

## Connecting pathways in a Pasifika project

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Kia orana kotou katoatoa.

In the 1950s, my parents sailed across Moana Nui o Kiva from the island of Rarotonga. Our family home is at the base of the mountain of Taputarangi near the Mango Nui reef passage and the marae of Te Ao O Tonga in the village of Pokoinu, in the Nikao district. My father, Taiti, Rangatira o Ngati Arera, took his father's name Koka'ua as our family name. My mother, Jane Marsters, came from Palmerston Atoll, another island in the Cook Islands. My family settled in Tamaki Makaurau / Auckland, where I was born in the 1960s. My wife, Anne, and I now live in Otepoti / Dunedin, where we raised our children, three daughters Stacey, Rebecca, and Sara, and son Hamish. I am now the grandfather of six grandchildren. I-e-ko-ko!

I am a senior research fellow and statistician at Va'a o Tautai—Centre for Pacific Health within the Division of Health Sciences at the University of Otago. I trained as a statistician at the University of Canterbury focussing on applied subjective Bayesian techniques.

At the beginning of my career, it was considered unconventional and challenging to the current practices of the day. But over time it has found more common use in contemporary statistical and data science applications. Most of my work has been as an applied statistician, most often as a biostatistician using non-Bayesian techniques. Much of my work has used large survey or whole of population data, many with non-Pacific projects, but I am best known as a Pacific health researcher.

My talk is about our application of a Pasifika framework to a quantitative study. As will be shown, this is a project involving many conspirators. However, for the purposes of this talk the work has been in collaboration with Dr Troy Ruhe and Professor Rosalina Richards. Dr Ruhe is a research fellow within the Va'a of Tautai—Centre for Pacific Health. His background is in Pacific research methodologies and applying Pacific frameworks in quantitative research. His PhD research was based on Cook Islands traditional movements as an exercise program, utilising a tivaivai research framework. His postdoctoral work will look at expanding the framework to include an aspect that measures research impact as defined by community providers and Pacific health researchers. Professor Richards is the Deputy Director of Va'a o Tautai and Co-director of the Coastal People Southern Skies Centre for Research Excellence. She has qualitative and quantitative training and has explored Pacific health over a wide array of topics, all with a central theme of exploring the multitude of factors that make up Pacific health.

### ***The research framework***

To begin, we set out to establish a research framework that would ensure that the stories of our Pacific communities are integrated to inform the quantitative evidence and form the basis of the specific research and interpretations. The tivaivai research framework was

designed to ensure Pacific worldviews and common values underpinned quantitative study designs. The framework creates room for Pacific nuances and narratives of the communities' experience and, in turn, allows us to better uphold the mana of our communities (Kokaua et al., 2020a). It extended an application of a similar framework applied in an education pedagogical setting (Futter-Puati & Maua-Hodges, 2019; Te Ava & Page, 2020). For this particular study, we believe the use of the framework allows for a culturally sympathetic process to realise the vision of better education and health outcomes in Pacific communities.

The tivaivai research framework draws from existing published Pacific research guidelines and protocols, for example, the University of Otago (Bennett et al., 2013) and Health Research Council of New Zealand (Health Research Council of New Zealand, 2003). Specifically, the framework makes it explicit that the expected outputs of the research and the approach taken by those conducting the research would be congruent and defensible within indigenous worldviews from throughout the Pacific, including Aotearoa New Zealand. These include inangaro (communal relationships), uriurikite (reciprocity), akangateitei (respect) and ora katoatoa'anga (holism) (Futter-Puati & Maua-Hodges, 2016). Ora katoatoa'anga aligns with existing models of health such as the fonofale (Pulotu-Endemann & Tu'itahi, 2009) or te whare tapa whā (Durie, 1982), in which health and wellbeing is seen holistically, as a culmination of multiple aspects of life, including the physical, mental, spiritual, and social contexts. In foundational work with our colleague, Dr Justine Camp, we drew inspiration from kaupapa Māori principles of research, many of which are espoused by Statistics New Zealand's own framework (Statistics New Zealand, 2020). Of particular resonance in this was the concept of *kia pono* (seeking truth), meaning to give an honest portrayal of our findings for the benefit of Pasifika. Many, if not all,

the framework's concepts, while shared through a Cook Island lens, are transferable across ethnic groups, even to non-Pacific.

