

The revitalised Fonofale as a research paradigm: a perspective on Pacific sexuality and reproduction research

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Abstract

Research into Pacific peoples' sexuality and reproduction is often complex and conflicts with social tapu. Historically, Pacific sexuality and reproduction research had been approached using a deficits-based lens with minimal congruence of Pacific cultural values. We offer a revitalised Fonofale model (Pulotu-Endemann, 1995) as a research paradigm that centres tapu in all considerations and decisions surrounding the research. This revitalised model offers a strengths-based approach that can promote valuable collection of, and meaningful engagement with data. We offer a case study which utilised this research paradigm as an overarching strategy. Te Tīpani Project was a mixed methods investigation into eighty-two Pacific tertiary students' understandings of sexuality and reproduction. Pacific research methods and methodologies, including the Kakala model and Talanoa method supported the integration of the paradigm into components of the study. We encourage researchers to utilise this strategy to fulfil their research obligations, as facilitators and guardians (mana tiaki) of the research environment. Pacific research methods, methodologies and epistemologies hold an important place in the field of sensitive Pacific well-being research by enabling cultural consideration and responsiveness.

Keywords: Pacific, tapu, sexuality, reproduction, Fonofale, methodologies

1. Introduction

Pacific research methodologies and epistemologies offer unique perspectives and understandings of the world. In research with or for Pacific peoples, it is crucial to adopt these contextualised processes to appropriately operate within the boundaries of these cultures (Ponton, 2018). In this paper, we address the growing need for strengths-based, culturally considerate health research within Pacific Aotearoa, with a focus on Pacific sexuality and reproduction research. We acknowledge that the Pacific cultural values of *tapu* (sacred) and *noa* (ordinary) play influential roles within the attitudes and health-seeking behaviours of Pacific peoples. When we centre *tapu* and *noa* within Pacific health and well-being research, we can achieve research outcomes that meet the needs of the community.

We describe and illustrate a revitalised version of the Fonofale Pacific health model, with *tapu* and *noa* integrated within the framework of the *fale* (house). We then discuss how we used this revitalised health model as a research paradigm within a summer research project investigating Pacific youth understandings of sexuality and reproduction. Here, our novel Pacific research paradigm offered a foundation to effectively use Pacific research methods and methodologies. We encourage readers to consider the use of Pacific research methods, methodologies and epistemologies to establish culturally considerate and responsive research environments, especially when engaging in sensitive Pacific well-being topics, such as sexuality and reproduction.

1.1 Authors' Notes

The genesis of Pacific philosophies is complex, particularly in the contemporary academic landscape where authorship does not necessarily reflect the voices contributing to the discourse of a manuscript. We acknowledge the numerous voices contributing to the core concepts discussed within this manuscript including, but not limited to, Taime Pareanga Samuel QSM, Vaivaimalemalo Dr Michael Fusi Ligaliga and the advisory groups. It is the nature of Pacific research to consult widely and informally, and we acknowledge the contributions of the Pacific community for sharpening the concepts of this manuscript. This manuscript belongs equally to the Pacific community as it does to the named authors.

We acknowledge our positionality as researchers within this field of Pacific research. Young is New Zealand-born with heritage from the Cook Islands and Sāmoa. Young shaped the research objectives after reflecting upon his sexuality and reproductive education as a Pacific youth and conducted the research. Taumoepeau is of Tongan heritage and teaches and researches in the field of child development, with extensive experience researching with and for Pacific peoples within New Zealand and the Pacific region. Three of the supervising researchers are non-Pacific with no previous Pacific-based research and instead provided perspectives from different research areas. Bird is a Teaching Fellow and education researcher, Girling is a reproductive biologist, and Hohmann-Marriott is a sociologist and demographer. The cultural components of this research were driven by Young and Taumoepeau who acknowledged the limitations of their Polynesian heritage in a pan-Pacific research topic, particularly when selecting Polynesian-dominant research methods and epistemologies. Perspectives from the local Pacific community, as thanked in the acknowledgements, also kept the research accountable and representative of diverse Pacific cultures.

Secondly, we wish to clarify our use of terminology. We have defined ‘Pacific Aotearoa’ as the diasporic population of peoples with indigenous and migrant heritage from the Moana Pacific region who are now living in Aotearoa New Zealand. This includes ethnic groups with heritage from Polynesia¹, Melanesia² and Micronesia³ (Ministry of Health, 2008). Together, Pacific peoples comprise almost eight-percent of the general population in Aotearoa New Zealand and are the fastest growing and youngest ethnic group, with a median age of 23.4 years (Statistics New Zealand, 2018). This paper uses the terminology ‘Pacific peoples’ and ‘Pacific Aotearoa’ interchangeably to refer to this diasporic population, but is not meant to minimise the extraordinary diversity within this homogenous term. We acknowledge this term comes from the New Zealand-based Polynesian perspectives of the researchers and does not represent the voices of all ethnic groups.

