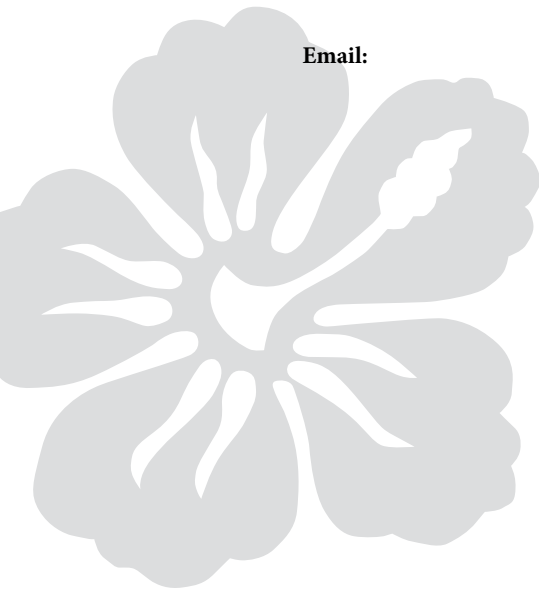
Lupe is Samoan and is a Registered Nurse (RN) at the Canterbury District Health Board. She is also an authorised RN prescriber in primary health and specialty teams. She completed her dissertation in May 2019 and graduated with a Master of Health Sciences (Nursing Clinical) in August 2019.

Academic department: Centre for Postgraduate Nursing Studies
University of Otago, Christchurch

Division: Health Sciences

Supervisors: Virginia Jones
Shirley Harris

Email: tuulu999@student.otago.ac.nz



EXPLORING THE PHENOMENON OF PSYCHOLOGICAL INSULIN RESISTANCE IN TWO PACIFIC ISLANDS CLIENTS WITH TYPE 2 DIABETES MELLITUS WHO ARE NEW ZEALAND RESIDENTS

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Lupesiliva Tu'ulua, Virginia Jones and Shirley Harris
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Diabetes Mellitus (DM) affects 425 million adults world-wide and one in every two people are undiagnosed according to the International Diabetes Federation. It is a serious and costly disorder which needs timely and adequate treatment such as insulin therapy, to prevent complications such as blindness, kidney failure and strokes. However, Psychological Insulin Resistance (PIR) has been recognised as a significant barrier to timely initiation and continuation of insulin therapy. The study used a qualitative Case Study methodology to investigate how two Pacific Islands (PI) women diagnosed with Type 2 DM, responded to the prescription and ongoing use of insulin treatment. The Fonua Health Model was chosen as the theoretical framework, for cultural and analytic applications of the study.

The findings of this research revealed that the two PI participants experienced the same multifaceted psychosocial issues and physical complications identified in the literature regarding PIR. The holistic outlook for the health status of both participants was poor and out of balance, according to the Fonua Health Model. For PI persons with diabetes to have acceptable holistic health status, they need to have life balance according to the Fonua Health Model. If they require insulin therapy to effectively control diabetes and to minimise the incidence and severity of diabetes complications, they will need extra support from health care professionals who are clinically and culturally competent.

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Keywords: Diabetes, insulin resistance, psychology, psychosocial, Fonua



GRETTEL WILLIAMS

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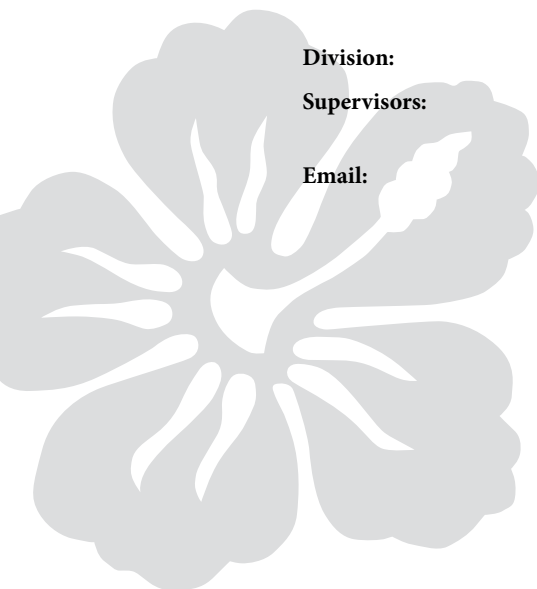
Grettel Williams hails from Hawkes Bay and is of Samoan descent. She is currently enrolled in the Masters of Public Health, supported by a Ministry of Health Pacific Health Scholarship. She holds a BSc in Anatomy and a PGDip in Public Health. As administrator for the Centre for Pacific Health, Grettel is closely involved in the delivery of the Pacific Health curriculum. Her research topic involves asking providers what they seek from graduates so teaching can be shaped to meet those needs.