We chose the tivaivai, a Cook Islands needlework artform, as a metaphor for its portrayal of connections: its design and method is inspired by a Pacific worldview, informed by cultural opinion, and reflective of environmental surroundings. A tivaivai's construction is specialised and mentored, it is communal, and requires the active involvement of Pacific peoples. As an artform Tivaivai is both simple and complex. The stitching and embroidery is often refined and, while covered and often never seen, is just as elaborate on its underside, revealing much about its construction and who contributed. Thus, as with most principles, what is not seen is as important as that which is portrayed outwardly. There are parallels here with quantitative data analysis, with experienced practitioners knowing that there is skill and complexity that is often underestimated within the research environment, and which is invisible in formal publications, where there is little room to share learnings and iterations as well as final conclusions. To take this metaphor into the research space, we seek a process that creates something meaningful and uplifting while also building capacity and capability of Pacific peoples in research. It has become a priority to develop young Pacific researchers while making our approach a learning experience for non-Pacific researchers who wish to do work in this context.

Finally, a six-step framework—Te ōrama (visualise the tivaivai), Ko'iko'i'anga (gathering materials), Tuitui'anga (stitching the tivaivai), Mareka'anga (appreciate the tivaivai), Ariki'anga (appraise the workmanship), and Orongo'anga (present the tivaivai)—was developed to be sympathetic to qualitative Pasifika frameworks, including alignments with the kakala (Fua, 2014) or fa'afaletui (Tamasese et al., 2005) models based upon metaphors drawn from Tongan and Samoan worldviews respectively. This integration is

particularly relevant for the study described here, which combines both quantitative and qualitative aspects to explore multigenerational relationships between education and health among Pacific families in Aotearoa.

While important frameworks and strategies have been developed in line with national commitments to uplift Pacific achievement, deficit reporting continues to focus on achievement gaps between Pacific and non-Pacific peoples in Aotearoa New Zealand (Ministry of Health, 2020; Ministry of Education, 2020; Ministry for Pacific Peoples, 2018). In response, the growing population, particularly the youth, have demanded more sustained efforts from its national leaders and governing agencies to create better social and economic opportunities and outcomes. Through each report, a common barrier highlighted across all sectors is systemic racism and an acceptance that inequities will continue to exist unless service design and programmes are inclusive of Pacific voices. This is an important message for the research community, underscoring the importance of allowing Pacific peoples to tell their own stories and lead evaluation efforts so metrics of success are aligned with the interests of the community. We hope that this article will provide an example of the application of a Tivaivai research framework and give some clues as to how it could be applied in other research or evaluation spaces.

### ***Te ōrama (The vision)***

“Preparation: Identify a clear research question. Define, prepare plan, and set up a clear project.”

- background and investigative research
- develop a robust research question
- incorporates Pacific community perspectives

- develop a clear study protocol specifying who the research is about and who will benefit.

#### The team

- incorporates Pacific community participation and leadership
- draws from allies with specialist knowledge
- seeks to build Pacific research capacity.

Pacific peoples in Aotearoa New Zealand are a vibrant migrant community from over 17 nations throughout the Pacific (Capstick et al., 2009). They are one of the fastest growing populations in Aotearoa with ancestors who migrated seeking opportunities for themselves, their communities, and future generations (Statistics New Zealand, 2018). Central in this vision was good health and education outcomes, which remains a priority today (Ministry for Pacific Peoples, 2018).

The aspirations of our ancestors are echoed through nationwide policy for Pacific peoples across multiple disciplines. For example, the Ministry of Health's report *Ola Manuia* has strategic visions to ensure Pacific people lead independent and resilient lives, in good health, with equitable health outcomes (Ministry of Health, 2020). Similarly, the Ministry for Pacific Peoples *Lalanga Fou* strategy is guided by the goals of resilient and healthy Pacific peoples as well as confident, thriving, and prosperous Pacific young people (Ministry for Pacific Peoples, 2018). These aspirations also sit within a context of current inequities in key outcome such as higher levels of mental distress (Ataera-Minster & Trowland, 2018) and risk of non-communicable disease (Ministry for Pacific Peoples, 2021), meaning accelerated progress is needed. Although in a Pacific worldview ailments

are not a sole indicator of wellbeing, they do contribute to the overall quality of life for these communities.

