

Research imperialism in Pacific health: the case of Tonga (1966 – 1997)

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Abstract

Researches of and among Pacificans have been largely externally initiated, funded and controlled. It has become an imperialist tool to colonize, oppress and control the aspirations of Pacificans. This case study shows that research imperialism thrives in Tonga. Economic and social efficiency can be achieved through local initiatives by native researchers. Such an alternative approach must replace foreign data prospectors, "mosquito scientists" and "parachute consultants". This study provides a rapid assessment methods for monitoring research performance among Pacificans.

Introduction

Health research is an essential tool for development of health knowledge and practice, especially in developing countries¹. The health profession, especially medical scientists of developed countries, have largely controlled it². The research and researchers of today will formulate the health perspectives and behaviors of the future³. Therefore it is crucial for the future of Pacific health that Pacificans are intimately involved in the initiation and generation of new knowledge now so that they remain the custodian of their future^{4,5}.

New knowledge forms future worldviews central to the perception and practice of culture, and thus health.

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New knowledge forms future worldviews central to the perception and practice of culture, and thus health. Therefore without local control of research, the "scientific colonialism" will continue to characterize research collaborations⁶. The Pacific have and will experience "mosquito scientists" who would come, take blood samples, and then fly out and the local people may be lucky to learn the results from publications⁷. The Pacific have untold experiences with "parachute consultants" who drops in, gobble up any research budget, then rehash local wisdom into thick reports³.

This paper examines the status of research in Pacific health. It describes health research in Tonga as a case in point to the externally driven and expatriate owned efforts to define the future. The deliberate effort at remote control by expatriate researchers and funding agencies are akin to research imperialism. The presence of research imperialism should be a caution as we search for Pacificentric telehealth.

Background

Research have been variously defined as the systematic investigation to generate new knowledge. However the definitions do not include the purpose for generating new knowledge other than perhaps implying that knowledge is an end to itself without ontological and epistemological assumptions and justifications⁸.

Imperialism suggests deliberate policy and practice of extending and establishing dominance over territory. This extension of authority, influence and power is akin to intellectual colonization⁹. There is no room for equality, equity and partnership as has been aptly demonstrated by the "scientific colonialism"⁶, "mosquito scientists"⁷, and "parachute consultants"³. The Pacific "data prospectors" collect and ship data and specimens into the bosom of their careers in developed country institutions. Therefore research imperialism in Pacific health implies establishing dominance through the influence and control of health knowledge and worldview. That is controlling the definition of future realities. It has been noted that "clinical investigations result in problems because of different and conflicting cultural constructions

of what clinical research is, how it is conducted, and what is to be gained from it" ¹⁰. This use of health research as a tool for cultural imperialism will ensure that the future of Pacific health belongs to the research imperialist.

Globally only 10% of the US\$50-60 billion spent annually on health research is directed to diseases which contribute to 90% of the world's disease burden ¹¹. The health research initiatives are mostly from and in developed countries¹². Lack of funds for research has been understood as lack of resources for local initiatives not developed country initiatives ¹³. It's obvious that the dominant principle has been that who paid the Piper called the tune and camouflage this with rhetoric and tokenism.

Almost exclusively, all health research in the Pacific to date have been externally initiated, funded and controlled. The data analysis have been mostly the domain of expatriate researchers e.g., Tokelau Island Migrant Study and several studies in Tonga on family planning in the 1970s and 1980s. The latter studies have not resulted in publications known to the authors. The interpretation of data have at least been contentious and at variance with the worldview of the researched ⁴. The current dialogue on Margaret Mead and the free love syndrome in Samoa is a Pacific example of this ontological difference.

Past examples of research imperialism in the Pacific

During 1949 and 1988 (39 years) there has been 99 nutrition and/or communicable disease studies in the Pacific (excluding Papua New Guinea) ⁴. These have been either cross-sectional (one-off) or longitudinal population studies describing the problem and identifying risk factors. The rate of such surveys have been 2.3 studies per year. However there has been no intervention or operation researches to resolve the problems.

