

Ten Years of Research for the Pacific Islands Families Study: A Comparative Review of publications

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Abstract

In 2000, the Pacific Islands Families Study (PIFS) initiated research into developmental pathways of health outcomes for Pacific children and families. Not only was the study premised on addressing the gap in longitudinal research of Pacific peoples, it also aimed to increase Pacific-researcher capacity. After ten years of operation, this paper reviews the journal publications and Pacific authorship from the PIFS. The PIFS team published 55 journal articles in 29 peer reviewed journals. Forty-four (80.0%) of these articles had a Pacific author, including seven (12.7%) where the first-author was Pacific. Most articles used cross-sectional data (n=38, 69.1%) and a quarter used longitudinal data (n=15, 27.3%). Eighteen (62.1%) of the 29 journals that PIFS articles were published in were registered on the Journal Citations Report database, with 2009 5-year journal impact factors ranging from 1.064 to 6.504. The PIFS achieved a similar number of publications compared with the Dunedin Multidisciplinary Health and Development Study (DMHDS, n=48) and Christchurch Health and Development Study (CHDS, n=67). Further analysis, showed that the PIFS (27.3%) had the lowest proportion of publications using longitudinal data compared to the DMHDS (n=37.5%) and CHDS (65.7%). This review provides a stocktake of publications in the first decade of the PIFS and shows that although the development of Pacific-researcher capacity has been promising, greater attention must be given to increasing first-authorship of academic writing and to utilising longitudinal data to better understand the origins of health status of Pacific peoples.

Introduction

Currently, most research focussing on social and health issues within Pacific Island communities has been executed via qualitative investigations and cross-sectional epidemiological surveys. Although invaluable, the information garnered in this body of knowledge has remained limited, specifically, that certain social and health outcomes can only be evaluated by participant reports and environmental circumstances recorded at the time of data collection. To address this gap in the literature, it is posited that greater insight would be gained by observing subjects and their environments over long periods. This would aid in the understanding of developmental pathways to health status through cohort or longitudinal investigations ⁽¹⁾.



Further, it has been argued that investigations of particular ethnic communities should be carried out by researchers with an inherent understanding of the culture of those communities if not by researchers who share a heritage with those communities⁽²⁾. This would minimise the potential to misconstrue information often due to unintentional and inappropriate cross-cultural miscommunication during the various stages of investigation (e.g. development, data collection and analysis, interpretation and dissemination of information). That being said, it would follow that culturally matched researchers would need to be trained and supported to perform their investigations to an international standard to the credit of their research findings, the research institution and relevant stakeholders.

To achieve such outcomes the Pacific Islands Families Study (PIFS) has been crucial in terms of its longitudinal aspect, Pacific ethnic focus and Pacific-researcher capacity building efforts⁽³⁾. After a decade of operation, this paper is an effort to descriptively review two aspects of the PIFS journal publications and Pacific-researcher contribution. It provides an overview of the publications and the journals PIFS papers are published in to take stock of progress achieved to date. It draws comparisons of publication outputs from similar studies carried out in New Zealand. For the purposes of this article, a data phase or 'phase' refers to a follow-up wave of data collection on the study (e.g. the 6-year phase refers to the follow-up wave when the children turned 6 years old).

Background

New health knowledge is pivotal to (and reciprocal with) social and cultural understanding. It plays an influential if not significant role in social health practices and services, and therefore in the health of communities. The good intentions of new health knowledge however can be undermined if the acquisition of it is not controlled and owned by its subjects⁽⁴⁾. For several years now, Pacific health researchers have argued for the intellectual ownership of health knowledge of their own peoples⁽⁵⁾. Not only can ethnically-matched researchers achieve efficient subject enquiry but also appropriate interpretation of subtle yet crucial cultural nuances easily missed by non-insider researchers. The misinterpretation of sociocultural cues can lead to misappropriated data, the result being misguided social health policy and services, and ultimately poorer health outcomes.

It is therefore imperative that Pacific researchers are holistically involved in research of Pacific peoples' health. The PIFS set out with a mandate to inculcate 'Pacific consultation' in all aspects of its research processes including publications. 'It is optimal practice for all publications to include a Pacific author, either as first or co author (sic)'⁽⁶⁾. Considering the dearth of qualified Pacific researchers in the academic community the opportunity for the PIFS is immense. Has the PIFS team stood by this mandate and how well has it accomplished its goal of supporting and producing qualified Pacific health researchers/authors? In addition to an evaluation of the PIFS publications, these questions are addressed in this review.