Another aspiration highlighted by the Ministry of Education is commitment to Pacific learners and communities by growing learning environments that embrace Pacific worldviews, culture, and beliefs (Ministry of Education, 2020). While the literature pertaining to parental education and children's health is mixed, it is generally accepted that greater education has an association with better health outcomes. While little is clearly established about the mechanism of causation (Raghupathi & Raghupathi, 2020), evidence suggests that higher levels of education are correlated with factors such as better health literacy, greater chances of employment, and earning potential, which all potentially contribute to accessing timely and effective services (Cutler & Lleras-Muney, 2006). While the evidence on relationships between the education of Pacific parents and their child's health is still sparse, this is an area which is worth exploring for Pacific communities, as the current barriers to equitable education and health outcomes continue, in stark contrast of the visions our ancestors pursued.

The goal of the current study was to explore, using the tivaivai research framework, the extent to which the level of a parent's educational qualification attainment influences several health-related outcomes for their child, specifically, the associations between parental education and health outcomes of Pacific children living in Aotearoa in 2013.

To that end we successfully applied for funding from the Health Research Council of New Zealand (HRC 20/115 and HRC 20/116) and established a Pacific-led research team. Importantly, in conjunction with our aim for further Pacific research development, we were able to support several early career researchers to participate in the team, including Faith Eccles, Ravana Saifoloi, and Dr Troy Ruhe. Furthermore, we utilised our collaborations with Pacific organisations

such as: the Pacific Families Study, a longitudinal study of Pacific children born in 2000; Pasifika Futures, to establish links with Pacific providers; and Moana Connect, affording us qualitative research expertise. This framework provides the foundation of all studies involved with the wider project. In addition to our tivaivai research framework, ethical approval was obtained from the University of Otago through the University of Otago Human Ethics Committee (18/422).

The aim of this article is to offer an example of how our Pacific framework laid a foundation of understanding between multiple sources of data which provide nuances and culturally informed interpretations of the findings.

### ***Ko'iko'i'anga (Procedure—method)***

“Cutting the pattern: Gather necessary resources”

Our quantitative data is already collated:

- indicator definitions need to be clear and robust
- quality needs to be assured
- the data collection and security assured
- variables should be included to reflect and support Pacific values as much as possible.

Our talanoa:

- interviews and questioning reflect and support Pacific values
- quality needs to be assured
- the data collection and storage ensures participants' safety and data security.



This was a national cross-sectional study using data from the Integrated Data Infrastructure (IDI), a large research database curated and managed by Statistics New Zealand (Statistics New Zealand, 2017). The IDI holds microdata about people and households, with data coming from administrative datasets and surveys from New Zealand government agencies and non-governmental organisations. Data are linked using probabilistic linking at the individual level, and are de-identified.

The target population is all Pacific children under 20 years of age living in Aotearoa New Zealand. The base population for this study is a Pacific cohort of children under 20 years of age from the 2013 Census linked with data from their parents. Outcomes were followed for 5 years between March 2013 and February 2018. For some outcomes—mental health service use and dental hospitalisations—the cohort was restricted to 10–19 years.

In this example we implemented a Oaxaca-Blinder decomposition (Jann, 2008), an application that decomposes differences between two groups into those attributable to individual covariates. These would be eliminated if the groups had the same characteristics. It also identifies the proportion which remains even if both groups had the same characteristics used in the study. This is a novel approach as no studies of Pacific families to date have applied this method to parental education differences in child-health related outcomes. However, other similar applications of the method have been published (Shackleton et al., 2018; Pacheco et al., 2017).

### **Study Variables**

**Ethnicity:** A personal details table in the IDI includes gender, birth-dates, six main ethnic groups, and links to birth parents of children in the study. We use the total definition for Pacific ethnicity. Pacific children included in this study represent children with a Pacific identity, irrespective of any other group they also identified with.

The main exposure variable for each child with at least one parent is the qualification of those parents, self-reported in the 2013 Census. An indicator of continued study was included if parents' qualifications had increased by the 2018, or they were still studying.

Five-year outcomes for this study, post 2013, included children's discharges from publicly funded hospitals in New Zealand, reported in the national minimum dataset that were either potentially avoidable (PAH), or serious dental admissions. Those seen in a private hospital were also included. Specialty mental health service use was identified if a child was recorded in data in the Programme for Integration of Mental Health Data. Child deaths were reported in the Ministry of Health's or Department of Internal Affairs mortality datasets.

