PACIFIC FATHERS: CULTIVATING THE FUTURE

THE HEALTH OF PACIFIC FATHERS AND THEIR INFLUENCE UPON AND INVOLVEMENT WITH THEIR CHILDREN

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Attestation of authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

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Co-authored works

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Abstract

Background:

Pacific men's health, and particularly the health of Pacific fathers, is a significant health priority which in recent years has become a largely neglected yet important area for health researchers and policy makers in New Zealand to consider. Moreover, it is being increasingly recognised that fathers and their involvement have a significant impact on the development and well-being of their children; both positively and negatively.

Aims:

The overarching study aim is to identify how Pacific fathers impact and influence the development of their children. Two major components are used:

Phase I, a quantitative component which seeks to:

(1) Identify and investigate key social, behavioural, and psychological aspects of health and fathering amongst Pacific fathers using data collected from the Pacific Islands Families (PIF) Study.

Phase II, a qualitative component, informed by the quantitative component, and which seeks to:

(2) Examine how these key aspects influence the fathering behaviours and practices among Samoan and Cook Islands fathers; and,

(3) Explore the ways that these aspects and fathering behaviours or practices of Samoan and Cook Islands fathers shape and influence the development of their children.

Methods:

To achieve aim (1), a secondary data analysis of key social, behavioural, and psychological measures of health among a cohort of Pacific fathers in the PIF Study was undertaken. Pacific fathers of a cohort of Pacific infants born at a large tertiary hospital in South Auckland in 2000 were interviewed at 1-year, 2-years and 6-years postpartum. The specific choices of variables investigated were informed by consultation with Pacific stakeholders and a review of the literature.

To achieve aims (2) and (3), focus group interviews were conducted by the doctoral candidate with a subset of Samoan and Cook Islands fathers from the overall cohort of PIF fathers. These interviews were conducted to examine how the aspects of health investigated in Phase I of this research, influence the fathering practices of these fathers. The interviews also examined how these fathering practices influence the progress and development of their children.

Informed by the results of Phase I, discussions during the focus groups and interviews with Pacific fathers included subjects such as the influence of their own childhood upbringing, religious involvement, the influence of culture and acculturation, risk-taking behaviours such as tobacco smoking, and the impact of these influences on the fathering behaviours of participants. The *Fonofale* model was used as a Pacific framework for developing the questions for the focus group interviews, and elements of the *Talanoa* method, were also incorporated to provide a Pacific-centred approach for interviewing participants. Using a thematic analysis methodology, the focus group

transcripts were examined and analysed to identify the dominant themes articulated by the fathers. In doing so, the analysis identified how these themes are made apparent in the participants fathering practices, and the subsequent child outcomes that are a result.

Results:

At the 1-year, 2-years, and 6-years interview, 825 (83%), 757 (81%), and 591 (64%) of eligible fathers consented and completed the interview, respectively. Within our cohort of participant Pacific fathers, the rates of mental health symptomatic indications were low. However, there is a significant increasing trend over time, from 3.9% at the 1-year phase to 6.7% and 9.8% in the 2-years and 6-years postpartum phases respectively. Pacific fathers who were regular smokers, unemployed, separated or single, or were of Cook Islands and Tongan ethnicity, had a significantly increased likelihood of being symptomatic for potential psychological disorder.

Smoking rates for Pacific fathers in this study (40.3%) were relatively high compared to results (35% for Pacific males) from other tobacco surveys. Moreover, fathers who had lower Pacific cultural alignment, no formal educational qualifications, and drank alcohol at least once a month were significantly associated with being a current smoker. Pacific fathers that had stronger alignment or affinity with their traditional culture had a decreased likelihood of being a current smoker.

Pacific fathers in the study reported high levels of involvement with their children, and increased father involvement was significantly associated with a lower risk of child

behaviour problems. Pacific fathers with less affinity with their traditional Pacific culture exhibited lower levels of father involvement, compared to fathers with strong affinity with their Pacific culture.

In terms of the qualitative results, 10 Samoan fathers and 7 Cook Islands fathers participated in focus group or individual interviews. The qualitative findings demonstrated that Samoan and Cook Islands fathers in this study face numerous challenges in raising their children. Overall fathers described themselves as eager and enthusiastic to be great, highly competent, and involved fathers, despite some of the challenges with migration and acculturation which they may face. The fathers also identified their inability to spend more time with their children as a major challenge, and provisions concerning flexible work hours, and adequate information and fathering support services may help to address this.

Conclusion:

Findings from this study suggest that health issues such as mental well-being and smoking are playing an increasingly significant part in the lives of the Pacific fathers. Efforts to curb the negative impacts of these health issues will be beneficial for the well-being of both Pacific fathers and their families. As suggested by the participant fathers, the implementation of strategies designed to accommodate their needs concerning flexible work hours, and the availability of appropriate support services, are likely to be successful in increasing effective father involvement and engagement for Pacific fathers, and lead to improved outcomes for Pacific children. Findings also highlight the influence of acculturation and culture on the health and fathering

practices of Pacific fathers in New Zealand. Pacific fathers that maintain a strong affinity with their traditional Pacific culture generally fared better across all domains investigated, excluding father involvement. In addition, historical experiences or exposure to recent migration and relocation to New Zealand appears to influence certain culture-specific fathering practices, with many participants attempting to modify their fathering to adapt to their new homeland. These findings emphasize the need to develop empirically based and considered ways to approach these complex phenomena.

Research presentations

Conference Presentations:

Pasefika Medical Association Annual Health Conference, Rarotonga, July 2009.
Mental health well-being amongst Pacific fathers in New Zealand.

TheMHS Mental Health Services Conference, Perth, Sept 2009.
Mental health well-being amongst Pacific fathers in New Zealand.

Pacific Island Families Study Research Symposium, Auckland, Nov 2009.
Acculturation and health amongst participants in the PIF Study.

Annual Cook Islands Health Conference, Rarotonga, July 2010.
Acculturation and smoking amongst fathers in the Pacific Islands Families Study.

APACT 2010 Asia Pacific Tobacco Control Conference, Sydney, Sept 2010.
Acculturation and smoking amongst fathers in the Pacific Islands Families Study.

Invited Presentations:

International Infant and Child Mental Health Conference, Auckland, Feb 2010. *Mental health well-being amongst Pacific fathers in New Zealand.*

Liga Maopo – National Pacific Health Service Providers Fono, Auckland, Mar 2010. *Acculturation: What does it mean for Pacific health.*

Turama 2020 – Cook Islands Health Network Conference, Auckland, Nov 2010.
Cook Islands dads in the Pacific Islands Families Study.

Annual Cook Islands Health Conference, Rarotonga & Aitutaki, July 2011.
Cook Islands fathers: Cultivating the future.

Abbreviations

BMI	Body Mass Index
CBCL	Child Behaviour Checklist
CI	Confidence Interval
CIHNA	Cook Islands Health Network Association
ETS	Environmental Tobacco Smoke
FCTC	Framework Convention for Tobacco Control
FIQ	Father Involvement Quartile
FI	Father Involvement
GEE	Generalised Estimating Equations
GEQ	General Ethnicity Questionnaire
GHQ-12	General Health Questionnaire – 12 item version
HRC	Health Research Council of New Zealand
IFI	Inventory of Father Involvement
IQR	Interquartile Range
LSAC	Longitudinal Study of Australian Children
NCDS	National Child Development Study
NZ	New Zealand
NZACCULT	NZ Acculturation
P.A.C.I.F.I.C.A	Pacific Allied (Womens) Council Inspires Faith in Ideals Concerning All
PHW	Pacific Health and Welfare
PIACCULT	Pacific Islands Acculturation
PIF	Pacific Islands Families

SD	Standard Deviation
SES	Socioeconomic Status
SKIP	Safer Kids in Partnership
SPARCNZ	Sport and Recreation Council of New Zealand
SUDI	Sudden Unexpected Death in Infancy
UK	United Kingdom
USA	United States of America
WHO	World Health Organization

Chapter 1: Introduction

This chapter provides a global synopsis of this thesis, and outlines the rationale and overall direction for this research. A brief overview of the experiences of migration, society, and health, amongst Pacific people in New Zealand (NZ), is presented as a way of setting the scene for the framework of this research. It also outlines the importance of Pacific father's health and well-being, and the need to enhance the knowledge in this area in order to reduce some of the health inequalities experienced by some Pacific communities in NZ. The chapter describes the key aims and objectives of the research, as well as the specific areas of Pacific father's health which will be investigated in this thesis. To conclude, a brief outline of each chapter within this thesis will be provided.

1.1 Setting the scene

1.1.1 Pacific people

Since the early 1960s there has been a steady increase in the Pacific population resident within NZ. At the 1976 Census there were 65,700 (2.1% of total population) Pacific people living in NZ, and this has progressively grown with the latest 2006 Census reporting 266,000 (6.9% of total population) Pacific people living in NZ (Statistics New Zealand and Ministry of Pacific Island Affairs, 2010). Samoans constitute the largest ethnic group (49.2%), followed by Cook Island Maori (21.8%), and Tongans (19.0%); 60.0% were born in NZ; and 65.8% lived in the Auckland urban area (Statistics New Zealand and Ministry of Pacific Island Affairs, 2010). This ethnic diversity is manifest in differing cultures, languages, and strength of acculturation

(Ministry of Health, 2005). The increase in Pacific population has presented numerous challenges for health policy makers to develop skills, knowledge and expertise that is responsive and appropriate to the diverse range of ethnic groups which make up the NZ Pacific population (Statistics New Zealand and Ministry of Pacific Island Affairs, 2010).

Pacific health

Unfortunately, compared to other ethnic groups in NZ, Pacific people are over-represented in many poor health outcome measures (Tobias & Yeh, 2009). Social and economic factors are known to contribute significantly to the relatively poorer health status of Pacific peoples (Minister of Health and Minister of Pacific Island Affairs, 2010; Ministry of Health, 2008c). Moreover, Pacific peoples exhibit a lower life expectancy than all other ethnic groups except Māori, and have higher rates of chronic diseases, which are recognised as leading causes of this premature mortality and disability. For example, cardiovascular disease is the principal cause of death for Pacific peoples, and cardiovascular mortality rates are consistently and significantly higher than for the general population (Ministry of Health, 2008c). The prevalence of diabetes in Pacific populations is approximately three times higher than among other New Zealanders, and Pacific men have higher rates of lung cancer and primary liver cancer, than other New Zealanders (Ministry of Health, 2008c).

Despite their increased association with lower socio-economic status, overcrowding, high unemployment, high rate of communicable diseases, and poor educational

outcomes, Pacific peoples in NZ are increasingly being regarded as high achievers in sports, music and the arts (Ministry of Pacific Islands Affairs, 2002). The last twenty years has seen an increase in the numbers of Pacific university graduates, entrepreneurs and business people (Ministry of Pacific Islands Affairs, 2002). Pacific migrants also bring to New Zealand a vibrant and significant culture with strong historical and familial connections with Māori, the indigenous people of New Zealand (Ministry of Pacific Islands Affairs, 2002).

Migration and relocation

Like all emigrants, Pacific families are often challenged when migrating away from their country of origin and traditional support systems (Macpherson, 2008). Migration and acculturation – the process of cultural change in customs, language, and values as a result of contact between two or more cultural groups - can be disorganizing and reorganizing experiences, which require alterations of social identity and self-image to accommodate this dynamic process (Schluter, Tautolo, & Paterson, 2011). Pacific migrants must negotiate new cultures and learn to navigate multiple new and different systems, sometimes without the support of familiar social networks. In addition, culture-specific patterns of parenting including roles, decision-making patterns, and cognitions and practices related to childrearing and child development (Benedict, 1983; Bornstein & Lansford, 2009) may be subjected to complex modifications when families emigrate from one society to settle in another. Understanding the impact of migration and acculturation on Pacific people, as well as their processes for developing

social support systems in a new culture, is crucial to meeting the needs of these population groups.

Previous international research also recognises the importance of migration on health, evolving from seminal NZ/Pacific migration studies (Stanhope & Prior, 1976), and early international studies (Carballo, Divino, & Zeric, 1998; Ostbye, Welby, Prior, Salmond, & Stokes, 1989). More recent studies have attempted to explain these interrelationships (Sam, 2006; Thomson & Hoffman-Goetz, 2009). The well-being of a migrant group is determined by interlinking factors that relate to the society of origin, the migration itself, and the society of resettlement (Borrows, Williams, Schluter, Paterson, & Helu, 2010). Moreover, studies involving Pacific mothers and infants in NZ (Borrows et al., 2010), Turkish immigrants in both Germany and Canada (Ataca & Berry, 2002; Berry, 2006), and Hispanic immigrant women in the USA (M. E. Jones, Bond, Gardner, & Hernandez, 2002), have established that migrants who retain their own cultural attitudes and behaviours without adopting attitudes or behaviours from the new culture, are likely to experience more positive health benefits.

1.1.2 Fatherhood

The importance of research on fathers and fathering behaviour has been recognized by international bodies such as the World Health Organization (2007), and the United Nations Secretariat (2011), as important factors impacting the formation, stability and overall well-being of families. These international bodies propose that a deeper understanding needs to develop of issues regarding men's health, fathering roles, and

family support structures in promoting better quality of life for children and families. In response to this need, several international organisations and countries are endeavouring to provide information to address this lack of knowledge about fathers, and their role and participation in parenting. An example is a report using data from the Longitudinal Study of Australian Children (LSAC) in Australia, which investigates issues that affect fathers of young children, and the potential impact of these factors on fathering roles and practices (Baxter & Smart, 2010). Similarly, a research project conducted by O'Brien & Shemilt (2003) in the United Kingdom (UK), has examined what they have termed 'modern day' fathers, by exploring the tensions and challenges these fathers face in trying to balance their work and family life. It is proposed that these findings may in turn allow consideration of potential impacts these factors may have on the well-being of their children.

Within NZ, recognition of the fundamental roles of men and fathering in family function and health has received increased nationwide attention through studies carried out by the Ministry of Health (1998, 2008a), and the Families Commission (2008b). Despite a lack of specific NZ-based information on fathering roles and behaviours, literature from the Families Commission (2007) indicates that NZ families are changing, and also that there is a need for fathers to have more direct involvement and stronger relationships with their children. These findings recognise that the importance of the role of fathers has for too long been overlooked. This may be because in most post-war modern societies, women have historically been seen as the main caregivers (Wall & Arnold, 2007). Consequently, services, support, and research

have largely been directed at mothers. However, without evidence-based research available for men, there may be a tendency to make do with opinion-based approaches which do not provide all the perspectives required to meet the needs of men and fathers (Macdonald, 2006).

While there is a general lack of information and research about fathering in NZ, there is even less information and research about Pacific fathers in NZ. In response to this, Pacific men's health and particularly the health of Pacific fathers is an issue which in recent years has become increasingly important for health researchers and policy makers to consider (Families Commission, 2008b; Health Research Council, 2006, 2007). The paucity of available information will be redressed in this study, given the increasing Pacific population in NZ, and their vulnerability as a population in terms of health and other outcomes. Such information and research will be helpful to health providers and policy makers.

Alongside this, developing an understanding of the influence which the health and involvement of fathers can have on the positive development of their children has also been highlighted as an increasingly important and emerging area of research. For example, a number of studies have demonstrated that healthy and involved fathers can lead to positive health outcomes for both their children and families (Sarkadi, Kristiansson, Oberklaid, & Bremberg, 2008; Teitler, 2001). Parental and caregiver behaviour are significant risk factors and important protective factors for infants and young children's health (Ministry of Health, 2008a). For example, Parents decide

whether the protective factors of breastfeeding, immunisation, and car-seat usage are available to their infant children. Parents and caregivers can also influence whether children will be protected from or exposed to risk factors associated with smoking, drinking and violence. As children begin to make decisions about diet, physical activity and lifestyle it is likely to be within parameters set and behaviours modelled by parents (Ministry of Health, 2008a). Parents who are proactive in providing a positive learning environment within the home, also provide security and a home for their children, which is essential for the positive nurturing and development of their offspring.

1.2 Purpose and significance

It is important to recognise that fathering behaviours encompass a very broad if not limitless range of areas and aspects. These behaviours affect children, families, and societies in a broad myriad of ways. As a result, this research will consider only a few sentinel slices or key variables of Pacific fathering and the influence of these upon Pacific children. These aspects of research were ascertained through informal consultation with the research team and key stakeholders, as well as a review of the literature. Also, information from pre-collected data from the Pacific Islands Families (PIF) Study was also useful in highlighting key variables for investigation.

The PIF Study is an ongoing longitudinal study following a cohort of Pacific children and their families over the past decade. A strong attribute of the PIF Study is that it is the first Pacific longitudinal and epidemiological study worldwide, which is positioned to

examine and report of fatherhood for a defined population of Pacific fathers (Paterson et al., 2008). Detailed information about the PIF Study design and procedures is given in the Phase I section of this thesis.

Mixed methods approach

While quantitative epidemiological data is important for this research concerning the health and fathering behaviours of Pacific fathers in NZ, the perspectives of Pacific fathers garnered through qualitative interview information are also recognised as crucial. Particularly in trying to gain a better understanding of the underlying key influences in Pacific father behaviours and how they are experienced and applied in raising their children. Therefore, the incorporation of a mixed-methods structure within the overall project seemed logical and appropriate. Information from the PIF Study is used as a starting position, with data on key social, behavioural, and psychological health characteristics of Pacific fathers. The findings would then be explored in a more in-depth manner using a planned phase of qualitative interviews and focus groups.

Quantitative phase

Within the quantitative research there were three domains which were an important focus of the study; (i) fathers health, (ii) fathers behaviour, and (iii) fatherhood participation. While recognising the diverse range of aspects within each domain, this research identified and investigated one primary characteristic for each of the three different domains.

1.2.1 Fathers health

The central focus of research concerning the health of Pacific fathers is an investigation of mental health and well-being. The mental health well-being of fathers is of particular importance to the function and well-being of the family. Fathers today face increasing demands from both work and family life (Kakakios, 2001; O'Brien & Shemilt, 2003). The associated financial and psychological strain felt by fathers trying to balance work and family commitments can have an adverse impact on their mental well-being. Fathers can also be particularly prone to depression after childbirth (Cowan, Cowan, Heming, & Miller, 1991) with mild to moderate depression most likely (Soliday, McCluskey, Fawcett, & O'Brien, 1999). Such depression is likely to strain the relationship between father's and their families, at a time when his involvement is most needed.

Issues of specific relevance to the health of men and fathers have received little attention in terms of public health research in NZ (R. Jones & McCreanor, 2009). Similarly, the absence of relevant information is a key motivation for a proposed longitudinal study of men's health in the Greater Sydney Area of New South Wales, Australia (Monaem et al., 2008). Health services and information specific to men's needs are necessary if we are to improve the health status of men and fathers (Monaem, Woods, Macdonald, Hughes, & Orchard, 2007). Thus, developing an understanding of mental well-being and associated risk factors amongst Pacific fathers in NZ is essential. Particularly for determining how these issues may influence their fathering and resultant behaviour outcomes for their children.

1.2.2 Father behaviours

The core focus of research concerning father behaviours is an examination of tobacco smoking. Tobacco smoking is the single most preventable cause of death in the world (World Health Organization, 2008), and within NZ. Moreover, particular sub-groups within NZ, such as Pacific peoples, carry a greater burden of smoking-related illness. Fathers have received scant attention in the literature on smoking, especially in relation to their motivations and behaviours. In spite of that, smoking fathers are a potential major contributor to the environmental tobacco exposure within a household; especially with their higher smoking prevalence and their generally higher cigarette consumption. Since children typically spend much of their early life in the presence of their parents, children who have either a mother or father that smokes will often have a prolonged and close exposure to environmental tobacco smoke (Tautolo, Schluter, & Taylor, In press). Furthermore, young children are particularly vulnerable to the detrimental effects of passive smoking, as their respiratory systems are rapidly developing and are structurally and immunologically immature (Cheraghi & Salvi, 2009; Juradoa, Munoza, Lunab, & Fernandez-Crehueta, 2004). This thesis seeks to better understand smoking behaviour amongst Pacific fathers in NZ, in order to determine how these practices influence the fathering behaviours, and developmental outcomes for their children.

1.2.3 Fatherhood participation and involvement

The primary focus of research concerning fatherhood participation is an investigation of father involvement. Father involvement and fathering practices have become a

significant research issue, especially in relation to the potential effects upon child development and health outcomes. There is a lack of information about fathering, and particularly data concerning Pacific fathers. This is highlighted in key policy and research priorities outlined by the Families Commission (2008b), and the Health Research Council of New Zealand (2007). These government bodies identify a clear need to enhance our understanding of health issues involving family support and social support structures which promote resiliency amongst children and young people, especially amongst Pacific families and communities.

Several factors have contributed to this increased interest in fathers and fatherhood, including changing societal conceptions of parental roles, shifts in the demographic profile of modern families, and policy debates over the impact of father involvement on child development (Lamb, 2004). Accompanying this increased interest has been a growing collection of research literature about fathers and the benefits of their involvement in raising their children (Cabrera, Tamis-LeMonda, Bradley, Hofferth, & Lamb, 2000; Day & Lamb, 2004; Tamis-LeMonda, 2002). Some of the key outcomes of father involvement, particularly relating to child behaviour and development, include cognitive development, social development, physical health, decreased negative outcomes, and the benefits of involvement for fathers.

A number of studies have highlighted the importance of the father in relation to the health and development of their children, particularly from infancy to the adolescent age. Research from Pleck (1997) and Lamb & Tamis-LeMonda (2004) reveals that fathers generally spend more time on social interaction and playing with their children

than mothers. Furthermore, observations of fathers show that they talk in a more adult way with their children; they question more and demand explanations in preparing and training the child for communicating with other adults (Sarkadi et al., 2008; Tomasello, Cont-Ramsden, & Ewert, 1990). In addition, studies have found that a child reacts much earlier and in a different way towards their father, using clearer signals of communication than they do with their mother (Nakamura, Stewart, & Tatarka, 2000). This thesis examines the association between fathering involvement and child behaviour outcomes amongst Pacific fathers in NZ.

1.2.4 Fathers and acculturation

For each of the three investigations in the quantitative phase, the influence and effect of acculturation is also explicitly examined. Research to date has shown that acculturation has a significant influence on the health-seeking and risk-taking behaviours of different population groups (Bethel & Schenker, 2005; S. Lee, Sobal, & Frongillo, 2000; Ma et al., 2004). Acculturation has been defined as a process by which individuals or groups accept aspects of another culture, often a dominant one, without completely relinquishing their own. Aspects of the adopted culture may include beliefs, values, social norms and lifestyles (Marin, 1992). A growing body of literature describes a trend of immigrant populations with low rates of risk factors migrating to countries where the dominant culture has a much higher rate of risk factors. As these migrant populations spend longer in the new culture or environment, their prevalence of risk taking behaviour tends to increase and reflect similar rates to that of the

dominant culture. This thesis examines the influence of acculturation on a selection of health behaviours amongst a cohort of Pacific fathers in NZ.

Existing research examining acculturation and parenting, also illustrates the presence of an association between culture, and fathering styles or behaviours (Harkness & Super, 1995). While parents in all societies are expected to nurture and protect young children (Bornstein, 2002, 2006), culture influences a wide array of family functions including roles, decision-making patterns, and cognitions and practices related to childrearing and child development (Benedict, 1983; Bornstein & Lansford, 2009). The research in this thesis aims to explore these associations and provide a more comprehensive picture of these relationships.

Qualitative phase

Using the analysis from the quantitative Phase I component, questions concerning specific aspects of mental health, smoking, father involvement, acculturation, and associated covariates, were explored and elucidated further in the qualitative Phase II component of this thesis. This second phase of the thesis, using focus groups and qualitative methodologies, also utilised the *Fonofale* model (Pulotu-Endemann, 2009) as a Pacific framework for developing the questions for the qualitative interviews. Elements of the *Talanoa* method of discussion (Vaioleti, 2006), were also incorporated to provide a Pacific-centred approach for interviewing participants.

An advantage of recruiting participants from an established cohort of Pacific fathers for the qualitative interviews, was the ability to utilize a considerable amount of quantitative information already collected about each participant. This provides an added richness to the qualitative interviews, and enables a more comprehensive examination of the underlying reasons for the participant responses in the quantitative surveys.

1.2.5 Research significance

This doctoral research study will provide a description and insight into the area of Pacific fathers' health, and the potential influence this may have on their children's health and development. This research utilises information from the PIF Study, an ongoing longitudinal study of Pacific children born at Middlemore Hospital, South Auckland, between March and December 2000. In addition to information collected about the children, data was also collected from the mothers and fathers at multiple time-points thus far.

Given the size of the PIF Study, this research provides an ideal opportunity to investigate the existence of any ethnic specific differences in contemporary fathering practices and behaviours. Results may allow current parenting interventions to be evaluated, and ascertain priorities and practices for future interventions to be modified and or identified. This research is critical in addressing the general lack of knowledge on Pacific men's health, and making an original contribution to the area of fathering.

In terms of policy implications, parenting and particularly fathering roles and practices have become an important health issue in recent times. This has become especially significant in relation to the potential effects upon child development and health outcomes. Key policy and research priorities outlined by the Families Commission (2008b), and the Health Research Council of New Zealand (2007), identify a need to enhance our understanding of health issues involving family support and social support structures which promote resiliency amongst children and young people. Furthermore, an improved comprehension of how fathering roles and practices can promote cohesion and connectedness of children with their schools or preschools, and thus increase educational aptitude, is another key issue that has been identified. Findings from this research will help to formulate better strategies and policies to address these priority needs, and contribute to improved health for Pacific children and families in NZ.

1.3 Aims and objectives

This doctoral thesis seeks to undertake research that is both methodologically robust and culturally sound, investigating issues of theoretical and scientific importance to Pacific people resident in NZ (Paterson et al., 2006). Given the need for further information and data concerning Pacific fathers, this thesis represents an important opportunity to examine and understand the fathering behaviours and practices of Pacific fathers in NZ, and their influence on the health outcomes of their children.

This thesis has three primary aims:

1) To identify and investigate some of the key social, behavioural, and psychological aspects of health amongst Pacific fathers using data collected from the PIF Study;
2) To examine how these key issues influence the fathering behaviours and practices among Samoan and Cook Islands fathers; and,
3) To explore the ways that these key issues and fathering behaviours or practices of Samoan and Cook Islands fathers, shape and influence the development of their children.

1.4 Thesis chapter overview

This thesis is comprised of eight chapters, with the results chapters collated into two phases. The current chapter provides the introduction with an overview of the study and the necessity for the research. Chapter 2 reviews background literature on Pacific families and fathering in NZ, thus providing a foundation for research to be undertaken. It describes important concepts and illuminate influences that impact on fathering behaviours amongst Pacific men, and the resultant child developmental outcomes. A review of research concerning fathering behaviours and practices will be undertaken, in relation to the influence on men's health and the health of their children, and the inherent challenges that fathers are faced with in raising their children. Also, research describing the impact of Pacific culture on fathers and their families will be presented. Chapter 3 provides information on the methodological framework of the study, and provides a rationale and justification for the mixed-

methods and describes the ethical approaches to be undertaken. In-depth information on how the aims of the thesis were aligned to the design approach, are outlined. The specific methods are only briefly introduced as each method is detailed in the relevant chapters of this thesis.

The Phase I section provides a short explanation of the rationale for the three focus areas of investigation undertaken using PIF quantitative data, as well as a brief description of the overall PIF study cohort and differing analytical methods used.

Chapter 4 presents the key findings from the research on mental health amongst Pacific fathers, with descriptive and analytical analyses undertaken. Specific focus on the prevalence of mental disorder and the significant association of variables of socioeconomic status (SES) and other risk factors, will be presented in order to highlight the influence of mental disorder on the health and fathering behaviours of Pacific fathers. Chapter 5 describes smoking behaviour amongst the Pacific fathers in this thesis, and investigates the potential mediating influence of acculturation and cultural alignment on their smoking practices. Chapter 6 presents the key findings from research investigating levels of father involvement within our sample of Pacific fathers, and their association with reported child behaviour outcomes from their children. Particular emphasis is given to the relationship between father involvement and child behaviour. Underlying variables significantly associated with father involvement are explored, in order to identify potential areas which may promote positive outcomes for Pacific fathering and their children.

The Phase II section provides a short explanation of the rationale for the qualitative focus groups and/or interviews. The findings from the quantitative chapters are analysed using the Pacific *Fonofale* model as a framework of enquiry, for more in-depth investigation of fathering amongst our sample of Pacific fathers.

Chapter 7 reports the emerging themes and experiences from qualitative discussions with a selection of Samoan and Cook Islands fathers. The conversations were based on a schedule of open-ended questions which were informed by the Phase I quantitative analyses, and designed using a Pacific framework. The topic questions were focussed on issues related to fathering including, childhood experiences of the fathers and their influence on fatherhood, mental health and well-being, Christianity and church involvement, risk-taking behaviours, physical health and activity, and environmental circumstances such as employment and support services.

