

Measuring Whānau: A review of longitudinal studies in New Zealand

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Abstract: We reviewed a number of longitudinal studies in New Zealand that have attempted to investigate and identify changes in family or whānau over time. Most of the studies described in this paper focus on the family unit, typically within households and impose some restriction on the definition of family. As a result they are not able to adequately quantify changes in both whakapapa and kaupapa whānau over time. The review found only one study, *The Best Outcomes for Māori: Te Hoe Nuku Roa* (Cunningham, Stevenson & Tassell, 2005; Forster, 2003), which is aligned with Kaupapa Māori principles and is suitable for measuring changes in self-defined whānau over time in New Zealand. This review highlights that it is challenging to measure whānau quantitatively, let alone investigating changes over time. More research needs to be conducted into how to quantitatively measure whānau and this needs to be built in to population wide surveys, such as the census, as well as new longitudinal surveys such as the Growing Up in New Zealand study.

Keywords: longitudinal studies; New Zealand; whānau

Introduction

This review paper is one of twelve exploring various research methods which may help our understanding about the ways in which the lives and realities of whānau might be well-represented by research as part of the 'Researching with Whānau Collectives' project. It is the only paper to take a quantitative approach and offers an overview of current longitudinal studies in New Zealand which may possibly be useful for measuring changes in whānau (but more than likely family) over time.

Background

Families have increasingly been acknowledged as fundamentally important to societies, as the building blocks of communities and as economic entities. Whānau has been described as the building block of Māori society (Ministry of Health, 2002). Family and whānau relationships affect our physical, mental, emotional and spiritual wellbeing and our productivity. A strong and resilient family can weather shocks such as a sudden drop in income, the loss of a family member's job, sickness or the death of a family member. Family and whānau resilience not only helps families cope with stress and the ability to cope with shocks and challenging life events, but also serves as an important protective environment for childhood development (Kalil, 2003).

New Zealand has been experiencing a period of rapid change for families alongside wider social and economic changes, and families are no longer as stable as typically assumed (Families Commission, 2004; Ministry of Social Development, 2004; Poland, Cameron, Wong & Fletcher, 2007; Pryor, 2006). Families are complex units and new patterns of partnering, family formation, relationship dissolution and re-partnering have resulted in a growing diversity of family forms, as well as greater frequency of change between family forms (Families Commission, 2009; Ministry of Social Development, 2004). Despite this period of rapid change in New Zealand families, there remains a lack of quantitative evidence on the changing state of family and whānau in New Zealand and the social and financial impacts of such changes. One of the reasons for this is that in quantitative analysis terms, 'whānau' is a difficult concept to measure due to the fact that whānau is a varied and diffuse

unit of persons which cannot be neatly described through a simple formula (Cunningham, Stevenson & Tassell, 2005).

Defining families and whānau in quantitative terms

Much of the data on the changing state of New Zealand families over time has come from census data, which defines families based on a family nucleus concept, where the unit of enumeration (counting) is the household (Cotterell, von Randow & Wheldon, 2008; Milligan, Fabian, Coope & Errington, 2006). In the 2001 census, a family (or 'family nucleus') was defined as 'a couple, with or without child(ren), or single parent and their child(ren), all of whom usually reside in the same household. Within the Statistics New Zealand definition of family, families are a subset of households, and some households may contain no families, while others may contain more members than just one family. But this definition ignores family, social and economic resources outside of the household; for example, children in shared custody arrangements, who live with both parents (i.e. two-household or two-home children) can only be attributed to one parent and one household. It has previously been shown in a study on income-sharing in New Zealand families that inter-household transfers of income between 'family members' were especially prevalent in Māori and Pacific Island families (Fleming, 1997).

The terms family and whānau are not the same although are regularly used interchangeably. Historical definitions of whānau have been based around the household unit and could include extended whānau and up to four generations in one household (Walker, 2006). These definitions, however, may be less relevant for contemporary perceptions of whānau which may include people and resources outside of the household. Statistics New Zealand has tried to address this issue in their data collection by developing a variable that represents 'extended family' (Statistics New Zealand, 2002). However, this measure is limited in its ability to capture whānau relationships which often extend across many households rather than being contained within a single household (Hodgson & Birks, 2002). Whānau is a difficult concept to measure in quantitative analysis, as the meaning of whānau is varied and cannot be described through a simple categorisation (Cunningham et al., 2005). Therefore, most individual data in New Zealand cannot be aggregated up to the whānau level without explicitly asking the participant their own definitions and inclusion in different types of whānau. The notion of whānau is largely subjective to the individual and often individuals identify with more than one whānau, which can be a mixture of both whakapapa and kaupapa whānau (Cunningham et al., 2005). Common definitions of whānau discussed in the literature include (Te Puni Kōkiri, 2003):