**Covariate factors:** Other covariate factors included in the models, as much as possible, were representative of the World Health Organization's social determinants of health and the Pacific priorities for health that underpin this study (Kokaua et al., 2020b; World Health Organization, 2008). The model we used allows us to arrange the covariates into themes. These themes are: child's demographics (age, and gender); social factors (two parent, parents' age, other children in the household, and non-smoking parents); cultural (Pacific languages spoken in the home, parents born in Aotearoa New Zealand, and parents Christian affiliation); parents continued study; family economic factors (parents employed, living in their owned home, and household income quartile); and Local Area deprivation: NZDEP13 quintile.

All analyses were conducted using Stata version 14. For each of the child-health outcomes, we conduct an Oaxaca-Blinder decomposition. This technique enables us to compare the difference between child outcomes for two-parent education groups. These are partitioned into an "explained" portion, the extent to which differences between

groups could theoretically be reduced if differences in the predictor variables were eliminated. While the residual, “unexplained” portion is the difference that would remain if the two groups had identical characteristics. Detailed decomposition allows us to assess which covariate, or groups of variables, have the largest impact on reducing the differences between groups. We summarise the decomposition results in themes described above: child demographics, social, cultural, continued study, and other economic characteristics.

### ***Tuitui’anga (analysis—results)***

“Stitch the pattern: Bring the pieces together:”

- ensure that appropriate analytical tools and techniques are applied
- data analysis and analysis is protective of individuals
- findings reported with a mind to Pacific values.

In 2013, 164,070 Pacific children under 20 years of age were living in New Zealand. Of those, 161,790 had completed a 2013 Census and 139,689 had at least one parent who also was in the Census. There were 139,602 children and parents eligible for this study after exclusions for missing age and address data. Furthermore, 53,477 were aged between 12 and 19 years. The distribution of children by presence of parental qualification is shown in Table 1. Of all 139,602 Pacific children under 20 years and 53,427 aged between 12 and 19 years, 23% of under 20 and 26% of 12–19 year-olds had parents without any national qualifications framework achievement. Around three out of four children had parents with at least a level 1 educational qualification (Table 1).

**Table 1. The distribution of parents’ education qualifications across the two study cohorts**

|                          | Under 20 |            | 12–19 yrs |            |
|--------------------------|----------|------------|-----------|------------|
|                          | <i>N</i> | % of Total | <i>N</i>  | % of Total |
| <b>Total</b>             | 139,602  | 100.0      | 53,427    | 100.0      |
| <b>Any Qualification</b> | 107,670  | 77.1       | 39,555    | 74.0       |
| <b>No Qualifications</b> | 31,932   | 22.9       | 13,872    | 26.0       |

Table 2 shows the results of the Oaxaca-Blinder decomposition highlighting the gap in levels of children that were hospitalised or died across the education qualification levels of their parents. Significant reductions are observed in Pacific children of parents with fewer qualifications and other Pacific children, between the incidence of children seen in publicly funded hospitals and those hospitalised with avoidable conditions. There were significant differences between qualified parents in the proportion of children admitted to a private hospital, admitted with a potentially avoidable condition or an unintentional injury, or seen in a specialist mental health service. No significant association was seen between children of qualified parents and those with less qualified parents for children admitted with dental conditions or dying from any cause.

Reducing the covariate differences between children with qualified and other parents explained the gap between the two groups by 35% to 55% for most conditions and 81% for children admitted with serious dental conditions. Apart from the latter, as much as 65% of the gap remained unexplained by the covariates included in the study.

Decomposing the proportion of the gap revealed, outside of the child’s demography, family economic factors contributed most to the explained part of the inequality followed to a lesser degree by social and cultural factors. While cultural factors contributed most to the

explained mortality gap, it increased the difference for other conditions. Family economic factors and deprivation explained the differences for private and dental hospitalisations. Further analysis, not shown, revealed that for those two outcomes household income had the greatest contribution. However, for the other conditions, home ownership and parental employment had a greater influence than household income or deprivation.