2. Sexuality and Reproduction within Pacific Aotearoa

Within Pacific Aotearoa, sexuality and reproduction are complex topics of discussion. National studies continue to report Pacific peoples as having amongst the highest rates of unplanned pregnancies and sexually transmitted infections compared with other major ethnic populations (Ministry of Health, 2008; 2012; 2019a; 2019b). Recent surveys demonstrate that Pacific youth are less likely (29-percent) to always use condoms as a form of contraception and protection against sexually transmitted infections, compared with Māori (37-percent) and Pākehā (44-percent) (Clark et al. 2020). Pacific teenage birth rates (51.1 per 1000), although lower than Māori (96.4 per 1000) are over twice the Pākehā rate (19.1 per 1000) (Ministry of Health, 2019b). There has been little variation in these statistics since they were first reported in the early 2000’s (Ministry of Health, 2008).

Sexuality and reproduction are contentious areas of health and well-being that are typically described through a deficits-based lens within Pacific Aotearoa (Nosa et al. 2018). A deficits-based lens identifies areas of need and searches for a way to address these needs and issues (Bogenschneider and Olson, 1998). However, this emphasis perpetuates negative perceptions and low expectations of Pacific families and communities and places a focus on external resources and solutions. Further, this deficits-based epistemology is used to explain that a problem exists, rather than working to prevent it from occurring in the first place (Kretzmann and McKnight, 1993). As expected from a deficits-based lens, studies and reports offer few solutions for improving sexual and reproductive health. The space of sexual and reproductive well-being research needs to be revitalised to combat these negative Pacific health narratives. We offer this paper to support holistic sexual and reproductive research with and for Pacific Aotearoa, which can be achieved by employing strengths-based research.

¹ Polynesian nations include Sāmoa, Tonga, Cook Islands, Niue, Tokelau, Tuvalu, Hawaii, French Polynesia and Easter Island, among others.

² Melanesian nations include Fiji, Rotuma, Vanuatu, Solomon Islands, New Caledonia, Papua New Guinea and West Papua, among others.

³ Micronesian nations include Kiribati, Marshall Islands, Federated States of Micronesia, Guam and Palau, among others.

3. Strengths-Based Pacific Research

Strengths-based research focuses on what is working well within communities and assumes they have the tools and competencies for their own empowerment (Alliance for Children and Youth of Waterloo Region, 2009; Kretzmann and McKnight, 1993). Strengths-based research considers cultural practices, values and social structures, and the impact of these components on the health of individuals and communities (Kretzmann and McKnight, 1993). This perspective highlights the need for contextualised epistemology when conducting research with and for different communities. Unlike a deficits-based lens, which homogenises the needs of diverse groups, a strengths-based lens enables researchers to recognise and respond to cultural diversity. This is critical when engaging with a diasporic population like Pacific Aotearoa.

Strengths-based research can be achieved using appropriate research methods and methodologies for the collection and analysis of data; ‘appropriate’ meaning contextualised to the cohort being investigated. Examples of Pacific research designs include the Kakala research methodology (Helu-Thaman, 1997) and Talanoa method (Vaioloti, 2006). The Kakala methodology guides a researcher through the stages of Pacific research, ensuring their work is intentional and offered back to the community. The Talanoa method supports a researcher in being aware of cultural nuances within an interview environment and encourages meaningful relationships to be built between the researcher and participant. Ultimately, these designs reflect the cultural values and behaviours of the Pacific community, providing insight into Pacific cultural norms and traditions, allowing researchers to observe and respond to cultural behaviours within their research environments. These designs also offer insight to the dreams and aspirations of Pacific peoples, which Pacific-centred research can help bring to fruition. Strengths-based research can be achieved through the utilisation of Pacific research methods and methodologies, by encouraging a dynamic and responsive research environment (Ponton, 2018). Empowering, strengths-based research is the goal of Pacific research; however, achieving this can be daunting for researchers when we consider the complexity of sexuality and reproduction. We must acknowledge cultural perspectives and restrictions around these topics, whilst still venturing into this field to effect change. We hope that clearer understandings of these cultural views will encourage Pacific and non-Pacific researchers alike to pursue strengths-based research into Pacific sexuality and reproduction.

