Utilisation of Traditional Pacific Healers by mothers and children of the Pacific Islands Families study

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Abstract

Aim: *This research explores data on the mother's willingness to use, and children's use of Traditional Pacific Healers (TPH) from the first five waves of the Pacific Islands Families study (PIFS). Specific aims were: to report the prevalence of, and describe factors associated with, (1) the willingness of Pacific mothers to use the health services of Traditional Pacific Healers, (2) the use of Traditional Pacific Healers to treat children within the cohort and (3) to assess whether the use of Traditional Pacific Healers was a substitute or a supplement for western medicine.*

Methods: *Mothers were asked whether they would use a Traditional Pacific Healer if sick (willingness) and how often their child had seen a Traditional Pacific healer in the previous 12 months (use). These questions were asked at multiple measurement waves consisting of 6 week, 4 and 6 year for mothers, and 6 weeks, 1, 2, 4, and 6 year measurement waves for children.*

Results: *at 6 weeks 48% of mothers were willing to use TPH and this decreased to 36% at year 4 and 24% at year 6. Pacific born mothers, Samoan and Tongan mothers, and religious mothers were significantly more willing to use a TPH. Varied patterns of use were observed by children based on ethnicity and measurement wave. Like mothers - use by children declined as they aged. At 6 weeks 18% of children saw a TPH whilst 8% saw a TPH at age 6 years. Mothers amenable to using traditional healers are using them as supplemental to western medicine, rather than as a substitute.*

Conclusions: *There is a steady reduction observed in mother's willingness and children's use of TPH in the PIFS over time. This raises the question of the whether provision of TPH is sustainable in NZ. There are significant differences in use of TPH by ethnicity. Further research that assesses reasons for visits, treatments provided, and costs may help explain the observed variations shown in this study.*

Introduction

Traditional, Complimentary and Alternative medicine (TCAM) includes a broad range of healing approaches not used in conventional Western medicine. Although many of these approaches and practices are considered alternative by Western medicine, these services can provide up to 80% of health care services in less developed nations.[1]

The use of TCAM is also common in many western countries. Furthermore, trends show that its use is increasing over time.[2-4] In 2004 an Australian study found that 52.2% of adults had used TCAM in the previous

12 months.[5] In the US a study from 2007 found that approximately 40% of all adults had used TCAM in the previous 12 months, and use was highest in indigenous (50.3%) and white (43.1%) adults compared to Asian adults (39.9%) or Black adults (25.5%).[6] In 2000 a study conducted in the UK reported that 20% of adults had used TCAM in the previous 12 months.[4]

Pacific migration to New Zealand (NZ) occurred predominantly during the 1950s–70s. [7] With the migration of Pacific communities, migration of traditional methods of maintaining wellbeing also occurred. This is observed in the ongoing use of Traditional Pacific Healers (TPH) by their respective communities in NZ.

In New Zealand, the Dunedin Multidisciplinary Health and Development Study found that 10% of the cohort (when they were 26 years of age) had used TCAM in the previous 12 months in 1998–1999.[8] Another study conducted over a two month period from December 2004 – January 2005 in the emergency department of Waikato hospital, Hamilton found that 38.1% of all presenters and their relatives that attended the clinic with them had used TCAM in the previous 12 months.[9] The most recent New Zealand Health Survey conducted in 2006/07 found that 18.2% of the NZ adults surveyed had used TCAM in the previous 12 months. Pacific New Zealanders were less likely to have used TCAM (13.3%) than other New Zealanders, however, were most likely to have used a Traditional Pacific Healer (Pacific 27.9%, compared to non-Māori 1.5%, and Māori 0.5%).[10]

Although few studies have quantified the use of Traditional Pacific Healers in the Pacific many publications have described characteristics of their existence with regard to treatment practices, conditions able to be treated, ideological considerations that have shaped their practice, and the conflicts or negotiations between the western trained medical fraternity and Traditional Pacific Healers.[11-13] A study that looked at use of Native Hawaiian healers by adolescents in Hawai'i from 1993–1994 found that 9.8% of participants had used a Hawaiian healer in the last 6 months.[11] There is limited information that has quantified the use of TCAM in other Pacific nations or of migrant Pacific populations elsewhere.