- Whakapapa whānau – which refers to individuals with a shared ancestry or common line of descent.
- Kaupapa whānau – which refers to individuals who may not the same ancestor but share a common bond, such as geographical location or shared purpose.
- Statistical whānau – which can refer to family, whānau or household interchangeably.

In a recent report, Statistics New Zealand acknowledged that one of the key gaps which exists in current official statistics is the collection of information on whānau and social and economic support for family members across households and on caring arrangements for children (Statistics New Zealand, 2007). As a result, Statistics New Zealand are developing a conceptual framework which will allow for the measurement of family issues with standard measures and indicators that will establish the nature and extent of support (social and economic) for family members within and across households. They have also identified the need for better data and information on the vitality of Māori culture, the strength that Māori gain from their culture and how this supports well-being (Statistics New Zealand, 2009). Statistics New Zealand are proposing to develop a Māori Social Survey in 2011 that will focus on improving the statistical information which is collected about the social and cultural needs of Māori in New Zealand (Statistics New Zealand, 2009).

Why research changes in families and whānau quantitatively?

A wide range of government policies and practices have direct and indirect impacts on families and whānau, such as the 'Working For Families' tax credit package (Centre for Social Research and Evaluation & Inland Revenue, 2007). In turn, family circumstances and functioning shape the ways in which individuals engage with policies and services, affect the ability of policies and services to meet their goals, and influence outcomes for individual family members. Families have different needs at different times of transition and at specific life-stages (True, 2005). Therefore, there is a need to quantify these changes and the impacts on individuals within these families in order to provide evidence for policy development to ensure policies are relevant for families of today. Longitudinal data is particularly important for this purpose for a number of reasons. It provides the opportunity, not available in cross-sectional data, to study the growth and evolution of families over time, to investigate how key decisions are made and responded to (such as marriage, separation, having children, and working), and to determine the impact of family background and circumstances on child development and family functioning (Ministry of Social Development, 2004). Longitudinal data on families and their members are essential if we are to gain real understanding of the dynamic nature of families in New Zealand today, and how and when changes in families are taking place. To date there has been little use of longitudinal data to investigate how families change over time and what influences these changes.

Application

In 2005 the Families Commission published a report that reviewed current longitudinal studies and their relevance for family research (Poland & Legge, 2005). Our paper builds on this existing work by providing an overview of current longitudinal studies in New Zealand which have explored (or will explore) changes in family and/or whānau over time. The following studies are reviewed in terms of their relevance for quantifying changes in family/whānau over time:

- Best Outcomes for Māori: Te Hoe Nuku Roa
- Survey of Families Income and Employment (SoFIE)
- Growing Up in New Zealand (GRUINZ)
- The Pacific Islands Families Study (PIF)
- Other longitudinal studies not focussed specifically around family

Te Hoe Nuku Roa and SoFIE are both household surveys with randomly selected samples. The other studies are birth cohort studies, where individuals born during a particular period of time are followed up over the life course. Each of the above mentioned studies are discussed in turn below.

Best Outcomes for Māori: Te Hoe Nuku Roa

Started in 1994, Best Outcomes for Māori: Te Hoe Nuku Roa is a 25-year longitudinal study of Māori households run by the Research Centre for Māori Health & Development and Te Pūtahi-ā-Toi, the School of Māori Studies at Massey University (Forster, 2003). The overall aim of the study is to produce a sound empirical base that will help to provide information for Māori and other planners, and to facilitate the development of policies and programmes appropriate to Māori in cultural, social and economic terms. A stratified random sampling method — Whaihua Tatau — developed in collaboration with Statistics New Zealand, was used to compile a sample of households representative of a range of Māori geographic, economic, cultural and social circumstances (Forster, 2003). By 2004, the study had completed three rounds of interviews with over 550 Māori households. This study has a longitudinal component that offers an opportunity to chart the natural history of Māori

individuals and families and to assess the impact of policies and programmes designed to address their specific and unique situation. The study uses a Māori-centred approach to research with a relevant Māori framework to gauge personal and family development. This framework consists of four interacting axes which are: *paihere tangata* (human relationships), *te ao Māori* (Māori culture and identity), *ngā āhuatanga noho-ā-tangata* (social-economic circumstances), and *ngā whakanekeneke* (change over time). The study also attempts to objectify the context in which Māori families and individuals exist by examining their relationships with societal structures at local, regional and national levels, as well as their relationship with Māori structures (Cunningham et al., 2005).