4. Tapu and Noa

The concepts of *tapu* (sacred, divine) and *noa* (ordinary, normal) have existed within Pacific cultures for centuries. These values drive and determine the actions of Pacific peoples, offering a behavioural directive on how to understand the world. Concepts which are *noa* are ‘known’, ‘explored’ and generally associated with safety (Durie, 1999). For example, a house is *noa* because it is a familiar and explored environment. Cooked food is also *noa* because it is safe to consume and couldn’t cause harm to the body. Conversely, concepts which are *tapu* are ‘unknown’, ‘yet to be explored’ and can be associated with unsafety or a link to a divine (Hiroa, 1949; Durie, 1999). For example, a waterfall could be *tapu* if locals believe a *taninaha* (monster) lives there; people will avoid it to keep safe. A church or temple is also *tapu* because it’s believed to be a place of worship and connection to divine beings. With

the widespread adoption of Christianity – over 73-percent of Pacific peoples in Aotearoa affiliate with a Christian church – understandings of *tapu* are increasingly being tied to the Christian God (Helu et al. 2009; Ministry of Education, 2013; Veukiso-Ulugia, 2016).

Within some Pacific cultures, the concept of *tapu* extends as a status to humans who are perceived to have a special connection to divinity. In the Tikopia *te kai tapu* (the sacred food) rite, the *Ariki i Kafika* (clan chief) is thought to be the vessel through which the ancestral deities watch the ceremony (Turner, 1984). In Tongan culture, *hou'eiki* (chiefs) are considered sources of *tapu* and therefore are worthy of connecting with and to God (Mills, 2016). These behaviours can also be seen within contemporary Pacific Aotearoa (Taumoeofolau, 2013), where church congregations uphold ordained ministers with *tapu*, believing them to be direct connections to the Christian God. The ramifications of *tapu* and *noa* in action are necessary to consider when conducting research on Pacific health and well-being. We discuss *tapu* further to understand how it can be used to drive everyday behaviours within Pacific Aotearoa. Mills (2016) categorises *tapu* in three states: *episodic tapu*, *regulatory tapu* and *relational tapu*. *Episodic tapu* is when objects or events could potentially induce a physical illness upon an individual (Hiroa, 1964). For example, uncooked meat could induce an episodic *tapu* – ingesting it could cause food poisoning and diarrhea. Touching dead corpses could induce an episodic *tapu* because they may be carrying pathogens and bacteria. *Regulatory tapu* places prohibitions upon certain foods, spaces or areas for political or religious purposes. Within *te ao Māori* (the Māori world), visitors are prohibited from entering certain spaces within the *marae* (house) (Durie, 1999; Durie, 2007). During *tangi* (funeral rites), these prohibitions of human movement prevent cross-contamination of the *tapu* corpse with the *noa* food. *Regulatory tapu* outlines a domain of safety where visitors can inhabit and exist comfortably. *Relational tapu* restricts certain behaviours and attitudes between two people or things, which initiates an *episodic tapu* in the inferior (Mills, 2016). An example of this is *feagaiga* (sacred covenant) within Sāmoan families which describes the relationship between siblings of the opposite sex (Mallon et al. 2012). *Feagaiga* places sisters in a *tapu* state to initiate *episodic tapu* in the brothers. Brothers are restricted from sleeping in the same room as their sisters, playing games or activities with them and, within a contemporary setting, from watching movies with them. *Relational tapu* can exist between siblings, partners, friends, family members and strangers. Thus, this expression of *tapu* has great implications upon interpersonal Pacific relationships and behaviours. As conceptual values, *tapu* and *noa* are integral to Pacific Aotearoa and should therefore be considered when conducting research with people of this community.

Within the context of sexuality and reproduction, we recognise that *relational tapu* has many implications for interpersonal relationships and health behaviours. We also recognise that much of Pacific Aotearoa is situated within the Christian religion, and that Christian teachings influence understandings and ideals of gender roles, social hierarchies, monogamous marriage and heterosexuality (Helu et al. 2009; Veukiso-Ulugia, 2016). There are a multitude of other factors that influence sexuality and reproduction, which this paper does not address. We do not intend to minimise these other factors, but aspire to add two more cultural concepts - *tapu* and *noa* - to the complex picture that is Pacific health and well-being.

Incorporating the concepts of *tapu* and *noa* into research furthers understanding of Pacific cultures and encourages researchers towards strengths-based epistemologies. To help ground these complex understandings of well-being, we offer a revitalised version of the Fonofale Pacific health model as a visual research aid. This sociocultural framework encourages the conscious use of Pacific research methods and methodologies to help enhance the sexual and reproductive well-being outcomes of Pacific Aotearoa.