Pacific Cultural Resource Units were established in many District Health Boards that serve large Pacific communities in New Zealand. These were established to provide cultural advice and support to patients and staff surrounding Pacific issues. A specific reason for their existence is to ensure that negative clinical health outcomes are not likely to occur due to harmful drug interactions in patients who are using traditional remedies as well as western medicines.[14] Furthermore, there have been instances where Pacific Cultural Resource Unit staff has mediated the use of TPH within hospitals when western treatment has failed to improve patient health.[15]

Aims

This research explores data on Traditional Pacific Healers (TPH) from the first five measurement waves of the Pacific Islands Families Study (PIFS). The specific aims of this paper were to report the prevalence of, and describe factors associated with, i) the willingness of Pacific mothers to use Traditional Pacific Healers, ii) the use of Traditional Pacific Healers by children within the PIFS cohort and iii) to assess whether the use of Traditional Pacific Healers substituted or was supplementary to the use of western medicine.

Methods

Study Design, Participants

The Pacific Islands Families study (PIFS) is of longitudinal design and this paper has used data gathered from the first five measurement waves. Further information describing the methods used in the PIFS is published elsewhere.[16] The study began in 2000 with 1376 mothers and their 1398 Pacific infants born in Manukau City, New Zealand (NZ). Mothers were interviewed when the child was 6 weeks, 1, 2, 4 and 6 years of age. At each interview, mothers were asked how many times their child had visited a traditional healer in the previous year (or since birth at the 6-week interview). This question was asked within the context of a larger section on child health that also included questions on GP visits, hospitalisations and numbers of various types of illnesses. At 6 weeks and again at 4 and 6 years, mothers were asked about their willingness to use a Pacific Traditional Healer when ill.

Measures

Willingness

The General Ethnicity Questionnaire (GEQ) from Tsai et al.[17] assesses acculturation of immigrant populations. Within the PIFS, its wording was slightly modified to separately measure cultural orientation towards Pacific culture(s) and the local New Zealand culture.[18] This version was used at baseline maternal interviews and again at 4 years and 6 years post-partum. It included the question *"Please tell me how much or how often you do the following things?"* and one of the items was *"I visit a traditional Pasifika healer when I have an illness"*. For the present research, responses from mothers to this item were dichotomised by separating *"Not at all"* from all other responses, ranging from *"a little"* to *"a lot"*. Thus, the mothers' willingness to use traditional healers was measured by this statement of habit.

Treatment

Questions about the child's actual visits to traditional healers were included in all five of the measurement waves. The question *"How many times has he/she received treatment from a traditional healer (e.g. fofō)?"* was asked at each wave, and suitably modified to assess the most recent time period of up to 12 months. For the current research, children were categorised into two groups at each time point: those who had seen a traditional healer at least once and those who had not. Mothers were also asked to identify which ethnic group the Traditional Pacific Healer was from. Similar questions were asked to mothers of the number of times a child had visited their GP for treatment and also the number of illnesses their child had in the past 12 months.

Substitution

Data on immunisation of the child were collected at the 1-year and 2-year waves, including whether or not the child had received the scheduled 3-month, 5-month and 15-month vaccinations.[19] At each of the five measurement waves, the number of GP visits and the number of traditional healer visits were recorded. Occurrences of particular types of child illnesses were also estimated by mothers under labels such as *"problems with breathing"* and *"stomach symptoms"*. Each of the numbers was reported in relation to a period of time limited to 12 months, as mentioned above. Responses from these questions were used to evaluate the substitution/supplement research question.

Socio-demographic and other explanatory variables

Household income was assessed at baseline as an indication of socio-economic status (SES). At every measurement wave, the mother's marital status, smoking status, self-reported health status, mental health status (measured by the GHQ-12) and highest education level were recorded. Acculturation was measured using the modified GEQ questionnaire.[18] However, the Pacific component was not used in the analysis of willingness because the outcome variable was lifted directly from this scale.