Finally, Chapter 8 presents a critique of the results by combining the quantitative and qualitative findings from this thesis with existing research findings. Acknowledgement of the complexities and challenges of undertaking this research will be discussed along with the corresponding limitations imposed by the inherent procedures. This chapter concludes the thesis by providing an overall summary of the study and resulting implications for future research in this field, both in terms of protocols and the limitations that such research presents. Auxiliary information to support the information presented will be included as appendices, rather than in the main text of the chapters.

Chapter 2: Background literature

2.1 Introduction

This literature review focuses on specific health issues of Pacific fathers, Pacific fathering behaviours and practices, and the influences of those fathering behaviours on the development of their children in NZ. An exhaustive and extensive literature search was carried out, including a visit to the National Library in Rarotonga, Cook Islands, to gather information. Yet, as very little information has been written specifically on these topics, completing the literature review involved gathering pieces of relevant information from a relatively limited stream of sources. Nevertheless, it was anticipated that accumulating and amalgamating these fragments of information, may reveal something of what it is like being a Pacific father in NZ.

This review is structured according to specific key themes of this doctoral research including, Pacific families, Pacific children, and Pacific fathering. The review also encompasses information pertaining to associated concepts such as culture and acculturation, migration, and the extended family. It initially portrays a profile of the Pacific community in NZ, followed by an outline of fathering from an international, national, and Pacific perspective. An account of fathering from both a Samoan and Cook Islands perspective is also presented, examining the subtle underlying differences in cultural meaning and interpretation of fathering amongst Pacific ethnic groups. As a way of presenting this idea, there is an account of migration for both Samoan and Cook Islands populations to NZ. This is followed by a review of how migration has shaped the cultural experiences, beliefs, and parenting behaviours of similar migrant

groups. Finally, a description of fathering and the effect on the health of fathers and their children is offered.

2.2 Pacific families in New Zealand

Pacific people feature significantly on NZ's ethnic landscape. According to the 2006 Census, Pacific Islands people constitute 6.9% of the NZ population (Statistics New Zealand, 2008). The Samoan ethnic group is the largest (49.6%), followed by Cook Islands Maori (22.7%), Tongan (17.6%), Niuean (8.7%), Fijian (3.0%), Tokelauan (2.7%) and Tuvaluan (0.8%) (Statistics New Zealand, 2008). Alongside this ethnic diversity it is important to keep in mind that each of these Pacific Islands has their own distinct culture, customs, and languages, which are uniquely different to the predominant culture of NZ. Furthermore, as can be seen from these ethnic groupings, Pacific people are not a homogeneous group, yet they tend to be grouped together in research and policy. As noted by Macpherson (1999), Pacific migrants to NZ have been grouped together and forced to adopt the label 'Pacific Islanders' as a result of migration to NZ and in part as a result of colonial processes. Moreover, Mafile'o (2005) contends that there are various subgroups which have emerged within Pacific Islands ethnic groups resident in NZ. Firstly, there are Pacific Islanders who were born and raised in the Pacific Islands and who have migrated to NZ as adults. Secondly, there are Pacific Islanders who were born in the Pacific Islands but then raised from childhood in NZ and thirdly, there are those Pacific Islanders who were born and raised in NZ. Thus, the category 'Pacific Islander' is very diverse.

Despite various economic and educational opportunities, Pacific people remain disadvantaged in NZ. According to Koloto & Katoanga (2007) there is clear evidence to suggest that Pacific people are disadvantaged socioeconomically, with many experiencing financial hardship. They have a lower rate of workforce participation, lower median incomes and restricted access to owning property; they often live in overcrowded conditions, and are less likely to be aware of, or draw upon, welfare entitlements (Ministry of Pacific Islands Affairs, 2002). They also face many social and health issues which can have ramifications for family functioning, and the practice of raising children in NZ (Poland et al., 2007).

2.2.1 The extended family

While many families in NZ reside in a nuclear arrangement, research from Poland et al. (2007) suggests a significant minority live with extended family members. A report on trends and issues in Pacific housing experiences within NZ by Koloto & Katoanga (2007) found that 'Pacific households' are significantly larger than most other NZ households, and can include a higher proportion of extended family members. Furthermore, Koloto & Katoanga report that in 2006 nearly 60% of Pacific households comprised more than three people, compared with only 35% of non-Pacific households. Consequently, it is important to acknowledge the significance of extended families amongst Pacific people in order to make assumptions and draw conclusions concerning Pacific Island fathers and their fathering practices.

A number of positive benefits may arise from living in extended family arrangements. Financial costs can be reduced; specifically rent and utilities such as phone, heating and lighting (Baker, Goodyear, & Howden-Chapman, 2003). There may be more support available to assist with housework, meals and the care of children. Having more people around to engage with children and assist with homework and after-school activities can make parenting easier, as parents are less pushed for time (Jera, 2005). Similarly, with other family members in the house, parents may have more time to themselves without having to pay for babysitters, which can be expensive. Moreover, with more adults undertaking household chores, parents may have more time to engage socially with their children (Poland et al., 2007). Those who are working may also have better systems of support for children outside of school hours, because they do not have to rely on paid childcare after school or during the holiday periods. All of these factors can contribute towards reducing parental and family stress (Poland et al., 2007).

Conversely, living in an extended family arrangement may also impact negatively on a household. Overcrowding can be a reason for concern and tension within a household (Gray, 2001). Furthermore, family members may not be contributing to running the household, and one or two people may be left to run and pay for the household and manage the children, despite other adults being around (Poland et al., 2007). This can be a source of discontent and conflict for members of that household, particularly children. Finally, there can be serious health risks associated with overcrowding, such

as skin infections, respiratory conditions (Baker, Zhang, & Howden-Chapman, 2010), and ear infections (Paterson, Carter, Wallace, et al., 2007)

2.3 Health of Pacific children in New Zealand

This section summarises some key areas in which Pacific children experience disparities in health including body size, nutrition and physical activity, child behaviour problems, and family support.

2.3.1 Body size, nutrition and physical activity

Obesity is a health issue where large health inequalities exist between Pacific and non-Pacific children, with one-quarter of Pacific children aged 2–14 years being obese compared with one in sixteen non-Pacific children (Ministry of Health, 2008c). Fizzy drink and fast food consumption, as well as television watching, are behaviours associated with an increased risk of obesity. Pacific children (in particular 10–14year olds) are more likely to be exposed to these behaviours compared with non-Pacific children (Utter, Scragg, NiMurchu, & Schaaf, 2007; Utter, Scragg, & Schaaf, 2006).

Results from the 2006/07 NZ Health Survey found that nearly two-thirds of Pacific adults were obese (Ministry of Health, 2008c). Obesity is therefore a key health issue for Pacific families and communities. The observed differences in patterns of obesity, particularly by age, suggest that specific initiatives to reduce obesity among Pacific children may need to be directed at school-entry age. However, further investigations of childhood obesity and the environmental factors that influence obesity are needed

to understand the observed differences and inform culturally appropriate nutritional and physical activity initiatives.

2.3.2 Child behaviour problems

While data on the prevalence and correlates of behavioural problems in Pacific children is limited (Paterson, Carter, Gao, & Perese, 2007), and despite considerable variability of instrumentation and case definition, there is agreement that approximately 10–15% of preschool children show mild to moderate problems (Backmann & Schulte-Markwort, 2005), with very small gender differences (Koot, Van Den Oord, Verhulst, & Boomsma, 1997). Frequently used markers of SES such as parental education (Kahn, Wilson, & Wise, 2005; Sourander, 2001), occupation and family income (Kahn et al., 2005), and minority status (Crijnen, Achenbach, & Verhulst, 1999) have consistently been associated with problem child behaviour. Research has demonstrated that parenting styles have an impact on early child behaviour problems, with a number of studies showing that punitive types of discipline are associated with elevated child behaviour problems (Javo, Ronning, Heyerdahl, & Rudmin, 2004; Stormshak, Bierman, McMahan, & Lengua, 2000).

Furthermore, it has been demonstrated that children who have a good relationship and involvement with their fathers have better peer relationships, fewer behavioural problems, lower criminality and substance abuse and higher educational/occupational mobility relative to parents (Families Commission, 2007). There is also a positive effect

on the child's capacity for empathy and higher self-esteem and satisfaction with their lives (Families Commission, 2007).

International studies have provided a useful approach for determining culturally specific aspects of behaviour problems in childhood (Verhulst, Achenbach, & Van der Ende, 2003). Many researchers have used the Child Behaviour Checklist (CBCL) (Achenbach, 1991) with large samples of children and have established the appropriateness of using this measure across different cultures and languages (Crijnen et al., 1999; Koot et al., 1997). Previous research from Paterson, Carter, Gao, et al. (2007) has utilised the CBCL to examine the prevalence of mother-reported behavioural problems among two-year-old Pacific children. The findings indicate that almost 16% of preschool Pacific children were in the clinical range on the CBCL, with one or more deviant scores from the seven narrowband syndrome scales. In comparison to international studies of preschool children, using the same measure and similar definitions of the clinical range, this rate is relatively high, with research showing that 8.8% of Turkish children (Erol, Sinsek, Oner, & Munir, 2005), 9.8% of Finnish children (Ujas, Rautava, Helenius, & Sillanpaa, 1999), and 12.5% of Dutch children (Koot & Verhulst, 1991), had one or more deviant scores from the CBCL syndrome scales.

Although cross-national comparisons of studies of preschool children are influenced by differences in study design and sampling, it is a useful benchmark from which to attempt to understand problem behaviour among young children. The relatively high

clinically significant scores from the PIF Study may be partly due to the difficulties associated with the measurement of behavioural problems at the preschool age, and cultural differences in child-rearing practices and attribution among Pacific parents. Earlier studies have found that cultural variation accounted for some of the differences in effect sizes for the CBCL scales (Crijnen et al., 1999). Extensive information is available about the reliability and validity of the CBCL (Achenbach & Rescorla, 2000, 2001). Although no specific work has been undertaken examining the use of the CBCL amongst Pacific ethnic groups, the validity of the CBCL across various cultures has been well documented (Crijnen, Achenbach, & Verhulst, 1997; Crijnen et al., 1999).

2.3.3 Family support

Family is an important social structure, critical to the health and well-being of individuals, especially children. Children depend on their family for most of their needs, including their physical and emotional development (Ministry of Social Development, 2004). Almost 80% of parents of Pacific children in the 2006/2007 NZ Health Survey reported their family's ability to get along with one another as 'excellent or very good', with no difference from parents of non-Pacific children (Ministry of Health, 2009a). While family cohesion decreased with age for both groups, there was no significant difference by neighbourhood deprivation (Ministry of Health, 2009a).

According to the 2006/2007 NZ Health Survey, the most common types of discipline used by primary caregivers of both Pacific and non-Pacific children were 'telling them off' and 'explaining why they should not do something'. Physical punishment was the

least-used form of discipline in the previous four weeks for both ethnic groups, but the primary caregivers of Pacific children were significantly more likely to report using it than the primary caregivers of non-Pacific children (16.9% versus 9.6%) (Ministry of Health, 2009a). Smith et al. (2004) contend that discipline which excludes physical punishment is better for the parent-child relationship, and is more effective when methods used are consistent, supportive and authoritative (but not authoritarian).

Of the group of children identified who experienced physical punishment, only one in three primary caregivers of Pacific children reported it as an effective discipline strategy (no difference from their non-Pacific counterparts) (Ministry of Health, 2009a). The recognition that physical punishment is not the most effective means of discipline combined with the continued disparity observed between ethnic groups for the use of physical punishment suggests that factors other than 'effectiveness' may be driving this disparity. However, further research to investigate these factors, combined with the promotion of effective alternatives, would be useful in providing effective support for Pacific parents.

2.4 Pacific culture and families

Despite migration to NZ, and the growing number of people with Pacific Islands ethnicity born in NZ, Pacific values, tradition and culture remain strong and active in most Pacific Islands communities. Pacific peoples generally hold culture and family in high regard, in the homeland and whilst away (Finau, 1999), and the notion of family is a key driving force in the way they live their lives. Drawing on the case of Samoa, the 'aiga (family) is of central importance in attempting to understand fa'asamoa (Samoan

culture), because the concept of ‘aiga motivates all behaviour, including purposes involving rank and status (Maiava, 2001). Fa’asamoa requires a clear understanding by individuals of what is expected of them in the family, and how they can fill these expectations through their service. This notion of service facilitates the way in which family ties and feelings of identity can be nurtured, and is the major means for status-raising (MacPherson, 1999). Families are sustained by their security in their cultural identity and by their belief in themselves and the value of the family unit (Families Commission, 2005).

A report from the Families Commission (2005) contends that cultural values have a significant influence on the way families work together. Cultural values impact on the kinds of knowledge and attitudes that families seek to pass on from one generation to the next. For many families, cultural values imply mutual obligations among wider kin networks that may enhance or constrain the aspirations of individual family members. Using the example of Samoan culture, fa’asamoa articulates belief in, and makes clear the importance of and value accorded to, the family unit (Anae, 2001). Fa’asamoa outlines the ways in which families work together, obligations to wider kin networks operate, and the community and ultimately family well-being flourish. This commitment to family ensures the well-being and welfare of all members.

Strong cultural connections can strengthen individual and family well-being, and families can work effectively as “nested wholes” (Families Commission, 2005). This involves acknowledging that the elderly and others both within and outside the family

influence and nurture children and fulfil caregiving roles. Conflict can sometimes arise between first-generation and higher-generational Pacific Islanders over cultural commitments and obligations to family and tradition, cultural values such as service and respect, and commitment to cultural institutions such as the church and notions of spirituality (Tiatia, 1998). However, the Families Commission has noted that where families have strong spiritual beliefs, these are likely to be a source of family strength. Participation in social institutions such as churches, for example, may generate positive values for some family members (Families Commission, 2005). Attending church provides a social framework, which can enhance social support, extend cultural knowledge and experience and provide meaningful relationships at the personal and community level.

2.4.1 Influence of acculturation and migration on parenting

An emergent body of research is focused on the implications of migration and acculturation for parenting. Acculturation entails processes of cultural and psychological change – for example in customs, language, values – that take place as a result of contact between two or more cultural groups and their individual members (Berry, 2003). Migration and acculturation are disorganizing and reorganizing experiences, necessitating alterations of social identity and self-image to accommodate this dynamic process (Schluter et al., 2011). Migrants must negotiate new cultures and learn to navigate multiple new and different systems, often without the support of familiar social networks. Acculturation requires adjusting responses of

engrained routines of life to compensate for cultural differences and disruption of family roles.

Culture-specific patterns of parenting make for variations in child-rearing practices that can be subtle, but are always meaningful in meeting a specific society's setting and needs. While parents in all societies are expected to nurture and protect young children (Bornstein, 2002, 2006), culture influences a wide array of family functions including roles, decision-making patterns, and cognitions and practices related to childrearing and child development (Benedict, 1983; Bornstein & Lansford, 2009). Parenting may be subjected to complex transformations when families emigrate from one society to settle in another.

Migrant parents bring with them on their journey from their original cultural context conceptual models of the successful parent and how to properly rear a child. When they migrate to a new culture, they often find that socialisation agents in the receiving culture, such as other parents, teachers and professionals, may possess different images of the successful parent and different strategies for childrearing (Roer-Strier, 2001). This circumstance prompts most acculturating parents to become bicultural in some degree, simultaneously adopting cognitions and practices of their new culture while retaining those of their old one (Chia & Costigan, 2006; Ryder, Alden, & Paulhus, 2000).

In the acculturating process, migrant parents must decide which cognitions or practices to retain from their indigenous culture, which to modify, and which new conventions to adopt. Cultural adaptation (to conform to the receiving culture) is often preferred in the public domain and cultural maintenance (of customs from the old culture) in the private domain. For example, Turkish and Moroccan immigrant parents in the Netherlands attribute more importance to cultural maintenance in the home and family context but consider adaptation more important in work situations (Phalet & Swyngedouw, 2003). Research shows that migrants do not always readily adopt cognitions of the receiving culture, and culturally significant parenting beliefs and norms tend to resist change (Ngo & Malz, 1998). For example, Chinese Canadian trans-national parents often opt to allow grandparents to care for their infants, based on expectations of their culture of origin, despite emotional hardship and disapproval within the receiving culture (Bohr, 2009).

2.4.2 Challenges for migrant parents

A major issue confronted by migrant children and their families is the acculturation gap that emerges between generations over time. The process of acculturation begins when immigrants enter a new country and involves changes in language, behaviour, attitudes and values. Children typically become involved in the new culture relatively quickly, particularly if they attend school. However, their parents may find it more difficult to become comfortable with the new language and culture, in order to adapt and become socially integrated into their new country (Birman, 2006b). In addition, immigrant children may have few opportunities to participate in and learn about their

heritage culture. As a result, migrant parents and children increasingly live in different cultural worlds (Birman, 2006a, 2006b).

Acculturation gaps (or acculturation dissonance) have been linked to family conflict and adjustment (Birman, 2006a, 2006b; Costigan & Dokis, 2006; Ho, 2010; Smokowski, Rose, & Bacallao, 2008). Such family conflict, in turn, leads to difficulties in children's adjustment psychologically, at school and in other life domains and is linked to adolescent adjustment, including depression, problem behaviours and academic under-achievement (Costigan & Dokis, 2006). For example, symptoms of depression were linked to parent-child acculturation dissonance for Chinese-American adolescents (Juang, Syed, & Takagi, 2007). Two studies found that gaps in Chinese language proficiency or use were linked to symptoms of depression for Chinese-Canadian (Costigan & Dokis, 2006) and Chinese-American adolescents (Liu, Benner, Lau, & Kim, 2009). Past-year and lifetime incidence of depression were predicted by acculturation gaps in studies of Muslim-American college students (Asvat & Malcarne, 2008), Chinese-American adolescents, and parents of Chinese descent (Crane, Ngai, Larson, & Hafen, 2005).

With respect to problem behaviours, acculturation dissonance predicts self-reports of violent behaviours in Chinese and Southeast-Asian heritage youth in the United States (Le & Stockdale, 2008). Youth who reported acculturation dissonance were more likely to associate with delinquent peers, and this in turn was linked to violent behaviour. In another study, alcohol and tobacco use was also associated with acculturation gaps in

the heritage culture for Mexican-American adolescents (Elder, Broyles, Brennan, Zuniga, & Nader, 2005).

Academic under-achievement has been predicted by acculturation gaps in several studies. Little Chinese language proficiency predicts lower academic achievement for Chinese-Americans (Liu et al., 2009). Similar research indicates little Chinese language use and media use is predictive of decreased achievement motivation for Chinese-Canadian adolescents (Costigan & Dokis, 2006).

The reduction of acculturation gaps between parents and children may contribute to a decrease in family conflict and improved child and adolescent adjustment in immigrant families. Several studies have noted the importance of gaps in heritage language proficiency or use for family conflict (Birman, 2006a; Ho, 2010) and adolescent adjustment (Costigan & Dokis, 2006; Liu et al., 2009). In particular, the less likely children were to be proficient or use their heritage language relative to their parents, the more negative were the outcomes for the adolescents and their families. This finding suggests the potential importance of helping migrant children retain their heritage language. It further suggests that parents and schools should support children's heritage language development. Therapeutic family interventions designed specifically to reduce the culture gap between parents and children have been shown to be effective at reducing youth substance abuse and conduct problems (Szapocznik et al., 1986).

2.5 Fathering behaviours and practices

Research evidence from Sarkadi et al. (2008) has highlighted the potential effects of fathering roles and lifestyle practices in promoting resiliency and improved health outcomes amongst young children. Investigation of this area as a research priority may help to improve understanding about child health and the influence of positive parenting and families. Similarly, the possibility of fathering practices influencing cohesion and connectedness within the family unit could be of prospective importance in promoting well-being amongst both parents and their children (Cabrera et al., 2000).

Modern day fathers experience increasing demands from both work and family life (O'Brien & Shemilt, 2003). The associated financial, psychological and physical strain placed upon fathers trying to balance work and family can also have an adverse impact on family life. Relative to women and mothers, there is a surprising lack of research into male health issues, and particularly data concerning the health and well-being of fathers. Existing research highlights the potential effects of fathering roles and practices in influencing their child's behaviour and cognitive development (Flouri, 2008; Sarkadi et al., 2008). It also underlines the potential for positive fathering to promote resiliency and improved mental health outcomes amongst young children (Boyce et al., 2006; Flouri & Buchanan, 2003).

Previous research from the WHO (2007) has investigated different aspects of children's development and welfare using a broad range of outcome measures. Categories

examined included educational attainment (self-reported or from public educational certificates), age-appropriate assessments of intelligence and cognitive skills, behaviour (parent-or teacher reported problems, adolescent-reported delinquency and mothers' report of trouble with the police), psychological outcomes (self-reported negative feelings or psychological distress/morbidity), and measures relating to social outcomes (psychologist-assessed social skills, problem solving abilities and adaptive behaviour).

The findings from this research strongly indicate that active and regular involvement between fathers and their children predicts a range of positive outcomes (World Health Organization Europe, 2007). Activities with a positive influence ranged from talking to bidirectional interaction taking place between the child and the father/father figure. Especially promising effects of father involvement include the notion that it seems to reduce the frequency of behavioural problems in boys and psychological problems in young women. Cognitive development is also enhanced, while decreasing criminality and economic disadvantage in families with overall low SES (World Health Organization Europe, 2007).

2.5.1 Fathering – The New Zealand context

Within NZ, literature from the Families Commission acknowledges that NZ families are changing, and that fathers need more direct involvement and stronger relationships with their children (Families Commission, 2007). This government agency recognises that the important role of fathers is often overlooked – primarily because women have

historically been seen as the main caregivers, and services and support have largely been directed at mothers.

Prior research findings from the NZ Families Commission (2007) have highlighted the importance of parenting in developing healthy families and children. Moreover, the research found that many fathers feel their role is not valued by society; yet they are raising the citizens of the future (Families Commission, 2007). Some fathers believed that raising children is the best day's work anyone can do and fathers need to be valued and supported in this (Families Commission, 2007). Some fathers also alluded to difficulties they often faced trying to find time with their children. Nevertheless, they described their greatest enjoyment came from watching their babies grow into healthy teenagers (Families Commission, 2007).

A comprehensive research report involving consultation with fathers, agencies, and families in West Auckland, NZ, highlighted increasing recognition of fatherhood as an important factor in successful health outcomes for their children (Pudney, 2006). The report emphasized that fathers are different in their approach to parenting, and this difference needs to be valued and respected. Many fathers spoke of feeling somewhat excluded in terms of support from services, and having lost some confidence in their mandate to parent with assurance. However, the community is shifting towards allowing fathers back into partnership with children, as awareness that fathers can be trusted and that they can do parenting well and differently increases (Pudney, 2006).

2.5.2 Pacific fathering – The New Zealand context

Pacific peoples in the context of this research encompass a diverse population grouping of peoples who have ancestral links to or have migrated from sovereign states throughout the Pacific. The researchers recognise that the different Pacific Islands have their own distinct languages, values, characteristics and ways of doing and knowing. However, this thesis uses the 'collective' umbrella term of Pacific for this particular study while remaining cognizant of the unique attributes of each individual island grouping.

Currently a scarcity of research exists about parenting practices and styles amongst different cultural groups in NZ (Marshall, 2005). Moreover, research findings about Pacific Islands parents in NZ are limited and inconsistent. However, findings from the little Pacific research currently available indicate that issues related to the care, protection and safety of children continue to be problematic for Pacific peoples (Marshall, 2005). This becomes evident as each generation struggles to meet new challenges in relation to their children (Fairbairn-Dunlop, 2001). Many Pacific-born parents who migrate to NZ have struggled with their children's loss of their mother tongue, changing cultural values, and differences in the legal positioning of parental roles and responsibilities (McCallin, Paterson, Butler, & Cowley, 2001). Associated findings from other focus group research has found that Pacific fathers play an important support role during the antenatal period, but take more of a background role compared to female relatives postpartum (Abel, Park, Tipene-Leach, Finau, & Lennan, 2001). Interestingly, both McCallin et al. (2001) and Abel et al. (2001) indicate

that many NZ-raised Pacific parents struggle to accommodate traditional parenting beliefs and practices with Western ones.

2.5.3 The effect of being a father upon health

A number of research studies show that becoming a parent has a positive effect on one's health, while others suggest it has no significance or claim that it can be negative for one's health (Nomaguchi & Milkie, 2003). International longitudinal research amongst fathers in Sweden indicates that parenthood and contact with children has mainly positive effects on men's health (Ringback-Weitoft, 2003). For example, findings show that single non-custodial fathers and single childless men face a much higher risk of premature mortality than cohabiting fathers.

A possible explanation for this is that children give structure to their parents' lives; they provide much needed company and meaning in life as well as access to other adults (Ringback-Weitoft, 2003). Research results from Benzeval (1998) and Umbertzon & Williams (1993) indicate divorced and noncustodial fathers generally show worse health i.e. psychological distress and depression, than married men living with their children. Bartlett (2004) argues similarly but stresses that at the same time the health effects of fatherhood are probably mediated by a variety of variables such as number of children, lifestyle, and role competency.

Fatherhood and mental well-being

Becoming a father can also lead to negative changes in life, such as difficulties in making work and family life co-exist, or greater expenses that lead to strained finances and emotional well-being. A considerable amount of research indicates that becoming a parent can be a factor which contributes to individual and/or marital distress and mental anguish (Cox, Paley, Burchinal, & Payne, 1999). Similarly, Nomaguchi & Milkie (2003) contend that becoming a parent does not automatically contribute to positive emotional well-being; on the contrary, it can worsen it for both the man and the woman. This might be attributable to potential changes that emerge when one becomes a parent; increased workload and stress (especially for women), a tighter budget/economy, greater pressure on the relationship between the parents, and restrictions in the social network (mostly for men). Men who have recently become fathers report more often than mothers that the number of social relations diminishes, as well as the time spent and satisfaction in socialising (Bost, 2002).

The evidence linking the mental health status with positive and negative outcomes for the health fathers, and the lack of research concerning the mental well-being of Pacific fathers in NZ, emphasises this topic as an important research focus. Given the strong link between active and regular involvement by fathers and positive outcomes for their children (World Health Organization Europe, 2007), developing a greater understanding of mental well-being amongst Pacific fathers would be beneficial in identifying factors which may promote improved engagement or involvement with

their children. This in turn may assist in formulating better strategies and policies to improve the health of Pacific children and youth (Ministry of Health, 1998).

Fatherhood and tobacco smoking

Results from the latest NZ Tobacco Use Survey (Ministry of Health, 2010) suggest that the high prevalence of tobacco smoking is a behaviour which may significantly affect the health of Pacific males in NZ. While useful information exists regarding the prevalence of smoking amongst Pacific males, important information regarding the level of smoking amongst Pacific fathers is not available. Understanding the risk-taking behaviours of Pacific fathers is vital in terms of addressing their health needs, as well as determining how these risk-taking behaviours influence the fatherhood and participation of Pacific fathers. The significance of this information is important given the important influence and effect which fathers can exhibit upon their children in terms of exposure to environmental tobacco smoke (ETS).

Since the early 1990s there has been increasing interest from researchers about the effects of passive smoking on the health of children (Poswillo & Alberman, 1992). As children typically spend much of their early life in the presence of their parents, children who have either a mother or father that smokes will often have a prolonged and close exposure to ETS (Hill & Liang, 2008). Furthermore, young children are particularly vulnerable to the detrimental effects of passive smoking, as their respiratory systems are rapidly developing and are structurally and immunologically immature (Cook & Strachan, 1999).

2.5.4 The influence of fatherhood participation and involvement upon the health and well-being of their children

A considerable number of studies examine the importance of father involvement and participation in association with the health and development of their children (Dubowitz et al., 2001; Flouri, 2008; Sarkadi et al., 2008; Teitler, 2001; World Health Organization Europe, 2007). These accumulated research findings lend support to the idea that fathers fulfil an important role in determining health outcomes for their children.

Sarkadi et al. (2008) carried out an extensive overview of 22 different longitudinal studies concerning child development and father involvement. Most of the 22 studies showed that a father who is involved with his child also promotes the child's physical health and social skills. This positive result applied to infants 0-3 years old, nursery infants, school children and young adults. Many of these studies included large populations (more than 900 individuals) and were based on follow-up questionnaires, observations and interviews. The extent of the father's importance was measured by a range of variables relating to the child such as behaviour problems, depression, social abilities, aggression, hyperactivity, criminality, intellectual ability, self esteem, empathy and psychological problems. Five of the examined studies explored the importance of the physical presence of the father in the family. The analysis of these gave no clear picture of causality, and thus it is not possible to decide if solely the presence of the father can influence the child's development and welfare. However, a

number of studies failed to consider the families social relationships, something which can dramatically influence the result of a study (Sarkadi et al., 2008).