Academic department: Centre for Pacific Health, Va'a o Tautai
Department of Preventive and Social
Medicine

Division: Health Sciences

Supervisors: Dr Richard Egan
Dr Rose Richards

Email: grettel.williams@otago.ac.nz



BUILDING A HEALTH WORKFORCE TO MEET THE NEEDS
OF PACIFIC COMMUNITIES: PERSPECTIVES FROM PACIFIC
HEALTH SERVICES ACROSS NEW ZEALAND

Grettel Williams, Rose Richards, Richard Egan

Pacific peoples in New Zealand experience significant health inequities. One pathway to reducing these is to better equip the health workforce to meet the health needs of the Pacific communities that they serve. Appropriate training and curricula is needed to support the development of a health workforce that can meet the needs of the Pacific communities. As the Pacific health curriculum at the University of Otago continues to grow it can be usefully informed by a variety of perspectives on what skills, knowledge and attributes are needed for students to be ‘work ready’ when they graduate. The current study focuses on Pacific health providers, health and social services set up to serve the needs of Pacific (and other) communities which are underpinned by Pacific values and expectations. Data collection was carried out in the form of a facilitated workshop (held in February 2019) with 12 leaders from Pacific health providers across New Zealand. The core of this workshop was a discussion about what participants would consider to be important skills, attitudes, awareness and knowledge for Pacific and non-Pacific graduates to have when seeking employment with health services such as theirs. The question was workshoped in smaller groups and then discussed as a full group. These discussions were recorded and transcribed and are currently being analysed for discussion themes. The findings will be disseminated to relevant networks and used to inform ongoing development of the Pacific health curriculum in the Division of Health Sciences.

Keywords: Workforce development, curriculum, leadership, health sector



AGNES WONG SOON

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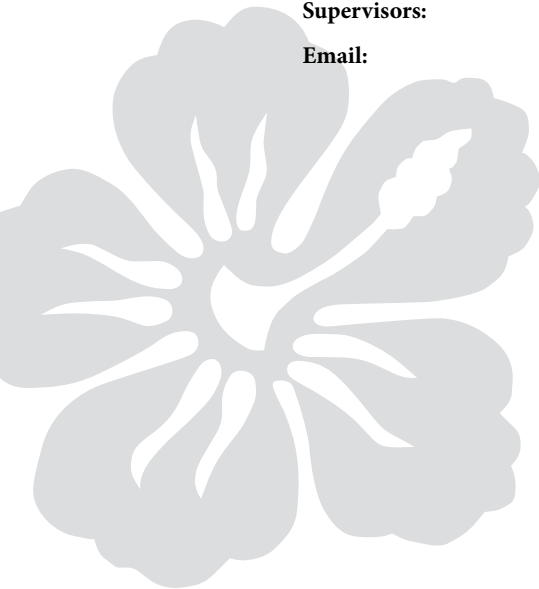
Agnes Wong Soon is Samoan with a Chinese twist. She holds a BSc and a Postgraduate Diploma in Computing, and a Certificate in Adult Teaching from the National University of Samoa, where she has been teaching for over ten years. She is the recipient of an Otago scholarship under the NUS Staff Development scheme and is currently working on her Masters in Higher Education (Educational Technology) at the University of Otago.

Academic department: Higher Education Development Centre

Division: Humanities

Supervisors: Associate Professor Joyce Koh

Email: wonag612@student.otago.ac.nz



SAMOAN STUDENTS' ATTITUDES TOWARDS TECHNOLOGY ADOPTION FOR LEARNING: THEORY OF PLANNED BEHAVIOUR

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Agnes Wong Soon and Joyce Koh
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Samoan students may enrol at the National University of Samoa (NUS) with or without prior computer experience and they may find it challenging to complete their programmes. Technology is still in its infancy in Samoa. Cost, accessibility, availability are problematical and with its social-cultural aspect, technology is known as a threat to the people. These factors may influence students' attitudes towards the adoption of technology for learning and this area is not fully explored in current literature.

Drawing on the Theory of Planned Behaviour (TPB) by Ajzen⁹, students' intentions to use technology are influenced by their attitudes towards using technology in general, attitudes towards technology adoption for learning, subjective norms and perceived behavioural control. Using a mixed method approach, an online questionnaire was administered to 35 students from two Foundation computer courses. Correlation analysis showed that students' intentions are greatly influenced by their attitudes towards technology and the support from their significant others. Moreover, thematic analysis results found that students have positive attitudes towards the use of technology and the influential roles of parents and teachers to encourage use. In contrast to other countries like United States, Indonesia and China, intentions are influenced by their self-efficacies and their perception of technology for learning. Results provide valuable insight in understanding students' intentions towards technology for learning as well as assisting educators and course developers to identify the support they require to help enhance students' learning.