Statistical Analysis

Willingness and treatment outcomes

Methods based on logistic regression were used to explore factors associated with higher odds of the two dependent variables, willingness and treatment. Several potentially confounding variables were included in these analyses. Multivariable logistic models were created to estimate adjusted odds ratios, which show differences among various subsets of the cohort. Due to the repeated measures and non-normal nature of the data, generalised estimating equations were used for these models.[20]

The odds of a mother being willing to use a traditional healer were initially modelled using the following explanatory variables: age band, ethnicity, NZ-born, baseline household income band, religiosity, smoking status, marital status, symptomatic depression, health status, highest education and NZ acculturation. The odds that a child received treatment from a traditional healer were modelled using the following explanatory variables: child's ethnicity and sex, household income category at birth, the mother's age, marital status, smoking status, highest education level, religiosity, depression, acculturation and NZ-born status. Starting with initial saturated models (containing all the above variables), variables were eliminated using a stepwise backwards elimination procedure until only significant associations remained. Pairs of models were compared using a Wald statistic.[21] No interaction terms were used in the multivariable models.

The ongoing PIFS captures data using SPSS. Analysis for the present research was performed using **R** version 2.12.0[22] and the 'geepack' package.[21-23] Standard errors and the derived confidence intervals have been adjusted appropriately to allow for correlations among the repeated measurements.

Substitution

A two-pronged approach was utilised to investigate whether the usage of traditional healers was adopted as a substitute for western medicine. Both were based on a measure of utilisation of an aspect of western medicine, which was then compared to data on willingness and utilisation of traditional healers. In the first approach, we investigated immunisation of the children at 2 years of age, comparing this result between the two willingness groups. In the second approach, we investigated the number of GP visits each child had had, comparing this to the number of illnesses over the same time period and investigating whether the number of traditional healer treatments reduced the number of GP visits per illness.

Paterson et al.[24] used a multiple logistic model to characterise children within the PIFS cohort who had not received full immunisation at the age 24 months. Their final model included two variables, maternal smoking and parity, both being significantly associated with the odds of non-compliance. We reproduced their model and added the dichotomous variable willingness, to test for an association between belief in traditional healing and inadequate immunisation.

The second approach to answering the substitution question was to model the number of GP visits in a 12-month period, using data from interviews held when the child was 1, 2, 4 and 6 years old. Clearly the number of GP visits depends on the number of illnesses (as indeed it does). Our hypothesis is that if traditional healing *is* a substitute for western medicine, then the number of GP visits per illness will be lower among those children who had also visited a traditional healer or whose mother had declared a willingness to visit a traditional healer herself. We used a multiple linear GEE model for this. The explanatory variables in this model were: the measurement wave, the total number of illnesses that the child had had during the period, the number of traditional healer visits during the period, the mother's willingness to use TPH and the mother's ethnicity.

Out of 4397 observations (one per child per measurement wave), 34 were removed because of extreme values (i.e. large numbers of GP visits, TH visits or number of illnesses) and to satisfy the approximate normality assumption for the model. The model used an exchangeable correlation structure for the repeated measures per child; thus standard errors were appropriately adjusted to take this into account. The assumption of linear relationships for numeric predictors was assessed. Stepwise variable elimination was not used for this model.

Results

A description of the cohort of mothers is presented below (Table 1). This table shows NZ-born status, ethnic composition, age, religiosity, relationship status and acculturation from the 6 week (baseline), 4 and 6 year measurement phases. Across the phases only the religiosity and education variables changed significantly; mothers who maintained a presence within the PIFS were significantly more religious and attained significantly higher levels of educational achievement compared to baseline (the latter is to be expected since highest education is monotonic).

Table 1. Cohort description of mothers at baseline, 4 years and 6 years, including socio-demographic characteristics