Journal Publications from the Pacific Islands Families Study

One way of measuring the outputs of a study is to review the publications which have been produced as a result of it. To simplify the analysis, this paper only reviews publications of journal articles. It excludes articles that were under review at the time of writing, conference abstracts, online presentations, technical reports and book chapters (see an updated registry for all of the PIFS publications following this article). All



peer-reviewed journal articles that had been published (including two online publications) up to December 2010 were tabulated by year and number of articles, number of articles that included Pacific authors, number of all authors and number of Pacific authors (Table 1). To gauge the contribution of Pacific authors, authorship based on Pacific-ethnicity was examined. Journal publications will also be referred to as papers or articles forthwith.

Table 1. Number of journal articles, authors and Pacific authors by year of publication

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
No. of all articles.	3	1	5	4	10	14	6	6	6	55
No. of articles with Pacific authors.	3	1	5	3	8	10	5	4	5	44
No. of all authors.	4	4	6	10	17	27	14	16	15	41
(Cumulative)		(4)	(6)	(11)	(20)	(31)	(32)	(36)	(41)	
No. of Pacific authors. (Cumulative)	1	1	3	3	4	9	5	6	7	16
		(1)	(3)	(4)	(5)	(10)	(10)	(11)	(16)	

In the nine years including 2002 to 2010, a total of 55 articles were published. Of the total, 44 (80.0%) articles had a Pacific author, either first- or co-authored. Cumulatively, there were 41 individual authors of which 16 (39.0%) were Pacific. Of the total number of articles published, only seven (12.7%) were referenced as having a Pacific author as the first author (figures not tabulated due to small numbers). Pacific authors as first-authors appeared in five years of the nine year period, with the greatest number of three (Pacific first-authors) appearing in 2009, constituting half of all articles published that year.

Other than the number of publications, it was thought important to review the types of data used (cross-sectional or longitudinal) in the publications in order to evaluate the focus of this output and to help guide future efforts (Table 2). Of all articles published from 2002 to 2010, most (n=38, 69.1%) used cross-sectional and a quarter (n=15, 27.3%) used longitudinal data. The remaining two articles focussed on methodological considerations of the PIFS. Articles using longitudinal data were first published from 2006 with a consistent publication rate of three per year.



Table 2. Number of Journal Articles Using Cross-sectional or Longitudinal Data, and Articles Based On Methodology By Year¹ (2002-2010)

	2002-2005	2006	2007	2008	2009	2010	Total
Type							
Cross-sectional	13	6	11	2	3	3	38
Longitudinal	-	3	3	3	3	3	15
Methodological	-	1	-	1	-	-	2
Total Papers	13	10	14	6	6	6	55

¹For the years including 2002 to 2005 there were no journal articles using longitudinal data or based on methodology.

Cross-sectional data articles

Of the 38 articles using cross-sectional data (Table 3), most were based on the 6-week phase data (n=24, 63.2%), followed by the 2-year and 1-year phases respectively (n=7, 18.4%; n=5, 13.2%). The remaining two articles used the 4-year and 6-year data phases individually.

Table 3. Number of Journal Articles Using Cross-sectional Data by Phase (n=38)

	Phase				
	6-week	1-year	2-year	4-year	6-year
No. of papers	24	5	7	1 ('07)	1 ('09)

Longitudinal data articles

Of the 15 articles using longitudinal data (Table 4), nine (60.0%) used information gathered from three data phases, one of which also used birth records. A further five (33.3%) articles used two data phases (including one which also used birth records), with only one article using four data phases. In terms of 'phase' used, 14 (93.3%) included the 2-year phase, followed by the 6-week (n=10, 66.6%), 1-year (n=9, 60.0%), 4-year (n=5, 33.3%) and 6-year phases (n=3, 20.0%), respectively.



Table 4. Journal Articles Using Longitudinal Data by Year and Phase (n=15)

Year	Article Topic [†]	Phase				
		6-week	1-year	2-year	4-year	6-year
2006	Immunisation	X	X	X		
	Breastfeeding	X	X	X		
	C. Nonfatal injuries	X	X	X		
2007	C. disciplining		X	X	X	
	M. health & C. behaviour	X	X	X		
	M. smoking	X	X			
2008	C. body size & growth	B [‡]		X	X	
	M. IPV & C. Behavr.			X	X	
	M. smoking & C. Behavr.	X		X		
2009	IPV, healthcare & C. injury	X		X		X
	P. mental health		X	X		X
	M. gambling	X	X	X		
2010	C. vehicle restraint	X	X	X	X	
	IPV, M. Health, C. behavr.	X		X		
	C. birth wgt & growth	B [‡]		X	X	X

†C. = Child; M. = Maternal; P. = Paternal; IPV = Intimate Partner Violence.