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Keywords: Intention, technology, theory of Planned Behaviour, factors
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9 Ajzen, I. 1991. The theory of planned behavior. *Organ. Behavior and Human Decision Processes* 50 179–211.



JOSHUA ALI'IFA'ALOGO

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Joshua is Samoan, and was born and raised in Mangere, South Auckland. He recently completed a Bachelor of Arts degree in Geography and Pacific Studies and is now undertaking a Master of Planning degree at the University of Otago. He is the 2019 Division of Humanities Pacific Bridging Scholarship recipient and recently interned at Arup NZ as a Cities and Digital Planning intern. He is also the first graduate of the EFKS Mangere East Homework Centre partnership with the University of Otago.

Academic department: Planning
School of Geography

Division: Humanities

Supervisor: Dr Ashraful Alam

Research Interest: Urban Sprawl and Housing Issues in South Auckland

Email: joshua.aliifaalogo@postgrad.otago.ac.nz





KALESITA POLE

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Kalesita is of Tongan heritage and was born in Auckland. She moved to Dunedin in her early teens and upon leaving school enrolled at Otago for a Bachelor of Science, supported by a Pacific Entrance Scholarship and majoring in Physiology. She was then awarded a School of Biomedical Sciences – Pacific Peoples’ Summer scholarship to complete a summer studentship in cardiovascular physiology. Kalesita is now studying towards a Postgraduate Diploma in Science with a scholarship from the School of Biomedical Sciences.

Academic department: Physiology

Division: Health Sciences

Supervisors: Associate Professor Daryl Schwenke
Associate Professor Rajesh Katare

Research Interest: Cardiovascular Physiology

Email: polka781@student.otago.ac.nz



RIPINE PANY JUNIOR TITO

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Ripine is of Samoan and Solomon Island descent, born in Samoa and raised in New Zealand. He graduated with a Bachelor of Science majoring in Neuroscience with a minor in Anatomy. Ripine is currently studying towards a Postgraduate Diploma in Public Health (DPH), endorsed in Social Research Methods.

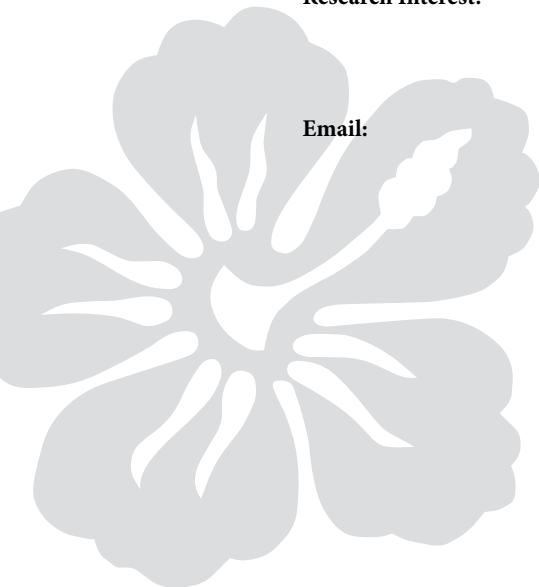
Academic department: Preventive and Social Medicine

Division: Health Sciences

Supervisor: Dr Trudy Sullivan

Research Interest: I hope to use the knowledge and skills focus on improving intervention designs/ strategies/research on public health-related issues among Māori and Pacific peoples.

Email: ripinetito@gmail.com





LISA BIIRI

Lisa is from the Republic of Kiribati and has lived in New Zealand for the past nineteen years. Lisa currently holds a Bachelor of Science (BSc) in Genetics and is studying towards a Postgraduate Diploma in Science (PGDipSci) in Plant Biotechnology.

Academic department: Botany

Division: Sciences

Supervisor: Dr Tina Summerfield
Department of Botany

Research Topic: Investigating pH sensitivity of a
Photosystem II mutant in the
cyanobacterium *Synechocystis* sp. PCC 6803

Email: Lisa.biiri@gmail.com

Fa'afetai Tele Lava 2019

There is so much to be thankful for – 150 years of this fine institution, great leadership, great achievement and especially the plethora of Pacific space and events on campus. For all these and many more reasons, we are grateful. Fa'afetai le Atua mo au faamanuiaga – Thank you Lord for your many blessings!

This 16th Symposium is dedicated to all the wonderful members of the Pacific Postgraduate Reference Group, past and present. They turned a dream into an annual event and made this Symposium part of the success story of 'things Pacific' in the first 150 years of the University of Otago. What a story we are continuing to weave and finesse! Growing Pacific scholars and encouraging scholarship are the heart of this programme and I am proud to bear witness to the wonderful projects and research our students continue to be involved in year after year. That is the true essence of Dare to Be Wise and of *saili malo!*

I would like to acknowledge the wonderful contribution of our academic and professional staff who attended our monthly seminars and provided support to our students. They are Dr Michelle Schaaf, Dr Rose Richards, and Dr Patrick Vakaoti. Importantly, I must acknowledge the daily support from the students' supervisors and departments, those who continue to support and guide them in their chosen areas of study. Thank you to Katherine Milburn and Amanda Mills from the Hocken Collections for their dedication and especially for starting this year a fortnightly pop-in service at Oceania House for postgraduate students to seek help with utilising the wonderful asset of our library. Thank you to Alison Finigan who again assisted us to coordinate this Symposium. A big Fa'afetai lava to our editorial team:

Dr Rose Richards, Dr Patrick Vakaoti, Dr Michelle Schaaf and Alison Finigan.