	At 6 weeks		At 4 years		At 6 years		Change
	N=1375	(%)	*N=1048*	(%)	*N=999*	(%)	*p*-value
NZ born							0.79
No	921	(67%)	689	(66%)	659	(66%)	
Yes	454	(33%)	359	(34%)	340	(34%)	
Ethnicity							0.99
Cook Island	232	(17%)	186	(18%)	174	(17%)	
Samoan	650	(47%)	475	(45%)	463	(46%)	
Tongan	288	(21%)	224	(21%)	218	(22%)	
Niuean	59	(4%)	54	(5%)	46	(5%)	
Other Pacific	47	(3%)	33	(3%)	30	(3%)	
Non Pacific Island	99	(7%)	76	(7%)	68	(7%)	
Age category (at baseline)							0.9
<20	111	(8%)	79	(8%)	73	(7%)	
20–29	719	(52%)	536	(51%)	518	(52%)	
30+	544	(40%)	432	(41%)	407	(41%)	
Religiosity							<0.001
Not	229	(17%)	166	(16%)	153	(15%)	
Moderate	392	(29%)	327	(31%)	178	(18%)	
Very	753	(55%)	555	(53%)	666	(67%)	
Partnered							0.95
Non partnered	269	(20%)	199	(19%)	193	(19%)	
Partnered	1106	(80%)	846	(81%)	805	(81%)	
Highest education							<0.001
No formal qualifications	535	(39%)	311	(31%)	316	(32%)	
Secondary school qualification	464	(34%)	277	(28%)	236	(24%)	
Post school qualification	376	(27%)	405	(41%)	447	(45%)	
Acculturation (NZ scale only)							0.18
High NZ	669	(49%)	544	(52%)	482	(48%)	
Low NZ	696	(51%)	500	(48%)	515	(52%)	

There has been a general decrease in both mothers' willingness and children's use of Traditional Pacific Healers (TPH) in the PIFS cohort over time. This trend is shown in Figure 1. More detailed information regarding mothers' willingness to use TPH is presented in Figure 2 and Table 2. Willingness significantly decreased at each consecutive time point. At baseline, 48% of mothers indicated a willingness to use a Pacific traditional healer; this figure had dropped to 37% at the 4-year mark and to 24% at the 6-year mark ($p<0.0001$). Willingness varied significantly among the different ethnicities, with Samoans being particularly keen ($p<0.0001$).

New Zealand born parents were significantly less likely to be willing, compared to overseas-born parents (AOR=0.6, $p<0.0001$). Compared to Cook Islanders as the reference group for ethnicity, three ethnicity groups showed significantly higher odds of willingness to use a traditional healer: Samoans (AOR=4.7, $p<0.0001$), Tongans (AOR=1.58, $p=0.0024$) and Other Pacific (AOR=2.88, $p<0.0001$). In contrast, no significant difference from Cook Islanders was found for Niueans and non-Pacific mothers. Highly significant differences by religiosity were found, with the non-religious (OR=0.30, $p<0.0001$) and the moderately religious (OR=0.63, $p<0.0001$) being less willing to use traditional healers than their very religious peers.

Figure 1. Willingness (mother) and use (child) of Traditional Pacific Healers over time

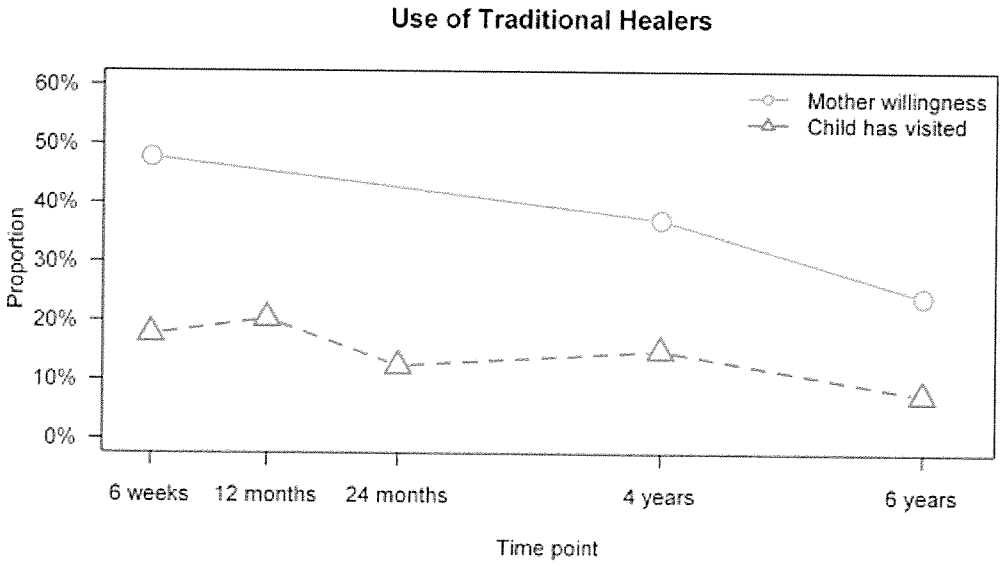

Figure 2. Mothers' willingness to use Traditional Pacific Healers, by ethnicity over time