**Table 2. Oaxaca-Blinder decomposition analysis results for parental educational qualification and selected child-health outcomes**

|   |          | Private Hospital | Potentially Avoidable Admission | Mortality      | Unintentional Injury | Specialist mental health Service | Serious Dental Admission |
|---|----------|------------------|---------------------------------|----------------|----------------------|----------------------------------|--------------------------|
| <b>Analysis Total</b>                     | <b>N</b> | <b>139,602</b>   | <b>139,602</b>                  | <b>139,602</b> | <b>139,602</b>       | <b>53,427</b>                    | <b>53,427</b>            |
| <b>No Qualification</b>                   | %        | 0.39%            | 24.97%                          | 0.15%          | 10.08%               | 15.36%                           | 0.38%                    |
|   | 95% CI   | 0.3 to 0.5       | 24.5 to 25.5                    | 0.1 to 0.2     | 9.7 to 10.4          | 14.7 to 16                       | 0.3 to 0.5               |
| <b>Any Qualification</b>                  | %        | 1.06%            | 22.94%                          | 0.09%          | 9.13%                | 10.41%                           | 0.28%                    |
|   | 95% CI   | 1.0 to 1.1       | 22.7 to 23.2                    | 0.1 to 0.1     | 9 to 9.3             | 10.1 to 10.7                     | 0.2 to 0.3               |
| <b>Total Gap <sup>a</sup></b>             | %        | -0.68%           | 2.03%                           | 0.06%          | 0.95%                | 4.95%                            | 0.10%                    |
|   | 95% CI   | -0.8 to -0.6     | 1.5 to 2.6                      | <0 to 0.1      | 0.6 to 1.3           | 4.3 to 5.6                       | <0 to 0.2                |
| <b>Explained Gap <sup>b</sup></b>         | %        | 47%              | 35%                             | 55%            | 41%                  | 55%                              | 81%                      |
| <b>Decomposition of the explained gap</b> |          |                  |                                 |                |                      |                                  |                          |
| <b>Demographic</b>                        | %        | 6%               | -15%                            | 22%            | 5%                   | -3%                              | 5%                       |
| <b>Social</b>                             | %        | 1%               | 13%                             | -3%            | 12%                  | 12%                              | -3%                      |
| <b>Further Study</b>                      | %        | 0%               | -1%                             | 1%             | -2%                  | 0%                               | 0%                       |
| <b>Cultural</b>                           | %        | -1%              | -18%                            | 23%            | -9%                  | -7%                              | -15%                     |
| <b>Family Economic</b>                    | %        | 26%              | 52%                             | 17%            | 35%                  | 51%                              | 79%                      |
| <b>Deprivation</b>                        | %        | 15%              | 4%                              | -6%            | 0%                   | 1%                               | 15%                      |
| <b>Unexplained Gap <sup>c</sup></b>       | %        | 53%              | 65%                             | 45%            | 59%                  | 45%                              | 19%                      |

*Note: Negative coefficients subtract from the explained gap. This implies that if children with qualified parents shared characteristics with children of parents with few qualifications, the gap would increase, rather than decrease.*

*a The total predicted gap is the value for children of parents with no or few qualifications minus the value for other children.*

*b The explained gap is the extent to which the total gap would be reduced if children of parents with few qualifications had the same values on the covariates as other children. It is decomposed into its constituents that sum to the explained gap.*

*c The unexplained gap is the gap that would remain even all children had the same values on the covariates due to differential associations between the covariates and the outcomes.*

## **Mareka'anga (verification)**

“Appreciation of the gift: Blending community and provider input into the quantitative findings”

- verification of the accuracy and sense making of key findings
- mindful of implications of naïve inferences upon Pacific communities
- consideration and reconsideration of key findings
- consideration of the strengths and limitations of the study and potential for future iterations of the models.

Our purpose for this phase is to discuss how these findings are perceived from feedback from communities involved, as well as how they align with multiple sources of information. These consultations provide further context to the nuances that emerge from the trends in our findings. The verification extends to lines of inquiry, accepted methods, and what is considered best practice for the investigation.

Our first source of verification for a line of inquiry came from another quantitative and longitudinal data source, the Pacific Islands Families study. This is a well-established birth cohort study of Pacific children born in Aotearoa in 2000. In a publication of our findings investigating the impact of parental education on children’s health, Schluter et al. reported that a mother’s continued study after the

birth of her child was a significant protective factor for their child's symptoms of mental illness (Schluter et al., 2022). Schluter et al.'s (2022) findings had specific consequences in that we have included an indicator of further study in our preliminary Oaxaca analyses while providing further associations between parental education and Pasifika children's health outcomes. While parents gaining further education post-birth is itself a significant contribution to many of the health outcomes, it offers little in terms of explaining the health outcome gap between parents with or without any qualifications.