5. The Revitalised Fonofale

The Fonofale Pacific health model (Pulotu-Endemann, 1995) is a popular paradigm describing a Pacific person's perspective of the world around them. It was initially constructed to meet the rising need for culturally effective health services for Pacific Aotearoa. The *fono fale* (Sāmoan meeting house) is used as an analogy to describe a Pacific paradigm of the world and, indeed, Pacific peoples' personal health and well-being. A Pacific person's world is complex and made up of many interconnecting factors; similarly, the Fonofale is constructed of many components that should all be considered when attempting to address Pacific person's health.

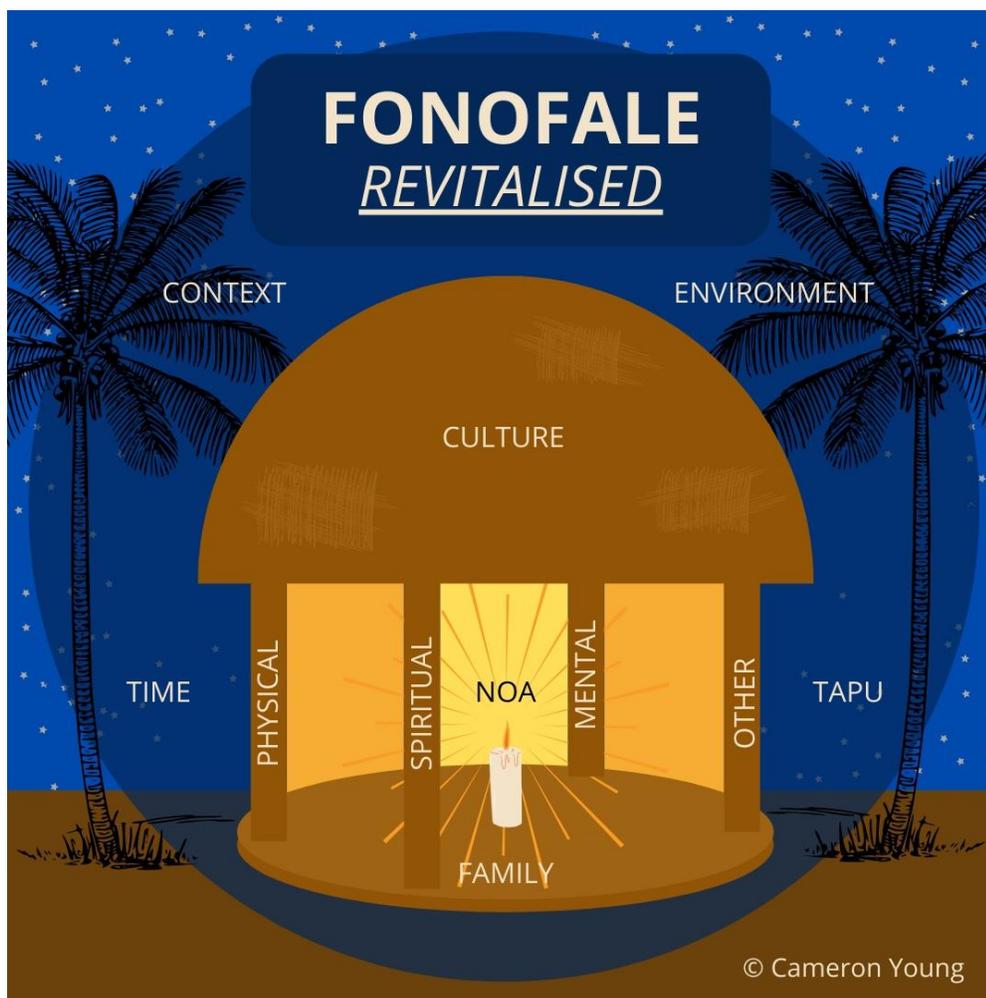


Figure A:

Illustration of the revitalised version of the Fonofale Pacific health model, the original conception by Dr Karl Pulotu-Endemann (1995). The components of noa (ordinary, normal) and tapu (forbidden, sacred) are centred as 'light' and 'darkness' within the fale (house). The 'light' of noa creates a domain of safety for good well-being to be achieved, whereas tapu represents the 'darkness' of uncertainty and the unknown that permeates all aspects of well-being.