Research shows that it is in families who live under favourable social conditions that fathers often show a greater involvement, and that these children show better health (Sarkadi et al., 2008). Other research has pointed out the difficulties of showing a clear cause and effect relation in this area of study which involves a significant risk for confounders (Wall & Arnold, 2007). Although fathers typically interact with their children differently than mothers, most researchers agree that men are not inherently deficient in their ability to parent. A father's gender is far less important in influencing child development than are his qualities as a parent (Plantin, Mansson, & Kearney, 2003). The research from Sarkadi et al (2008) draws a similar conclusion, and states that the studies are not designed to determine if the positive effects of the father's involvement are connected to his status as the biological father, or even to whether he is a man or not. Other studies show that those adult persons who have been involved with a child for a longer period can have a favourable influence, irrespective of gender (Flouri & Buchanan, 2004).

It is important to consider differences when defining what it means to be an involved father and how to measure the degree of involvement. Palkovitz (2002) contends that when discussing involvement, we often focus on 'direct child care' or 'hands-on care', and disregard other forms of involvement. Instead Palkovitz suggests expanding the definition of the word to include the areas of planning for the child's well-being, monitoring, providing protection, giving emotional support and affection, having

shared interests and activities. Similarly, research from Lamb (1987) criticizes how the word involvement is used for measuring father's commitment and engagement, and presents an alternative model for explaining involvement. The model consists of three aspects of parenthood which are essential for guaranteeing the child's welfare: engagement/interaction, accessibility, and responsibility. Lamb defines engagement/interaction as those activities in which the parent is directly involved (playing, physical caring of the child etc), accessibility refers to how available the parent is, while responsibility is seen as the parent's acceptance of long-term liability for the child.

The view that is given within research about the father's importance in the child's development and health is a complex one. A large number of studies show that children are positively influenced by the long-term and active involvement of an adult in their close environment. However, it is difficult to ascertain whether the adult's gender has a pronounced effect on this relationship more than other variables which influence children's health and development. However, much of the research into fatherhood and health in everyday life shows that if men involve themselves on an equal footing with mothers, and are active in parenting, this can lead to positive health effects not only for the men themselves but for their partners and children.

2.5.5 The effect of father absence upon their children

Overall, father absence has deleterious effects on a wide range of child development outcomes including health, social and emotional, and cognition (Wertheimer, Croan,

Moore, & Hair, 2003). Children who live without their fathers are, on average, more likely to experience behaviour problems at school (Dubowitz et al., 2001; Heatherington & Stanley-Hagan, 1997), such as having difficulty paying attention, disobedience, (Mott, Kowaleski-Jones, & Mehaghan, 1997), or have poor school attendance. Children who live without their fathers are, on average, more likely to choose deviant peers, have trouble getting along with other children, be at higher risk for peer problems (Mott et al., 1997), and be more aggressive (Dubowitz et al., 2001).

Children who live in homes where their father is absent are more likely to have problems in emotional and psychosocial adjustment and exhibit a variety of internalizing and externalizing behaviours (Dubowitz et al., 2001; Heatherington & Stanley-Hagan, 1997). In fact, research from Cuffe et al. (2005) suggests that not living with both biological parents quadruples the risk of having an affective disorder. Family structure affects conduct disorders and childhood aggression directly but the magnitude of the effect declines when tested with family processes and individual characteristics (Brannigan, Gemmell, Pevalin, & Wade, 2002). Moreover, the heightened antisocial behaviour in children associated with absent biological fathers was not mitigated by presence of stepfathers and was not accounted for by lower SES (Pfiffner, McBurnett, & Rathouz, 2001).

Research evidence on adolescents who live without their father show that they are more likely to engage in greater and earlier sexual activity, are more likely to become pregnant as a teenager (Ellis et al., 2003). This elevated risk was not explained by

familial, ecological, or personal disadvantages associated with father absence and there was stronger and more consistent evidence of the effects of father absence on early sexual activity and teenage pregnancy than on other behavioural or mental health problems or academic achievement (Ellis et al., 2003).

2.6 Summary

The evidence is clear that fathering practices and behaviour play a major role in the development of children. In addition, Pacific men and communities are over represented in terms of adverse outcomes, from exposure to many social and health indicators concerning deprivation and morbidity in NZ. In recognition of the projected growth in the Pacific population in NZ, it is imperative that a greater level of understanding of the factors that impact on Pacific father's health and fathering behaviour be explored. Acknowledgement of the distinct cultural practices and beliefs of Pacific people, when combined with socio-demographic factors such as the level of education, years spent in NZ and language skills may allow a better understanding of Pacific fathers and how they raise their children. The proceeding thesis chapters assess specific aspects of health amongst a cohort of Pacific fathers, and ascertain the impact these aspects impart on the fathering behaviours of this cohort. They provide an opportunity to gain information and pursue research to improve the overall health not just of Pacific fathers, but their children and families as well.

Chapter 3: Overview of mixed-methods approach

3.1 Introduction

This chapter outlines the theoretical stance which informed the mixed-methods approach adopted in this thesis. It also outlines the rationale for adopting a mixed-methods approach. While a brief overview of the methods used is presented, this chapter does not deeply describe the specific methods utilised, as these are detailed within each pertinent chapter. This chapter concludes with a section relating to the consultation process and ethical considerations of the approach adopted in this thesis.

3.2 Methodological framework

Potter (1987) has argued that it is fundamentally important for researchers to acknowledge their epistemological position when presenting their research, criticising authors who have not theoretically underpinned their studies. Research from Grant & Giddings (2002) underlines similar beliefs, stating that it is useful for researchers to be explicit about their orienting framework. Furthermore, they note that very few mixed-methods nursing studies acknowledge any methodological positioning. This lack of theoretical reinforcement reflects a perception that appeared to emerge from the 1990s onwards, that mixed-methods research was tending to be seen as a methodological movement in its own right.

In reviewing existing published mixed-methods nursing studies, Giddings (2006) also highlights the common inconsistencies that are applied to the terms 'methodology' and 'methods'. Giddings (2006) reiterates the belief that 'methodology' should relate

to the theoretical stance that supports a research approach, and 'methods' should refer to the tools used to gather and analyse the data. The tendency for researchers to present their studies as mixed-methods, and to assume that this approach in itself reflects the methodological approach, is thus flawed.

3.3 Implementing the approach

Having framed the research aims for this thesis in Chapter 1, the next stage considers the optimal approach to adequately address these questions. To achieve the aims of this doctoral thesis, after supervisory discussions, a mixed-methods approach was considered the most appropriate and was subsequently adopted. This mixed-methods system initially entails a quantitative examination of a range of social, behavioural, and psychological aspects of Pacific fathering, and then fathering in relation to child behaviour. This phase of the project would utilise information collected from the father cohort in the PIF Study, with data collected from three different measurement waves. This rich and substantial dataset allows an accurate and invaluable profile of the health and well-being of Pacific fathers to be characterised, and contributes to the dire need for more research information regarding Pacific fathers in NZ.

In terms of the overall thesis, key social, behavioural, and psychological health characteristics of Pacific fathers were investigated in the quantitative analyses. The findings would then be explored in a more in-depth manner using a planned phase of qualitative interviews and focus groups. The perspectives of Pacific fathers were crucial in gaining a better understanding of key influences in Pacific father behaviours

and how they are applied in raising their children. Therefore, the incorporation of a mixed-methods structure within the overall project seemed logical and appropriate.

The methodology is beneficial from a Pacific perspective because it gives voice to groups traditionally considered difficult to access. Findings from previous research have highlighted problems when attempting to recruit and engage Pacific participants (Fuamatu, Simpson, Allan-Moetaua, & Southwick, 2009). However, by recruiting participants from an established cohort of Pacific fathers for the qualitative interviews, we increased our chances of successful engagement, and utilized a considerable amount of quantitative information already collected about each participant. The *Fonofale* model (Pulotu-Endemann, 2009) was used as a Pacific framework for developing the questions for the qualitative interviews, and elements of the *Talanoa* method (Vaioleti, 2006), were also incorporated to provide a Pacific-centred approach for interviewing participants (more detailed information is provided in section 7.2).

In addition, the use of the mixed-methods approach allowed the qualitative investigations to be very specific and reduce the required participant time. Furthermore, principles and guidelines for Pacific research as outlined by the Health Research Council of New Zealand (2005), were adhered to when undertaking this study. This required the development of a culturally appropriate, reciprocal, and meaningful approach to the research, while maintaining a respectful and protective outlook towards the study participants.

As noted by Giddings (2006), there has been considerable debate over the use of mixed-methods in research. Smith & Heshusius (1986) argued against the mixing of qualitative and quantitative methods in research. They claimed that researchers who did so, in effect ignored the different theoretical assumptions underpinning the two approaches. Quantitative research was essentially positivist and objective, and qualitative research was subjective and interpretive. Therefore, they are essentially incompatible. However, this position has been challenged by a number of researchers, including Grant & Giddings (2002), Tashakkori & Teddlie (1998), Creswell (2003), and Greene (2006). Similarly, research from Bryman (2006) comments that a mixed-methods approach may provide a better understanding of a phenomenon than if just one method had been used.

In attempting to understand the complexities of Pacific fathering behaviours, methodologies that would most appropriately answer the research questions were chosen. After considering the themes of enquiry, and the proposed mixed-methods approach, it was decided that a thematic analysis methodology framework provides the most useful structure to examine the qualitative responses of participant Pacific fathers.

According to Boyatzis (1998), thematic analysis is a rarely acknowledged yet widely used qualitative analytic method. Despite the incredible diversity and complexity amongst qualitative approaches, thematic analysis should be regarded as a foundational method for qualitative analysis. In fact, 'thematizing meanings' has been

identified as a generic skill required amongst many qualitative approaches (Holloway, 2003). Thematic analysis is essentially a method for identifying, analysing and reporting themes within the data (Braun & Clarke, 2006). It is often not clearly asserted as such, but much qualitative analysis is essentially thematic (Meehan, 2000). Furthermore, thematic analysis is a recognised research method that has been utilised and published in medical and public health journals (Thomas & Harden, 2008), which is the target area or field for this research.

The mixed-methods approach of this thesis applied both the quantitative and qualitative components in synergy to achieve the overarching aims of understanding Pacific fathering behaviours and how they influence their children's health and development.

3.4 Ethical considerations

Ethical approval to proceed with the qualitative phase of this thesis was granted on 16th November 2009 by the Auckland University of Technology Ethics Committee (AUTEC) (see Appendix I). A comprehensive outline of all documentation for the qualitative interviews is included in Appendix II & III. All participants in the qualitative phase of this thesis provided informed consent to participate. The overall PIF Study, which provided the quantitative data, has previously obtained ethical clearance from the Northern Regional Ethics Committee *(Ethical approval: First 2 years of Life Study – 99/055 and Transition to Schools Study AKY/04/02/019)*. Moreover, participants provide informed consent at each measurement wave of the overall PIF Study. The

quantitative investigation was a secondary analysis of these data, and was covered by these ethical clearances.

3.5 Consultation process

During the design phase of this thesis, consultations were initiated with the Directors for the PIF Study, both the Head of Research and the overall Head of the School of Public Health & Psychosocial Studies at AUT University, the Manager of AUT University Health Counselling and Well-being, and selected members of the Pacific community. The proposed study design also underwent peer-review through a PhD proposal presentation to academic reviewers and members of the School of Public Health & Psychosocial Studies at AUT University, as part of the doctoral candidacy process.

Consultation was undertaken with key Pacific community groups in Auckland including the Pacific Health & Welfare (PHW) Network Inc. and P.A.C.I.F.I.C.A (the Pacific Allied (Womens) Council Inspires Faith in Ideals Concerning All) Inc. These discussions led to the formation of a Pacific advisory group for elements of this project. The group provided oversight regarding the qualitative questionnaire development and the summaries from transcript analysis.

The key rationale for this advisory group was the need to be conscious and responsive to Pacific cultural competency and safety in this project (Tiatia, 2008), cultural safety of the participants, as well as the research team (Fuamatu et al., 2009). Another important function of the group was to provide an external review and feedback on

some of the key themes to be discussed with participants, and to ensure that interview themes and questions are culturally appropriate for Pacific people. Membership of the advisory group was designed to reflect the ethnic makeup of the project participants, but also to comprise key Pacific individuals with long-term involvement in the area of Pacific health, and particularly families and children.

The AUT University Health, Counselling and Well-being Centre offered free counselling services if any participant required support as a result of the focus groups or interviews, to these participants. The availability of this service was relayed to fathers in the participant information sheets associated with Phase II of the research.

3.6 Summary

This chapter has outlined the theoretical considerations reinforced by the approach adopted in this thesis. The rationale for adopting a mixed-methods study was also explained, with detail of how the aims of the thesis were aligned to the design approach adopted. The specific methods are only briefly introduced as each method is detailed in the relevant chapters of this thesis. The chapter concludes with a discussion about the ethical considerations that arose from this thesis. The next chapters (Chapters 4 to 7) provide details of each of the sub-studies conducted. They are contained in overarching phases; Phase I for the quantitative investigations (Chapters 4-6), and Phase II for the qualitative investigations (Chapter 7).

Phase I: Epidemiological investigations of health amongst Pacific fathers

Introduction

This section provides the rationale for the quantitative section of this thesis. It outlines Phase I of this thesis which entailed the use of quantitative analytical techniques, to investigate specific facets of health (in Chapters 4-6) amongst a cohort of Pacific fathers. A rationale for the selection of these specific aspects of health is given. These selected aspects of health were examined to investigate their influence on the fathering behaviours and involvement of Pacific fathers, and their association with positive health outcomes amongst their children. The findings from this component of the thesis were then used to inform and motivate Phase II of the thesis, entailing the use of qualitative procedures.

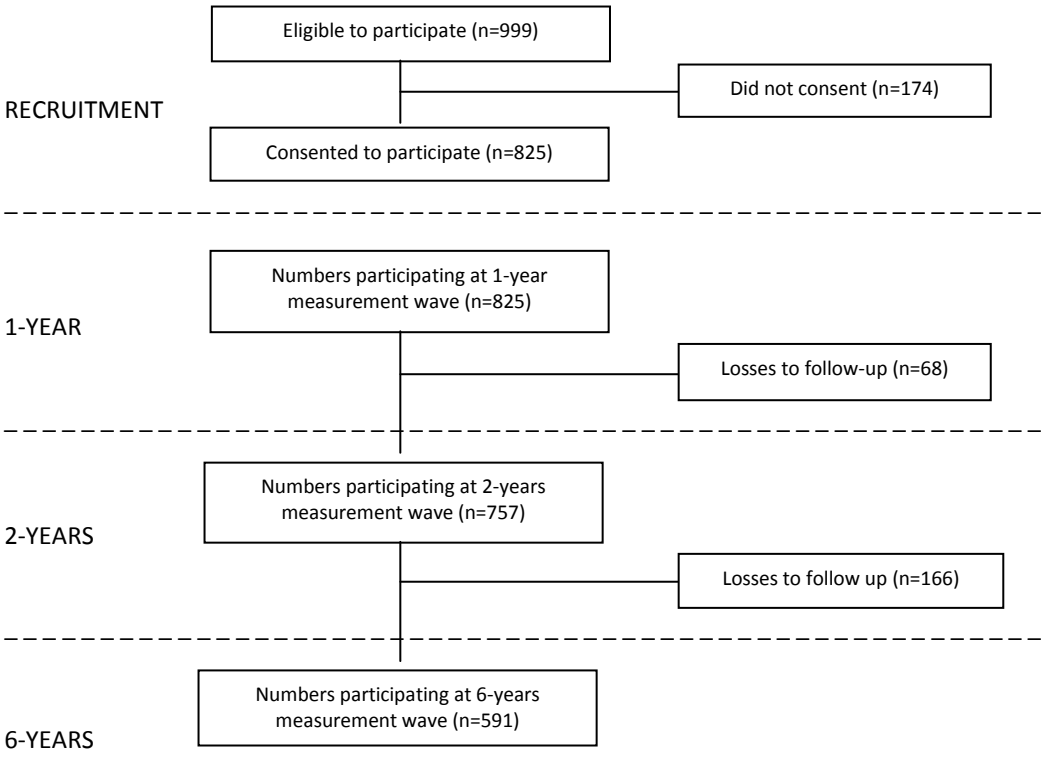
Design of the overall Pacific Islands Families Study

Phase I of this thesis involved quantitative analysis of data from the full PIF Study cohort. The PIF study design is multi-disciplined, broad-based and inclusive, capturing information from mothers, fathers and children (Paterson et al., 2008). The general aims of the PIF study are to: (1) identify and characterise those individuals and families experiencing both positive and negative health outcomes; (2) understand the mechanisms and processes shaping the pathways to those outcomes; and (3) make empirically based strategic recommendations to improve the well-being of Pacific children and families, and thereby benefiting NZ society (Paterson et al., 2008).

The PIF Study is an on-going cohort study following 1,398 Pacific infants (22 pairs of twins) born at Middlemore Hospital, South Auckland, NZ, between March 15 and December 17, 2000. All potential participants were selected from births where at least one parent identified as being of a Pacific ethnicity and was a NZ permanent resident. Thus, non-Pacific fathers were eligible for the study in cases where the infant's mother was of Pacific descent. For the purposes of this research, all fathers that self-identified as non-Pacific were excluded.

Figure I.1 below displays a participant flow diagram which records the numbers for eligibility, consent, and participation of fathers in each wave, and attrition.

Figure I.1: Participant flow diagram identifying the numbers of participant fathers at each longitudinal wave of the PIF study.



With respect to fathers, information was collected at three different measurement time-points thus far (Figure I.1). At the time of the 1-year, 2-years, and 6-years interviews, mothers were asked to give permission for a male Pacific interviewer to contact and interview the father of the child. If permission and paternal contact details were obtained then a Pacific male interviewer contacted the father to discuss participation in the study. At the 1-year interview, 999 mothers consented to the child's biological father or her partner to act as a collateral respondent, of whom 825 (83%) consented and completed the interview. A father was deemed ineligible for interview if they had no contact with the child or the mother requested that the father not be interviewed. At the 2-years interview, 938 mothers consented to the child's biological father or her partner to act as a collateral respondent of whom 757 (81%) consented and completed the interview. For the 6-years interview, 844 mothers consented to the child's biological father or her partner to act as a collateral respondent, of whom 591 (64%) fathers consented and completed the interview at this time.

Summaries of the demographic information for fathers throughout the three different measurement points thus far are presented in Table 4.1 (see Chapter 4). While there were no significant differences in attrition across different ethnic groups, place of birth groups and highest educational qualification groups over the measurement waves, younger fathers, assimilationists and those fathers with lower household incomes were significantly more likely to attrite from the studies. However, despite the

distributions of age, acculturation and household income changing over measurement waves, the overall percentages remained relatively stable (Table 4.1).

Male interviewers of a Pacific ethnicity who were fluent in English and a Pacific language visited fathers in their homes. Once informed, and consent obtained, fathers participated in 90 minute interviews concerning family functioning and the health and development of the child, conducted in their preferred language. The majority of respondents were the biological father of the child. However, as identification of the father respondent was dependent on obtaining contact details from the mother, a very small number of respondents were adoptive or stepfathers (see section 4.3). A battery of questions and standardized instruments were employed at each measurement wave for mothers, fathers and children (Paterson et al., 2006).

Pacific researchers had considerable input into the general framework utilised in the overall survey questionnaire administered to the participant fathers within the PIF study. Specific measurement tools were employed to ensure their content acceptability and validity, and some measures underwent focus group examination to check wording of items and testing procedures. The psychometric properties of all standardized measures used in the pilot and penultimate versions of the questionnaire were acceptable and few modifications were required. Descriptions of particular instruments used for this investigation are described in the relevant chapters and include the 12-item General Health Questionnaire (GHQ-12) (Goldberg & Williams, 1988), an adaptation of the General Ethnicity Questionnaire (GEQ) (Tsai, Ying, & Lee,

2000), a shortened version of the Inventory of Father Involvement (IFI) scale (Hawkins et al., 2002), and the CBCL (Achenbach, 1991; Achenbach & Rescorla, 2001).

All measurement instruments have been utilised in other international research studies, and undergone robust validation testing with a wide range of populations and ethnic groups (Goldberg et al., 1997; Hawkins et al., 2002; Javo et al., 2004; Paterson, Carter, Gao, et al., 2007; Tamis-LeMonda, 2002), which strongly supports the generalisability of the findings from this thesis. However, the possibility of cross-cultural differences in interpretation when applying these measures in this research must also be acknowledged.

More detailed information on the design and scope of the PIF Study appear in methodological papers published elsewhere (Paterson et al., 2008; Paterson et al., 2006).

Analytical methods

The quantitative analysis of the data utilised logistic regression, linear regression, as well as longitudinal methods of analysis and investigation such as generalized estimating equation (GEE) models, where appropriate. Longitudinal study designs include repeated measurement of participants' responses, which are typically correlated (J. Lee, Herzog, Meade, Webb, & Brandon, 2007). Correct inferences can only be obtained by taking into account this within-participant correlation between these repeated measurements. In recent years, GEE models have become a standard

method for analyzing this type of data (J. Lee et al., 2007). Logistic regression analysis is a robust method often used in epidemiological studies when the dependent variable is dichotomous (binary) (Pampel, 2000). Logistic regression is used to describe data and to explain the relationship between one dependent binary variable and one or more continuous-level (interval or ratio scale) independent variables (Pampel, 2000). Statistical analyses were performed using SAS version 9.1 (SAS Institute Inc., Cary, NC, USA) and Stata version 10.0 (StataCorp, College Station, TX, USA) software and α=0.05 was used to define statistical significance.

Chapter 4: Mental health well-being amongst fathers within the Pacific Islands Families Study, and the effect of acculturation

4.1 Introduction

This chapter outlines the findings from quantitative investigations into mental health well-being amongst Pacific fathers within the PIF study. These peer-reviewed findings have been published in: *Tautolo E, Schluter PJ, Sundborn, G. 2009. Mental health well-being amongst fathers within the Pacific Island Families Study. Pacific Health Dialog. 15(1): 69-78*, which appears in appendix IV of this thesis. These investigations utilise data that was collected using an internationally recognised measure of potential mental disorder. The analysis employed GEE models to examine the trend of mental health well-being over a 6-year period amongst the cohort of Pacific fathers within the PIF study.

4.1.1 Fathers and mental health

Fathers today face increasing demands from both work and family life (O'Brien & Shemilt, 2003). The associated financial, psychological and physical strain felt by fathers trying to balance work and family commitments can have an adverse impact on family life. However, unlike their female counterparts, there is a lack of contemporary epidemiological research into male health issues, particularly data concerning the health and well-being of fathers. Existing research highlights the beneficial effects of fathering roles and practices in influencing their child's behaviour and cognitive development (Flouri, 2008; Sarkadi et al., 2008). It also underlines the significant

potential for positive fathering to promote resiliency and improved mental health outcomes amongst young children (Boyce et al., 2006; Flouri & Buchanan, 2003).

The mental health well-being of fathers is of particular importance to the function and well-being of the family. First time fathers can be particularly prone to depression after childbirth (Cowan et al., 1991); with mild to moderate depression most likely (Soliday et al., 1999). Moreover, depressed new mothers receive more support from their partner than from any other individual, including medical staff (Holopainen, 2002). Such support is likely to be compromised if the father himself has poor mental health.

4.1.2 New Zealand evidence

Within the NZ context, recognition of the fundamental roles of men and fathering in family function and health has received increased nationwide attention through the Ministry of Health (1998, 2008a), the Families Commission (2008b), and the Health Research Council of New Zealand (2007). Again a lack of information exists in New Zealand about male health, fathering, and associated mental health issues. Nevertheless, a research report concerning fathers in West Auckland highlighted the increasing recognition of fatherhood as an important factor in successful health outcomes for their children (Pudney, 2006).

4.1.3 New Zealand-based Pacific evidence and ethnicity

Quantifying the extent of mental illness amongst Pacific peoples in NZ has historically been a very difficult task, with most information about the frequency of mental disorders being generated using institutional statistics that tend to underestimate the

true prevalence of mental disorder (Ministry of Health, 1997). Furthermore, available figures have usually been grouped under an umbrella Pacific ethnic label which fails to capture any sub-ethnic differences and variations. However, recent information and evidence from the Te Rau Hinengaro NZ Mental Health Survey (Oakley-Browne, Wells, & Scott, 2006) has contributed to a better understanding of mental health amongst Pacific peoples. Key findings from this survey indicate that Pacific peoples in NZ experience higher rates of mental illness than New Zealanders overall. Furthermore, the 12-month prevalence of Pacific peoples experiencing a mental disorder was 25%, compared with 20% of the total NZ population (Ministry of Health, 2008b). One of the fundamental findings within the study was recognition of the need for further research in mental health and particularly amongst specific groups within the Pacific population such as Pacific youth and Pacific males.

4.1.4 New Zealand-based Pacific evidence and acculturation

Acculturation has been defined as a process by which individuals or groups adopt aspects of another culture, often a dominant one, without completely relinquishing their own (Berry, 2003). Moreover, aspects of the adopted culture may include beliefs, values, social norms and lifestyles (Marin, 1992).

The research literature abounds with explanatory models of the acculturative process, most of which are multidimensional, involving many topics and factors (Stanley, 2003). These multidimensional topics range from those at the personal level, such as personality qualities and psychological adjustment (Ward & Leon, 2004), language

retention and community socialization, as well as external acculturation drivers such as migration experience, micro- and macro-societal policies, and regional setting (Persky & Birman, 2005). Two of the most common models of acculturation theory are uni-directional and bi-directional models of acculturation.

The bi-directional model, as stated by Berry (2006), proposes that acculturative adaptations lead to culture changes in either or both of the migrating and host society groups (Berry, 2006). Such insights generated by this bi-directional model challenge the ethnic melting-pot assumptions and promotes exploration and resolution of political sensitivities among ethnicities (Flannery, Reise, & Jiajuan, 2001).

Many studies that have examined acculturation strategies in minority population groups have found preference for integration is expressed over other acculturation strategies, although notable exceptions with Turks both in Germany and in Canada, and in Hispanic immigrant women in the United States, have instead discovered a preference for separation (Ataca & Berry, 2002; Berry, 2006; M. E. Jones et al., 2002). All these contributions could be seen as underpinning Pacific community perspectives of cultural maintenance within NZ society. In NZ, widespread official government dogma and minority community perceptions espouse that cultural maintenance is important to health outcomes and that culturally specific information for minority groups on which to base policy and services is necessary (Minister of Health and Minister of Pacific Island Affairs, 2010; Ministry of Health, 1997; Ministry of Pacific Islands Affairs, 2002). The untested assumption is that such an approach will lead to improved health and social outcomes for Pacific peoples. An alternative “popular

hypothesis" in NZ would support international perspectives and studies cited above. That expectation is that more positive health outcomes will exist for those effectively embedded in mainstream culture, compared to those embedded in Pacific culture or those marginalized from both cultures (Borrows et al., 2010).

Pacific people in NZ are commonly characterised by a history of migration from Pacific Island nations, resulting in experiences of rapid acculturation and socio-cultural change. This rapid socio-cultural change has been linked to mental illness among Pacific peoples, and an increase of risk-taking behaviour, such as drug and alcohol abuse (Bridgeman, 1996; Ministry of Health, 2005).

While there is little research evidence available regarding acculturation and mental health for Pacific fathers, this relationship has been explored amongst Pacific mothers. In an examination of the association between risk factors for poor maternal health and acculturation amongst Pacific mothers within the PIF Study, individuals that were more aligned to the mainstream NZ culture had a greater odds ratio (OR) for most risk factors, including maternal depression, compared to individuals that were more strongly aligned to their traditional Pacific culture (Borrows et al., 2010). This thesis research seeks to examine whether this relationship between traditional cultural maintenance and improved mental health outcomes also exists amongst Pacific fathers.

Using a standardized measure of mental health well-being, this chapter reports the prevalence of potential psychological mental health disorders amongst a cohort of Pacific fathers within the PIF Study over the first 6-years of the child's life. Additionally, acculturation and other important covariates for potential mental health disorders are also examined and discussed.

4.2 Methods

4.2.1 Participants

Detailed information about the participants and procedures is described earlier in the Phase I explanatory section of this thesis.

4.2.2 Measurement of mental health status

At the 1-year, 2-years, and 6-years postpartum measurement waves, the prevalence of symptomatic mental health disorder within our cohort of fathers was calculated using the 12-item General Health Questionnaire (GHQ-12) screening tool. The GHQ-12 was developed as a screening instrument to provide information on the mental well-being of respondents, and has been recognized internationally for its high level of specificity and reliability. A measure of mental well-being is achieved by assessing normal healthy functioning, and the appearance of new distressing symptoms, rather than giving a specific psychiatric diagnosis (Goldberg & Williams, 1988).