Fa'afetai lava to our great High Chief, Vice-Chancellor Professor Harlene Hayne, for her leadership and for providing the Foreword for this publication; to Deputy Vice-Chancellor, Research and Enterprise Professor Richard Blaikie, – thank you Sir for your leadership and for doing the honour of opening this year's symposium. To our Symposium Chairs – Professor Pat Cragg, Deputy Vice-Chancellor, Academic; Professor Tony Ballantyne, Pro-Vice-Chancellor, Humanities; and Professor Richard Barker, Pro-Vice-Chancellor, Sciences, we thank you for your support.

Finally, to our stars, our students, our leaders of tomorrow – Continue to do well and remember the prayers of our whenua, our fa'asinomaga and our aiga back home.

150

*Is not just a number
For it's a grand library of history
O tikanga ma fāasinomaga
Of stories, whenua, personal and global
Of sweat and pain, of struggles and dreams realised
Of noodles and bread, of relationships and friendships
Stories of aspirations and the success of a people
Peoples
The Leith and the captain, land marking the many journeys
May the Leith rise
May the Link continue to connect and reconnect
May the Quad quadruple
Welcoming the hunters and gatherers of the future
That grace this fine institution.
Ia Manuia – Cheers!!
TNKA2019.*

Tofilau Nina Kirifi-Alai
Manager
University of Otago Pacific Islands Centre

Appendix

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Introduction to *PACIFIC VOICES XV*

27 September 2018

Professor Helen Nicholson BSc (Hons) MB ChB MD (Brist)

Deputy Vice-Chancellor, External Engagement

Pacific Voices XV 2018

Welcome to the 15th *Pacific Voices*, a celebration of Pacific research. Today provides an opportunity for you to hear about the fascinating research that your colleagues are undertaking and of the ups and downs of doing research. It is an opportunity to learn from each other and to think laterally about how you might incorporate some of the learning into your research. Today there are a diverse mix of talks from across the 4 Academic Divisions. You may ask why you might want to listen to talks that are not in your field of research? Of course, I would hope you would do this to support your colleagues!

I also suggest that during your lifetime you will probably have more than one career and that these may take you on a different pathway than you currently expect. If my journey is anything to go by you cannot always predict where you will end up!

My current role is DVC External Engagement – this involves leading teams such as schools' liaison, scholarships, international office, M & C and DARO. This is certainly not what I expected to be doing when I was a student – neither did I expect to be living in NZ.

I grew up in a small village in the south of the UK and like many of you was the first in my family to go to university. I still remember moving away from home and starting at Bristol University as a slightly scared and yet excited medical student. After graduation I started working in hospitals and training to be a surgeon, in particular I wanted to be Urologist – someone who deals with kidneys, bladders and prostates (Career 1). However, after a few years I had the opportunity to go back to Bristol to do a higher degree which I did undertaking research in male reproduction (and also starting my own reproductive journey). After this I worked part time as a research fellow and retrained as a family planning doctor (career 2). I carried on doing this until the younger of my 2 children started school and then I was fortunate enough to be appointed as a lecturer in the Anatomy department at Bristol teaching Vet students and then subsequently medical students (Career 3) and still undertaking research. After spending a sabbatical at Massey studying sperm transport in sheep and briefly visiting Otago a professorial position in the Anatomy dept was advertised and in 2000 my family and I moved to Dunedin.

At Otago I continued my research in reproductive biology but was also involved in Anatomy teaching and became involved in clinical anatomy research. For various reasons I also worked with a fellow medic who was also a film maker to produce a TV documentary about body donation – Donated to Science – this resulted in a huge amount of video footage and data relating to how students learn (or don't) and I moved out of my comfort zone of quantitative research to qualitative research. How I then wished I'd listened more carefully to my colleagues' research talks about qualitative analysis!

Since then I have moved into senior management roles but like all of us from the VC down have maintained my research interests – this is what keeps me sane! How I ended up in my current position I'm still not sure but God moves in mysterious ways!

I tell you this story because many of you will have less than straightforward journeys and I would encourage you to listen and learn from people you meet along the way even if at the time it appears to be unrelated to your current endeavour.

Finally I wish you all the best for this year's *Pacific Voices*.