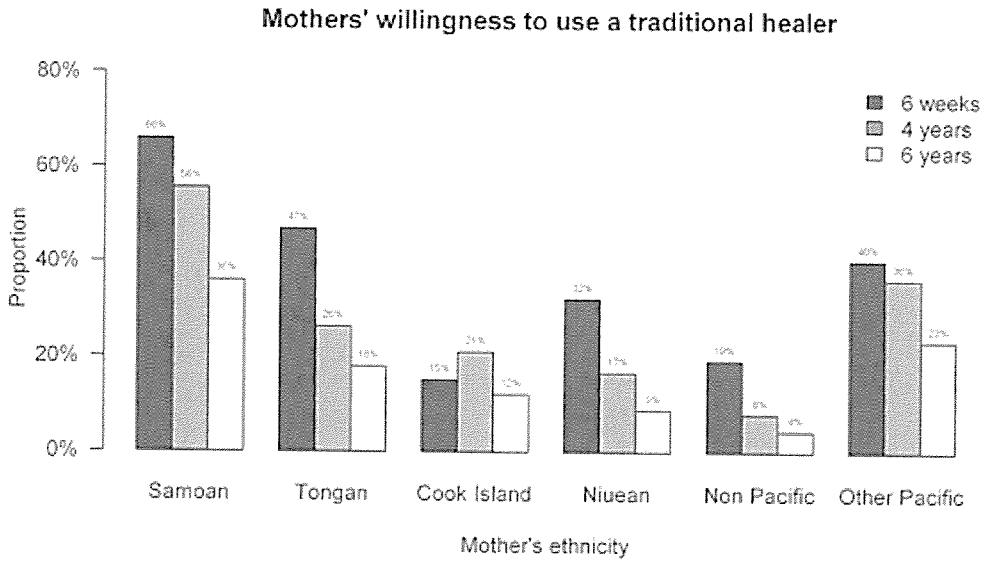

Figure 2 (above) shows variations by ethnicity of mothers' willingness to use a TPH over the 6 week, 4 and 6 year waves. The downwards trend was seen consistently within almost all of the Pacific ethnic groups.

Prevalence rates and adjusted odds ratios for the child having seen a TPH in the past 12 months, are presented in Table 3. Compared to Cook Island children, Samoan (AOR=4.9, $p<0.0001$) and Tongan (AOR=4.67, $p<0.0001$) children were significantly more likely to have been treated by a TPH.

Table 2. Prevalence and adjusted odds ratios for mothers' willingness to use a TPH

	Total (*N*)	Willing (*n*)	Rate (%)	Adjusted odds ratio	95% CI	*p*-value
Measurement wave						
Baseline	1355	646	(48%)	1.00	–	
Year 4	973	353	(36%)	0.60	(0.50, 0.73)	<0.0001
Year 6	980	238	(24%)	0.28	(0.23, 0.34)	<0.0001
NZ born						
No	2191	950	(43%)	1.00	–	
Yes	1117	287	(26%)	0.60	(0.50, 0.73)	<0.0001
Mother's ethnicity						
Cook Island	568	91	(16%)	1.00	–	
Samoan	1535	824	(54%)	4.70	(3.62, 6.11)	<0.0001
Tongan	713	229	(32%)	1.58	(1.18, 2.12)	0.0024
Niuean	149	30	(20%)	1.24	(0.77, 1.99)	0.3810
Other Pacific	103	35	(34%)	2.88	(1.76, 4.70)	<0.0001
Non Pacific Island	240	28	(12%)	1.13	(0.70, 1.83)	0.6145
Religious						
Very	1906	890	(47%)	1.00	–	
Moderate	870	278	(32%)	0.63	(0.52, 0.76)	<0.0001
Not	532	69	(13%)	0.30	(0.22, 0.40)	<0.0001

Table 3 presents the prevalence and adjusted odds ratios for treatment of child by a TPH by various demographic characteristics. Mothers presenting with symptoms of depression were slightly but significantly more likely to take their child to a TPH (AOR=1.45, p=0.0015). No differences by income band were detected, apart from significantly higher odds for those mothers who chose not to disclose their income (AOR=1.85, p=0.0032). The ethnicity of the TPH for 98% of all children visits was either Tongan or Samoan.