Most of the studies conducted coincide with the time of the diagnosis of non-communicable diseases as the biggest killer in the countries from where the researchers and the money came. At this time, none of the Pacific countries have the research databases, few of the local health workers have seen the publications generated nor shared in the careers build on the research into migration, urbanization and social dislocation in their respective countries. After all these years there is a negligible number of established Pacific researchers. It has been argued that these Pacific studies have only successfully launched careers of expatriate experts ¹⁴.

In 1963, 1965 and 1973 the South Pacific Commission (SPC) published reviews on urbanization, migration and western diet. This was followed by another extensive review in 1984 – the SPC Technical Report No. 18 on "The

Effect of Urbanization and Western Diet on Health of Pacific Island Populations". This influential landmark work used 445 publications from a variety of sources ⁴. Of these publications thirteen (2.9%) involved Pacificans as authors and only two (0.4%) were first authors.

If the usual publishing convention apply, then only two papers would have had Pacificans influence on the data analysis and interpretations. At best there could be thirteen but the higher the ranking would mean less influence on the publication. Thus this opinion-forming document had minimal Pacific influence. Needless to say, that the reviewers were expatriate Pacific experts using expatriates' papers to establish the Pacificans view of their health and formulate a worldview of their future.

These examples demonstrate externally initiated and controlled research in Pacific health. Deliberate or not, the imperialism in Pacific health is not recent and is still alive. The following experience in Tonga provides data to examine this phenomenon at the national level in contrast to the above regional examples.

Method

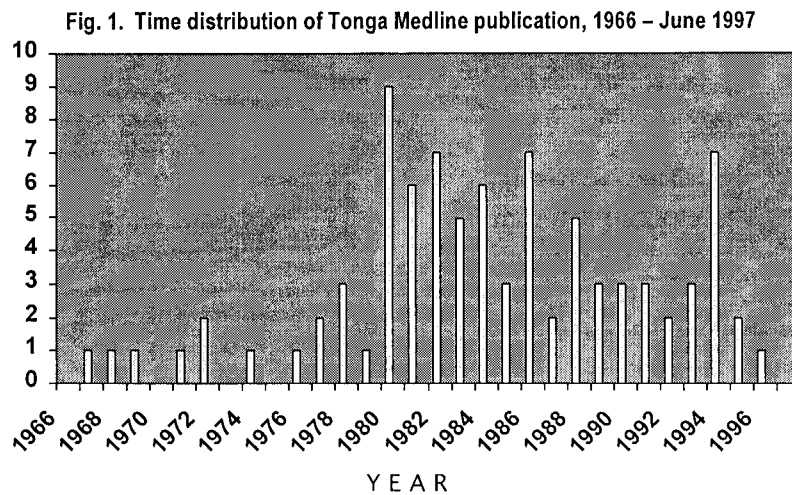
Medline publications was used as an indicator of research output. It assumes that health-related publications in Medline have gone through peer review and the journal screening processes. Therefore the papers would be of credible scientific merit and should be of a quality and standard acceptable and useful for influencing health work.

"Tonga" was used as the search word and all papers identified in the search of the years January 1966 and June 1997 were included in the analysis for content and authorship.

Results

There were 74 papers about Tonga that were identified from the Medline search. Figure 1 shows the number of papers by year. Most of these papers were published in the New Zealand Medical Journal (eleven), Social Science and Medicine (four), Journal of the American Medical Association (five), and Journal of Virology (three). There were two papers each in the Journal of Ethnopharmacology, Lancet, Medical Journal of Australia, International Journal of Epidemiology, Community Health Studies, and the American Journal of Tropical Medicine and Hygiene. There was an article each in thirty-nine other journals.

Of the articles published, there were seventy in English, two in German, one in French and Japanese, respectively. In addition to the seventy-four articles there were nine letters and interviews that were published. All were in English and three from Tongans.



Note: 28 papers (38%) had 21 Tongan authors. 17 (16.5%) of first authors by one Tongan.