‡ Use of Birth records.

In terms of the topics of longitudinal articles, 7 (46.6%) focussed on child health, two of which analysed relationships with parental behaviours (disciplining, vehicle child restraint) and one which analysed relationships with maternal health (via intimate partner violence). Three articles looked at relationships between specific child behaviours and maternal health, while one examined associations between specific child and maternal behaviours. Only two articles focussed solely on maternal health and behaviour, and only one focussed solely on paternal health.



Journal Citation Report - 5 Year Impact Factor

As part of this review an assessment was made of journal rankings that PIFS articles were published in. Using the Journal Citation Reports (JCR) database this review provides the 2009 5-year journal impact factor (5YJIF) for each journal that was in the JCR list at the time of writing (7). The 2009 5YJIF (rather than 1-year impact factor) was used as a journal average to account for differences in the number and variation of publication dates within each journal and was the most recent 5-year impact factor available at the time of writing. A 5YJIF is the average number of times articles from a particular journal published in the past five years have been cited in the JCR year (e.g. 2009). It is calculated by dividing the number of citations in the JCR year by the total number of articles published in five previous years. A journal's impact factor of 1.5 means that, on average, articles from that journal were cited one-and-a-half times by other articles.

The fifty-five PIFS papers in this review were published in 29 peer reviewed journals from 2002 to 2010. Of these journals, 18 (62.1%) were registered on the JCR database. The lowest 5YJIF score for a particular journal was 1.064 and the highest was 6.504. Overall, six journals had scores ranging from 1.064 to 1.721, five had scores ranging from 2.167 to 2.761, four had scores ranging from 3.158 to 3.910, and three had a score of 4.958, 5.874 and 6.504 respectively.

Journal audience and discipline

Further analyses included categorisation of the journals (with PIFS publications) by research discipline and whether a journal had a regional or international outlook. We found that most journals had an international audience (n=22, 75.9%) and the remaining five had an Australasian and/or Asia-Pacific regional focus.

The Excellence for Research in Australia (ERA) database was used to determine the discipline of most journals analysed in this paper (8). If a journal was not included on the ERA database, a discipline category was obtained from a journal's website. Failing that, the authors assigned journals a generalised discipline based on their own observation and assessment. For example, *The Australian and New Zealand Journal of Psychiatry* was assigned to the discipline of Health Sciences (General). All of the journals were then assigned to the four disciplines listed in Table 5.

Table 5. Journal Discipline and number of publications

Discipline	Number of Journals
Health Sciences (Medicine/Clinical/Applied/Applied Science)	14
Health Sciences (General/Mental Health/Gambling & Addictions)	4
Social Sciences (incl. Social Policy)	8
Social Psychology	3
Total	29

Discussion

This paper provides a stock take of progress made of the Pacific Island Families Study (PIFS) by assessing publication quantity and characteristics after a decade of existence. In order to gauge the output performance of the PIFS as a longitudinal study we compared journal publications of two other comparable longitudinal studies carried out in New Zealand (Table 6). Studies were deemed comparable provided they a) were longitudinal birth cohort studies, b) had a similar sample size to PIFS (n=1,398), and c) had achieved at least 10 years of participant follow-up. The two studies that met the criteria were the Dunedin Multidisciplinary



Health and Development Study and the Christchurch Health and Development Study. Despite being an important determinant for study outputs, it was not within the scope of this article to examine or report on differences in research design, funding, administrative and academic capacity.

The Dunedin Multidisciplinary Health and Development Study (DMHDS) is based on a large cohort (n=1,037) born in Dunedin from 1972/1973 (9). The publication references used in this review were kindly provided by DMHDS personnel. The criteria for inclusion of articles were those published up to 1982 when the cohort was 10 years old (the age of the PIFS cohort at the time of writing this review). The comparison excluded literature and critical reviews or reports the authors deemed extracurricular to the sample or study methodology. Based on these criteria the total number of journal publications from the DMHDS was 48. Twenty-nine (60.4%) articles used cross-sectional and 18 (37.5%) used longitudinal data and one (2.1%) addressed methodological considerations. Under the inclusion criteria, the DMHDS had approximately 10% less articles using cross-sectional and 12% more articles employing longitudinal data compared to PIFS publications.

As the name suggests, the Christchurch Health and Development Study (CHDS) is based in Christchurch whose cohort (n=1,310) was born in 1977 (10). Again, journal articles included in this comparison were those published up to 1987 when the cohort was 10 years old. References were obtained directly through the CHDS website. A review of paper abstracts and, where necessary, full-text examination of articles published within this period was carried out. In total, 67 articles were directly related to the CHDS data and were included in the comparison. Approximately one-third (n=22, 32.8%) of all articles used cross-sectional data while the remaining majority (n=44, 65.7%) employed longitudinal data. One article addressed methodological issues.