Table 3. Prevalence and adjusted odds ratios for treatment of child by a TPH

	Total (*N*)	Treated (*n*)	Rate (%)	Adjusted odds ratio	95% CI	*p*-value
Measurement wave						
Baseline (6 weeks)	1355	238	(18%)	1.00	–	
Year 1	1204	245	(20%)	1.23	(1.00, 1.51)	0.0525
Year 2	1118	139	(12%)	0.67	(0.53, 0.84)	0.0007
Year 4	968	143	(15%)	0.81	(0.64, 1.03)	0.0858
Year 6	979	74	(8%)	0.38	(0.29, 0.50)	<0.0001
Ethnicity of child						
Cook Island	966	38	(4%)	1.00	–	
Samoan	2644	536	(20%)	4.90	(3.44, 6.98)	<0.0001
Tongan	1181	225	(19%)	4.67	(3.23, 6.76)	<0.0001
Niuean	257	8	(3%)	0.79	(0.36, 1.72)	0.5548
Other Pacific	576	32	(6%)	1.58	(0.97, 2.60)	0.0685
Baseline household income						
$0–$20,000	1825	253	(14%)	0.98	(0.83, 1.17)	0.8494
$20,001–$40,000	2922	455	(16%)	1.00	–	
>$40,000	684	96	(14%)	1.05	(0.82, 1.35)	0.6991
Unknown	193	35	(18%)	1.85	(1.23, 2.78)	0.0032
Maternal depression						
Non-symptomatic	4932	718	(15%)	1.00	–	
Symptomatic	692	121	(17%)	1.45	(1.15, 1.82)	0.0015
Acculturation						
Low NZ High Pasifika	1886	430	(23%)	1.00	–	
High NZ High Pasifika	937	175	(19%)	0.83	(0.68, 1.02)	0.0797
High NZ Low Pasifika	1865	135	(7%)	0.42	(0.33, 0.53)	<0.0001
Low NZ Low Pasifika	936	99	(11%)	0.60	(0.47, 0.77)	<0.0001

The average number of GP visits for children in the previous 12 months reported by mothers ranged from 4.39 visits per year at age 1, and decreased to an average of 2.26 GP visits per year at age 6. When mothers were asked of the number of illnesses their child had experienced in the previous 12 months a similar trend was observed. At age 1 year children experienced on average 7.7 illnesses, whilst at age 6 years they experienced on average 4.38 illnesses in the previous 12 months. No differences were observed when the number of GP visits and illnesses were differentiated based on mothers '*willingness*' to use a TPH.