Table 1 shows the number and rank of authors of the articles about Tonga. The seventy-four papers had 214 authors. The number of authors per paper ranged from one to ten. Tongans were involved 42 times out of 214 instances as authors. Of the twenty-eight (38%) papers with Tongan authors, there were twenty-two Tongans persons involved. Seventeen (16.5%) of the first or sole authorships were by one Tongan person. So much of the involvement of the other twenty Tongans were as third or greater authorship rank. This table showed a predominance of non-Tongans as authors of the Medline papers on Tongans.

The subjects of the papers by authorship are shown in Table 2. Most of the papers were related to non-communicable diseases and virology/parasitology.

Discussion

It is obvious that expatriate researchers dominated research in Tonga. Of the twenty one Tongans involved only one could be viewed as an established author. However most of the articles by this author were from scheduled work that were organized and used the research approach. This locally driven effort needed minimal extra funding in addition to those on the recurrent budget. Table 3 showed a comparison between two research activities with subsequent Medline publications. Using Medline publication as an outcome measure, gross inefficiency is demonstrated by the output of the externally driven research. Access of the publications by Tongan health workers have been minimal to non-existent. Most of the journal were inaccessible and unavailable in Tonga. The non-English articles could not be comprehended. Most were not aware of the existent of the publications. Even some of the authors did not know they have published article.

Table 1. Number and rank of authorship by Tongans (1966 – 1997 Medline papers)

Authorship rank	No. of all authors per rank	No. of Tongan authors per rank	No. of Tongans involved per rank
Sole First	24	8	1
Multi First	50	10	2
Second	50	9	8
Third	31	7	7
Fourth	23	4	4
Fifth	16	2	2
Sixth	11	1	1
Seventh or more	9	1	1
Total	214	42	22

The experience of Tonga is similar to that of most Pacific countries. The response must include the suggestions to increase local involvements. The most common responses to attempts to improve research capability have included: research is not a priority; there is no time for research by busy health workers; lack of training; and insufficient resources. However these constraints can obviously be overcome as was demonstrated by one of the Tongans who indulged in research.

An alternative view of these constraints may be just fear of research. Therefore encouragement may come from the modification of the environment and provision of incentives for research⁴. Firstly, the macro-environmental factors that need modification should include: increased demand for research and evidence-based health service development; creation of a scientific culture through organized presentations and dialogue; development of flexible bureaucratic mechanism to encourage work using the research approach; and generate public support through appropriate marketing and acknowledgment of local research and researchers. At national level, there should be clear policy on research leading to research infrastructure development.

Secondly, at the work environment there should be improved library and literature search facilities; provision

of support staff for any research efforts; provide institutional support by linking research to overseas conference trips; allowing time in lieu for research efforts; and highlighting and rewarding research efforts as much as the recognition given to clinical work. Perhaps senior health officials should incorporate and link research performance and publication outputs to contract renewal and survival in the bureaucracy.

At the personal level, research training should be available locally as part of continuing education and leading to a recognized qualification from a credible educational institution; and provide incentives like cash or promotion for local research efforts. These personal encouragements must be based on incentives rather than assume a love of learning, research and knowledge.

For Tonga, a sustainable research strategy may depend on incorporating the above issues to the national health system. A national research council, perhaps multi-sectorial, may provide the ethical and quality control that are currently lacking. They should include the screening and approval of local and expatriate research proposals. This research council can be the conduit for co-ordination and research proposal development for funding. The employment of a grant writer will enhance the quality and thus the funding probability of research proposals by

Table 2. Subject of papers by Tongans and others (1966 – 1997 Medline)

Subject	No. of Papers with Tongans	No. of Papers without Tongans	Total
Nutrition	3	5	8
Mental Health	2	4	6
Genetics	0	5	5
NCD	2	1	3
Health Services	5	1	6
Child Health	3	1	4
Virology	0	10	10
Parasitology	2	4	6
Ophthalmology	1	0	1
PF/RHD	1	0	1
Dental	2	3	5
Traditional Medicine	2	1	3
Substance Use	1	2	3
Environmental Health	1	2	3
HBV	2	1	3
Bacteriology	1	2	3
Total	28	46	74