A key strength of the GHQ-12 instrument is its accuracy and ease of administration as a screening tool for the identification of symptomatic (those with probable non-

psychotic psychiatric disturbance) and non-symptomatic cases (those with no significant non-psychotic mental health problems) (Goldberg et al., 1997). In fact research has confirmed that despite its shortened form, the GHQ-12 is just as accurate in screening and case detection as longer versions of the GHQ (Goldberg et al., 1997). Using a binary scoring method, the GHQ-12 responses from participant fathers were scored to give a total out of 12, and a total score of 2 or greater was used to indicate potential psychological disorder (Goldberg & Williams, 1988); referred to hereafter as symptomatic for potential mental disorder. Fathers who scored values of 0 or 1 were classified as being non-symptomatic.

4.2.3 Measurement of ethnicity

Ethnicity information for participant fathers in the PIF study is self-reported. Fathers were asked during the interviews to specify their ethnicity, and in the case of multiple ethnicities to specify the ethnicity they most strongly identify with. Further information about the participants and procedures is described earlier in the Phase I explanatory section of this thesis.

4.2.4 Measurement of acculturation status

Development of the acculturation measure

The acculturation measure chosen for the PIF study is an adaptation of the General Ethnicity Questionnaire (GEQ) developed by Tsai et al. (2000). This measurement scale included elements consistent with the current status of theory on the psychological responses to acculturation (Berry, 2006; Cabassa, 2003). Moreover, the GEQ embodies

elements of individual perceptions of characteristics of the island societies of origin and the NZ receiving society. It also measures adoption and maintenance strategies from a bidimensional perspective, and has been widely applied internationally.

A bi-directional scale was chosen because the use of multidimensional acculturation measures provide a more comprehensive understanding of the association between specific components of acculturation and particular health outcomes (Abraído-Lanza, Armbrister, Florez, & Aguirre, 2006). To suit the specific purposes of the PIF study, the scale was further shortened and modified, thereby developing the NZ (NZACCULT) and Pacific versions (PIACCULT) of the GEQ (Borrows et al., 2010). In shortening the scale, the most important objective was to reduce participant burden in an already long questionnaire, without compromising the collection of relevant information to the acculturation process and its inter-relationship with the other variables of interest.

The original 38-item GEQ scale was reduced to 11 items on a pragmatic minimalist basis but included key items reflecting five of the six specific cultural dimensions identified by Tsai et al. (2000). It also reflected the two fundamental issues of interest: (i) maintaining one's heritage, culture, and identity and (ii) relative preference for having contact with, and participating in, the larger society (Berry, 2006). Questions were included relating to the specific cultural dimensions of language, social affiliation, activities, exposure in daily living, and food. The sixth dimension, pride in culture, was excluded as it was considered that this aspect was better accommodated by other questions in the measure (Borrows et al., 2010).

Some specific items were excluded because they bore little relevance to Pacific life in NZ, for example listening to radio in a Pacific language, as such services were not widely available at that time. Thus, items were excluded that from knowledge of mainstream NZ culture and NZ Pacific culture, were deemed less relevant (face validity) than for the American/Chinese population for which the GEQ scale was originally designed. The scale was further adapted to include a small number of items considered of particular cultural relevance in NZ. Two questions relating to social affiliation were included which explored issues relating to contact with Pacific family, relatives, and attendance at church. Both of these were considered important in a Pacific context in NZ society. Similarly, inclusion of sport as a particular recreation was included because of the perceived importance of Pacific youth involvement in NZ sport, and its importance in the context of the wider NZ society (Borrows et al., 2010).

The GEQ measure was modified to make it appropriate and relevant to Pacific peoples and NZ society, and so as to provide reasonable approximations of the acculturation process for this population. Examination of face validity for the acculturation measure yielded positive feedback from both pre-participant focus groups, as well as the Pacific advisory group which is part of the overall PIF Study. This advice was integral to all substantive decisions about the study content (Borrows et al., 2010). The internal consistency of the measure was also examined, using Cronbach's α, and were found to be acceptable (α=0.81 for NZACCULT and α=0.83 for PIACCULT) (Borrows et al., 2010). Subsequent results from other PIF research involving Pacific mothers (M. Abbott & Williams, 2006; Erick-Peleti, Paterson, & Williams, 2007; Paterson, Carter, Gao, et al.,

2007) demonstrated that the acculturation variable measured from these scales was a persistently strong predictor for a range of health and social indicators.

Assessment of acculturation

Adopting the bi-directional philosophy of Berry, the acculturation variable describes four distinct categories for acculturation status of respondents depending on whether the acculturation strategy is freely adopted by the individual, or imposed by the dominant culture. Both the NZACCULT and PIACCULT 11-item scales are measured using a 5-point likert scoring method. Each of the respondents was individually scored on both the NZACCULT and PIACCULT scales and allocated to one of the categorical classes dependent on whether their individual score fell above or below the median of the full group on each scale, namely: Separator (Low NZ – High Pacific); Integrator (High NZ – High Pacific); Assimilationalist (High NZ – Low Pacific); Marginalist (Low NZ – Low Pacific). All analysis incorporating the acculturation variable was conducted in terms of this categorisation.

4.2.5 Socio-demographic and potential confounding variables

Additional variables describing socio-demographic and other circumstances of the participant fathers, were incorporated in the analysis in order to provide some profile information of the participants in the study and also because of the known association between those variables and potential psychological disorder (Aseltine & Kessler, 1993; Brown, 2004; Mental Health Commission, 1999; Mental Health Foundation of New Zealand, 2008; Patkar et al., 2002). These variables included age, ethnicity, being

NZ born, and household income at baseline. Other variables investigated were highest educational qualification at baseline (either none, secondary or post-secondary), smoking status (either non-smoker, light smoker (0-9 cigarettes per day), moderate smoker (10-19 per day), or heavy smoker (>20 per day)), alcohol drinking status (categorised as either non-drinker, monthly or less, or more than once a month), current employment status (categorised as either unemployed, full-time work, part-time work, or full-time parent), and marital status (categorized as either separated/single or married/defacto relationship).

4.2.6 Statistical analysis

Categorical variable comparisons between groups were made using Fisher's exact test. Due to the longitudinal binary data, binomial GEE models were employed to investigate relationships between fathers' mental health status over time in crude analyses, and when adjusted for potential confounding variables (J. Lee et al., 2007). Binomial GEE models were also used to model whether there were systematic patterns in attrition with sample sub-groups. An unstructured correlation matrix was employed and robust Huber-White sandwich variance estimators used for all GEE analyses. Statistical analyses were performed using SAS version 9.1 (SAS Institute Inc., Cary, NC, USA) and Stata version 10.0 (StataCorp, College Station, TX, USA) software and α=0.05 was used to define statistical significance.

4.3 Results

Nine hundred and ninety-nine of the mothers interviewed at 1-year had partners who met eligibility criteria to act as collateral respondents, of whom 825 (83%) were interviewed. Most, 820 (99%), men interviewed at one year were the biological fathers of the children with five adoptive or stepfathers. For ease of exposition, we shall refer to this group collectively as 'fathers' hereafter.

Most, 786 (95%), fathers were living with the biological mother of the child in a married (77%) or de facto (18%) relationship. The mean age was 32.1 years (standard deviation (SD) 7.3 years), the range was 17 to 65 years, and 1% of the fathers were younger than 20 years. Over half the cohort of fathers were of Samoan ethnicity, and the majority were born in NZ. Over half had no formal educational qualification. The majority had a household income of less than $40,000 per year, were in a married/de facto relationship, and had full-time employment. These numbers are consistent with national data about Pacific people collected during the 2006 Census and from the 2002 Pacific Progress Report (Ministry of Pacific Islands Affairs, 2002; Statistics New Zealand, 2009).

The number of participants in each measurement wave significantly decreased with time from 825 at 1-year to 757 at 2-years and 597 at 6-years postpartum (P-value<0.001). As father recruitment for each measurement wave was conditional on mother's consent, 164 fathers interviewed at the 2 years measurement phase did not participate in the 1-year phase, and 158 fathers interviewed at the 6-years

measurement phase did not participate in the 1-year phase. Overall 1053 fathers are included in this study with 271 (26%) fathers completing one measurement wave, 444 (42%) fathers completing two and 338 (32%) fathers completing all three measurement waves.

Summaries of the frequencies and percentages of socio-demographic variables at baseline for the participants in the study over the three measurement waves are presented in Table 4.1. After accounting for the attrition over time, there were no significant differences in attrition across different ethnic groups, place of birth groups and highest educational qualification groups over the measurement waves (all P-values>0.05). However, younger fathers, assimilationists and those fathers with lower household incomes were significantly more likely to attrite from the studies than their older, non-assimilationist and higher income counterparts (all P-values≤0.05). Despite the distributions of age, acculturation and household income changing over measurement waves, the overall percentages remained relatively stable (Table 4.1). The frequencies and percentages for potential confounding variables indicate that the majority of participants in the study were married or in de facto relationships, were non-drinkers and non-smokers, and were in full-time employment.

Table 4.1: Frequencies of socio-demographic and potential confounder variables over different measurement waves (1-year n=825, 2-years n=757, and 6-years n=591).

Variable	Measurement Wave					
	1-year		2-years*		6-years**	
	n	(%)	n	(%)	n	(%)
Age at baseline (years)						
<30	321	(39.1)	219	(36.7)	149	(34.0)
30-39	390	(47.4)	286	(47.8)	219	(50.0)
≥ 40	112	(13.6)	93	(15.6)	70	(16.0)
Ethnicity						
Samoan	440	(53.3)	350	(58.3)	213	(48.5)
Cook Islands	73	(8.9)	50	(8.3)	32	(7.3)
Tongan	199	(24.1)	121	(20.2)	142	(32.4)
Other Pacific	54	(6.6)	39	(6.5)	28	(6.4)
New Zealand born						
Yes	203	(24.6)	149	(24.8)	95	(21.6)
No	621	(75.4)	451	(75.2)	344	(78.4)
Highest educational qualification at baseline						
No formal qualification	481	(58.4)	345	(57.7)	270	(61.8)
Secondary	220	(26.7)	163	(27.3)	96	(22.0)
Post-secondary	122	(14.8)	90	(15.1)	71	(16.3)
Acculturation status						
Assimilationist	305	(37.0)	216	(36.0)	140	(31.9)
Separationalist	302	(36.6)	208	(34.7)	188	(42.8)
Integrator	75	(9.1)	53	(8.8)	38	(8.7)
Marginal	143	(17.3)	123	(21.0)	73	(16.6)
Household income at baseline						
$0-$20,000	216	(26.2)	185	(24.4)	152	(25.7)
$20,001-$40,000	486	(58.9)	455	(60.1)	334	(57.0)
>$40,000	103	(12.5)	102	(13.5)	84	(14.2)
Unknown	20	(2.4)	15	(2.0)	21	(3.6)
Marital Status						
Married/de facto	789	(95.6)	724	(95.8)	568	(97.1)
Separated/single	36	(4.4)	32	(4.2)	17	(2.9)
Smoking status						
Non-smoking (0)	490	(59.5)	414	(54.8)	363	(62.1)
Light smoker (1-9)	123	(15.0)	175	(23.2)	90	(15.4)
Moderate smoker (10-19)	169	(20.5)	123	(16.3)	87	(14.9)
Heavy smoker (>20)	41	(5.0)	44	(5.9)	45	(7.7)
Alcohol drinking status						
Non-drinking	578	(70.2)	536	(71.0)	425	(72.0)
Monthly or less	209	(25.4)	185	(24.4)	117	(19.8)
More than once a month	37	(4.5)	36	(4.8)	48	(8.1)
Current employment status						
Unemployed	109	(13.2)	96	(12.7)	57	(9.6)
Full-time employment	666	(80.7)	605	(80.0)	485	(82.1)
Part-time employment	28	(3.4)	24	(3.2)	27	(4.6)
Full time parent/student	22	(2.7)	31	(4.1)	22	(3.8)

* n=164 fathers included at 2-years did not participate at 1-year.

** n=158 fathers included at 6-years did not participate at 1-year.

4.3.1 Prevalence of mental health indications

The frequencies of symptomatic mental health indications over each measurement wave, estimated ORs and associated 95% confidence intervals (CIs) are presented in Table 4.2. In crude analysis, the results show that participants had an odds 1.75 more likely to be symptomatic at 2 years and 2.67 more likely to be symptomatic at 6 years postpartum, than at the 1-year measurement phase; a significant time effect (p-value<0.001). The adjusted analysis results were similar to those of the crude analysis, indicating that this association did not appear to be confounded by the socio-demographics and covariates considered here (Table 4.3).

Table 4.2: Prevalence of symptomatic mental health indications over different measurement waves, with adjusted OR estimates derived from binomial GEE models.

Measurement	Symptomatic indication			Crude Analysis		Adjusted analysis†	
Wave	Total	n	(%)	OR	(95% CI)	OR	(95% CI)
1-year	825	32	(3.9)	1.00	reference	1.00	reference
2-years	757	50	(6.6)	1.75	(1.14,2.71)	1.71	(1.05,2.77)
6-years	591	58	(9.8)	2.67	(1.72,4.16)	3.18	(1.94,5.19)

*p-value<0.001 †Adjusted for all variables listed in Tables 4.1.

4.3.2 Mental health indications by ethnicity

The frequencies of symptomatic mental health indications by ethnicity, over each measurement wave, along with estimated ORs and associated 95% CIs are presented in Table 4.3. There is a significant association between ethnicity and mental health indications (p-value=0.004), with both Tongan and Cook Islands ethnicities having increased ORs, compared to the reference Samoan ethnic group.

Table 4.3: Mental health indications of Pacific fathers by ethnicity.

	1-year		2-years		6-years			
Ethnicity	n	(%)	n	(%)	n	(%)	OR	(95% CI)*
Samoan	13	(2.9)	15	(3.9)	7	(2.8)	1.00	reference
Cook Island Maori	2	(2.9)	5	(6.0)	7	(12.5)	5.06	(1.70,15.02)
Tongan	3	(1.5)	17	(10.4)	20	(10.1)	3.98	(1.65,9.62)
Other Pacific	2	(4.0)	5	(7.5)	8	(20.1)	2.66	(0.66,10.70)

*p-value=0.004

4.3.3 Mental health indications by acculturation

The frequencies of symptomatic mental health indications by acculturation, over each measurement wave, along with estimated ORs and associated 95% CIs are presented in Table 4.4. Although separators appear to have a decreased likelihood of mental health indication, and marginalists have a slightly increased likelihood, these results were not significant (p-value=0.76)

Table 4.4: Mental health indications of Pacific fathers by acculturation.

	1-year (N=825)		2-years (N=757)		6-years (N=591)			
Acculturation status	n	(%)	n	(%)	n	(%)	OR	(95% CI)*
Assimilationalist	7	(2.3)	11	(4.6)	14	(9.8)	1.00	reference
Separationalist	6	(2.0)	15	(6.2)	14	(5.0)	0.86	(0.29,2.60)
Integrator	2	(2.7)	3	(4.3)	7	(7.5)	1.17	(0.24,5.73)
Marginalist	5	(3.8)	6	(5.0)	7	(9.9)	1.67	(0.52,5.34)

*p-value=0.76

4.3.4 Multivariable analysis of mental health indications

Table 4.5 presents the ORs and 95% CIs for the socio-demographic and covariates used in the adjusted GEE analysis. Ethnicity, current smoking status, employment status and marital status were all significantly associated with symptomatic mental health indications from the GHQ-12. When studying these variables further, being of Cook Islands or Tongan ethnicity, a regular smoker, unemployed, or having a marital status of separated or single, all had increased odds for symptomatic mental health indications.

Table 4.5: Multivariable GEE analysis of mental health indications with adjusted OR estimates and 95% CIs.

Variable	OR	(95% CI)	p-value
Age at baseline (years)			0.42
<30	1.00	reference	
30-39	2.03	(0.25,16.34)	
≥ 40	2.56	(0.32,20.46)	
Ethnicity			<0.001
Samoan	1.00	reference	
Cook Islands Maori	2.90	(1.51,5.57)	
Tongan	2.25	(1.23,4.12)	
Other Pacific	0.77	(0.27,2.21)	
New Zealand born			0.06
Yes	1.00	reference	
No	1.75	(0.97,3.17)	
Highest educational qualification at baseline			0.69
No formal qualification	1.00	reference	
Secondary	1.02	(0.54,1.93)	
Post-secondary	1.31	(0.69,2.49)	
Acculturation status			0.28
Assimilationist	1.00	reference	
Separationalist	1.10	(0.53,2.30)	
Integrator	1.40	(0.63,3.10)	
Marginalist	1.80	(0.91,3.50)	
Household income at baseline			0.42
$0-$20,000	1.00	reference	
$20,001-$40,000	1.02	(0.61,1.68)	
>$40,000	0.70	(0.35,1.41)	
Unknown	0.26	(0.03,2.34)	
Marital Status			0.004
Married/de facto	1.00	reference	
Separated/single	3.20	(1.45,7.07)	
Smoking status			0.04
Non-smoking (0)	1.00	reference	
Light smoker (1-9)	1.89	(1.12,3.22)	
Moderate smoker (10-19)	1.68	(0.97,2.91)	
Heavy smoker (>20)	2.07	(0.98,4.40)	
Alcohol drinking status			0.35
Non-drinking	1.00	reference	
Monthly or less	0.82	(0.50,1.37)	
More than once a month	2.19	(0.37,13.10)	
Current employment status			<0.001
Unemployed	0.32	(0.17,0.63)	
Full-time employment	1.00	(reference)	
Part-time employment	0.54	(0.21,1.37)	
Full time parent/student	0.63	(0.06,7.01)	

4.4 Discussion

4.4.1 Prevalence of potential mental disorder

Analysis of the GHQ-12 responses identified 3.9% of fathers as symptomatic for potential psychological disorder in the year after the birth of their child, increasing to 6.7% and 9.8% in the 2-years and 6-years postpartum phases. By comparison, findings from the Te Rau Hinengaro study indicate that currently amongst Pacific people 25% are mentally unwell (Oakley-Browne et al., 2006). Given this level of GHQ-12 'symptomatic' indication, the results from this analysis appear low. However, the significantly increasing likelihood of potential mental health disorder within our father cohort is of concern and potential distress should not be ignored. Also, an important point to consider is that the Te Rau Hinengaro survey does not utilise the GHQ-12 screening tool, and instead uses the DSM-IV diagnostic tool to identify disorders. Thus any differences with findings from the PIF study results may be due to definitional issues.

Little research information exists concerning rates of GHQ-12 indicated 'symptomatic cases' amongst the NZ population. However, research from Davis et al. (2008) has explored the use of the GHQ-12 instrument in identification of psychological distress among patients in the NZ general practice setting. Participants completed the GHQ-12 and a demographic information form while waiting for a GP appointment. Using the same scoring method and threshold employed in this thesis to denote 'symptomatic cases', the GHQ results indicated that 33% of patients might be experiencing some form of psychological distress.

The perception of mental illness amongst Pacific people differs distinctly from Western medical approaches. Pacific cultures tend to view the cause of mental illness as being either spiritual or inherited, and treatment is delivered in the traditional way by traditional or 'spiritual' healers (Ministry of Health, 2005). A holistic approach to mental health is often utilized by Pacific peoples, thus requiring all aspects of a person's life – spiritual, physical, emotional and family – to be in harmony (Ministry of Health, 2005). The application of this holistic framework to potential mental disorder amongst Pacific fathers, emphasizes the need to discern and understand potential risk factors which significantly increase the likelihood of developing mental disorder. In addition, this philosophical difference in mental health and illness raises questions about the use of the GHQ-12 amongst Pacific fathers in NZ.

4.4.2 Mental health indications and ethnicity

Fathers of Cook Islands or Tongan ethnicity were found to have a significantly increased likelihood of having potential mental disorder. Apart from the Te Rau Hinengaro NZ Mental Health Survey, little research has examined the prevalence of mental illness amongst Pacific people, particularly ethnic specific research. This doctoral research supports the proposal that Pacific approaches and understandings of mental illness differ markedly from Western perspectives, and some Pacific ethnic groups describe mental illness in ways that are unique to their own particular culture (Ministry of Health, 2005). For instance, Samoan perceptions of mental illness are frequently described in terms of spiritual relationships or the breaking of forbidden traditions (Tamasese, Peteru, & Waldegrave, 1997). Therefore, the results from this

thesis highlight the necessity for further research to understand which particular issues and concerns make these ethnicities more susceptible to potential mental illness.

4.4.3 Mental health indications and acculturation

In considering the variables which displayed a significant association with mental well-being, an interesting exclusion was acculturation status. The non-significant relationship between acculturation and mental well-being within the cohort was a somewhat unexpected result, especially considering the significant association it has displayed with an extensive selection of factors in previous research findings concerning the PIF study (Borrows et al., 2010; Erick-Peleti et al., 2007; Tautolo, Schluter, Paterson, & McRobbie, In press). For example, prior research involving mothers and children from the PIF study has examined the relationship between acculturation status and an assortment of maternal and infant health risk factors, including post-natal depression. The analysis identified individuals characterised as separationalists to have the least risk of any of the maternal and infant health risk factors, while assimilationists exhibited the highest risk (Borrows et al., 2010). These findings suggest that individuals with stronger alignment or connection to their Pacific culture have more favourable health outcomes compared to those that are more aligned or connected to mainstream western culture. Nonetheless, further research is necessary to understand the aspects of traditional or Pacific culture which are responsible for this improved protection.

4.4.4 Mental health indications and other significant risk factors

In addition to time postpartum, a number of other variables were found to be significantly associated with potential psychological disorder; being a regular smoker was one such variable. According to the Mental Health Foundation of New Zealand (2008) there is little research available regarding the effects of smoking on mental health in NZ. However, internationally it has been reported that smoking prevalence is significantly higher among people with mental health problems than among the general population (Meltzer, Gill, & Petticrew, 1995). Additionally, daily cigarette consumption is considerably higher among smokers with mental health problems (Brown, 2004).

One of the main explanations proposed to explain smoking prevalence among mental illness sufferers is that it is a coping mechanism for dealing with feelings of depression, isolation, and mental illness (Brown, 2004). Further research suggests that the nicotine in cigarettes may help to alleviate some of the side effects of medication for mental illness sufferers, thereby encouraging them to keep smoking (Patkar et al., 2002). Consequently, the results of this thesis complement previous international findings which indicate a significant association between smoking and mental health. However, it is unclear whether smoking is a causal factor, or a proxy variable for other risk factors associated with potential mental disorder.

Results from the analysis also demonstrated an association between full-time employment and potential mental illness amongst Pacific fathers. Previous research

findings from a Mental Health Commission of New Zealand report (1999) determined that employment and mental health were strongly associated. Furthermore, the report suggested that employment assists mental illness sufferers in their recovery and decreases their dependence on services. Despite a lack of systematic research in NZ about discrimination experienced by people with mental illness in the labour force, people with mental illness and mental health service providers cite discrimination as the key barrier to employment. This discrimination potentially affects the chances for recovery, and also increases the likelihood of potential psychiatric disorder developing (Mental Health Commission, 1999).

Marital status was significantly related to potential mental disorder amongst Pacific fathers. Pacific fathers who were separated or single were significantly more likely to develop potential mental disorder than Pacific fathers who were married or in de facto relationships. These results concur with previous research findings which contend that married spouses serve as a source of support and validation of identity, leading to positive self-image and a source of resilience for fathers when dealing with everyday stresses (Umberson, 1987). Likewise, marital disruption may create vulnerability to stresses, with divorced people reporting worse mental health due to stresses associated with role transitions (Aseltine & Kessler, 1993). Finally, those with mental illness may also be less likely to remain in enduring relationships compared to non-sufferers of mental illness (Wolfinger & Wilcox, 2008).

4.4.5 Strengths and limitations of the research

The PIF study provides information from the first, large, and culturally diverse sample of Pacific fathers within NZ. The sample composition is reasonably representative of Pacific populations in NZ at baseline (Paterson, Carter, Gao, et al., 2007; Paterson et al., 2006), and although it suffers from significant attrition, it remains reasonably representative over time for the demographic variables captured (Table 4.1).

Further strengths of this research are the strong study design and the sophisticated GEE model analytic techniques employed to examine data from the PIF cohort over time. In general the PIF study aims to identify and characterize both positive and negative health outcomes amongst participants, understand the mechanisms and processes leading to those outcomes, and make empirically based tactical recommendations to improve the well-being of Pacific children and families and thereby benefit NZ society as a whole (Paterson et al., 2008)

The GHQ-12 is a standardized measure of general health, including mental health, used internationally, and with good specificity and sensitivity (Goldberg et al., 1997). The GHQ-12 was developed as a screening instrument to provide information on the mental well-being of respondents. This is achieved by assessing normal healthy functioning, and the appearance of new distressing symptoms, rather than giving a specific psychiatric diagnosis (Goldberg & Williams, 1988). A key strength of the GHQ-12 instrument is its accuracy and ease of administration as a screening tool for the identification of symptomatic (those with potential psychiatric disorder) and non-

symptomatic (those with no significant risk of potential psychiatric disorder), symptomatic being identified by specified cut-off scores (Goldberg et al., 1997). Subsequent research has confirmed that despite its shortened form, the GHQ-12 is as accurate in screening and case detection as longer versions of the GHQ (Goldberg et al., 1997).

Despite a number of strengths, a potential limitation of this research is the rate of attrition amongst the cohort. Attrition, particularly differential attrition, is problematic as it can cause systematic bias within study findings. It has also been suggested that non-responders in longitudinal studies can often be those that are most likely to be the worst off or, in this instance, are more likely to be symptomatic of mental health disorder (Boys et al., 2003). However, at baseline, the prevalence of potential mental health disorders was at its lowest. So while the subsequent measurement waves may underestimate the underlying rate of mental health disorders, the figures at baseline are likely to be robust.

Regardless of its strengths, the GHQ-12 may also have weaknesses. A specific limitation exists concerning the validity of GHQ-12 usage amongst Pacific populations. Currently, there has been little work done to validate and measure the psychometric properties of the GHQ-12 in Pacific populations. Studies examining the validity of the GHQ-12 with cultures other than English have shown that the validity coefficients are comparable to those of the English version (Goldberg & Williams, 1988). However, previous studies examining the effect of language on GHQ-12 responses have found

that certain differences emerged at the item level of the questionnaire, attributable to linguistic and cultural factors (Chan, 1985). The key issue for these differences relates to difficulty in understanding the items (technical validity). Considering that the sample in the present investigation of Pacific fathers has a large number of participants who have not finished secondary school, it is likely that this could affect the extent to which the GHQ-12 items are adequately understood by respondents.

Notwithstanding its success as an accurate screening measure for psychological disorder, there are varying methods for defining symptomatic or non-symptomatic cases. For example, the traditional method of scoring the GHQ questions uses a binary method. However, the GHQ can also be scored using a Likert scale, or by assigning different weights to questions associated with illness or health (Goodchild & Duncan, 1985). The threshold or cut-scores for the GHQ-12 not only vary with the scoring method and length of questionnaire but also across populations. As a result, there can be vastly different rates of case detection depending on which scoring method is employed for the analysis (Martin, 2003). However, this is alleviated in this longitudinal study by explicitly articulating this threshold and then consistently employing the threshold over all measurement waves. This gives internal validity to the findings, and external validity for studies adopting the same threshold level.

Another important limitation of the findings is the fact that family size, composition and child number and order was not measured from fathers or accounted for in the analysis. The composition of the household and number of children in the family unit

could potentially affect the amount of stress present in the home and thereby increase the likelihood of potential psychiatric disorder.

4.4.6 Implications of the research

There is a lack of robust information on the mental well-being of Pacific fathers, and while small – a significant proportion of Pacific fathers appear to suffer from potential mental disorder. This, in turn, may have implications for their families and children as well, particularly regarding intimate partner violence, temporal involvement with the family, and the ability to provide necessary resources for everyday life (Families Commission, 2009b; Mental Health Commission, 1999; Schluter, Paterson, & Feehan, 2007).

Although mothers are not routinely screened post-natally for depression in primary care settings, some individual health providers do administer post-natal screens for depression to mothers as part of their overall medical follow-up appointments. While no such screening exists for their male counterparts, the findings from this investigation suggest that perhaps this might be considered.

Mental health is recognized as an important health issue, and it is currently receiving considerable health promotion in the general media (Ministry of Health, 2007a). The mental health of fathers should be targeted as a priority research objective, especially given their important role in influencing the health and well-being of children. Likewise, further investigation must be undertaken to examine some of the variables

which significantly increase the likelihood of developing potential mental health disorder. Although issues such as smoking are already key factors identified as affecting health, more comprehensive research should be initiated to gain a more detailed understanding of the associations with potential mental disorder. This may help to establish strategies to mitigate or prevent the increase of potential mental disorder among fathers.

4.4.7 Summary

Within our cohort of participant Pacific fathers in the PIF study, rates of mental health symptomatic indications were low but there is a significant trend of increase over time. Pacific fathers who were regularly smoking, were unemployed, had a marital status of separated or single, and were of Cook Islands or Tongan ethnicity had a significantly increased likelihood of being symptomatic for potential psychological disorder. However, further investigation during the qualitative Phase II of this thesis will attempt to understand more about the specific elements of these variables responsible for this significant relationship. In addition, future measurements over time are needed to establish whether this increasing prevalence of mental health symptoms among fathers continues, plateaus or declines with advancing time post-partum.