The foundation of the *fale* represents family, the extended kin who ground the individual's well-being. The roof represents culture – just as the roof of a *fale* can be remodeled and replaced, so is culture dynamic and subject to change. Anchoring the roof to the foundation are four *pou* (posts) which represent mental/emotional well-being, spiritual well-being, physical well-being and 'other' factors that secure culture within the family. Finally, three metaphysical factors encapsulate the *fale*: time, context and environment. These represent how understandings of well-being can shift across time, and depend on the setting, which is particularly relevant when discussing the diasporic population of Pacific peoples in Aotearoa. The 'other' *pou* has been understood to include an individual's sex, sexual orientation, age, gender, and socioeconomic status. Interestingly, these aspects that are tied to sexuality and reproduction are combined, and by being combined into the 'other' category, may be overlooked or considered an afterthought. We argue that each *pou* is central to an individual's well-being, thus requiring equitable maintenance to support healthy well-being. This largely untouched 'other' *pou* needs to be better considered and understood to improve current experiences of sexuality and reproduction. Rather than reconceptualising the Fonofale, we present a revitalised version with the added values of *tapu* and *noa*. The genesis of this version emerged from discussions with many members of the Pacific community, particularly Taime Pareanga Samuel QSM, Vaivaimalemalo Dr Michael Fusi Ligaliga and our advisory groups. In particular, these discussions inspired our modelling of *tapu* and *noa* as darkness conflicting with light (M. Ligaliga, personal communication, 2021). Importantly, our revitalised Fonofale draws attention to the 'other' *pou*, and to recognise the complexity of health and well-being within the lives of Pacific peoples.

As can be seen in Figure A, the added components of *tapu* and *noa* are imagined as darkness and light, respectively. *Noa* is conceived of as a candle at the centre of the *fale*, casting light within the *fale* to allow for families to operate safely, confidently and with purpose. *Noa* provides a safe space to learn, belong and discover one's identity (Averill et al. 2020). The candle is in the centre of the *fale*, just as the lives of Pacific peoples typically centre around living in the *noa*, a state of safety and caution. In contrast is the darkness that surrounds the candle: *tapu*. Although *tapu* impedes upon the *fale* and well-being of an individual, it is kept at bay by the 'light' of the *noa*. We propose that individuals must stoke their candle to maintain a domain of safety within their well-being; to do so, they must behave in accordance with the *noa* ways of life accepted by their family and community. By doing so, individuals can obtain and maintain healthy well-being, free to explore the complex aspects of their identity that comprise them. In this metaphor, *tapu* is imagined as a 'darkness' which permeates the outskirts of the *fale*, warded off by the 'light' of what is *noa* (known). *Tapu* represents the unexplored and unknown aspects of the world external to oneself (Durie, 1999). This 'unknown' can be tied to an underworld, afterlife or divine powers, but more widely represents the presence of a non-physical, non-material plane. *Tapu* can represent fear and uncertainty, just as darkness evokes fear by hiding things from sight. As the darkness permeates the outskirts of the roof, foundation and *pou*, so does *tapu* invade other aspects of our well-being. The physical, mental, emotional, spiritual, cultural and familial aspects of well-being contain *tapu* components. This paper specifically considers around the *tapu* aspects of the 'other' *pou*, which includes sexuality and reproduction. We hope this paper encourages further dialogue about the presence of *tapu* and *noa* within other components of Pacific well-being.

The revitalised Fonofale can be used as a sociocultural research paradigm that describes the worldview of Pacific peoples. It can be used as a foundation, a lens or an overarching strategy when undertaking any research into Pacific communities, particularly in *tapu* health like sexuality and reproduction. To use this paradigm effectively, we offer the following three questions to guide researchers in considering the *tapu* components of the paradigm.

1. What is *tapu* about the topic?
2. Where are the restrictions of *tapu*?
3. How do I navigate the *tapu* space?

Used within a research environment, this paradigm has the potential to extend researchers' understandings of Pacific participants' needs and perspectives. Within a research environment about sexuality and reproduction, this paradigm is particularly important to ensure Pacific participants are safe and supported in their cultural identity. This paradigm promotes strengths-based research by validating Pacific participants in their feelings of discomfort or uncertainty when asked about *tapu* topics like sexuality or reproduction. It shifts the responsibility of safety from the participant to the researcher; this paradigm encourages researchers to have strategies in place to respond to Pacific participants if they do feel unsafe. Even by beginning to acknowledge that cultural beliefs influence people's understandings of sexuality and reproduction, one can begin to better explain or articulate reasons why the profiles of sexual and reproductive health look different for our Pacific communities. Our conception of sexual and reproductive health, while having a negative impact, can be explained within a *tapu/noa* paradigm and within a cultural framework. So, our revitalised Fonofale is strengths-based in that it is both an explanatory framework, as well as a model for how to work in this area.