Figure 3 Children's use of Traditional Pacific healers, by ethnicity over time

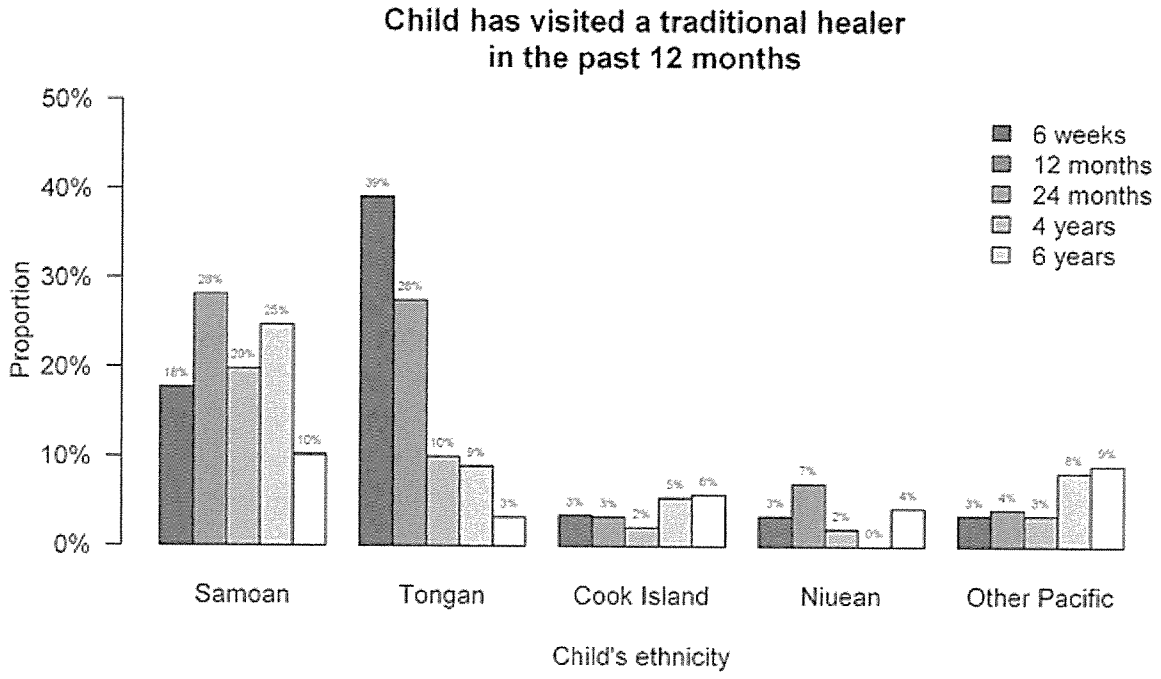

Figure 3 shows children's use of TPH over the 6 week, 1, 2, 4 and 6 year waves. Again there are unique patterns of use by Pacific ethnic group. Tongan children were most likely to have used a TPH at 6 weeks, however are least likely at 6 years. Samoan children maintained relatively steady use up to 6 year phase.

Substitution

Using the first approach described to investigate whether *use* of TPH substituted for western medicine; no differences were found in immunisation rates of children in the TPH and the non-TPH group. Results from the immunisation model showed no evidence that a belief in traditional healing meant a higher rate of non-compliance to scheduled immunisations (AOR=0.9, p=0.4). Indeed, the proportion of non-compliance was slightly smaller within the willingness group.

Table 4 presents estimated coefficients for the model of GP visits. Significant variation over the four time points was seen (p<0.0001) with a general decrease in the number of GP visits as the child ages. As expected, a significant association for the number of illnesses was found (β=0.309, p<0.0001). The coefficient for the number of TPH visits (β=0.050, p=0.06) was not significantly different from zero. No evidence was found for a difference in the use of GP services between mothers who are willing and non-willing to use TPH (β=-0.084, p=0.24). Significant differences among the ethnicities were found (p<0.0001) but these are of little direct interest to the substitution question, and were included for their potential confounding effect.

Table 4. Multiple linear regression analysis of the number of GP visits, as explained by the number of illnesses and other variables.

	Coefficient estimate	95% CI	P-value
(Intercept)	1.949		
Interview year (approx child's age)			
Year 1	0.000	–	
Year 2	-0.652	(-0.84, -0.47)	***
Year 4	-0.917	(-1.1, -0.72)	***
Year 6	-1.085	(-1.3, -0.90)	***
Number of illnesses			
per illness	0.309	(0.29, 0.33)	***
Number of traditional healer visits			
per TPH visit by child	0.050	(-0.002, 0.1)	
Mother's willingness to use TPH			
Not willing	0.000	–	
Willing	-0.084	(-0.22, 0.06)	
Maternal ethnicity			
Samoan	0.000	–	
Cook Island	0.476	(0.26, 0.69)	***
Niuean	0.418	(0.10, 0.74)	*
Non Pacific Island	0.269	(-0.07, 0.61)	
Other Pacific	0.459	(0.05, 0.87)	*
Tongan	-0.371	(-0.54, -0.20)	***