After the first 10 years of operation the PIFS had achieved a similar number of publications compared to what the DMHDS and CHDS had achieved in the same amount of time. In relation to the DMHDS (n=48) and CHDS (n=67), the PIFS (n=55) was situated midway in total publication outputs between either study. The PIFS produced the greatest proportion of publications using cross-sectional data and the lowest proportion using longitudinal data, with the CHDS publishing the greatest proportion of articles using longitudinal data overall.

Table 6. First 10 years Comparison of Journal Articles¹ from the Pacific Islands Families Study (PIFS), Dunedin Multidisciplinary Health and Development Study (DMHDS) and Christchurch Health and Development Study (CHDS)

	PIF (2000-2010)	DMHDS (1972-1982)	CHDS (1977-1987)
	N (%) ²	N (%) ²	N (%) ²
Cross-sectional	38 (69.1)	29 (60.4)	22 (32.8)
Longitudinal	15 (27.3)	18 (37.5)	44 (65.7)
Methodological	2 (3.6)	1 (2.1)	1 (1.5)
Total Papers	55	48	67

¹ Comparison excludes conference abstracts, online presentations, technical reports or book chapters;

² Column frequency and percentage.



Conclusions and Recommendations

The Pacific Islands Families Study was developed to address the lack of Pacific-specific social health data from a longitudinal aspect using a culturally relevant approach. A Pacific workforce has been employed not only to effectuate cultural appropriateness and relevance but to develop Pacific-researcher capacity itself. This paper set out to descriptively review two aspects of this study, namely, the characteristics of PIFS publications and the contribution of Pacific researchers.

In its first 10 years of operation, the PIFS researchers (Pacific and non-Pacific alike) produced a total of 55 papers in 29 peer-reviewed journals, focussing on the health and well-being of Pacific Island families in New Zealand. This is a considerable accomplishment in its own right and consistent with that of other major longitudinal studies in New Zealand. Furthermore, there has been a significant achievement for Pacific Island health research and Pacific health researchers. Of the articles published in this time, four of every five PIFS papers ($n=44$, 80.0%) involved the contribution of at least one Pacific author. However, less than one in every eight papers ($n=7$, 12.7%) was written by a Pacific first-author. Overall, Pacific authors constituted nearly two-fifths ($n=16$, 39.0%) of all authors contributing to PIFS articles. As a stated ambition of the PIFS study, the authors advocate for the ongoing review of policy and process to strengthen the development of Pacific-researcher capacity. In particular, although progress to date is promising, emphasis must be given to increasing the level of first authorship of academic papers by Pacific researchers.

Unlike the DMHDS and the CHDS, the PIFS articles were biased towards cross-sectional ($n=38$, 69.1%) over longitudinal analyses ($n=15$, 25.9%). This review highlights a greater need for researchers to carry out longitudinal analysis which is an inherent value and rationale for conducting longitudinal investigations. It is reasonable to suggest that the use of longitudinal data, as well as the general output of publications, should increase as a natural consequence of study duration and age.

Positively, of the 18 journals found on the JCR database that PIFS articles were published in, two-thirds (66.7%) of them had a 5-year journal impact factor ranging from 2.167 to 6.504. This finding indicates the credibility of PIFS publications when accepted by journals of high academic regard. Further illustration of the PIFS credibility as a study of international relevance is that, despite being an ethnic specific study, three-quarters (75.9%) of the journals that published PIFS articles in its first decade of operation had an international audience.

Notwithstanding that, it is also crucial that PIFS findings are disseminated in local journals and journals that have a Pacific audience and/or regional focus irrespective of whether they are ranked. Of the 29 journals that PIFS articles were published in, 11 did not have a current JCF ranking. This point is of particular importance as findings should be readily available to audiences that are most likely to make use of such information. With this in mind, it would be beneficial to investigate how well the PIFS findings have a) been disseminated into the Pacific community and b) informed government/non-government policy related to the health and well-being of Pacific Island peoples. Apart from helping to guide future research and dissemination this exercise may help translate research outputs into health outcomes, further demonstrating the significance of the study to the Pacific Island community. If the findings and recommendations of this review are earnestly considered by the research team and relevant funding bodies, valuable outputs should undergo exponential growth as the study ages and the Pacific Islands Families Study will continue to make its presence felt in the Pacific Diaspora.



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*“I look forward to a great future for America
- a future in which our country will match its
military strength with our moral restraint, its wealth
with our wisdom, its power with our purpose.”*

John F. Kennedy