Table 3. Comparison of locally and externally driven research, Tonga

Items	Locally driven study	Externally driven study
Location	Ha'apai (10 Islands)	Ha'apai (1 island) and Tongatapu (1 urban center)
Purpose	Post Disaster Rehabilitation, Rapid Assessment	Baseline Study, Cross-sectional Study
Duration of data collection, in days	10 (1982)	38 (1973)
Sample size	1000 Households	1000 Children & Adults
Blood tests	No	Yes
Cost	\$3,000 (NZ dollars)	\$100,000 (NZ dollars)
No. of Medline papers	3	4
Cost per paper	\$1,000	\$25,000
Authorship	All Tongans (10)	Mostly expatriates (10 expatriates & 2 Tongans)

donor agencies.

Health research functions can be incorporated into the existing health planning and information units. Of importance, managers must make evidence-based decisions and demand information rather than data, from all levels of the service. A common feature is the demand by clinicians for new drugs and technology, especially after overseas training, without evidence of efficacy, effectiveness, and efficiency for the new acquisitions in the local environment. Such technology assessment evidence should be mandatory before serious consideration of such demands. Research imperialism is also recognizable in the planning and management of the Pacific regional internet websites¹⁵ which are dominated by expatriate control and use. As in research, there should be a

concerted effort to improve participation of Pacificans through positive affirmative programs. This would be a prerequisite for Pacificentric telehealth.

Research partnership models have been suggested in order to provide a level playing field for research¹. Checklists have been developed to evaluate these principles of research partnership based on mutual trust and shared decision making, ensuring that research programmes are owned and managed by nationals, with expatriate inputs simply to be technical and advisory¹⁶. Also crucial will be the early planning for translation of research findings into policy and practice. The development of national research capacity cannot be overemphasized.

Table 4. Colonial and partnership models of research in developing countries (Ref 1)

Characteristics	Colonial model	Partnership model
Setting of research agenda	Dominated by outsiders	Negotiated with insiders
Links with national institutions and training programs	Peripheral	Integral
Management	Line management by foreigner	Line management by national or insider
Staff costs	Predominantly foreign salaries; over inflated local salaries	More balanced investment and more sustainable in the long term
Dissemination	Heavily orientated to international journals and conferences	International dissemination balanced by outputs in national or regional journals, and media to reach a wider audience
Emphasis on sustainability and generalisability of research findings	Low	More likely
Influence with local policymakers	Low	High
Effect on national institutions	Negative: attracts best and brightest away from national research institutions	Positive; builds up local academic infrastructure

The existing models for research in developing countries largely pay little attention to ownership, sustainability, and development of national research capacity. "Postal and parachute research" are colonial models leading to publications with minimal local representation¹. The use of "annexed sites" for field research ignored the local opportunity costs in human resources development including the recognition of the importance of cultural factors and indigenous viewpoints in influencing the interpretation of research finding and getting research into practice. Table 4 shows the characteristics of a partnership model for research in developing countries, including the Pacific, in contrast to the colonial model¹.

The use of Medline publications as an endpoint have excluded other research publications (e.g. consultant reports) and regional sources not included in international publication databases (e.g. Pacific Health Dialog). This study have not addressed the use of research findings¹⁷ and the double ethical and clinical standards used by expatriate research in developing countries¹⁷⁻¹⁹. There has also been claims of association between these double standards with imperialistic attitudes²⁰.

An appropriate research infrastructure and culture is essential to combat health research imperialism. A formative evaluation of progress towards local empowerment should include a Medline publication review. Real partnership in and localization of research can be measured through credible publication, demand for and use of research evidence, and subsequently better health care delivery and improved health status. Without empowerment and control over research the Pacificans will not be the custodians of their future.

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