P values: *** < 0.001 < ** < 0.01 < * < 0.05

Discussion

Generally *willingness* and *use* of Traditional Pacific Healers (TPH) by mothers and children, respectively, in the PIFS declined over the 6 year period from the birth of the child in 2000 to 2006. Possible reasons for the decreasing *use* of TPH for the child may be due a lower need (fewer instances of illness) which is supported by the lower average number of GP visits and number of illnesses experienced by children as they age, and also may be due to a belief that the illnesses experienced by the child at an older age were not thought appropriate for treatment by a TPH. Whether this trend is representative of the wider Pacific community in NZ is uncertain. The more long-established Pacific communities (Niuean, Cook Island) were significantly less *willing* and showed lower *use* of TPH than other Pacific groups. This may highlight a change in the health seeking behaviours that come about with increasing acculturation within a new country. Other factors may also contribute to this occurrence especially with regard to the availability of TPH in NZ, satisfaction of services offered by TPH, and the level of health literacy of carers'. These factors warrant further investigation. Unlike Asian Traditional Healers, the services offered by TPH have not been commercialised. If they were, use may increase over time rather than decline. Investigation into the attitudes and beliefs of TPH practices in New Zealand is warranted to understand whether such ideas would be plausible, especially after consideration of this study's findings that indicate TPH practices in NZ are destined to be lost if current trends continue. Should initiatives be developed to support their survival, and if so what would these look like?

Several variables were found to have significant associations with mothers' *'willingness'* to use TPH (Table 2) and may be interpreted as proxy indicators of acculturation. These variables included measurement wave (lower willingness - later phases), mothers birth place (NZ-born – were less willing), ethnicity (long-established ethnic groups – were less willing), and religiosity (not religious – least willing). Past research from this study has found that strong alignment to one's traditional Pacific culture was protective when assessing maternal and infant health outcomes.[18] Tongan and Samoan ethnic groups were found to be more aligned to their Pacific culture affording them greater protection that it may offer. There was no association of *'willingness'* to use TPH with either education or income. This contrasts with what has been observed elsewhere in that the use of TCAM is more common in subgroups of the population with higher incomes / socio-economic status, and higher education, a subgroup of the health seeking population labelled 'the worried well'.[8,25]

There was significant variation in child *use* of TPH by ethnicity and measurement wave. At the 6 week measurement wave approximately 40% of Tongan infants had already visited a TPH, more than double that of the next highest group (Samoan 18%) and more than 10 times that of all other groups (3%). By the 6 year measurement wave prevalence's were less varied between Pacific ethnic groups with Samoan children having the highest *use* (10%) and Tongan children the least (3%). The sharp decline observed in the Tongan ethnic group may indicate that use of TPH is more age specific for Tongans compared to other Pacific groups. Use of TPH by Samoan children was relatively constant over the first 4 years of life ranging from 18-28% and then fell to 10% at the 6 year measurement wave. Further investigation into the types of treatments received and reasons for visiting a TPH may provide useful insights as to why such trends were observed.

Analysis that investigated whether the *use* of TPH was supplementary to or a substitute for Western medicine found that the former is most likely, in that TPH visits appear to supplement standard health seeking behaviours. There was no difference in the use of GP services between the TPH *willing* and *unwilling* groups. Similarly, no difference was found in infant immunisation rates between those two groups. This again contrasts with what has been found elsewhere. In developing[26] and developed[27-29] nations Traditional Healer and/or CAM use has been negatively associated with children's vaccination. This shows a unique manner in which traditional medicine is utilised by Pacific communities in NZ.

Although this study offers new insights into the existence of TPH and its use by Pacific communities in NZ it should be noted that these data are extrapolated from a longitudinal study. The Pacific Islands Families Study is comprised of young families, where the median age of mothers was 27 years in 2000 rather than a broad cross section (with regard to age) of the Pacific population, and is likely to exclude representation from younger and older sub-groups of this population. Therefore readers need to be cognisant of this fact when interpreting these findings. This study has described utilisation of Traditional Pacific Healers by mothers and children in the PIFS. Further research is planned to explore child visits to TPH more thoroughly, including reasons for visits, treatments provided, costs, and how these may explain the observed variations reported in this paper.

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"Be faithful in small things because it is in them that your strength lies."

Mother Teresa