The study collects information on *whakapapa whānau* by asking participants if they are a member of a number of listed *whānau* configurations (three or more generations, two generations, or one generation). Participants are also asked about *kaupapa whānau*, which are characterised as any *whānau* not based on *whakapapa* or blood, such as membership to school, sports, work, community/neighbourhood or religious groups. In a report for the Ministry of Education, using data from the fourth wave of *Te Hoe Nuku Roa* (collected between 2004 and 2005), the authors found that participants often identified with more than one *whānau*, with the majority members of *whānau* including three or more generations (Cunningham et al., 2005). They also found that most people belonged to one or more *kaupapa whānau* groups, with the most common of these being *kōhanga*, *kura* or *wānanga* (children's education). Most individuals identified with more than one *whānau*, which are often a mixture of both *whakapapa* and *kaupapa whānau* (Cunningham et al, 2005).

Survey of Families, Income and Employment (SoFIE)

The Survey of Families, Income and Employment (SoFIE) is New Zealand's first national survey designed to study income, family type and employment and how they change over a period of eight years. It is a representative fixed household panel longitudinal survey of the usually resident population living in private dwellings in New Zealand conducted by Statistics New Zealand from 2002 to 2010. The initial SoFIE sample comprised approximately 11,500 responding private households in Wave 1 (77% response rate). In Wave 1 22,000 adults responded, which reduced to just over 17,500 in Wave 4 (76% of Wave 1 responders) (Statistics New Zealand, 2008). In Wave 1 there were over 22,000 adults responding which reduced to just over 17,500 in Wave 4 (76% of Wave 1 responders) (Statistics New Zealand, 2008). In SoFIE face-to-face interviews are used to collect information annually on income levels, sources and changes; employment, education, household and family status and changes, demographic factors and health. Every two years detailed information on assets and liabilities is collected, with a battery of health questions asked every other year, including : health status (SF36 and Kessler-10 scale of psychological distress), perceived stress, chronic conditions, smoking and alcohol use, health care utilisation, and an individual deprivation score.

The core definitions of family used in SoFIE are defined by Statistics New Zealand and are based on the typical family nucleus within a household which consists of a couple, with or without child(ren), or one parent and their child(ren), where the children do not have partners or children of their own living in the same household. One person within the household identifies links between all people within the household (for example, family members, dependent children, non-family household members). Another commonly used definition is the 'economic family' type where a person is financially independent or a group of persons who reside together and are financially interdependent. An 'economic family' can be comprised of a couple, a couple with dependent children, one parent with dependent children, or one person on their own. There are aspects of SoFIE that could identify informal economic or family support outside the household unit (for example, family childcare or other economic support). However, respondents are not asked to identify who they define as to be included in their *whānau* outside the household.

SoFIE is useful for identifying changes within families (for example, separation, cohabitation, new births) and how this impacts on social and economic factors, and how in turn economic and social factors may impact on changes in family. A key strength of SoFIE is that if a family consisting of original sample members splits during the course of the study, every effort is made to follow up all respondents even when they move to separate households (within New Zealand). The Families Commission used data from the first two waves of SoFIE to describe the characteristics of individuals in different family types and to explore differences in the characteristics of those who moved from one family to another over the course of a year (Poland, Cameron et al., 2007). The analysis in this report defined the family nucleus as people living together in a household, which meant that discussions about changes for extended family members and intergenerational living arrangements were outside of its scope. The main findings of the report highlighted that life-cycle factors (such as children growing up and leaving, partnering, having children) were a likely key driver of changes in family living arrangements for New Zealanders.