Chapter 5: Smoking amongst fathers within the Pacific Islands Families Study, and the effect of acculturation

5.1 Introduction

This chapter outlines the quantitative investigations and findings on smoking and the impact of acculturation on the health and well-being of Pacific fathers within the PIF study. These peer-reviewed findings have been published in *Tautolo E, Schluter PJ, Paterson J, McRobbie H. Acculturation has a modest effect on smoking amongst a cohort of Pacific Island fathers. Australian & NZ Journal of Public Health 39(6) pp509-516*, which appears in appendix IV of this thesis. The analysis utilises data collected using a novel and robust measure of acculturation, and the current smoking status amongst a cohort of Pacific fathers in the PIF study.

In recent years, tobacco smoking has been identified as one of the most modifiable risk factors for poor health amongst modern industrialised countries (World Health Organization, 2003, 2005). Tobacco smoking is the single most preventable cause of death in the world, and is currently responsible for roughly 5 million deaths per year (World Health Organization, 2008). Within NZ, approximately, 5,000 deaths each year are attributed to direct tobacco smoking or second hand smoke (Ministry of Health, 2007b). Moreover, particular sub-groups within NZ, such as Pacific peoples and other lower socioeconomic and ethnic subpopulations, carry a greater aggregate of smoking-related illness. Current statistics regarding male smoking rates within NZ indicate that smoking is more prevalent amongst Pacific males (35%) compared to both European

(23%), and Asian (20%), although Māori have the highest rates (40%)(Ministry of Health, 2009b).

Within the Pacific region, the availability and quality of data regarding the prevalence of smoking in the Pacific Islands varies greatly. Information regarding smoking prevalence is available through WHO publications (Tobacco-Free Initiative Western Pacific Region, 2000), but it is often out-of-date with estimates for some Pacific countries dating back to the mid 1980s (Tuomilehto et al., 1986). Nevertheless, more recent research publications indicate that male smoking prevalence within Pacific Islands nations is still very high (McKay, 2002). Information collected in 2004 indicated that Samoan males have a smoking prevalence of 49%, while their Tongan counterparts have a rate of 53% (Rasanathan & Tukuitonga, 2007); significantly higher than the prevalence rate of 35% amongst Pacific peoples in New Zealand (Ministry of Health, 2009b).

The most likely explanation for this difference is that NZ has a comprehensive tobacco control programme that includes high taxation of tobacco products, advertising bans, restrictions on tobacco sales, good public health campaigns and health warnings on tobacco products, smokefree public places legislation, and freely available smoking cessation treatment. Such strategies are recommended in the WHO Framework Convention on Tobacco Control (FCTC). This global public health treaty provides support and guidance for legislation and other initiatives to reduce tobacco-related harm throughout the world (World Health Organization, 2003). Although NZ and all 14 Pacific Islands countries that are member states of the WHO are parties to the FCTC,

there are marked differences in the implementation of the recommendations set out in the FCTC (Cussen, 2011).

Related to this difference in tobacco control policy is a latent attitude of societal permissiveness towards smoking in Pacific nations compared to NZ. This may contribute to an under-reported smoking status in NZ. Despite these international differences smoking prevalence among Pacific peoples remains high. In addition, although research on tobacco use has increased in recent years, there has been little investigation amongst diverse migrant populations, and particularly amongst specific groups such as Pacific fathers.

5.1.1 Fathers and smoking

Fathers have received scant attention in the literature on smoking, especially in relation to their motivations and behaviours. In spite of that, smoking fathers are a potential major contributor to the ETS exposure within a household; especially with their higher smoking prevalence and their generally higher cigarette consumption (Tautolo, Schluter, & Taylor, In press).

A systematic review of research evidence concerning parental smoking indicates a clear relationship (which is unlikely to be due to chance) between parental smoking and the prevalence of asthma and respiratory problems amongst school age children (Cook & Strachan, 1997). An aspect of particular concern is the impact of smoking on Sudden Unexpected Death in Infancy (SUDI) and stillbirth among Pacific infants. During

2003-2007, the SUDI rate for Pacific was 1.31 per 1000, which was significantly higher than for 'Other' (including European) at 0.52 deaths per 1,000 (Child and Youth Mortality Review Committee, 2009). The literature on SUDI recognises the influence of both smoking by pregnant women and ETS as a preventable risk factor for SUDI (Taufa, In press).

An effective public health approach to smoke cessation is based on the rigorous requirement of scientific method that moves from understanding and measuring the problem to finding, implementing and evaluating a solution (Rothman & Greenland, 1998). Therefore such robust epidemiological information is essential for reducing the detrimental effects of tobacco smoking amongst Pacific fathers and their families in NZ.

5.1.2 Smoking and ethnicity

Information on the prevalence of smoking amongst Pacific ethnic groups from the 2006 Census indicates that Tokelauan and Cook Islands Māori had the highest smoking prevalence (39% and 35% respectively) (National Pacific Tobacco Control Service, 2010). Almost half of all Pacific smokers were Samoan (21,000), reflecting their proportion of the total Pacific population. Cook Islands Māori (12,000) and Tongan (8,000) also represented a large proportion of the total Pacific smoking population (National Pacific Tobacco Control Service, 2010).

In terms of Pacific ethnic smoking rates for males, a similar pattern is present with Samoan males (11,124) representing over half the total number of Pacific male smokers (National Pacific Tobacco Control Service, 2010). Cook Islands Māori (5,553) and Tongan (5,082) again represent a large proportion of the total Pacific male smoking population (National Pacific Tobacco Control Service, 2010).

These findings demonstrate some marked differences between Pacific ethnic groups, and suggest that targeting interventions to the most populous groups (particularly Samoan, Cook Islands and Tongan) may be more effective in delivering increased benefits to the total Pacific population. However, it is also important not to lose sight of the smaller groups with very high levels of smoking, particularly Tokelauans. Consistent and coordinated action across government, the health sector and Pacific communities, may be useful in trying to reduce the substantial impact of tobacco on the Pacific population.

5.1.3 Smoking and acculturation

Research to date shows that acculturation has a significant influence on the smoking behaviours of different population groups (Bethel & Schenker, 2005; S. Lee et al., 2000; Ma et al., 2004). A growing body of literature describes a trend of immigrant populations with low rates of risk factors migrating to countries where the dominant culture has a much higher rate of risk factors (Bethel & Schenker, 2005). As these migrant populations spend longer in the new culture or environment, their prevalence of risk taking behaviour tends to increase and reflect similar rates to that of the dominant culture.

Intuitively it seems reasonable that the converse would also be true. One of the relatively few studies examining migrant communities with high rates of smoking, and the effect of migrating to a country with a significantly lower prevalence of smoking, was undertaken involving Arab Americans from the Middle East who settled in the United States (Al-Omari & Scheibmeir, 2009). Likewise, a similar study involving Vietnamese and South East Asian migrants to the USA has also been recently completed (Constantine et al., 2010). Findings from these studies support the premise that the level of acculturation and alignment to either the traditional or the dominant culture significantly influences smoking behaviour.

Using questions from the PIF Study, this chapter will empirically investigate the prevalence of smoking in a cohort of Pacific fathers resident in NZ. This chapter also investigates whether smoking prevalence amongst Pacific men is affected by their acculturation status, even after accounting for other confounding factors.

5.2 Methods

5.2.1 Participants

Detailed information about the participants from the PIF cohort and procedures is described earlier in the Phase I explanatory section of this thesis. The reason for selecting only data from the 1-year phase for analysis was that the total number of Pacific fathers (n=766) was the largest of the 3 measurement waves available, and smoking status is very stable for people in the participating age bracket. Therefore, the data from the 1-year phase provided the largest number of responses and data to

analyse and investigate for associations with selected variables including acculturation, and other SES indicators, without the introduction of potential differential attrition bias.

5.2.2 Measurement of smoking status

At the 1-year phase, fathers smoking status was assessed using one specific question from the interview protocol. This question was "On average, how many cigarettes did you smoke yesterday?" For the purpose of this investigation, participant responses to this question were dichotomised into 'current smoker' and 'non-smoker' smoking status groups. Although biochemical confirmation of smoking status was not possible in this study, prior research has established the utility of self-report data as a reliable indicator of smoking status (Patrick et al., 1994; Studts et al., 2006).

5.2.3 Measurement of ethnicity

Ethnicity information for participant fathers in the PIF study is self-reported. Further information about the participants and procedures is described earlier in the Phase I explanatory section of this thesis.

5.2.4 Measurement of acculturation status

Acculturation status was assessed using a modified version of the General Ethnicity Questionnaire (GEQ) (Tsai et al., 2000). Detailed information about the development and assessment of acculturation can be found in section 4.2.4.

5.2.5 Socio-demographic and potential confounding variables

Additional variables describing socio-demographic and other circumstances of the participating fathers were incorporated in the analysis to provide some background information about the participants in the study, and also because of their known association with smoking behaviour. These variables included age, ethnicity, being NZ born, household income, highest educational qualification, alcohol drinking status, current employment status, and marital status (Bethel & Schenker, 2005; Hill & Liang, 2008; Reed, Wang, Shillington, Clapp, & Lange, 2007; Stanton & Silva, 1993).

5.2.6 Statistical analysis

Statistical analyses were performed using SAS version 9.1 (SAS Institute Inc., Cary, NC, USA) and Stata version 10.0 (StataCorp, College Station, TX, USA) software and α=0.05 was used to define statistical significance, except where otherwise explicitly stated. Categorical variable comparisons between groups were made using Fisher's exact test. Statistical model development followed that advocated by Sun and colleagues (1996). Initial bivariable comparisons were employed to compare socio-demographic and potential confounding variables with smoking status using logistic regression models. All variables with a p-value<0.20 were then included in a saturated multivariable logistic regression model. A manual backward selection process was then conducted sequentially eliminating the least significant variable (using Wald's statistic) until all remaining included variables had an overall p-value<0.05. Once derived, the goodness-of-fit of this most parsimonious multivariable main effects model was checked using the Hosmer-Lemeshow test. This hierarchical model development approach,

advocated in previous research by Sun and colleagues (1996), was employed to select the variables of most significance for multivariable analysis, and to reduce the chance of variable rejection due to confounding.

5.3 Results

Overall, 766 Pacific fathers were included in this analysis. Most, 761 (99%) of fathers interviewed at one year were the biological fathers of the children with five adoptive or stepfathers. As in the previous chapter, for ease of exposition, we shall refer to this group collectively as 'fathers' hereafter. Most, 727 (95%) of fathers were living with the biological mother of the child in a married (77%) or de facto (18%) relationship. The mean age was 32.1 years (SD 7.3 years). The range was 17 to 65 years. A summary of the frequencies and percentages of socio-demographic variables at the 1-year measurement wave for participants in the study is presented in Table 4.1 in the previous chapter.

5.3.1 Prevalence of smoking

In the overall analysis, 308 (40.3%; 95% CI: 36.8%, 43.9%) Pacific fathers self-identified themselves as current smokers.

5.3.2 Prevalence of smoking by ethnicity

Table 5.1 displays smoking amongst Pacific fathers by ethnic sub-group. 166 (37.9%) Samoan fathers, 91 (45.7%) Tongan fathers, 31 (42.5%) Cook Islands fathers, and 20 (37.0%) Pacific fathers of other ethnicity self-identified themselves as current smokers. There was no significant difference between ethnicities (p-value=0.28).

Table 5.1: Prevalence of smoking amongst Pacific fathers by ethnicity.

	Non-smoking		Smoking			
Ethnicity	n	(%)	n	(%)	OR	(95% CI)*
Samoan	272	(62.1)	166	(37.9)	1.00	reference
Cook Island Maori	42	(57.5)	31	(42.5)	1.40	(1.00,1.94)
Tongan	108	(54.3)	91	(45.7)	1.20	(0.73,2.00)
Other Pacific	34	(63.0)	20	(37.0)	0.96	(0.54,1.73)

*p-value=0.28

5.3.3 Prevalence of smoking by acculturation status

Smoking status was compared with acculturation to characterise the number of smokers and non-smokers for each of the four acculturation categories (see Table 5.2). These categories reflect an individual's position on the bi-directional scale concerning affinity with both NZ and Pacific cultures. Smoking rates were found to be significantly different between the acculturation groups (p-value=0.008). Marginalists and assimilationists (both groups having lower Pacific cultural identification) had higher smoking rates of 48.3% and 44.9% respectively, whereas integrators and separators (both groups having higher Pacific cultural identification) had lower smoking rates of 31.2% and 35.3% respectively.

Table 5.2: Prevalence of smoking amongst Pacific fathers by acculturation status.

	Non-smoking		Smoking			
Acculturation status	n	(%)	n	(%)	OR	(95% CI)*
Assimilationist	145	(55.1)	118	(44.9)	1.80	(1.12,2.88)
Separationalist	172	(64.7)	94	(35.3)	1.21	(0.75,1.94)
Marginalist	61	(51.7)	57	(48.3)	2.06	(1.20,3.55)
Integrator	75	(68.8)	34	(31.2)	1.00	reference

**p-value=0.008*

5.3.4 Bivariable and multivariable analysis of smoking

Table 5.3 presents the ORs and 95% CI for the socio-demographic and covariates used in the bivariable and final most parsimonious multivariable logistic regression analysis of smoking. Initial bivariable analysis highlighted five variables which met the criteria for inclusion in the multivariable analysis (i.e. acculturation status, educational qualifications, current alcohol drinking status, marital status, and years lived in NZ). The subsequent manual backward selection process yielded a final parsimonious multivariable model that included acculturation status (p-value=0.008), educational qualifications (p-value=0.02) and alcohol drinking status (p-value< 0.001) which were

all significantly associated with smoking. When examining these variables further, being an assimilationist, having no formal qualifications, and drinking alcohol more than once a month, all had increased ORs for being a smoker. There was no reason to reject the adequacy of the final multivariable model (Hosmer-Lemeshow p-value=0.07).

Relating acculturation status against years in NZ and birthplace revealed significant relationships (both p-values<0.001). Cross-tabulations revealed that 94.5% of integrators and 80.8% of separators had spent more than 5 years in NZ compared with 75.4% of marginalists and 95.1% of assimilationists. Similarly, 21.3% of integrators and 0.8% of separators were born in NZ compared with 1.7% of marginalists and 46.1% of assimilationists.

Table 5.3: Bivariable and multivariable analysis of smoking and sociodemographic covariates amongst Pacific fathers.

	Non-smoking		Smoking		Crude analysis		Adjusted analysis	
Variable	n	(%)	n	(%)	OR	(95% CI)	OR	(95% CI)
Acculturation Status								
Assimilationist	145	(55.1)	118	(44.9)	1.80	(1.12,2.88)	1.69	(1.02,2.77)
Separationalist	172	(64.7)	94	(35.3)	1.21	(0.75,1.94)	1.05	(0.63,1.73)
Marginalist	61	(51.7)	57	(48.3)	2.06	(1.20,3.55)	1.50	(0.85,2.67)
Integrator	75	(68.8)	34	(31.2)	1.00	reference	1.00	reference
Age at baseline (years)								
<30	166	(56.3)	129	(43.7)	1.00	reference		
30-40	223	(61.6)	139	(38.4)	0.80	(0.59,1.10)		
≥40	66	(62.3)	40	(37.7)	0.78	(0.50,1.22)		
Ethnicity								
Samoan	272	(62.1)	166	(37.9)	1.00	reference		
Tongan	108	(54.3)	91	(45.7)	1.40	(1.00,1.94)		
Cook Islands	42	(57.5)	31	(42.5)	1.20	(0.73,2.00)		
Other Pacific	34	(63.0)	20	(37.0)	0.96	(0.54,1.73)		
Birthplace								
New Zealand	370	(60.6)	241	(39.4)	1.00	reference		
Overseas	85	(55.9)	67	(44.1)	1.21	(0.85,1.73)		
Years in New Zealand								
0-4 years	62	(62.6)	37	(37.4)	0.78	(0.50,1.22)		
5-10 years	116	(66.7)	58	(33.3)	0.65	(0.45,0.94)		
>10 years	205	(57.3)	153	(42.7)	1.00	reference		
Highest qualification								
No formal qualification	260	(56.6)	199	(43.4)	1.44	(0.92,2.26)	1.65	(1.00,2.72)
Secondary	128	(63.4)	74	(36.6)	1.09	(0.66,1.80)	0.97	(0.57,1.65)
Post-secondary	76	(65.3)	35	(34.7)	1.00	reference	1.00	reference
Household Income								
$0-$20,000	111	(55.5)	89	(44.5)	1.12	(0.68,1.85)		
$20,001-$40,000	283	(62.2)	172	(37.8)	0.85	(0.54,1.34)		
>$40,000	53	(58.8)	38	(41.2)	1.00	reference		
Unknown	9	(50.0)	9	(50.0)	1.40	(0.51,3.84)		
Marital Status								
Married/De Facto	441	(60.2)	292	(39.8)	1.00	reference		
Separated/Single	15	(48.4)	16	(51.6)	1.61	(0.78,3.31)		
Alcohol drinking status								
Abstainer	370	(68.5)	170	(31.5)	1.00	reference	1.00	reference
Monthly or less	76	(39.2)	118	(60.8)	3.38	(2.40,4.75)	3.19	(2.25,4.53)
More than once a month	10	(33.3)	20	(66.7)	4.35	(1.99,9.50)	3.96	(1.79,8.76)
Employment status								
Unemployed	57	(54.3)	48	(45.7)	1.30	(0.86,1.98)		
Full-time employment	373	(60.7)	241	(39.3)	1.00	reference		
Part-time employment	14	(53.8)	12	(46.2)	1.33	(0.60,2.92)		
Full time parent/Student	12	(63.2)	7	(36.8)	0.90	(0.35,2.33)		
GHQ – Mental health								
Potential indication	11	(61.1)	7	(38.9)	0.94	(0.36,2.46)		
No indication	445	(59.7)	300	(40.3)	1.00	reference		

5.4. Discussion

5.4.1 Prevalence of smoking

Analysis of the results identified 40.3% of Pacific fathers as current smokers in the first year after the birth of their child. This is noticeably higher than findings from the 2008 NZ Tobacco Trends Report which indicated that currently 35% of Pacific males are smokers (Ministry of Health, 2009b). This alarming prevalence of smoking within our father cohort is of concern to the function and well-being of the fathers themselves, as well as the overall family unit. As mentioned previously, smoking fathers are a potential major contributor to the ETS exposure within a household; especially with their higher smoking prevalence and their generally higher cigarette consumption. Moreover, prior research amongst a sample of NZ parents, including Pacific parents, indicated that these participants perceived parental smoking as an important influence on smoking uptake in children. Additionally, the findings suggest that strategies to prevent smoking in children should include supporting parents to quit or make non-smoking the norm for themselves and their families (Glover et al., 2006).

5.4.2 Smoking and ethnicity

In terms of ethnic sub-groups, Cook Islands fathers (42.5%) and Tongan fathers (45.7%) had non-significantly higher rates of smoking compared to the reference group of Samoan fathers. Both the Cook Islands and Tongan ethnic groups combined account for almost 40% of the Pacific fathers within the cohort that are smokers. These results reflect findings from other smoking prevalence surveys, which report Cook Islands Māori (5,553) and Tongan (5,082) males comprising a large proportion of the total

Pacific male smoking population in the 2006 NZ Census (National Pacific Tobacco Control Service, 2010).

5.4.3 Smoking and acculturation status

The acculturation status of our cohort of Pacific fathers was significantly associated with smoking status, even after adjusting for significant confounders, with results indicating that fathers who are more aligned with traditional culture (separators and integrators) are less likely to be smokers than fathers who have less alignment (assimilationists and marginalists) (see Table 5.3).

Data from NZ (Wong, Ameratunga, Garrett, Robinson, & Watson, 2008) and internationally show that individuals from cultures with low smoking prevalence are more likely to smoke as they become more assimilated with the dominant culture or more western culture (Bethel & Schenker, 2005; Ma et al., 2004). Conversely, smoking prevalence is reportedly lowest amongst those individuals who remain more strongly aligned to their traditional culture. Emigrants from nations with higher smoking prevalence than the country they now reside in have been shown to have lower smoking rates than their native countries. This may reflect the state of tobacco control in different countries as is likely to be the case with NZ and Pacific nations. However our data suggest that acculturation status is also related to the likelihood of smoking.

One explanation for this phenomenon may be that Pacific perspectives of health readily acknowledge the influence of traditional cultural practices and beliefs on the

overall health of individuals. This holistic perspective of health utilized by Pacific peoples, proposes that all aspects of a person's life – spiritual, physical, cultural and family – are important for good health and well-being (Ministry of Health, 2005). As a result, individuals who are more strongly aligned to their traditional culture and practices may be expected to have better health outcomes.

Conversely, individuals who are not strongly aligned to their traditional culture, may tend to be more vulnerable to poor lifestyle choices such as smoking and alcohol drinking (Borrows et al., 2010). However, the relationship between acculturation and smoking prevalence is unlikely to be 'clear cut' and the high smoking rates in Pacific countries suggest that strong affinity with traditional culture is not, singularly, a protective factor against smoking. Without regulation and effective tobacco control interventions, smoking in Pacific countries will remain high. In addition, our results suggest that cultural targeting may be one method for successfully reducing smoking rates. This could prove most effective alongside other strategies such as reducing the availability of tobacco, eliminating cigarette displays, and implementing plain packaging on cigarettes, which have all been proposed by a NZ government select committee inquiry into the tobacco industry (Māori Affairs Committee, 2010).

5.4.4 Smoking and other significant risk factors

A significant relationship between educational status and smoking status was reported, with those who have a tertiary qualification being less likely to smoke compared to those without formal qualifications. This finding is consistent with data

from international research in which educational attainment has been associated consistently with adult smoking prevalence (Gilman et al., 2008; National Center for Health Statistics, 2004; Siahpush, Heller, & Singh, 2005). Similarly, information from NZ based studies indicates that male smoking prevalence is highest among individuals with lower educational qualifications (Hill, Blakely, Fawcett, & Howden-Chapman, 2005; Stanton & Silva, 1993). Although this trend is of some concern, it is unclear whether educational status is a strong predictor of smoking uptake and behaviour, or whether it is a marker of broader socioeconomic disadvantage which must be addressed in order to influence smoking behaviour.

Finally, alcohol drinking status was also found to significantly affect the likelihood of being a smoker, with those who were regular drinkers having an increased likelihood of being smokers. This finding is also consistent with international literature which has reported that individuals who are alcohol drinkers are more likely to be smokers, when compared with non-drinkers (Little, 2000; Reed et al., 2007; Zimmerman, Warheit, & Ulbrich, 1990). The low overall rate of alcohol use found in this study was surprising, with 70% of the cohort reporting that they abstained from alcohol. This is significantly larger than the proportion of Pacific male abstainers (39%) in the 2002 Pacific Drugs and Alcohol Consumption Survey conducted by Huakau et al. (2005), or the proportion of general NZ male non-drinkers (12%) in the 2000 National Alcohol Survey (Habgood, Casswell, Pledger, & Bhatta, 2001). This finding raises the possibility of under-reporting of alcohol use in this cohort, with prior research amongst Pacific people in NZ identifying cultural stigmas towards drinking behaviours and acknowledgement of

alcohol use (Alcohol Advisory Council of New Zealand, 2007). This unease may result in reluctance amongst this cohort to divulge their drinking status, especially considering their responsibilities as fathers of young children.

5.4.5 Strengths and limitations of the research

This is the first study to describe the relationship between acculturation and smoking amongst a cohort of Pacific fathers in NZ, and the findings support the literature regarding smoking amongst different acculturation groups. Unlike previous research which relies on other proxy methods for acculturation assessment, such as time spent in a country, or country of birth, this research utilises a tool designed specifically for measuring or assessing acculturation (Berry, 2003; Borrows et al., 2010; Tsai et al., 2000).

Acculturation is a complex concept which has become of interest in public health. However, most of the acculturation measures commonly utilised employ either proxy measures or unidimensional scales which lack precision and suitability (Thomson & Hoffman-Goetz, 2009). The strength and suitability of the acculturation measure utilised in this study is highlighted when comparing acculturation status with years lived in NZ, and birthplace; two commonly used proxy measures of acculturation (Schluter et al., 2011). These results emphasize that birthplace or time spent in a place does not necessarily dictate the cultural alignment of an individual. There are underlying factors that are culpable, and an appropriate theoretically grounded acculturation measure is better designed to epidemiologically capture and investigate this dimension. This acculturation tool has been modified and validated to make it

appropriate for use with NZ and Pacific participants (Borrows et al., 2010), providing a more accurate and reliable method for assessing acculturation within minority or migrant sub-populations in NZ. The PIF study also provides information from the first, large, and culturally diverse sample of Pacific fathers within NZ.

Despite these strengths, a limitation of the study is prevalence rates of smoking are based on self-reported information, and are not validated by any biochemical tests. However, self-reported data on current smoking status can have high validity, and this has been demonstrated in previous research regarding the prevalence of smoking measured using self-report data (Patrick et al., 1994; Studts et al., 2006).

5.4.6 Implications of the research

Reported smoking prevalence rates amongst males in Pacific countries are much higher than our cohort, with some Pacific countries reporting over 50% of the male population being smokers. The timeliness and accuracy of this information is not without question. However the higher rates of smoking in Pacific Island nations are likely to reflect the lack of legislation and regulation concerning the sale and purchase of tobacco products, an attitude of societal permissiveness towards smoking, and the widespread availability of tobacco products in most Pacific countries.

These findings support the view that stronger legislation and regulations around smoking and support for smoking cessation in Pacific countries are critical to aid the reduction in smoking prevalence and associated personal and societal harm. Although Pacific nations have signed and ratified the FCTC large gaps remain in implementation

of the articles of the treaty. National and international investment and commitment is needed to implement and sustain effective tobacco control measures. Collaboration between Pacific nations, and countries such as NZ and Australia, will also help ensure implementation of comprehensive policy and tobacco control practice.

While prevalence rates of smoking are markedly lower amongst Pacific males in NZ compared to their Island equivalents – they remain unacceptably high – and are inconsistent with the smokefree aspirations of a number of NZ health and governmental organisations. The goal of a tobacco free NZ by the year 2020 was the vision proposed by the Smokefree Coalition of New Zealand, wherein future generations would be free from exposure to tobacco and enjoy smokefree lives (Smokefree Coalition of New Zealand, 2009). Following recommendations from a 2010 Māori health select committee inquiry into tobacco and the impact on Māori health (Māori Affairs Committee, 2010), the NZ Government has committed to a policy of achieving a Smokefree New Zealand (smoking prevalence rate of <5%) by the year 2025 .

One of the key rationales for making this vision an urgent priority is that almost all smokers start smoking before the age of 18, with two thirds regretting that decision and wanting to quit. This is especially relevant for Pacific communities which in comparison to the total NZ population, constitute a predominantly youthful populace. For example, in 2006 almost 38% of the Pacific population were under the age of 15

years, compared with 22% of the total NZ population (Statistics New Zealand and Ministry of Pacific Island Affairs, 2010).

Another important motivation for prioritising the achievement of a smokefree NZ by 2020 is that eradicating smoking is the single most important and attainable policy action to reduce inequalities in mortality for Māori and Pacific peoples (Smokefree Coalition of New Zealand, 2009). This evidence provides a compelling justification for creating a smokefree nation in the near future, in order to create a national identity that protects children and young people from tobacco-related harm.

5.4.7 Summary

Smoking rates for Pacific fathers in this study were relatively high compared to results from other tobacco surveys (Ministry of Health, 2010). Moreover, fathers who had lower Pacific cultural alignment, no formal qualifications, and drank alcohol at least once a month, were significantly more likely to be a current smoker, than their more educated, alcohol abstaining, counterparts. Pacific fathers who had stronger alignment or affinity with their traditional culture, had a decreased likelihood of being a current smoker. Therefore, strategies which maintain, enhance and celebrate fathers' Pacific cultural identity within the NZ context, alongside comprehensive tobacco control strategies, may help to further reduce smoking rates among Pacific people.

Chapter 6: The relationship between father involvement and child behaviour outcomes amongst Pacific fathers and their children, and the effect of acculturation

6.1 Introduction

This chapter presents findings concerning the relationship between father involvement and child behaviour outcomes amongst Pacific fathers and children within the PIF Study. These findings are being prepared for submission and peer-review publication in *Tautolo E, Schluter PJ, Paterson J. Father involvement and child behaviour outcomes amongst a cohort of Pacific Island fathers. Australian & NZ Journal of Public Health.* The analysis examines the level of father involvement amongst the cohort of Pacific fathers in the PIF Study. In addition, the analysis provides a brief profile of the children within the PIF Study, and characterises the child behaviour scores for each child. These scores are then compared with the father involvement scores to determine the existence of any significant relationships between the level of father involvement, and resultant behaviour outcomes amongst their children. Lastly, important covariates for both father involvement and child behaviour are analysed to determine any significant associations.