Further, another form of evidence that we have used for verification of our findings is through talanoa to provide context to the quantitative findings. Talanoa is a Pacific research methodology that allows people to story their issues, their realities, and aspirations as part of conversation, talking, chatting, and the sharing of ideas. The talanoa process enables the researchers to approach the participants with open-ended questions that participants were able to think about, reflect upon, critique, and argue, and express their perspective according to their experiences and beliefs, and not feel as if there was a right or wrong answer (Vaiolenti, 2006). Two talanoa are taking place, undertaken by two of our collaborating partners, Moana Connect who are interviewing families who were identified by Pasifika Futures. The first talanoa will be from families who view education as a priority, and the second from a wider group of families. We are currently in the process of analysing the first stage of our talanoa from families who have identified education as a priority, the findings from which are still preliminary. Thus, these talanoa not only provide further context to the quantitative findings, they also provide direction for further lines of inquiry and research direction.

Additionally, the preliminary feedback from talanoa has been challenging to the way the data models have been constructed. While it seemed obvious to the research team that "education" is a widely

accepted concept, most families think of learning in more general terms. Perhaps the former is perceived by families as a formal qualification process, but the latter is what individuals take from a lifetime of learning. Also, many parents prioritise education in terms of their child's learning from which their progeny will glean benefits in terms of health and financial security.

One of the key strengths as well as its limitation is the analysis uses data from the IDI which includes as much of the Pacific child population that would be possible for any study of this kind. It offers researchers a wide range of key data and indicators in a controlled environment. Individual privacy is protected, and output is checked and restricted to remove, as much as possible, any chance that any individual could be identified in the released results. One of its limitations is that this study, and in some respects the IDI, is compiled from government administrative datasets. Pacific children are often less likely to be involved in such data, such as in the Census, or their involvement may arise from a traumatic event, as in hospitalisations.

A limitation of the models in this study is that there are other indicators that might explain how a parent's education might be associated with their children's health outcomes. In some, as in those highlighted in the PIFS analysis as well as ongoing with the talanoa research, ongoing education of the parent and their child, or the health of the parent, will be included in future iterations of these analyses. Others, such as health literacy, are not available for inclusion in the IDI. Finally, the data in the IDI is limited in terms of data that captures cultural involvement or many other strengths-based factors that may explain parental education or be an outcome for their children.



## **Ariki'anga (validation)**

“Acceptance of fine workmanship: Validate the findings”

- findings are submitted for peer review to appropriate specialists including Pacific communities
- obtain community solutions wherever possible
- key findings shared with sectors of the Pacific community to discuss solutions.

A third and final talanoa will involve a group of potential providers who could respond to the issues raised from the evidence gathered. The aim of this is to see how Pacific communities can develop solutions that will benefit Pacific families' education and health outcomes beyond the many initiatives that have been introduced over the past 5 years by the ministries of health, education, and Pacific peoples. Our analyses will focus on what we have found about education so far: from existing literature, how to retain Pacific students in school in a way that improves their achievement; from our own findings, how to support their continued education beyond school or to work and learn while at school; to support their continued education as young parents to beyond their early careers. In addition to what we have found about the health sector so far: from existing literature, how to respond to ethnic inequities; from our own findings, how to respond to educational or other socioeconomic inequalities that exist for Pacific peoples.

## **Orongo'anga (dissemination)**

“Presentation of the gift”

- findings published in peer reviewed journals and presented at academic fora
- findings can be presented with Pacific solutions, asserting our Pacific community as a priority.

For us to be able to make our findings available to other Pacific researchers and Pacific communities, we chose to target only open-access journals that have a good Aotearoa or Pacific target circulation. This intention was in contrast with the usual practice of prioritising international journals with the highest impact factor.

*Evaluation Matters—He Take Tō Te Aromatawai*, the journal of the Aotearoa New Zealand Evaluation Association, happily meets those criteria. We are acutely aware that our example is strictly a research project rather than an evaluation. However, we hope that the principles that we have highlighted translate across disciplines. In particular: developing well-defined questions of enquiry; adopting appropriate and robust methodology; strong adherence to Pacific values; Pacific projects lead by Pacific researchers or evaluators with a desire to further develop a younger Pacific workforce; ensure results are verified from multiple sources and validated by Pacific communities. Finally, to develop solutions that reflect Pacific infrastructures and add value directly to Pacific communities. These apply to benefit Pacific communities, regardless of academic discipline—researchers, statistician, evaluator, or other.

Meitaki ma'ata.

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