Growing Up in New Zealand

Growing Up in New Zealand is a new longitudinal study of New Zealand born children, led by the University of Auckland. Children included in the study had to be born between 25 April 2009 and 25 March in one of the regions covered by the Auckland, Counties Manukau and Waikato District Health Boards. The study will follow a cohort of approximately 7,000 children from before they are born until they become young adults (about 20 years old) and has aimed for proportionate representation of European, Māori, Pasifika, Asian and other ethnic groups to reflect the wide cultural diversity of New Zealand's children and their families. The first research findings from the ante-natal interviews have recently been released and show how diverse families have become, differing from those of previous generations and earlier longitudinal studies undertaken in New Zealand (Morton et al., 2010). Approximately every year, the child's parents (both mother and partner) will be contacted to get a better understanding of the range of influences on their child which, over time, have an impact on it. When the child is old enough, he or she will be interviewed too. The research asks questions about health and wellbeing, family and whānau, education, psychological and cognitive development, the neighbourhood and environment, and culture and identity so that holistic information about children in the context of their families and community can be gathered

Pacific Islands Families Study

The Pacific Islands Families study is a longitudinal study established within the Faculty of Health and Environmental Sciences at the Auckland University of Technology, to determine the factors that influence the health and developmental outcomes of Pacific children and their families (Paterson et al., 2008). The cohort for this study included all Pacific babies born between 15 March and 17 December 2000 at Middlemore Hospital in South Auckland. A total of 1,376 mothers participated at the six week point, 89% were re-interviewed at the 12-month stage and 83% (of those interviewed at six weeks) were re-interviewed at 24 months.

The study has both a health and a family focus and aims to look at Pacific family development and structure, parenting practices and family lifestyle. The information collected includes household composition; family circumstances such as income, housing and transport; parenting practices such as child care, discipline and nurturing; demographics such as cultural and religious orientation and practices; and child outcomes such as health, social and language development. Three living arrangements considered in the study could be useful for definitions of whānau: (1) those children who live with immediate family members only; (2) children who live with extended family members including at least one of their grandparents; and (3) children who live with extended family members but do not live with any of their grandparents (Poland, Paterson et al., 2007).

Other longitudinal studies not focussed specifically around family

The longitudinal studies described above have all had family or households as the focus of their data collection. This next section describes briefly a further three longitudinal studies which, although not specifically designed to study families or households, merit inclusion in the discussion around measuring whānau. The Health, Work and Retirement Study incorporates retirees from Te Hoe Nuku Roa amongst its members and may thus be able to measure changes in whānau in older Māori. Both the Dunedin and Christchurch birth cohort studies have collected data on families but as the study populations do not include a large Māori sample, they are limited in their ability to measure whānau.

Health, Work and Retirement Study

Massey University's Health, Work and Retirement Study was established in 2006 to identify the influences on health and wellbeing in later midlife (55 to 70 years) which may lay the basis for community participation and health later in life, and ultimately lead to a more independent retirement (Stephens & Noone, 2008; Towers, 2008). The study is mainly based around biennial postal surveys (surveys repeated every two years) of 8,000 New Zealand workers and retirees, incorporating Māori workers and retirees from the Te Hoe Nuku Roa study. The Health, Work and Retirement study attempts to capture measures of whānau, as defined in Te Hoe Nuku Roa, and therefore, may be able to measure changes in self-defined whānau in this middle-to-older aged cohort over time.

The Dunedin Multidisciplinary Health and Development Study

The Dunedin Multidisciplinary Health and Development Study ("Dunedin Study") has followed individuals for 38 years and contains a great deal of information on family background and child development. The cohort contains over 1,000 people and assessments have taken place at birth (in 1972–1973), three years, every two years until age 15 and at 18, 21, 26, 32 and, currently, 38 years. The study has recently generated additional data on families through several generational offshoot studies: the Family Health History Study (2003–2006), the on-going Parenting study, and the Children and Parents Study. The Dunedin study has been very successful in retaining participants who have moved out of the Dunedin area to elsewhere in New Zealand or overseas by covering all the costs associated with attending the assessment. However, the study population is relatively homogenous and both Māori and Pacific people are under-represented in the study as a proportion of its total sample (Poulton et al., 2006). As a result, there are limitations to the generalisability of the study findings to Māori and in its ability to measure whānau.