During the 1970s, fathers as active involved parents began to attract the attention of social scientists (Lamb, 1975). This interest was in contrast to research about fathers conducted in the prior decades which, for the most part, focused on the consequences of father absence upon children. The refocused interest on fathers as active parents

increased dramatically in the ensuing years with considerable attention given to father involvement in direct child-rearing activities (Hofferth, Pleck, Stueve, Bianchi, & Sayer, 2002). Several factors have contributed to this increased interest in fathers and fatherhood, including changing societal conceptions of parental roles, increased maternal employment, shifts in the demographic profile of modern families, policy debates over the well-being of children, and a growing body of literature outlining the impact of father involvement on child development (Lamb, 2004).

Accompanying this increased interest has been an expanding collection of research literature on fathers and their involvement in raising their children (Cabrera et al., 2000; Day & Lamb, 2004; Tamis-LeMonda, 2002). One of the key outcomes of increased father involvement is less negative child behaviour. Other outcomes include positive effects on cognitive development, social development, and physical health (Flouri, 2005; Teitler, 2001). Each of these areas will be discussed further in the following sections, as well as the concept of fatherhood and father involvement from a Pacific perspective.

6.1.1 Father involvement

One of the earliest and most coherent conceptualizations of father involvement to emerge from research about fathering, was the model proposed by Lamb et al. (1987). This model conceptualized father involvement as consisting of three distinct categories: (a) engagement (parent interacting with child in one-on-one activity such as playing, feeding), (b) accessibility (parent is physically and psychologically available

to child), and (c) responsibility (parent assumes responsibility for welfare and care of child such as making childcare arrangements, knowing when the child needs to go to the doctor).

Although the Lamb et al. (1987) conceptualization is useful and has served as the basis for much of the research on father involvement, it has not escaped criticism. Several researchers, including Hawkins, Palkovitz and others have argued that research on fatherhood conducted during the past 30 years has conceptualized paternal involvement as consisting of temporal and readily observable events (Hawkins et al., 2002; Hawkins & Palkovitz, 1999). These scholars argue that an overdependence on the Lamb et al. (1987) conceptualization of father involvement has led to the limited, more uni-dimensional construct that is prevalent in the research literature.

Moreover, in their critique of this approach to conceptualizing and measuring father involvement, Hawkins and Palkovitz (1999) argue that paternal involvement is a multidimensional construct that includes affective, cognitive, and ethical components as well as the observable behavioural components which are often studied in fatherhood research. Consequently, the investigation of father involvement in this thesis utilises the Inventory of Father Involvement (IFI) scale, a measure designed by Hawkins et al. (2002) with a more cognizant appreciation of the multidimensional nature of father involvement. More detailed information about the measure is provided in the methods section of this chapter.

While the broadening definition of father involvement is timely, the expansion of this construct poses several challenges for researchers. Most notable among these is the challenge of developing reliable and valid measures of father involvement that endorse the multiple dimensions that constitute these more recent conceptualizations (Day & Lamb, 2004; Hawkins et al., 2002; Palkovitz, 2002). It has been challenging to balance the need for researchers to develop father involvement measures of a manageable length and/or format, without being cumbersome and prohibitive for participants. Many researchers such as Hawkins et al. (2002) have addressed these challenges by attempting to develop relatively brief, global measures of father involvement that adequately reflect the complexity of this construct. However, these attempts may still require further development in order to capture the range of behaviours that reflect the diversity which exists in how men approach their parenting roles (Palkovitz, 2002).

6.1.2 Pacific father involvement

A lack of empirical studies exists concerning parenting attitudes, practices, and styles among different cultural groups in NZ (Marshall, 2005). While research on Pacific parents in NZ is limited, findings have been inconsistent. Focus-group research by Abel et al. (2001) found that Pacific fathers play an important support role during the antenatal period, but took more of a background role compared to female relatives postpartum. Research from Iusitini et al. (2011) investigated the status of both nurturing and harsh disciplinary practices among Pacific fathers towards their child at 12 months of age. Findings revealed that a majority of Pacific fathers never or rarely

used harsh discipline with their 1-year old child, and hitting with an object was extremely rare. Nurturance, which is a scale that assesses the provision of a positive, loving atmosphere within parent-child relationships through parental expressions of affection and praise (e.g., hugs, verbal statements of love) and instrumental acts and shared activities (e.g., playing games, helping) (Locke, 2002), was also examined. Levels of nurturance amongst Pacific fathers were mixed, with playing and praise being common, but provision and reading of books being relatively uncommon. Multivariable logistic regression showed that relatively low nurturance scores were associated with cultural separation, less formal education, and non-partnered marital status (Iusitini et al., 2011). Relatively high harsh discipline scores were associated with partnered marital status, gambling, and harmful alcohol consumption. Relatively low harsh discipline scores were associated with Tongan ethnicity and cultural maintenance (Iusitini et al., 2011).

These results suggest culture has a mixed positive and negative influence, with low levels of harsh discipline and low levels of nurturance being associated with cultural maintenance. Lamb & Tamis-LeMonda (2004) have also identified cultural attitudes and ideologies as important determinants of father involvement, as they shape family types, attitudes and beliefs about gender and parenting, and paternal roles (Lamb & Tamis-LeMonda, 2004). However, further investigation is needed to understand the underlying interactions between culture and parenting.

Key outcomes of father involvement

Examining the relationship between father involvement and child behavioural outcomes has highlighted several areas of child development that are significantly affected by levels of father involvement.

6.1.3 Cognitive development

In terms of cognitive development, school aged children of involved fathers are often better academic achievers (Nord, 2001). They are more likely to have higher grade point averages, get better achievement test scores, perform a year above their expected age level on academic tests, obtain higher scores on reading achievement, or learn more and perform better in school (Howard, Lefever, Borkowski, & Whitman, 2006; McBride, Schoppe-Sullivan, & Ho, 2005). In addition, children of involved fathers are more likely to enjoy school, have positive attitudes toward school, and participate in extracurricular activities (Flouri, 2005; Flouri, Buchanan, & Bream, 2002). Similarly, Flouri & Buchanan (2004) found that father and mother involvement at age 7 years independently predicted educational attainment by age 20 years for both sons and daughters. This correlation indicates that early father involvement can be another protective factor in counteracting risk conditions that might lead to later low attainment levels.

Pertinent to cognitive development of Pacific children is their participation in early childhood education programmes. Early childhood education programmes have been highlighted by the Ministry of Social Development (2006) as a potential marker of

achievement in later education settings, such as primary school and beyond. Further research findings from the Ministry of Social Development (2007), indicate that Pacific primary school entrants have the lowest prior participation in early childhood education services, with 84% in 2006, compared to 90% of Māori entrants and 98% of European entrants. However, Pacific children with mothers at a higher education level are more likely to participate in early childhood education. This may highlight the importance of parental involvement and engagement in influencing the cognitive development of their children.

6.1.4 Social development

Father involvement is positively correlated with children's overall social competence, social initiative, social maturity, and capacity for relatedness with others (Stolz, Barber, & Olsen, 2005). This impact begins early in child development. For example, Kato et al. (2002) found a direct association between men's participation in childcare and children's prosocial development among three year olds. Children of involved fathers are more likely to have positive peer relations and be popular and well liked. Their peer relations are typified by less negativity, less aggression, less conflict, more reciprocity, more generosity, and more positive friendship qualities (Hooven, Gottman, & Katz, 1995; Lieberman, 1999).

Although there is scant information available regarding the impact of Pacific father involvement on the social development of their children, a report on Pacific child health and well-being in NZ specifically outlines parental and caregiver behaviours as

the most significant protective factor for infants and young children (Ministry of Health, 2008a). Furthermore, the report suggests that parents are often the key decision makers around whether their children are exposed to or protected from adverse risk factors. As children begin to make their own decisions about diet, physical activity and lifestyle it is often within parameters set and behaviours modelled by their parents (Ministry of Health, 2008a).

Father involvement has been reported to reduce the likelihood of children engaging in delinquent behaviour, and is associated with less substance abuse among adolescents, and less drinking (Coombs & Landsverk, 1988; Harris, Furstenberg, & Marmer, 1998). Furthermore, a father's positive involvement (as measured by the amount and type of contact) is related to children having fewer behavioural problems (Howard et al., 2006). For example, children who feel close to, and share activities with their fathers, display less antisocial behaviour and are less depressed and withdrawn. Moreover, research from Flouri (2005) found that father involvement is also associated with decreased occurrence of child behaviour problems, conduct disorder, and hyperactivity. In addition, father involvement provides a buffering effect for children, which protects them from extreme victimization.

Research undertaken by Paterson et al. (In press) examined child outcomes amongst Pacific children within the PIF Study. The findings indicated that 15.6% of 2-years old Pacific children were in the clinical range for behaviour problems using responses from the CBCL, and 14% were in the borderline range for behaviour problems. The research

also indicated clear cross-ethnicity differences in CBCL scores, illustrating the diversity in outcomes for the Pacific population in NZ. Such results suggest that preschool behaviour problems may vary within specific cultural settings, and underscores the need for in-depth research to explore these unique contexts.

6.1.5 Physical health

Father involvement can indirectly influence the physical health and well-being of their children. Research from Burke et al. (2001) found that obesity amongst fathers is associated with a four-fold increase in the risk of obesity for their sons and daughters at age 18 years. More active toddlers were more likely to have a father with a lower body mass index (BMI) than less active children (Finn, Johannsen, & Specker, 2002). Similarly, obese children are more likely to live in father absent homes than are non-obese children (Strauss & Knight, 1999). These findings compliment the large amount of research that indicates fathers' inactivity is a strong predictor of children's inactivity (Fogelholm, Nuutinen, Pasanen, Myohanen, & Saatela, 1999; Trost, Kerr, Ward, & Pate, 2001).

Results from national surveys in NZ reveal that approximately 55-60% of Pacific children are overweight or obese (Ministry of Health, 2003, 2008c). This high prevalence is alarming, considering the high fertility rate and relatively young age structure of the Pacific population. However, findings from a study of nutrition and physical activity amongst Pacific children indicate that family based interventions, involving fathers and other family members, may be considerably more successful in

addressing the issue of nutrition and physical activity amongst Pacific children in New Zealand (Oliver, Schluter, Rush, Schofield, & Paterson, 2011).

6.1.6 Child behaviour

Father involvement can have an important impact on behavioural problems amongst children (Javo et al., 2004). The WHO (2001) estimates a worldwide prevalence of behavioural problems in children and adolescents of approximately 20%. The risk factors associated with early child behaviour problems are viewed as a critical area of empirical enquiry, both in its own right, and as a prerequisite for the development of effective preventions to improve health in children and adults (Robinson et al., 2008).

Migration is assumed to be a stress inducing process leading to heightened risk for the development of behavioural problems for children and their parents (Bhurgra & Jones, 2001; Halphern, 1993; Karlsen & Nazroo, 2002). Berry (1990) suggests that migration to a new country may be accompanied by acculturation stress, leading to increased levels of anxiety, depression, and feelings of alienation which may lead to high child problem behaviour levels, both internalizing and externalizing. These effects were found in Turkish children living in the Netherlands (Benji-Arlson, Verhulst, Ende, & van der Erol, 1997; Janssen et al., 2004; Murad, Joung, Lenthe, Benji-Arslan, & Crijnen, 2004).

Few epidemiological studies have focused on the prevalence and correlates of behavioural problems in early childhood (Bordin et al., 2009; Campbell, 1995; Erol et

al., 2005). There is considerable variability of instrumentation and case definition but there is agreement that approximately 10–15% of preschool children show mild to moderate problems (Barkman & Schulte-Markwort, 2005). Results from studies using the CBCL (Achenbach & Rescorla, 2000) in early childhood fell within this range for total scores in the clinical range, with a prevalence of 11.9% of Turkish children (Erol et al., 2005), 7.9% of Finnish children (Ujas et al., 1999), 7.8% of Dutch children (Koot & Verhulst, 1991), and between 10% and 18% for German children (Barkman & Schulte-Markwort, 2005). In the PIF study cohort, using the CBCL at two years of age, the prevalence of total problems was relatively high at 14.2% in the clinical range (Paterson, Carter, Gao, et al., 2007).

Longitudinal studies have indicated that early childhood problem behaviour is a strong predictor of adolescent antisocial behaviour (Bor, McGee, & Fagan, 2004). Moreover, research into child development and behaviour suggests that early recognition of problems is a valuable guide for the development of successful prevention programmes (Hermanns & Leu, 1998).

As mentioned previously, fathering behaviours or parenting styles have been shown to have an impact on early child behaviour problems, particularly regarding harsh discipline and its association with elevated problem behaviour scores (Bordin et al., 2009; Gershoff, 2002; Javo et al., 2004; Stormshak et al., 2000). Within the Pacific context, some researchers report that parents view physical punishment as acceptable

(Marcus, 1991; Schulz, 1995) and view heavy discipline as necessary because poor behaviour can bring shame on the whole family (Fairbairn-Dunlop, 2001).

A review of the literature by Marshall et al. (2005) concludes that there is no evidence that physical discipline formed a significant part of the traditional pre-European cultural beliefs and parenting practices of Pacific peoples. However, there is some evidence that the effects of colonization, immigration, urbanization, and racism have influenced the use of physical discipline amongst some Pacific peoples. In particular, the teachings of Christian missionaries favoured harsh biblical interpretations that endorsed physical punishment as a disciplinary method, contributing to its widespread adoption and acceptance within some Pacific cultures (Collier, McClure, Collier, Otto, & Polloi, 1999; Duituturaga, 1988; Kavapalu, 1993). Thus there is evidence that some Pacific peoples view physical discipline as a parental duty borne out of love and moral obligation reinforced by religious doctrines such as “spare the rod and spoil the child” (Fairbairn-Dunlop, 2001; Schoeffel et al., 1994). Moreover, the culturally endorsed values of conformity, obedience, deference, and respect for elders are often cited as primary reasons for the use of physical punishment among Pacific peoples (Kavapalu, 1993; Mageo, 1991; Schoeffel et al., 1994).

The stressors and negative life events experienced as a result of Pacific immigration to NZ may have intensified traditional disciplinary practices. Although, among Pacific parents living in NZ, smacking prevalence rates were no different to the wider NZ population (Schluter, Sundborn, Abbott, & Paterson, 2007). It has also been suggested

that the erosion of the extended family and other support systems, economic hardship, racism, and the exposure of children to a cultural emphasis on libertarian values of freedom and choice may induce harsher disciplinary practices among some migrant Pacific parents (Fairbairn-Dunlop, 2001; Schoeffel et al., 1994).

However, two surveys of public attitudes toward physical discipline indicated that Pacific respondents did not hold more positive attitudes toward physical discipline than other ethnic groups (Carswell, 2001; Maxwell, 1993). Interestingly, Carswell found that Pacific (and Māori) peoples were less likely than Pakeha (NZ European) respondents to agree that it was acceptable to physically punish younger children between the ages of 2 years and 5 years (Carswell, 2001). McCallin et al. (2001) and Abel et al. (2001) have described how many NZ-raised Pacific parents have attempted to blend traditional parenting beliefs and practices with Western ones. However, it is unclear whether disciplinary attitudes and practices amongst Pacific parents in NZ differ from those of other ethnic groups.

International research into the relationship between various indices of SES and childhood problem behaviour has produced contradictory findings. A prevalence study of problem behaviours in Dutch preschool children revealed no relationship between socioeconomic status and total problem scores (Koot & Verhulst, 1991). Similarly, Richman et al. (1975), in a longitudinal study of three-year-old children, found no association between single measures of social class and behavioural problems. In contrast, other studies have found consistent associations of childhood behaviour

problems with parental education (Kahn et al., 2005; Sourander, 2001) and low income (Adams, Hillman, & Gaydos, 1994; Blanz, Schmidt, & Esser, 1991; Offord, 1990).

6.1.7 Benefits of father involvement for fathers

Men who are involved fathers feel more self-confident and effective as parents, and feel encouraged to be even more involved (De Luccie, 1996). Lamb (2004) suggests spending time taking care of children provides fathers with opportunities to display affection and to nurture their children. Moreover, research from Eggebean & Knoester (2001) indicates that fathers who are involved in their children's lives are more likely to exhibit greater psychosocial maturity, be more satisfied with their lives, and feel less psychological distress.

In terms of Pacific research, a report by Luketina et al. (2009) about supporting fathers, found that Māori (40.4 hours) and Pacific (39.4 hours) fathers tended to spend the most time with their children, compared to the average of 35.4 hours amongst other ethnic groups. Furthermore, Pacific fathers were reported to be the most interested and also proactive in attending parenting educational courses to learn about being effective parents. These courses were often provided through their churches or community centres. These findings highlight the strong desire amongst Pacific fathers to be involved and support their children and families.

Using standardized measures of child behaviour, and father involvement, this chapter aims to examine the relationship between father involvement and child behaviour

outcomes amongst a cohort of Pacific fathers within the PIF Study at the 6-year timepoint of the child's life. Additionally, important mediating variables for father involvement and child behaviour outcomes will also be examined.

6.2 Methods

6.2.1 Participants

Detailed information about the PIF cohort and procedures is described earlier in the Phase I explanatory section of this thesis. The decision to utilize only the data from the 6-years measurement wave was made primarily because of the hypothesis that father involvement is a predictor of child behavioural outcomes. As father involvement data has only been collected at the 6-years measurement wave of the PIF study, only information from this measurement wave was used for analysis and modelling of the association.

6.2.2 Measurement of father involvement

Hawkins et al. (2002) developed the Inventory of Father Involvement (IFI) measurement scale which was used to analyse father involvement within our study. The original 35-item questionnaire was designed to provide a reliable and valid self-report instrument that captures the breadth and richness of father involvement, yet is short enough for inclusion in large-scale surveys of broader family issues. The IFI measure includes nine dimensions of father involvement, namely discipline and responsibility, mother support, school encouragement, providing, time and talking together, praise and affection, developing talents, reading/homework support, and

attentiveness. Scores for each of the dimensions are derived from a series of questions relevant to each particular component of fathering. Each question is scored using a Likert scale of 0-6, with a score of 0 being very poor and a score of 6 being excellent.

To relieve participant burden, the original IFI measure was shortened for use in the PIF Study to include 5 of the original 9 dimensions which comprise the father involvement measure; school encouragement, mother support, providing, developing talents and future concerns, and attentiveness. In terms of analysis of the IFI measure, scores for father involvement were categorized into quartiles. This was necessary because of the high median scores reported for each of the 5 dimensions of father involvement, as well as the overall involvement score. Information about the reliability and validity of the IFI measure is discussed by Hawkins et al. (2002), with particular regard to the multidimensional nature of the measure, and the relevance of cognitive as well as physical behaviours in trying to understand father involvement.

6.2.3 Measurement of child behaviour

CBCL responses from Pacific fathers were used in this analysis. The CBCL from Achenbach and Rescorla (2000, 2001) is a 120-item questionnaire utilised in the PIF study, and designed to obtain ratings of behavioural/emotional problems by parents or caretakers of children aged between 6 and 18 years of age. The measure includes an overall total problem score, and two composite problem scores, namely internalizing and externalizing. Scores for internalizing behaviour reflect mood disturbance, including anxiety, depression, and social withdrawal, as displayed by the child, whilst

scores for externalizing behaviours reflect conflict with others and violation of social norms. Within the CBCL measure, the score for internalizing behaviour is derived as the sum of scores for 32 questions within three syndromes: *anxious/depressed*, *withdrawn* and *somatic complaints*; and externalizing behaviour scores are derived from 35 questions within two syndromes: *aggression* and *rule breaking*. The CBCL is assessed on a 3-point Likert-type scale: 0=Not true, 1=Somewhat or Sometimes true, and 2=Very true or Often true. Higher scores indicate greater degrees of behavioural and emotional problems.

Extensive information is available about the reliability and validity of the CBCL (Achenbach & Rescorla, 2000, 2001). Although no specific work has been undertaken examining the use of the CBCL amongst Pacific ethnic groups, the validity of the CBCL across various cultures has been well documented (Crijnen et al., 1997, 1999). For the data in this study, internal consistency was tested using Cronbach's α and produced results of 0.82 for internalizing; 0.86 for externalizing, and 0.93 for total problems. These results showed that internal consistency within this cohort was satisfactory for the CBCL and supported the appropriateness of this checklist for use with Pacific populations in NZ. In order to determine clinically relevant cases, using the cut-off values recommended by Achenbach and Rescorla and the results from our sample, the 83rd and 90th percentiles were used to define the borderline and clinical ranges for internalizing, externalizing and the total problem score within our cohort of Pacific children from the PIF Study.

6.2.4 Measurement of ethnicity

Ethnicity information for participant fathers in the PIF study is self-reported. Further information about the participants and procedures is described earlier in the Phase I explanatory section of this thesis.

6.2.5 Measurement of acculturation status

Acculturation status amongst participants was assessed using the General Ethnicity Questionnaire (GEQ) (Tsai et al., 2000), which is a measure based on the widely used concept of *acculturation,* the process of change that groups and individuals undergo when they come into contact with another culture. Detailed information about the PIF cohort and procedures is described earlier in the Phase I explanatory section, as well as Chapter 4 of this thesis. Further information about the acculturation measure can also be found in previous research by Borrows et al. (2010).

6.2.6 Socio-demographic and potential confounding variables

Father reports of ethnicity, paternal age, education level, maternal relationship, weekly household income, relationship to the child, and potential mental health disorder, were also incorporated within this analysis to determine whether there were any significant relationships between these socio-demographic characteristics, father involvement and child behaviour. All socio-demographic and confounder variables included in this analysis were selected due to their identification in previous research as being associated with fathering, child behaviour, or the overall health of Pacific

children (Flouri, 2005; Hill & Liang, 2008; Iusitini et al., 2011; Loureiro, Sanz-de-Galdeano, & Vuri, 2006; Ministry of Health, 2008a).

Alcohol drinking and tobacco smoking measures were also included in the analysis as markers of lifestyle risk factors. In order to measure alcohol consumption, fathers were asked how often they drank alcohol in the past 12 months. To measure tobacco usage, fathers were asked how many cigarettes they had smoked the previous day. These variables were then categorized for analysis into smoking status of yes or no, and alcohol drinking status of abstainer, monthly or less, or more than once a month. The analysis examined any significant associations with both father involvement and child behaviour outcomes.

6.2.7 Statistical analysis

All statistical analyses were performed using SAS version 9.1 (SAS Institute Inc., Cary, NC, USA) and Stata version 10.0 (StataCorp, College Station, TX, USA) software and α=0.05 was used to define statistical significance, except where otherwise explicitly stated. Logistic regression analysis was utilised to determine the significance of the relationship between father involvement and child behaviour outcomes. An analysis was also undertaken comparing CBCL outcomes for children with participating or non-participating fathers at the 6-years measurement wave. For this analysis, maternal reports of CBCL were used as a proxy for all father responses, and then categorised into either the participating or non-participating fathers group for comparison.

Categorical variable comparisons between groups were made using Fisher's exact test. Statistical model development for regression analysis followed methods advocated by Sun et al. (1996). Initial bivariable comparisons were employed to compare socio-demographic and potential confounding variables with father involvement and CBCL using logistic and GEE models, analysing internalising and externalising behaviour indicators simultaneously. From these comparisons, all variables with a p-value<0.20 were then included in further analysis using a saturated multivariable regression model. This model utilized a manual backward selection process to sequentially eliminate the least significant variable (using Wald's statistic), then to re-analyse the model, until all remaining included variables had an overall p-value<0.05. This hierarchical model development approach was deemed the most appropriate approach to select the variables of most significance for multivariable analysis, and to reduce the chance of variable rejection due to confounding (Sun et al., 1996).

6.3 Results

Description of sample and characteristics

As shown in Table 6.1, most, 571 (97%), Pacific fathers interviewed at the 6-years phase were the biological fathers of the child with 20 adoptive or stepfathers. For ease of exposition, we shall refer to this group collectively as 'participating fathers' hereafter. Most, 565 (97%), fathers were living with the biological mother of the child in a married or de facto relationship. The mean age was 38.4 years (SD 7.9 years), and the range was 21 to 71 years.

Information for fathers that did not participate at the 6-years phase was elicited from previous phases in which they had participated. Comparatively, most 392 (99%), fathers who were not interviewed at the 6-years phase were the biological fathers of the child, with 3 adoptive or stepfathers. Again, for ease of exposition, we shall refer to this group collectively as 'non-participating fathers' hereafter. Most, 369 (94%), were living with the biological mother of the child in a married or de facto relationship. The mean age was 37.1 years (SD 7.3 years), and the range was 22 to 70 years.

The results from Table 6.1 display some significant differences between the two groups of fathers, especially in terms of age, ethnicity, and educational qualification. However, overall there is a strong similarity between the two groups, and results from the participating fathers are likely to be representative across all fathers within the PIF study.

Table 6.1: Socio-demographic information for Pacific fathers at the 6-years phase.

Variables	Participating fathers		Non-participating fathers	
	n	%	n	%
Age at baseline (years)				
<30	57	(9.6)	67	(17.0)
30-40	333	(56.4)	217	(55.1)
≥40	201	(34.0)	110	(27.9)
Ethnicity				
Samoan	245	(42.9)	387	(48.6)
Tongan	191	(33.5)	139	(17.4)
Cook Islands	54	(9.5)	117	(14.7)
Other Pacific	81	(14.2)	154	(19.3)
Highest educational qualification				
No formal qualification	215	(45.6)	261	(54.7)
Secondary	70	(14.8)	127	(32.2)
Post-secondary	187	(39.6)	52	(13.2)
Weekly household income				
$0-$500	85	(14.6)	4	(1.1)
$501-$1000	315	(54.0)	281	(74.9)
>$1000	183	(31.4)	90	(24.0)
Relationship to the child				
Birth father	571	(96.6)	392	(99.2)
Adoptive father	10	(1.7)	3	(0.8)
Other	10	(1.7)	-	
Relationship to child's mother				
Married/de facto	565	(96.6)	369	(94.1)
Separated/single	20	(3.4)	23	(5.9)

Comparison profiles for children of participating and non-participating fathers

In a similar fashion, Table 6.2 provides descriptive information about the children of participating fathers and non-participating fathers at the 6-years measurement phase. Both groups have similar profiles with approximately 51% male and 49% female

children. In terms of the number of other children in households, 466 (79%) households with participating fathers had 1 or more children in their home, while 346 (83%) households with non-participating fathers had 1 or more children in their home.

Table 6.2: Socio-demographic information of children at the 6-years phase.

	Children of participating fathers		Children of non-participating fathers	
	n	%	n	%
Gender				
Male	301	(50.9)	417	(51.7)
Female	290	(49.1)	390	(48.3)
Multiplicity				
Single	580	(96.0)	807	(100)
Twin	11	(4.0)	0	(0)
No. of other children in home				
0	29	(4.9)	25	(6.0)
1-2	240	(40.7)	202	(48.7)
3-4	226	(38.3)	144	(34.7)
5 or more	95	(16.1)	44	(10.6)

6.3.1 Child behaviour

Table 6.3 displays the CBCL scores for children of participating fathers at the 6-years phase, with specific focus on the summary scales of internalizing, externalizing, and overall behaviour. The results yielded 73 (12.4%) clinical cases of internalizing problem behaviour and 80 (13.5%) clinical cases of externalizing problem behaviour amongst the children. Additionally, there were 50 (8.5%) cases of borderline internalizing problem behaviour and 70 (11.8%) cases of borderline externalizing problem behaviour amongst the children in the study.

Table 6.3: Participating father reports of CBCL scores in the clinical and borderline range at the 6-years measurement wave (n=591).

	Clinical cases			Borderline Cases		
Summary Scale	*n*	(%)	95% CI	*n*	(%)	95% CI
Internalizing behaviour	73	(12.4)	(9.7,15.0)	50	(8.5)	(6.2,10.7)
Externalizing behaviour	80	(13.5)	(10.8,16.3)	70	(11.8)	(9.2,14.5)

Table 6.4 displays the number of children with normal or problem behaviour scores at the 6-years phase. In order to classify CBCL scores into either normal or problem behaviour categories, children were sorted into 2 groups; those with either normal or borderline CBCL scores, and those with clinical CBCL scores. There were 476 (80.5%) children that had no problem behaviour indications, 35 (5.9%) children with internalising problem behaviour only, 42 (7.1%) children with externalising problem behaviour only, and 38 (6.4%) children with both internalising and externalising behaviour problems.

Table 6.4: Number of children with either normal or problem CBCL scores at the 6-years measurement wave.