This research paradigm is most effective when used in collaboration with Pacific research methods and methodologies. The combination of research strategies specific to Pacific participants will promote strengths-based research that encourages meaningful solutions that originate from within and is driven by the community proper and not external sources. We now present a case study which used this research paradigm to conduct strengths-based Pacific research into sexuality and reproduction.

6. Case Study: Pacific Youth Understandings of Sexual and Reproductive Well-Being

Te Tīpani Project was a summer research project that investigated eighty-one Pacific tertiary students' understandings and experiences of sexuality and reproduction. The revitalised Fonofale model was used as the overarching research paradigm of this study and directed us towards a mixed methods approach. The intention of the original Fonofale was to demonstrate how complex and holistic health is; similarly, data collection methods for research should be varied to capture these diverse aspects of health and identity. As one of the first studies to examine Pacific young people's understandings of sexuality and reproduction, the mixed methods approach was critical for examining both breadth (through survey items) and depth (through interviews) of understanding. The Kakala methodology guided three stages of research including *tolī* (preparation), *tui* (data collection and analysis), and *luva* (study outcomes). Data was collected using a mixed methods online survey on the data capture

platform REDCap (Harris et al. 2009). Examples of qualitative questions are, “In your own words, define sexual health?”, “In your own words, define reproductive health?” and “Where did you get this knowledge from?” Examples of quantitative questions – presented as 5- and 7-point Likert scales – are, “How satisfied are you in your knowledge of sexual and reproductive well-being?”, “How comfortable are you talking about sexual and reproductive well-being to your friends/peers?” and “It’s shameful to talk about sexual health topics in my church/religion”. Following initial analysis of the survey responses, further qualitative data was collected using the Talanoa method in eight one-on-one interviews which delved further into participant’s answers, conducted by the primary researcher. No formal script was followed, except for prompting broader explanations of participants’ survey responses and their perspectives on preliminary data (eg. “Most participants indicated they were comfortable talking about sexuality and reproduction to their mother, but not their father... what do you think about this?”). The results of this project directed a set of recommendations to the Department of Anatomy (University of Otago) on how to foster culturally responsive learning environments for Pacific students.

The revitalised Fonofale research paradigm facilitated turning points in our study and informed best practice. This paradigm challenged our positionality – particularly as a Polynesian and non-Pacific research group – and held us accountable to ensure we were creating a research environment where participants felt safe and respected in their unique cultural identities. We discuss our process of implementing the Fonofale research paradigm into our study using the three key questions.

6.1 What is *tapu* about the topic?

A few moments stood out to us in the process of answering this question. First, we reviewed the literature surrounding sexuality, reproduction and the historical development of these health topics within Pacific Aotearoa. It was clear sexuality and reproduction contain great *tapu* due to the strong cultural ties to the Christian religion (Helu et al. 2009; Veukiso-Ulugia, 2016). There are also cultural values, traditions and social structures which influence and regulate Pacific peoples’ experiences of sexuality and reproduction (Mallon et al. 2012; Veukiso-Ulugia, 2016). We were satisfied we had identified, at a sociocultural level, the considerations needed for *tapu* boundaries within sexuality and reproduction research.

A second key moment was when we consulted with representatives from the local Pacific community. This was during the *toli* (preparation) stage of the Kakala research methodology. We connected with two advisory groups, consisting of five undergraduate and postgraduate *māpū* (students/youth, Cook Islands) and five academic and professional *pā metua* (staff/elders, Cook Islands). The groups encompassed a range of ethnicities, genders and sexualities, providing diverse representation of the local Pacific community. These diverse perspectives were critical in gauging a pan-Pacific understanding of what is *tapu* about sexuality and reproduction, rather than relying on the researchers’ predominantly Polynesian and non-Pacific understandings of these topics. For example, all advisors identified that Christian religions influenced Pacific beliefs that sexuality and reproduction are *tapu* (forbidden) topics. They also identified that many Pacific adults have limited scientific vocabulary and knowledge of reproductive anatomy, which adds to their feelings of discomfort discussing reproduction. An additional factor is that few Pacific languages have equivalent translations of

scientific words. This meaningful consultation broadened our knowledge of the complex Pacific worldview and allowed us to prepare a research environment in which participants would feel safe.