The Christchurch Longitudinal Study

This study was originally set up to investigate the impact of single parenthood on child health and well-being. Since then the focus has been broadened to reflect interest in a range of issues to do with child and family well-being. The data is collected from a cohort of people born in mid-1977 in the Christchurch urban area. The cohort contains over 1,000 people. Assessments took place at birth, four months, and one year, annually until the age of 16, then at 18 years, 21 years and 26 years of age. The original purpose of the Christchurch study was family focussed. As a result, it is likely to be valuable for investigating questions relating to the impact of changes in family structure on child outcomes, parenting issues and the relationship between material well-being and other factors. The study collects a vast range of family-related variables such as perinatal health, social background, child health, child behaviours, parenting, family transitions, family material well-being, family socio-economic status, family income, family violence, family planning, step-parenthood and family size. However, (as with the Dunedin study) the study population is relatively homogenous and does not include a large Māori sample, so it is limited in the ability to measure whānau.

Kaupapa Māori analysis

Of all the longitudinal studies described in this paper, the Best Outcomes for Māori: Te Hoe Nuku Roa is the only one aligned with Kaupapa Māori principles. It was developed using a Māori-centred research approach focussing primarily on Māori, using research methods and practices that are cognisant of Māori culture, Māori knowledge and contemporary realities (Forster, 2003). Furthermore, the measures of cultural identity and whānau developed and used in Te Hoe Nuku Roa have since been included in later studies such as the Health, Work and Retirement study.

This is perhaps not surprising given that most of the longitudinal studies described here are either national population-based surveys e.g. SoFIE, or were set-up many years ago e.g. Dunedin and Christchurch studies, or were set up with a different research focus e.g. Pacific Study or the Health and Retirement Study. Most of the research on whānau in New Zealand has been qualitative in nature rather than involving quantitative studies. Thus, to measure changes in whānau quantitatively may require a longitudinal study to be set up specifically for this purpose. A number of Māori researchers see qualitative methods as being particularly well suited to Māori as they see it as enabling a more equal conversation to take place where power can be negotiated in ways that are not generally considered or thought possible in more quantitative approaches (Moewaka Barnes, 2000). However, we may need to start utilising mixed methods that incorporate both quantitative and qualitative data in order to get a more complete picture of the meaning of whānau in the communities being surveyed. This would require that a range of issues from how the research is initiated and the purpose of the study, through to design, implementation and analysis are examined from a Māori-centred research approach.

Summary and discussion

In summary, a large amount of information on families could be generated from existing New Zealand longitudinal studies. However, the lack of a simple categorisation or description of whānau makes it significantly challenging to describe whānau in statistical terms. Most of the New Zealand data on individuals cannot be systematically aggregated at the whānau level without intimately knowing the living arrangements within each whānau (Cunningham et al, 2005). More research is needed to investigate how to quantitatively measure whānau. These definitions need to be included in population-based surveys, such as the Statistics New Zealand Census and Māori Social Survey, to enable more accurate descriptions of the population and the social networks surrounding people and whānau. We have provided an overview of current longitudinal studies in New Zealand that have attempted to investigate and identify changes in family or whānau over time. Most of these studies focus on the family unit, typically within households and impose some restriction on the definition of family. As a result they are not able to adequately define and quantify changes in both whakapapa and kaupapa whānau over time. The Best Outcomes for Māori: Te Hoe Nuku Roa Study remains the only current longitudinal study in New Zealand that is both Māori centred and capable of measuring change in self-defined whānau over time.

At the policy level, the breadth and depth of the notion of whānau means it is difficult for policy and legislation to capture its whole meaning and to apply it appropriately (Walker, 2006). The SoFIE study may be useful for policy development around families more generally and households over time, as it follows households and families that split during the course of the study. As many family-based policies in New Zealand are typically focussed on nuclear families, typically within the same household, quantitative analyses looking at families within households may still be useful for informing policy around families/whānau and how they are changing over time. This survey, however, is limited to the eight-year period between 2002 and 2010, so its policy relevance (post 2015) may be limited. Looking to

the future, the Growing Up in New Zealand study will be able to provide quantitative information about changes in family or whānau over time, as well as changes in a person's definition of whānau (or extended family) over time as New Zealand families and whānau become more diverse.

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Author Notes

Funded by the Māori Health Joint Venture: a joint initiative of the Health Research Council of New Zealand and Ministry of Health, HRC Contract No.08/601.

The authors acknowledge and thank Dr Fiona Cram and Ms Vivienne Kennedy for the opportunity to be part of the collaborative research project to search out research methods that capture the fullness and interconnectedness of whānau collectives.

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