	Normal/Borderline vs. Clinical		Normal vs. Clinical/Borderline	
	n	(%)	n	(%)
No problem behaviour indications	476	(80.5)	401	(67.9)
Internalising problem behaviour only	35	(5.9)	40	(6.8)
Externalising problem behaviour only	42	(7.1)	67	(11.3)
Both Internalising & Externalising	38	(6.4)	83	(14.0)

For comparison, children were also categorised by those with normal CBCL scores, and those with either borderline or clinical CBCL scores. Using this categorisation, there were 401 (67.9%) children that had no problem behaviour indications, 40 (6.8%) children with internalising problem behaviour only, 67 (11.3%) children with externalising problem behaviour only, and 83 (14.0%) children with both internalising and externalising behaviour problems. Concordance between CBCL responses from fathers and mothers for each child that participated at the 6-years measurement phase was measured using the κ statistic. Using Landis and Koch's characterisation, (Landis & Koch, 1977) there was poor agreement between CBCL responses for internalising and externalising behaviour (κ: 0.08, and 0.18, respectively) between any pair of parents.

6.3.2 Father involvement

Table 6.5 shows the median and the 25th percentile (Q1) and 75th percentile (Q3) scores for father involvement amongst the cohort of Pacific fathers. The results display a score for each of the five individual dimensions of father involvement, as well as the overall global father involvement score. Overall the scores were very high amongst the cohort, with median involvement scores of 6 out of 6 (6 being the maximum score – most involved) for each dimension, and reasonably high range scores respectively. This indicates a ceiling effect with data highly skewed towards the upper range scores.

Table 6.5: Median and interquartile range scores for father involvement amongst participating fathers.

Dimensions	Median	(Q1,Q3)
School encouragement	6.0	(5.4, 6.0)
Mother support	6.0	(5.6, 6.0)
Providing	6.0	(6.0, 6.0)
Developing talents and future concerns	6.0	(5.4, 6.0)
Attentiveness	6.0	(5.0, 6.0)
*Overall Involvement Score**	5.9	(5.5, 6.0)

* Overall involvement score was derived from the average of all 5 dimensions

6.3.3 Father involvement and child behaviour

In order to examine and consider the relationship between father involvement and both internalizing and externalizing behaviour outcomes, the father involvement scores of participating fathers were categorized into quartiles for analysis: Quartile 1 or "Lowest" (≤5.40), Quartile 2 or "Med-Low" (≤5.77), Quartile 3 or "Med-High" (≤5.96), and Quartile 4 or "Highest" (≤6.00). This information is presented in Table 6.6.

Table 6.6: Logistic regression analysis of the relationship between father involvement and child behaviour.

	Internalising behaviour		Externalizing behaviour	
Father Involvement	OR	95% C.I.	OR	95% C.I.
Lowest	2.55	(1.48, 4.41)	4.38	(2.56, 7.48)
Med-Low	2.29	(1.32, 3.97)	3.40	(1.98, 5.86)
Med-High	2.04	(1.15, 3.62)	3.58	(2.06, 6.23)
Highest	1.00	reference	1.00	reference
p-value	<0.01		<0.0001	

The crude analysis using logistic regression demonstrated a significant relationship between father involvement score and child behaviour outcomes.

6.3.4 Father involvement and child behaviour by ethnicity

Previous results from Table 6.6 indicate that father involvement appears to fall into two groups for both externalising and internalising behaviour: Quartile 4 (reference) and Quartiles 1-3. Therefore, for the following analyses in Table 6.7, we dichotomised father involvement and child behaviour into two groups; father involvement high (FI-High), and father involvement otherwise (FI-Otherwise). The information in Table 6.7 indicates the odds of ethnicity and FI groups of internalising and externalising behaviour, treating Samoan, FI-high as the reference. Fathers of Cook Islands and Tongan ethnicity had much greater odds of either internalising or externalising behaviour compared to Samoan fathers, regardless of their FI level. However, there was not a significant interaction (p=0.85) between ethnicity and FI child behaviour.

Table 6.7: Logistic regression analysis of the relationship between father involvement and child behaviour by ethnicity.

		Internalising behaviour				Externalising behaviour		
Ethnicity	N	n	(%)	OR	(95% CI)	n	(%)	OR	(95% CI)
Samoan									
FI-High	136	3	(2.2)	1.0		6	(4.4)	1.0	
FI-Otherwise	108	4	(3.7)	1.6	(0.9, 2.9)	9	(8.3)	2.2	(1.3, 3.9)
Cook Islands									
FI-High	15	1	(6.7)	5.2	(1.8, 15.2)	3	(20.0)	4.0	(1.8, 9.2)
FI-Otherwise	39	7	(18.0)	8.5	(2.7, 26.9)	10	(25.6)	8.9	(3.5, 22.7)
Tongan									
FI-High	67	15	(22.4)	11.3	(5.0, 25.8)	9	(13.4)	3.9	(2.1, 7.3)
FI-Otherwise	124	36	(29.0)	18.5	(7.1, 48.2)	34	(27.4)	8.6	(3.9, 19.0)
Other Pacific									
FI-High	23	0	(0)	1.8	(0.5, 6.0)	0	(0.0)	1.1	(0.4, 2.9)
FI-Otherwise	57	4	(7.0)	2.9	(0.8, 10.6)	6	(10.5)	2.4	(0.8, 7.1)

**NOTE: interaction between FI and ethnicity was non-significant p=0.85 in GEE model.

**NOTE: cells with zero weight [i.e. externalising behaviour, other Pacific, FI-high] were assigned a weight of 0.5 in the GEE analysis.

6.3.5 Father involvement and child behaviour by acculturation

The relationship between father involvement and child behaviour outcomes was examined by acculturation status amongst the cohort of Pacific fathers. For the purpose of the following analyses, we dichotomised father involvement and child behaviour into two groups; father involvement high (FI-High), and father involvement otherwise (FI-Otherwise). This information which is presented in Table 6.8 indicates the odds of acculturation and father involvement groups of internalising and externalising behaviour, treating assimilation, FI-high as the reference. Fathers with lower levels of involvement had greater odds of externalising or internalising behaviour compared to the reference group, regardless of their acculturation status. However, there was not a significant interaction (p=0.51) between acculturation and FI child behaviour.

Table 6.8: Logistic regression analysis of the relationship between father involvement and child behaviour by acculturation.

		Internalising behaviour				Externalising behaviour		
Acculturation	N	n	(%)	OR	(95% CI)	n	(%)	OR	(95% CI)
Assimilationist									
FI-High	48	5	(10.4)	1.0		7	(14.6)	1.0	
FI-Otherwise	94	11	(11.7)	1.9	(1.1, 3.23)	15	(16.0)	2.5	(1.4, 4.3)
Separationalist									
FI-High	135	10	(7.4)	1.1	(0.6, 2.1)	8	(5.9)	0.8	(0.4, 1.4)
FI-Otherwise	142	21	(14.8)	2.0	(0.8, 5.0)	23	(16.2)	1.9	(0.8, 4.5)
Integrator									
FI-High	43	2	(4.7)	0.6	(0.2, 1.5)	3	(7.0)	0.7	(0.3, 1.6)
FI-Otherwise	51	4	(7.8)	1.1	(0.3, 3.4)	7	(13.7)	1.8	(0.6, 4.8)
Marginalist									
FI-High	18	3	(16.7)	3.0	(1.4, 6.2)	0	(0)	1.6	(0.8, 3.2)
FI-Otherwise	53	17	(32.1)	5.5	(2.2, 13.8)	16	(30.2)	3.8	(1.6, 9.4)

**NOTE: interaction between FI and acculturation was non-significant p=0.51 in GEE model.
**NOTE: cells with zero weight [i.e. externalising behaviour, marginalist, Fi-high] were assigned a weight of 0.5 in the GEE analysis.

6.3.6 Bivariable and multivariable analysis of father involvement and child behaviour

Table 6.9 displays the results of a GEE regression analysis between child behaviour outcomes and father involvement mediated by potential predictor variables. After bivariable and multivariable analysis, results show that ethnicity, smoking status, and acculturation play a significant mediating role between father involvement and child behaviour. Further testing was undertaken to investigate interaction between the acculturation and ethnicity variables within the model. This was done to ensure that the significant result discovered during the multivariable modelling was only due to a relationship with CBCL and father involvement, and not due to an interaction between the two mediating variables (acculturation & ethnicity). A p-value of 0.53 using Wald's type III testing revealed no significant interaction between the acculturation and ethnicity variables during multivariable modelling.

Table 6.9: Bivariable and multivariable analysis of father involvement and child behaviour.

						Crude Analysis		AdjustedAnalysis	
Variable	N	n_i	(%)	n_e	(%)	OR	(95% CI)	OR	(95% CI)
Age at baseline (years)									
<30	57	14	(24.6)	16	(28.1)	--	reference		
30-40	333	39	(19.4)	44	(21.9)	1.0	(0.6,1.8)		
>40	201	70	(21.0)	90	(27.0)	0.9	(0.5,1.6)		
Ethnicity									
Samoan	245	15	(6.1)	29	(11.8)	--	reference	--	reference
Tongan	191	86	(45.0)	80	(41.9)	6.9	(4.5,10.6)	6.6	(4.2,10.3)
Cook Islands	54	7	(8.6)	20	(37.0)	3.3	(1.7,6.1)	3.0	(1.6,5.9)
Other Pacific	81	12	(22.2)	17	(21.0)	1.3	(0.7,2.3)	0.9	(0.5,1.9)**
Highest educational qualification									
No formal qualification	215	53	(24.7)	54	(25.1)	1.1	(0.7,1.7)		
Secondary	70	8	(11.4)	16	(22.9)	0.8	(0.4,1.4)		
Post-secondary	187	38	(20.3)	50	(26.7)	--	reference		
Weekly household income									
$0-$500	85	14	(16.5)	15	(17.7)	0.6	(0.3,1.0)		
$501-$1000	315	69	(21.9)	78	(24.8)	0.9	(0.6,1.3)		
>$1000	183	38	(20.8)	55	(30.1)	--	reference		
Relationship to child									
Birth father	571	120	(21.0)	147	(25.7)	--	reference		
Adoptive father	10	2	(20.0)	1	(10.0)	0.4	(0.1,1.4)		
Other	10	1	(10.0)	2	(20.0)	0.4	(0.0,3.1)		
Relationship to child's mother									
Married/De Facto	565	117	(20.7)	143	(25.3)	--	reference		
Separated/Single	20	5	(25.0)	5	(25.0)				
Alcohol drinking status									
Abstainer	274	55	(20.1)	63	(23.0)	--	reference		
Monthly or less	151	40	(26.5)	44	(29.1)	1.3	(0.9,2.0)		
More once a month	165	28	(17.0)	43	(26.1)	0.9	(0.6,1.3)		
Smoking status									
Yes	222	59	(26.6)	73	(32.9)	1.7	(1.2,2.4)	1.5	(1.1,2.2)*
No	363	64	(17.6)	76	(21.0)	--	reference	--	reference
GHQ – Mental health screen									
Potential indication	42	19	(45.2)	18	(42.9)	2.5	(1.4,4.5)		
No indication	549	104	(18.9)	132	(24.0)	--	reference		
Acculturation status									
Assimilationist	143	32	(22.4)	37	(25.9)	--	reference	--	reference
Marginalist	71	27	(38.0)	31	(43.7)	0.5	(0.3,0.9)	0.7	(0.4,1.3)
Integrator	94	10	(10.6)	15	(16.0)	1.0	(0.6,1.5)	1.8	(1.0,2.9)
Separationalist	280	54	(19.3)	67	(23.9)	2.0	(1.2,3.3)	1.6	(0.9,2.8)*

(Note: * p-value<0.05, **p-value<0.001; n_i = internalising cases, n_e = externalising cases

6.3.7 Child behaviour outcomes amongst participating/non-participating fathers

Table 6.10 compares maternal CBCL outcomes for children of participating and non-participating fathers. The results indicate very little dissimilarity between the two groups of fathers, highlighting the correspondence of overall responses.

Table 6.10: Comparison of maternal CBCL outcomes to represent children of participating and non-participating fathers.

	Participating fathers		Non-participating fathers		
	n	(%)	n	(%)	p-value
Internalising behaviour					0.47
Normal	494	(83.6)	362	(84.8)	
Borderline	49	(8.3)	27	(6.3)	
Clinical	48	(8.1)	38	(8.9)	
Externalising behaviour					0.06
Normal	403	(68.2)	319	(74.7)	
Borderline	96	(16.2)	51	(11.9)	
Clinical	92	(15.6)	57	(13.4)	

This suggests that the differences in father and child characteristics seen in Tables 6.1 and 6.2, respectively, due to fathers participation or non-participation at the 6-years phase, is unlikely to differentially effect or bias the presented father involvement and child behaviour findings.

6.6 Discussion

6.6.1 Father involvement

Analysis of father involvement amongst participants in the study indicated that the majority of Pacific fathers reported they were very involved with their children. The median score for overall total father involvement was 5.9 out of 6, and was similarly high for the 5 individual dimensions of father involvement. This result indicates that most Pacific fathers within the cohort perceived themselves as being very involved in raising their children, especially in terms of encouraging them at school, supporting the mother, developing their talents, providing, and being attentive to their needs. Given the substantial literature highlighting the relationship between increased father involvement and positive child behaviour outcomes, these results are very encouraging. However, an important notion to consider is the self-reported nature of the information, which highlights the potential for some participants to overestimate their level of involvement with their children, in order to conform to preconceived societal norms of parenting behaviour (Paulhus, 1991). Although the utilisation of a standardised instrument, the IFI, may negate this effect, this limitation is likely to remain.

6.6.2 Child behaviour

Findings concerning child behaviour outcomes indicate approximately 20-30% of children within the study displayed some form of either internalizing or externalizing behaviour problems (see Table 6.4). While there is little information available regarding the use of the CBCL measure at a population or cohort level, it has been

widely used in NZ (Fitzgerald et al., 2006), and the validity of the CBCL across various cultures has been well documented (Crijnen et al., 1997, 1999). Despite considerable variability of case definition, there is agreement that approximately 10–15% of school children show mild to moderate behavioural problems (Backmann & Schulte-Markwort, 2005). With this in mind it appears that the children within our cohort appear to exhibit a prevalence of behavioural problems which is significantly higher than this predicted range. A possible explanation for this could be that Pacific peoples may have norms that are different from other cultures in terms of perceptions of child behaviour. Pacific parents' perceptions of proper behaviour might be viewed as problematic behaviour by individuals from other cultures, or vice versa. Therefore, the use of the CBCL as a method for indicating problem behaviour amongst Pacific children may be questionable.

Although literature from previous studies using the CBCL instrument cautions the use of individual summary scores as absolute indicators of problem behaviour, research into child development and behaviour does suggest that early identification and recognition of problems is a valuable guide for the development of successful prevention programmes (Hermanns & Leu, 1998). Previous research findings concerning Pacific children in the PIF study demonstrate that Pacific children whose behaviour was identified as being in the clinical range at one year of age were significantly more likely to be in the clinical range again two years later, compared to non-clinical children (Paterson et al., In press). Moreover, longitudinal studies in

Australia have demonstrated that early childhood problem behaviour is a strong predictor of adolescent antisocial behaviour (Bor et al., 2004).

The disease burden of adjustment problems in childhood is difficult to estimate because many of these problems are precursors to more disabling disorders in later life. However, economic studies following children through to adulthood found nearly 10-fold increases public service costs attributed to child emotional and behavioural disorders (Knapp, McCrone, Fombonne, Beecham, & Wostear, 2002). Information about the risk factors underlying the prevalence and patterns of child behaviour problems amongst Pacific children is essential to sound public policy. There is an increasing recognition of the need to develop programmes based on a developmental understanding of the origins of antisocial behaviour. Left untreated, disruptive and aggressive behaviour in childhood is very likely to persist and evolve into antisocial behaviours in adulthood (Elgar, McGrath, Waschbusch, Stewart, & Curtis, 2004).

6.6.3 Father involvement and child behaviour

Results from the crude or bivariable analysis of associations between father involvement and child behaviour displayed a significant relationship between father involvement and child behaviour outcomes amongst the cohort of Pacific fathers. In order to adjust for the highly skewed pattern of scores, the father involvement results were divided into quartiles and then analysed with internalizing and externalizing behaviour. Odds ratios indicated a significant relationship between the two, as well as a significant trend illustrating that higher father involvement scores were associated

with a decreased likelihood of internalising and externalising problem behaviour for children.

These findings complement previous research highlighting the important influence that father involvement has on the development of children, particularly in the areas of cognitive learning and social development (De Luccie & Davis, 1991; Dubowitz et al., 2001; Sarkadi et al., 2008). Therefore, the important role of fathers must be highlighted, and a concerted effort made to inform Pacific fathers about the vital role they play in shaping the future development of their children.

6.6.4 Father involvement and child behaviour by ethnicity

The findings from this research indicate there was not a significant interaction between father involvement and child behaviour and ethnicity, amongst the cohort of Pacific fathers in this study. Although both Tongan and Cook Islands fathers had an increased OR for internalising and externalising behaviour amongst their children compared to the reference group of Samoan fathers, this interaction was not significant (p-value=0.85). This research finding does suggest that some Pacific ethnic groups may describe and understand fathering involvement in ways that are unique to their own particular culture. Therefore, the results from this thesis highlight the necessity for further research to understand which particular issues and concerns are important amongst these different Pacific ethnicities.

6.6.5 Father involvement and child behaviour by acculturation

The analysis also investigated the role of acculturation in influencing the fathering involvement of Pacific fathers. Results indicated that fathers who were less strongly aligned to their traditional culture i.e. marginalists, had greater odds of children with internalising or externalising behaviour problems, compared to fathers who were strongly aligned with their traditional culture i.e. separators and integrators (see Table 6.7), although the interaction between acculturation and FI and child behaviour was not significant (p-value=0.51). These findings may reflect the tendency within Pacific families to have grandparents and other extended family or household members involved in child-rearing and teaching a child (Schoeffel et al., 1994). Therefore, there is no clear expectation of fathers to be specifically involved with their children, and instead their role is primarily concerned with providing the basic necessities of life for the family and their children. However, migration to a new country may expose fathers and families to new values and priorities which require fathers to be more involved with their children (Chia & Costigan, 2006; Ryder et al., 2000).

6.6.6 Strengths and limitations of the research

A key strength of this research is the contribution to the limited data available about parenting within the NZ Pacific community, and the cultural context of fathering. This study, which possesses a relatively large sample size of Pacific fathers with robust procedures and protocols in place, can make an important contribution to examining and understanding the relationship and significant factors associated with father

involvement and child behaviour outcomes. This will enhance the knowledge base concerning this important area of Pacific health.

An additional strength of the research is the use of standardized instruments such as the CBCL and IFI scale. Both of these measurement tools have been previously utilized and validated in prior research studies, which highlights their suitability, but also improves the robustness of the analysis in the study. Similarly, the father involvement scale attempts to measure the quality rather than the quantity of parent-child interactions. This consideration is important because positive child outcomes arise principally from the emotional quality and closeness of the father-child relationship, rather than temporal involvement per se (Cabrera et al., 2000).

In comparing socio-demographic information for participating and non-participating fathers in the 6-years measurement phase, an important indication was that the two groups express very similar responses and exhibit a similar profile. Consequently, responses obtained from participating fathers at the 6-years phase, are likely to be reflective of expected responses from the non-participating fathers at the 6-years phase. Given the highly skewed distribution of responses for the father involvement measure, this proposition is important and helps to reinforce the strength and reliability of the results.

A few limitations exist regarding this research. The self-reported nature of both father involvement and child behaviour data is subject to recall and social-desirability biases (Paulhus, 1991). Respondent fathers may have been reluctant to endorse child-rearing

practices that are considered to be less socially acceptable. Also, the presence of a ceiling effect concerning the father involvement scores derived from participants, may have contributed to some misinterpretation of results (Rothman & Greenland, 1998).

The findings of this research should also be interpreted in light of the presence of attrition bias. Most of the data used in this analysis was derived from fathers in the PIF cohort that were interviewed during the 6-years measurement phase. However, due to attrition and missing data from some participants, some of the data utilized in the analysis concerning paternal characteristics and also CBCL outcomes, was derived from previous paternal or maternal interviews when the children were 1-year old. This was primarily performed to provide the data necessary to compare the group of participating fathers present at the 6-years measurement phase of the PIF Study, and the group of non-participating fathers who were not present. Nevertheless, as mentioned earlier, results from the analysis indicated an overall lack of differential bias between the two groups of fathers, and responses were deemed to be generaliseable between them.

Finally, these findings are based on a cohort of Pacific families in NZ and thus are unlikely to be generaliseable to Pacific peoples residing in their island homelands or other international settings. This particular study is but one part of a larger longitudinal study investigating many other aspects of parenting, family functioning, and child development among Pacific peoples in NZ.

6.6.7 Implications of the research

The results indicate a clear association between increased father involvement and positive behaviour outcomes for children, consistent with other international findings (Dubowitz et al., 2001; Flouri, 2005; Flouri & Buchanan, 2003; Palkovitz, 2002; Sarkadi et al., 2008). Pacific men and Pacific fathers have received negligible attention in the literature on fathering involvement, especially concerning their motivations and behaviours. Yet Pacific fathers are a potentially major contributor to positive developmental outcomes for their children. Therefore, encouraging fathers to be more involved with their children is likely to produce benefits not only for their families, but also for the future generations of NZ. With the Pacific population projected to be approximately 10% of the total population within the next 10 years, it is vital to strive to understand more about the interactions between Pacific fathers and their families, and encourage them to be more involved with their children. An important recommendation from these findings is the need for more father specific services, especially developed and appropriate for Pacific fathers. This may be beneficial in helping Pacific fathers to contend with life in mainstream NZ society, as well as facilitating the incorporation of their traditional Pacific attitudes with their parenting here in NZ.

The analysis also indicates the necessity for a stronger more robust method/measure for examining father involvement and behaviour, which is both culturally appropriate and applicable for Pacific populations. The Inventory of Father Involvement scale developed by Hawkins et al. (2002), was modified for use in this thesis in order to

examine five different dimensions of fathering. However, this measure fails to account for the influence of cultural traditions and practices, as well as the issues of migration and navigation through mainstream NZ society. Previous PIF Study research has highlighted these factors as significant influences for maternal health and social issues (Borrows et al., 2010), and findings from this study indicate a similar pattern amongst fathers, with acculturation being a significant mediating variable for both father involvement and child behaviour outcomes (see Table 6.8). In response to these concerns, further postdoctoral research is planned and already funded by the Health Research Council of New Zealand, involving the development and validation of a Pacific-specific measure of fathering behaviour and involvement.

6.6.8 Summary

Pacific fathers in the study reported high levels of involvement with their children, and a significant relationship exists between father involvement and child behaviour outcomes. Pacific fathers should be encouraged and supported to be highly involved with their children, given the association between increased father involvement and positive child outcomes. Pacific fathers who are more strongly aligned with their traditional culture may require particular attention, given that their traditional systems or practices of raising children may not emphasise the importance of father involvement as strongly as other cultures. Further qualitative research is needed to investigate the underlying motivations and behaviours in relation to father involvement and fathering amongst Pacific men. These are important findings within a Pacific framework and may be used to guide social policy and targeted support

programmes that are focused on the well-being of Pacific fathers and their children. It is hoped these findings will draw attention to the diversity beliefs and behaviours in parenting practices among the Pacific population in NZ, and stimulate the development of empirically based and considered ways to approach these complex phenomena.

Phase II: Voices of Samoan and Cook Islands fathers

Introduction

This section outlines the qualitative component or Phase II of this thesis, examining the fathering behaviours and practices utilised amongst Samoan and Cook Islands fathers within the PIF Study. This section explains the rationale behind the qualitative investigations, and outlines the methodology utilised to address the second and third aims described earlier in this thesis.

Rationale for investigation of Samoan and Cook Islands fathers

Based on the analysis from the quantitative research component (in Chapters 4-6), questions concerning specific aspects of mental health, smoking, acculturation, father involvement and associated covariates were explored further and elucidated in Phase II of this thesis. This second phase of the thesis investigated the influence of these specific aspects on fathering behaviours, using focus groups and qualitative methodologies (in particular, thematic analysis).

An important consideration while undertaking this qualitative phase of the thesis was that although they tend to be grouped together in research and policy, Pacific people are not a homogenous group. Therefore, not only is the category 'Pacific Islander' diverse, but the range of perspectives and beliefs which must be acknowledged and described in referring to this category is also considerable. For this reason it was prudent to focus this qualitative section of the thesis on two Pacific ethnic groups.

Following consultation with academic advisors, key stakeholders, and community advisors (including the Pacific Health & Welfare Network Inc. & the Cook Islands Health Network), the Samoan and Cook Islands ethnic groups were selected as the focus of this qualitative research to investigate differences and explore relationships between fathering behaviours and child development.

A key motivation for selecting these two groups is the large proportion of the Pacific population in NZ who affiliate with either of these groups. In terms of population numbers, the Samoan ethnic group is the largest Pacific group in NZ comprising approximately 131,000 people or roughly 50% of Pacific people in NZ (Statistics New Zealand, 2009). The next largest Pacific ethnic group within NZ is the Cook Islands group, with approximately 58,000 people or roughly 20% of Pacific people in NZ.

Both the Cook Islands and Samoa have a long association with NZ in terms of governance and administration, particularly during the late 19th and early 20th century. Prior to Samoa gaining independence in 1962, NZ played a key role in administration and governance of the country, whilst the Cook Islands retains a strong association despite gaining independence in 1965 (Ministry of Pacific Islands Affairs, 2002).

Another key motivation for examining the Samoan and Cook Islands groups in this phase is the different dynamics in terms of migratory history, and political relationship between NZ and both the Cook Islands and Samoa. In comparing the migratory patterns of the Samoan and Cook Islands ethnic groups it is interesting to note the

large number of Cook Islands people who migrated here more than 40 years ago (Statistics New Zealand, 2009). This reflects the fact that as NZ citizens, Cook Islanders enjoy free unrestricted access to the country, providing them with a unique perspective and migratory experience. In contrast, the migratory perspectives and experiences of Samoan people are different to those of their Cook Islands counterparts, since they have not enjoyed the same rights of free unrestricted access to NZ.

Lastly, the Samoan and Cook Islands ethnicities respectively comprise two of the larger Pacific ethnic sub-groups of fathers in the overall PIF study cohort. Therefore, they represent a large number of potential respondents for the focus groups with Pacific fathers.

Chapter 7: Conversations with Samoan and Cook Islands fathers within the Pacific Islands Families Study

7.1 Introduction

This chapter outlines the emerging themes and experiences from Phase II of this thesis, involving qualitative discussions with a selection of Samoan and Cook Islands fathers within the PIF study. The peer-reviewed findings are under revision in *Tautolo E, Schluter, P. Samoan & Cook Islands Dads in South Auckland*, a report for the Families Commission of New Zealand. The conversations were based on a schedule of open-ended questions which were informed by the Phase I quantitative analyses, and designed using the *Fonofale* model as a Pacific framework. The topic questions were focussed on issues related to Pacific fathering including, childhood experiences and their influence on fathering behaviours, mental health and well-being, Christianity and church involvement, acculturation and cultural influences, risk-taking behaviours such as smoking, child behaviour issues, and environmental circumstances such as employment and support services.

As outlined in earlier sections of this thesis, there is a growing realisation of the important role fathers fulfil in influencing their child's behaviour and positive cognitive development (Flouri, 2008; Sarkadi et al., 2008), as well as promoting resiliency and improved health outcomes amongst their children (Boyce et al., 2006; Flouri & Buchanan, 2003). However, unlike their female counterparts, there is a surprising lack

of contemporary research into fathering, and particularly data concerning how lifestyle and health issues affect the practices of Pacific fathers.

Set against this back-drop of evidence-based deficit, a need to develop a deeper understanding of fathering roles exists, as well as family support structures and factors that promote resiliency amongst Pacific children and young people. Family relationships remain the most intense and enduring bonds (Ainsworth, 1963), and have been regarded as a vital influence in the socialization of the child since the late 1950s (Bowlby, 1958). The qualitative explorations presented in this chapter are part of a contribution to address this lack of information, and provide insights into fathering behaviours and practices amongst representatives from two of the larger Pacific ethnic groups in NZ, namely Samoan and Cook Islands ethnicities.

7.1.1 Samoan fathering

Although scant information is available regarding Samoan fathering, the existing research suggests the concept of family occupies a special place within Pacific families, particularly for Samoan families, as it is often viewed as the earliest source of social contact for a child. The Samoan family structure is composed of an array of different family types within NZ society, such as extended families, nuclear families, and sole parents. Furthermore, nearly 35% of Samoan people live in households shared by other relatives (Statistics New Zealand, 2009).