6.2 Where are the restrictions of *tapu*?

We considered this question during each stage of the Kakala research methodology. First, we had to consider the restrictions of *tapu* during the *toli* (preparation) stage. We interacted with the *māpū* and *pā metua* advisory groups separately to acknowledge cultural hierarchies of age; it is considered *tapu* for older and younger generations to discuss sexuality and reproduction together. Due to time constraints, we were unable to follow gender *tapu* (similar restrictions between men, women and non-binary genders) but we would ideally consult with genders separately. The advisors appeared more comfortable in an environment with people of a similar age and level of experience as them. All advisors discussed personal connections to these topics and their hope this project would catalyse future research in sexuality and reproduction. As a research team, we were grateful to receive the support and encouragement of the local Pacific community; it affirmed our mission and enriched our understanding of our participants.

Second, we considered the line of questioning for the online survey and one-on-one interviews. Various recommendations were offered by the advisors and cultural nuances specific to the Otago Pacific student community were identified. Cultural components, such as social hierarchies and power dynamics, were also identified and discussed amongst the advisors. For example, it was advised for our demographic section to not include questions about sexual orientation or sexual preference, with concerns that the student community were not 'ready' for open discussions of that nature. Interestingly, Likert scales containing questions about the acceptance of homosexuality within churches were encouraged by some advisors. These cultural nuances would not have been discovered had we not engaged with the local community through the Kakala research methodology.

6.3 How do I navigate the *tapu* space?

We answered this question by considering our practical interaction with participants, whether that was through an online survey or interview. First, we considered the tone and vocabulary of our online survey questions. We avoided words like 'pornography', 'sexual orientation', 'rape' or 'abuse' as these words were considered too *tapu* by our advisors which might impose distress on our participants or cause them to exit before completion. All open-ended questions were broad and used simple terminology such as, "*In your own words, how would you describe 'sexual well-being'?*" or "*Are there family members you would feel comfortable talking with about sexual and reproductive well-being? Yes/No? Why?*". All sections and many questions were followed with disclaimers that there are no wrong answers, to answer what they feel comfortable with and that they can exit the survey at any point. Although this is standard practice for data collection surveys, consideration of the earlier questions shows us that there may be greater discomfort in Pacific participants filling out surveys about sexuality and reproduction. We also used this opportunity to ask strengths-based questions on what solutions participants could think of to focus on prominent issues. For example, asking, "*Do you have any comments or ideas on how we can destigmatize sexual and reproductive well-being?*" led to more frequent conversations about these topics, greater support for queer Pacific students, and more visibility in student magazines.

Since this study, we have observed an increase in Pacific-led student events around sexual health, the establishment of a queer Pacific student support group and the publication of a Pacific sex issue in the university's student magazine. It is encouraging to witness the use of Pacific research methods, methodologies and paradigms to navigate a *tapu* research space resulted in strengths-based outcomes of community-led initiatives.

Second, we considered the methods of data collection, including using the *Talanoa* method to build meaningful relationships between the primary researcher and interview participants. To *talanoa* (converse, talk, Sāmoan) is to “talk about nothing in particular”, meaning no rigid script was prepared for the interview except a loose line of questions. This enabled a dynamic space where participants were able to drive the conversation in a direction where they felt more comfortable and confident. Participants were able to lead the discussion into the ‘unknown darkness’ of *tapu* and return to the safe domain of *noa* when they needed to. For example, a sexually-active participant became emotional when discussing their family's pressure upon them to not have sex and the shame they felt for not upholding religious ideals of virginity. During this situation, the interviewer stopped the interview and brought the discussion back into the *noa* by checking on the interviewee's well-being and offering to finish the interview there. The participant indicated they felt safe enough to stay and, when they were ready, brought the discussion back into the *tapu* space. This demonstrates the participant-led intention of *talanoa*, which empowers the participant to move through the conversation when and where they felt comfortable. It also highlights the benefits of using research methods and paradigms that reflect the participant's worldview so that they feel safe enough not only to be vulnerable in their emotions, but also to re-enter the *tapu* conversation on their own terms.

7. Fulfilment of research obligations

We believe that researchers are responsible for improving their communities' quality of life. Pacific research methodologies provide a platform and ‘instruction manual’ for how research teams can achieve these obligations within a Pacific cultural space; equally, the strength and diversity of Pacific research methodologies provide a valuable framework for considering health-related research beyond the Pacific context. Our case study described how a Pacific research paradigm, in combination with Pacific research methods and methodologies, can enable researchers to fulfil their research obligations by building meaningful relationships and establishing safe and responsive research environments for participants.

We believe researchers as navigators of the *vā* (relational space, Sāmoan) have an obligation to build meaningful relationships with their participants (Simati, 2011). Relational space between two people or things is restricted by *relational tapu* (Mills, 2016). Researchers must be aware of these restrictions and other prohibitions that may influence interpersonal communication within the research environment. A solution for understanding these restrictions is by using Pacific research methodologies which offer ‘instruction manuals’ on navigating these interpersonal relationships (Naepi, 2019). We used the *Kakala* research methodology to observe and address potential restrictions of *tapu* which may impinge upon the safety of the research environment. As described in our case study, we separated the advisory groups based on age to restrict intergenerational *relational tapu*.

Although these groups were not separated into genders due to time constraints, we do encourage researchers with this capacity to take age, gender and other factors into consideration. Another example is the suggestions we received from the advisory groups, which we implemented to make the lines of questioning more relevant to the study community. The Kakala research methodology allowed us to navigate the *vā* of the study community in a way that responded to their sociocultural context and nuances.

We believe researchers as *mana tiaki* (sacred guardians, Cook Islands) have an obligation to protect participants' cultural identities (T. Samuels, personal communication, 2021). As researchers, we accept our responsibility to be agents of transformation whilst upholding and maintaining cultural values and behaviours (Robinson-Wood, 2013). Pacific identities are complex structures, as highlighted by the complex multi-dimensional nature of the Fonofale health model. As with our revitalisation of this model, so should researchers acknowledge the centrality of cultural concepts, like *tapu* and *noa*, within the lifestyles and behaviours of Pacific peoples. We encourage researchers to employ Pacific research paradigms, methods and methodologies to foster strengths-based, values-driven and participant-led research (Ponton, 2018). Our case study utilised this collaborative strategy to establish a research environment where the cultural identities and perspectives of the researchers and participants were protected and upheld.

As only two of the five researchers were of Pacific heritage, the use of appropriate research methods and methodologies became increasingly necessary to ensure cultural nuances and discomforts were observed and addressed. The identities of the two Pacific researchers – Cook Islands, Sāmoan and Tongan – also brought limitations to the understanding of this pan-Pacific study; an issue mitigated as best as possible through engagement with diverse advisory groups and the use of various Pacific methods, methodologies and epistemologies. Furthermore, we recognise the bias of the researchers' sex, gender identity and educational experiences when interpreting the data from this study. The primary author analysed the surveys and conducted the interviews and thus his personal lens – as a monolingual, half-caste Pacific male studying at a tertiary education – would perceive participants' responses differently than someone else interpreting the data. For example, though it may not have been recognised during the interviews, his physical presentation as a male may have caused female participants to respond differently to questions than they would have to another female. We acknowledge these limitations and encourage future researchers in this space to be aware of cultural nuances to minimise biases of data interpretation.

This research offered learning opportunities for the researchers by expanding their exposure to Pacific cultures, systems and structures. More importantly, these Pacific research epistemologies protected the cultural identities of the study participants. We encourage researchers to utilise Pacific research methodologies as tools to navigate the *vā* (space) of, and be *mana tiaki* (guardians) within, research environments like sexuality and reproduction.

8. Conclusion

Pacific cultural epistemologies should be integrated within research with and for Pacific peoples, particularly when researching *tapu* or sensitive health topics. Pacific research paradigms,

methodologies and methods can be tools to weave these epistemologies into the fabric of the research. We offer a revitalised version of the Fonofale Pacific health model to better describe the complex realities of the Pacific worldview. This created a unique research paradigm that centres the values of *tapu* and *noa* within sensitive health research. We used this research paradigm in Te Tīpani Project, where considerations of *tapu* were woven throughout an investigation into Pacific tertiary students' understandings of sexual and reproductive well-being. We described how we considered the use of the Pacific research paradigm through three key questions: What is *tapu* about the topic? Where are the restrictions of *tapu*? How do I navigate the *tapu* space?

Pacific worldviews are critical to consider for Pacific-specific research to establish a culturally considerate and safe research environment. Pacific worldviews also have great potential for use in non-Pacific research that extends beyond health-related fields, as it allows researchers to better prepare and facilitate their research environment and achieve strengths-based outcomes. Ultimately, Pacific worldviews and paradigms are valuable reflections of the world around us and should be considered for sexuality and reproduction research.

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Associate Professor Bryndl E. Hohmann-Marriott (she/her) is a sociologist and demographer working to understand and increase knowledge of the social and relational aspects of fertility, childbearing, and reproductive health. She teaches, supervises, and practices across a range of methodologies and particularly enjoys interdisciplinary and intercultural teams.

Associate Professor Jane E. Girling (she/her) is a reproductive biologist with key interests in the biology of the uterus, menstrual cycle and associated diseases including endometriosis. Her focus reflects the need for biopsychosocial research that improves the knowledge of, and patient and community outcomes related to, reproductive health and well-being.

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