It has been acknowledged that traditional parenting and fathering behaviours in the Pacific Islands are different to those that occur in NZ. Previous research by Meleisea &

Schoeffel (1998) describe family life during the 1970s in Samoa, which centred around the village and the ranked social systems present in that environment. Not only did this hierarchical system rank children on the lowest level in terms of social status, but a high degree of community intervention existed in family life, and this was often useful in controlling undesirable behaviour. However, the metropolitan neighbourhood structures and communities which people inhabit in NZ may sometimes prevent this concept of 'the village to raise a child' from being feasible or effective. Further research from Anae et al. (2000) regarding parenting amongst Samoan men found that raising children to *usita'i* or obey their parents from a young age, and without question or fuss, was an important goal. Parents that were able to instil this behaviour and value within their child were seen as raising a 'good' child.

7.1.2 Cook Islands fathering

Cook Islands people have always enjoyed unrestricted rights of settlement in NZ, and therefore have had more opportunity to become established (Statistics New Zealand and Ministry of Pacific Island Affairs, 2010). However, a concerted review of the available information uncovered very little research or literature investigating fathering and parenting amongst Cook Islands people. Nevertheless, recent work undertaken as part of a Safer Kids In Partnership (S.K.I.P) parenting initiative has helped Cook Islands communities in the Glen Innes and Panmure areas of East Auckland to meet and discuss parenting and fathering issues in a safe environment (Family and Community Services, 2007).

The notion of 'Akapapa'anga' or 'conscious parenting' emerged from these discussions, with a particular emphasis on the comparison between new and traditional fathering practices. An analogy put forward used the example of traditional tivaevae making for a special occasion – which involves a communal effort of labour intensive and detailed work; compared to the modern approach which is to buy a factory-made Minkee blanket, a ritual with no communal input, emotional sentiment or connection between the 'giver' and the 'receiver' (Family and Community Services, 2007).

7.2 Research method

The qualitative phase of this thesis, which examined Samoan and Cook Islands fathers, was undertaken using small focus group meetings and/or individual interviews. Once participants had been recruited they were allocated to a focus group and/or individual interview, based on their availability. Participants were asked open questions based on the findings of the quantitative investigations in Phase I as well as the literature review, and consultation with key stakeholders, and representatives from both the Samoan and Cook Islands communities.

7.2.1 Participants

For this qualitative phase of the thesis, participants were recruited from amongst the Samoan and Cook Islands fathers enrolled in the PIF Study. The PIF Study cohort contains 440 Samoan and 73 Cook Islands fathers from a diverse sample of the NZ Pacific population (Paterson et al., 2008). Inclusion criteria for the qualitative

interviews required the participant to be a Samoan or Cook Islands father, whom had already given full informed participation consent to the main PIF Study. They also had to have the ability to give full informed consent to participate in the qualitative focus groups and/or individual interviews.

Initially an information sheet was given to potential participants (see Appendix II), outlining the study information to-date, details of this project, contact details of the researcher (and supervisor), and an invitation to take part in the project. Interested participants then contacted the researcher indicating their expression of interest, and participants were able to discuss the research further and ask any additional questions. Following acceptance from the participant agreeing to be part of the study, a full consent form was sent for completion, outlining the basic requirements for the participants and emphasising the right to withdraw from the study at any time during the process. Receipt of a signed consent form signified an indication of a commitment to participate in the research. Finally, the researcher made contact regarding the time and venue for the focus group and/or individual interview to take place.

Due to the prominence of acculturation as a theme in this thesis, a range of fathers with different acculturation status were purposively recruited as participants. Information on measurement and classification of acculturation is presented earlier in section 4.2. The final cohort of participants was purposefully selected and cross-referenced with existing PIF Study data, to reflect a diversity of experience, and perspectives. This diverse sample of individuals possessed a range of acculturation or cultural alignment positions, a range of NZ and Island born statuses, and a variety of

age categories. It was anticipated that there would be two focus groups for each ethnic group (overall total of four focus groups), with approximately four-five participants in each focus group (overall total of approximately twenty participants).

However, in actuality there were three focus groups for Samoan fathers, and two focus groups for the Cook Islands fathers, with an additional two individual depth-interviews for Cook Islands fathers. Following consultation with a qualitative research expert, these individual depth-interviews were very useful in contributing additional material to ensure that emergent themes and key issues were sufficiently discussed and explored for Cook Islands fathers. Consultation with the advisory group also recommended this approach because of the difficulties that Cook Islands participants experienced in making it to planned focus group meetings.

Overall, 54 Samoan fathers were contacted and invited to be part of this study. Of these, 16 fathers agreed to participate. However, in the end only ten fathers actually attended the focus group sessions. For the Cook Islands fathers, the entire active cohort of 73 fathers was invited to be part of this study. Of this number, twelve agreed to participate, but only five fathers actually attended the focus group interviews, and another two agreed to participate in face-to-face interviews.

7.2.2 Setting

The venue for the focus groups and individual interviews was the Pacific Business Trust Centre in Otahuhu, South Auckland. This venue was selected because of the close

proximity for many of the participants who live in the surrounding suburbs, the professional facilities, ample parking space, equipment which was available at this venue, and the 'culturally friendly' atmosphere of the facility (which also houses many Pacific businesses and services). Many of the participants commented that it was their first time to visit the Pacific Business Trust, and they appreciated the opportunity to learn more about the services offered at the venue.

7.2.3 Procedure

The information gathered from focus groups and interviews involved the use of a semi-structured interview guide containing a list of key points of enquiry (see Appendix III). This allowed some form of flexibility for participants to discuss things which may have influenced their experiences (Grant & Giddings, 2002). The researcher conducted all focus groups and interviews, and recorded them using an audiotape recorder. In addition, the researcher utilised elements of the *Talanoa* method (Vaioleti, 2006), as a Pacific-centred approach for collecting and discussing information with participants. Superficially, *Talanoa* can be referred to as a conversation, a talk, an exchange of ideas or thinking, whether formal or informal. It is almost always carried out face-to-face. *Tala* means to inform, tell, relate and command, as well as to ask or apply, while *Noa* means of any kind, ordinary, nothing in particular, purely imaginary or void (Vaioleti, 2006). The *Talanoa* approach literally means talking about anything, and interacting without a rigid framework. It involves talking things over rather than taking a rigid stand, and incorporates oratory and verbal negotiation which have deep traditional

roots in Pacific cultures (Ministry of Education, 2001). Therefore, in *Talanoa* people are flexible and open to adaptation and compromise.

Focus groups were conducted for approximately 60 minutes in line with recommendations from previous social research methods (Bloor, 2001), and refreshments were provided. The individual interviews took approximately the same length of time, as they were based on the same interview guide as the focus groups. Participants were also provided with a small koha donation of petrol vouchers in recognition of their travel costs and attendance. There was provision for translation and conducting interviews in both Samoan and Cook Islands language, by the facilitator, for those participants that would be more comfortable with this. However, all participants were most comfortable in using the English language, and translation was not required.

7.2.4 Interview guide

The design of the interview guide for this study utilised the *Fonofale* model as a Pacific framework for formulating the questions and guiding the areas of exploration and interest; areas which have been identified through the quantitative phase of the overall study (Chapters 4-6). This framework was first proposed by Pulotu-Endemann (c1980s) as a process for dealing with addictions and mental health amongst Pacific peoples (Pulotu-Endemann, 2009). The *Fonofale* model is named after Pulotu-Endemann's maternal grandmother. The model incorporates the metaphor of a Samoan house with components such as the foundation or the floor, posts and roof

encapsulated in a circle to promote the philosophy of holism and continuity (Pulotu-Endemann, 2009). Each of the components represents a key feature of the model e.g. roof = culture, as well as underlining the notion that in order to have a sound stable structure, all components must be sturdy or robust. This overarching holistic approach adopted in the *Fonofale* model was appropriate for utilisation in this research as it acknowledges the holistic perspective of Pacific peoples when discussing and considering health. For example, each part of the model was used as a broad subheading for questions, in order to encourage a holistic investigation of fathering amongst Samoan and Cook Islands fathers.

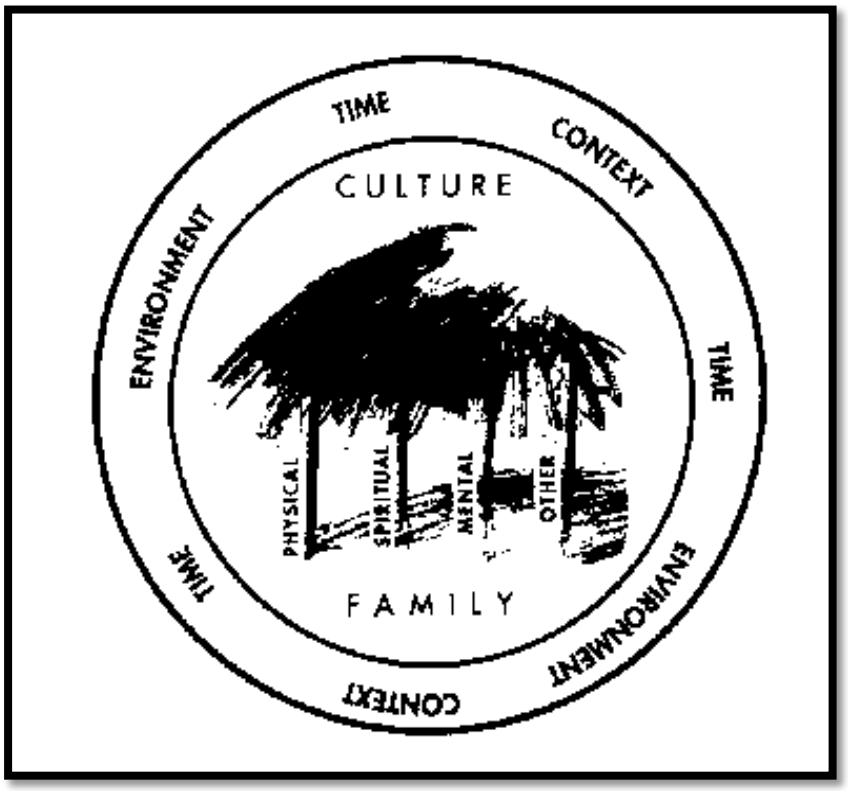


Figure 8.1: A diagram showing the overall framework of the Fonofale model: Taken from (Pulotu-Endemann, 2009).

In utilising the *Fonofale* framework, the topics for investigation included aspects of childhood upbringing and values, and how these values and experiences influence the fathering practices of the participants. Also, the influence of cultural knowledge and traditions, Christianity and the church, mental well-being, risk-taking behaviours and physical activity, and environmental influences and support services, were examined within the framework of this study.

7.2.5 Transcript analysis

Analysis of the information from the focus groups and interviews was undertaken utilising research by Braun & Clarke (2006), which provided detailed advice and suggestions for proceeding with a thematic analysis approach to the data.

- The initial phase of analysis involved a process of familiarisation with the data which was achieved through transcription of the audio-taped focus group and interview transcripts by the researcher. This was followed by a process of reading and re-reading of the transcripts by the researcher, and noting initial ideas or thoughts.
- The next phase entailed 'coding' the data, in a systematic fashion across the entire dataset. Interesting features of the data were listed and recorded.
- The third phase required searching for themes, and began when all data had been coded and collated. This phase refocused the analysis at the broader level of themes, sorting different codes into potential themes. Essentially this step involved analysing and considering how different codes may combine to form an overarching theme. This phase ended with a collection of candidate themes,

and sub themes, and a sense of the significance of individual themes began to emerge.

- The fourth phase involved reviewing and refining the candidate themes from the previous phase. At the end of this phase there was a clear picture of the different themes, how they fit together, and the overall story they tell about the data.
- The fifth phase entailed defining and naming the identified themes, by exploring the essence of each theme, and the aspect of the data each theme captures.
- The sixth and final phase compiled the set of established themes, and completed the final analysis and write-up of the report.

In accordance with recommendations by Lincoln and Guba (1985) regarding the 'trustworthiness' or credibility of the findings from the focus groups and interviews, the technique of 'member-checking' with members of those groups from whom the data were originally obtained, was utilised in order to ensure the validity and establish credibility. This was addressed in the research by sending out summaries of the themes to all participants via mail, followed by a telephone call by the researcher to discuss any potential concerns with them. All participants affirmed that they were happy with the overall process and findings.

In conducting thematic analysis there were also a few potential pitfalls that the researchers were mindful to avoid. One particular drawback to avoid was that extracts

in thematic analysis should be illustrative of the key analytical points which the researcher suggests from the data, and not be a collection of data extracts with little critical comment or simply paraphrases of the content (Braun & Clarke, 2006). Similarly, all aspects of the themes in thematic analysis should cluster around central ideas or concepts. If themes are not internally coherent and consistent, or there is too much overlap between themes, then this is an indication of poor or unconvincing analysis. The analysis needs to be convincing and constructed in a way which will persuade the reader of the credibility of an assertion (Braun & Clarke, 2006).

In order to address these issues, feedback and review was obtained from other qualitative researchers to ensure similarity in identification of key points and themes from the data. Likewise, weak or outlying themes were collapsed or eliminated in order to ensure the reliability of the analysis.

7.2.6 Key characteristics of fathers

Table 7.1: Descriptive characteristics of Samoan and Cook Islands fathers

Variable	Samoan	Cook Islands	Total fathers
Age (years)			
<30	-	-	-
30-40	8	2	10
≥40	2	5	7
Place of birth			
New Zealand	6	2	8
Overseas	4	5	9
No. of children in house			
1	4	1	5
2	5	4	9
≥3	3	2	5
Highest educational qualification			
No formal qualification	2	1	3
Secondary	4	2	6
Post-secondary	4	4	8
Weekly household income			
<$350	1	-	1
$350-$700	8	4	12
>$700	-	-	-
Unknown	1	3	4
Marital status			
Married/de facto	9	7	16
Separated/single	1	-	1
Current smoker			
Yes	3	1	4
No	7	6	13
Current alcohol drinking status			
Yes	3	2	5
Abstainer	7	5	12
Current employment status			
Unemployed	1	-	1
Full-time or part-time	9	7	17
Proficiency in Pacific language			
No	2	2	4
Conversational	2	-	2
Fluent	6	5	11
Acculturation status			
Separator	3	2	5
Integrator	3	2	5
Marginal	1	1	2
Assimilator	3	2	5

Table 7.1 displays the key characteristics of the sample of Samoan fathers who participated in this phase of the overall project. The table revealed that there were ten Samoan participant fathers, six fathers who were born in NZ and four fathers who were born in Samoa and migrated to NZ in early adulthood. Nine of the Samoan fathers were currently employed in either full-time or part-time work, and one Samoan father was currently seeking employment.

The majority of the Samoan fathers were married or in a long-term committed relationship, although one father had been separated from his partner for some time. All of the Samoan fathers asserted that they were actively involved in the daily upbringing of their children. Most of the Samoan fathers were between their late 30s to early 40 years of age; however two of the Samoan fathers were aged in their early 50s.

A number of themes emerged from the focus groups and interviews with Samoan fathers, and these are presented along with the representative quotations in the following section 7.3. The quotations are coded by focus group number (SG1, SG2, SG3) and by speaker, and have been drawn from 10 speakers (V1 to V3 in SG1, V4 to V6 in SG2, and V7 to V10 in SG3). Age group and place of birth information is also included for each quotation.

The themes are grouped under the six main topic areas, namely; childhood experiences and their influence on fatherhood, mental health and well-being,

Christianity and the role of the church, cultural knowledge and practices, risk-taking behaviours, physical health and activity, and environmental influences and support services.

7.3 Findings from conversations with Samoan fathers

7.3.1 Influence of childhood experiences upon fatherhood

Theme: Challenges of providing for the family

Samoan fathers in this study described their own childhood and upbringing within a Samoan family, particularly in terms of parenting and the primary person accountable for their nurture and care. Most Samoan fathers revealed their mother as the main caregiver responsible for raising them, while their father was primarily responsible for providing for the family. The participants alluded to the fact that although both parents were normally present within the home, their mother spent more time rearing and taking care of them, whereas their father spent most of his time working and trying to earn money for the family.

> *"We spent time with mum, most of the time. My dad was out and about all the time. But had an influence with all the time he spent working."*
>
> (SG1-V1, NZ born, mid 30s)

This model of care-giving characterised by the father as the main financial provider and the mother as primarily responsible for child-rearing and nurturing, is reminiscent of the style of child-rearing prevalent amongst many families during the early 19th century. Although this practice highlights the differing social roles or responsibilities of fathers and mothers in past years (Schoeffel et al., 1994), a majority of the participant

fathers expressed their desire to have spent more time with their father during their upbringing. As a result, a majority of the participant Samoan fathers had consciously resolved to be more involved and spend more time with their own children.

Further conversations with the participants focused on the role played by their own fathers in influencing the manner and approach with which they raised their children. All the participants acknowledged the influential role their fathers held in shaping their fathering practices. Discussions concerning the values and ideals which participants were taught or learned from their fathers, led most of the Samoan fathers interviewed to reveal many examples, such as being hardworking and conscientious, being disciplined in rising early every morning to go to work, and being mature and responsible in order to ensure adequate provision for any of the family needs.

Due to the lack of tangible time spent together during their upbringing, many of the participant fathers professed that they learned these values and ideals through witnessing the physical acts and exemplar of their father, rather than via verbal means. Similarly, many participants reasoned that this was also the manner in which their father would express his love and affection toward them.

> *"We didn't talk much. He loved us by the way he worked hard or smiled at us, but he never really said much...His influence was in his hours, and working nearly seven days a week, and putting food on the table."* (SG2-V6, Island born, late 30s)

Theme: Lessons from the past

In contemplating the predominant value or principle imparted by their father during their childhood, most Samoan participants reported the fervent belief in God, and regular attendance or involvement in church, as key ideals which they were raised to understand and maintain.

"Make sure you work hard to support your family and keep up with the church. He (Dad) teaches me respect to the elders. Fa'aaloalo. I really learnt that it was paramount. These days compared to those generations that whole thing is missing."

(SG3-V10, NZ born, late 30s)

Other examples of important values that were instilled in participants through their father included: having a staunch respect for the elderly and those older than oneself, diligence in working hard to provide resources for family needs and obligations, and finally, caution to keep out of any trouble which might bring shame on the family.

> *"Dad was very strict on keeping on the narrow and don't get in trouble...we didn't want to go and do those things that he didn't like coz they bring shame on the family."*
>
> (SG1-V3, NZ born, late 30s)

Some participant fathers also mentioned specific negative practices perpetrated by their father, which they encountered or experienced during their childhood, and were conscious of not passing on to their children. These experiences involved the perpetration of harsh physical discipline or violence by their fathers towards them, negative consequences such as violence and lack of money due to the misuse and abuse of alcohol by their father, and a sense of fear and intimidation towards their father as a result of their exposure to these negative practices. As a result, the

participant fathers spoke adamantly of trying to ensure that their own children did not experience any of these harmful events.

> *"The other thing with my dad was violence…he was at the pub a lot. So those are the things I see that I don't want to pass to my kids…He was quite intimidating. That's why we were quite fearful of him... So those are the things I don't wana pass down."*
> (SG3-V9, Island born, mid 30s)

Participant fathers who were born and raised in Samoa expressed their perception of a stark contrast between expectations when raising children in their home islands, and raising them in NZ, specifically regarding adjusting to the different roles and responsibilities of fathers and mothers. In NZ, they observed an expectation of fathers to fulfil a hands-on role in raising children, in addition to working hard to provide food, shelter, and any other essential requirements for the family. In comparison, expectations of fathers in the Islands primarily revolve around the ability to provide and meet the daily needs and requirements of the family, and are less concerned with involvement in raising the children. This perception amongst the Island-born participants could be related to the structure of village life in the Islands, wherein the extended family live in close proximity and are able to assist in raising the children. Nevertheless, these Island-born participants discussed these expectations as an added layer of pressure that they must negotiate in raising their families here in NZ.

> *"I think the main difference that I find back here (NZ) is that with the life back home the good parents show their love through work by toiling the land to provide for you. But here it's important to go to work but to also be there for your kids you know to have that time with them."* (SG2-V6, Island born, late 30s)

All participant fathers were in agreement that although they maintain and utilise ideals and practices from their own upbringing, there is a need to adapt and be relevant to the present, in terms of fathering their own children. This assertion is in keeping with similar research amongst Samoan parents, which proposes the concept of 'striving for the best of both worlds' (McCallin et al., 2001), or negotiating the pathway between traditional and contemporary values, norms, and ideals. This goal or objective is what all the fathers in this study aspire to achieve in raising their children in the present day.

> *"Yeah, I father basically on the children's' needs…I understand the similarities in discipline with our own childhood…but I'm tending to the child's needs now. We may disagree with some of the stuff children do…But we have to move with the times. And, you hope for the best."* (SG3-V7, NZ born, late 30s)

7.3.2 Mental health and well-being

Theme: Cohesion and support within the family

In discussing the impact of mental health issues during and following the birth of their children, all of the Samoan participant fathers reported that mental health issues and depression were not significant concerns for either themselves or their partners.

> *"Yeah, there was nothing really.. I think it's not common amongst Pacific people anyway."* (SG1-V1, NZ born, mid 30s)

This belief amongst the fathers seems to echo assertions from quantitative research examining longitudinal trends in the mental health well-being of Pacific fathers (Tautolo, Schluter, & Sundborn, 2009). This study investigated the prevalence of potential mental health disorder at three different time points over a six year period following the birth of their child. Despite an overall low prevalence of potential mental

disorder amongst the fathers following the birth of their child, there was a significant trend of increase over time which should be monitored and examined further.

Post-natal depression amongst Pacific mothers in NZ has been examined in previous research using PIF study participants. Research findings indicated that the rates of post-natal depression (using a screening questionnaire) amongst Samoan women were relatively low at 7% (M. Abbott & Williams, 2006), although other ethnic groups reported considerably higher rates. These research assertions concerning mental health issues amongst Pacific fathers and mothers support the qualitative findings of this thesis, that the reported impact of mental health issues is low amongst these families.

A majority of participants expressed the opinion that extended family who were highly supportive and available to assist with issues if needed, were strong protective factors in reducing their chances of mental anguish and stress. This estimation strongly supports the link between high levels of family support and cohesion, and a reduced risk of negative mental health outcomes.

> *"No, I don't actually recall...We probably would have been stressed out if weren't here in NZ, she had all her family and I had all my family, we had a lot of family and support that's why I can't recall any times of depression."*
>
> (SG3-V9, Island born, mid 30s)

7.3.3 Christianity and the church

Theme: Generational involvement and influence of church

Following discussions concerning participant experiences of the church and Christianity during their childhood, all Samoan fathers interviewed recounted how the church and Christian religion were very important influences when growing up. Furthermore, it continued to have a lasting effect on their lives. In addition, the bible was considered a valuable blueprint in providing the guidelines necessary for successfully living and raising a family.

> *"Faith is the most important thing. My family and even my wife know it...And all the values…we study the bible and try to follow the lord…that helps us in life."*
>
> (SG1-V1, NZ born, mid 30s)

All participant fathers believed that sound religious and moral guidelines, as well as a strong social support network, were inherent within Christianity and churches. They believed that exposure to the church and Christianity was beneficial for their families, and they were extremely keen to see those values passed on to their children. In some cases, despite not regularly attending church themselves, some fathers still sent their children along.

> *"(Church) It's our grounding it all comes from where we came from..Back in Samoa...The church becomes another family to you. Another group of friends for your kids. And it's one we most need because of the influences the whole world…they can spend their time and be influenced by the word of God and by some great values and biblical values...Some of us struggle to talk to our kids, but sometimes kids take the same information better from others than they do from us."*
>
> (SG2-V6, Island born, late 30s)

This strong affiliation and connection between Pacific people and religion is supported by data from the 2006 Census, which indicates that 86% of Samoan people in NZ are

affiliated with at least one religious denomination, compared with 83% for the overall Pacific population and 61% for the overall NZ population (Statistics New Zealand, 2007).

Many participant fathers perceived the church as an extended support network that assists in strengthening culture ties, and provides a positive influence on the children. These sentiments are echoed by prior research from Fairbairn-Dunlop (2003) who contends that since the early migration of Pacific people to NZ in the 20th century, the church has remained a strong centre of support, friendship and safety for Samoan and Pacific families.

One participant father spoke of additional factors which motivated his choice of church. He discussed potential benefits of membership within the Catholic church, particularly regarding eligibility for enrolment of his children within Catholic schools. Hence, his decision around Christianity and church involvement was also swayed by additional benefits regarding educational opportunities.

> *"I don't know about today, but you had to be baptised in the (Catholic) church to qualify for certain things, like schooling and other things so that's why I had them baptised there."* (SG1-V3, NZ born, late 30s)

7.3.4 Cultural knowledge and practices

Theme: The Samoan way

Most participants reported the significant influence of Samoan culture during their own childhood upbringing, especially for those participants who were born in Samoa.

Many participants spoke of Fa'asamoa (Samoan way) and Aganu'u (Samoan culture) as pivotal parts of their beliefs systems, and these concepts were a strong influence in their everyday lives.

The NZ born and Island born fathers identified very similar concepts as representative of Samoan culture. These components of Samoan culture encompassed facets of the language and cultural customs of Samoa, as well as an overarching ideal of respect for others, particularly elders or those positioned in a more prominent position in the societal hierarchy e.g. Ministers, Matai (Chiefs).

> *"The Samoan way that means a lot to me. That means the fa'aaloalo...That's how I was raised, really involved in that stuff…so for me, even though I didn't raise up in Samoa I still believe there are certain parts in my life that were the Samoan way. Cos we're taught about the family, the matai, the village, the community. So I think I've been raised in the (Samoan) way, especially getting a hiding (laugh)."*
>
> (SG3-V10, NZ born, late 30s)

One Island born participant expressed his feelings of gratitude for this manner of upbringing, and his realisation of the importance of this cultural upbringing following his migration to NZ.

> *"I didn't know there was a Samoan way until I came here because you only know one way…the Samoan way…that's how we learnt respect, there was no other way. And then we come here and we realise how important it was to get that grounding. We are grateful for that childhood because we learn that respect and that discipline."*
>
> (SG2-V4, Island born, late 50s)

There was a definite impression amongst all participants that fa'asamoa is not just a rigid concept but that it is fluid and variable, especially as it is transported from the Islands to NZ. This finding echoes the contention from previous research Siauane

(2004) which examines some of the Samoan communities within NZ. The research highlights the flexible and changing nature of Samoan culture, and the necessity for many Samoan people to define and determine what Samoan culture means to them. Furthermore, research from Fa'alau (2006) discovered that most Samoan family relationships in NZ, continue to be influenced by the Fa'asamoa and its underlying values, structure, and practices, even amongst the subsequent generations following their migration from the islands.

Theme: Protecting the Samoan language

Most of the participant fathers were proactive in using Samoan language and customs at home. They believed that this practice assisted their children in maintaining their cultural links, and forming a positive, robust, and resilient sense of identity. One participant discussed his childhood experiences of speaking English only when outside the home, but whilst at home being instructed to only speak Samoan. As a father, he retained this custom within his own family. He felt that this practice was a way of ensuring that his children were fluent in the language, and able to pass on the culture and language to subsequent generations.

> *"Yes, it does play a major part in my upbringing and my kids. When I was young, just the way that I was bought up. If I was at home my parents would tell me don't speak English in the house, just speak Samoan. Once you're out of the house you can speak English. We use to carry you know the Samoan language, I'm trying to do that to my kids today, so just carry on so they know the language of Samoan."*
>
> (SG2-V5, NZ born, late 30s)

Similarly, another participant in sharing his views on the important parts of Samoan culture, talked about the necessity of using the Samoan language to communicate with

his parents because of limited English proficiency. This practice assisted him in maintaining a high level of proficiency in the Samoan language, and strengthening his cultural connections and cohesion with his Samoan community.

> *"For me it's speaking it, definitely and I thank my mother for that cos she doesn't really know how to speak English. So we had no choice. But to speak it because we had to communicate with my mum…it keeps you rooted and grounded in it."*
>
> (SG2-V6, Island born, late 30s)

One participant shared how his children had started to become more inquisitive, and eager to learn more about Samoan culture and history. This had prompted him to be more active in utilising Samoan language and other customs in the home, in an attempt to improve the knowledge of common Samoan cultural activities and practices, amongst his children e.g. evening prayers in Samoan language with the family.

> *My son he is very eager, he likes to learn Samoan. He always asks, How do you say this? How do you say this in Samoan?...it's like trying to get them use to things…in some evenings, late at night I try and have a little bit of a lotu (worship).*
>
> (SG3-V10, NZ born, late 30s)

Theme: Samoan sportspeople as contemporary cultural markers

One of the NZ-born participant fathers recounted observing the large number of successful top level athletes in NZ, including boxers and rugby players, who were of Samoan descent. Accordingly, he associated being a Samoan not with the ability to speak Samoan language or proficiency in Samoan cultural knowledge, but instead with the level of sporting prowess or skill which one possessed.

> *"Samoan for me is different, it's a different concept…for me it's like rugby players, you know, like boxers, that's what I call Samoa, that's what I thought it was. Cos my uncle*

has been boxing and all these things. So I thought oh well that's a Samoan."
(SG3-V7, NZ born, mid 30s)

This notion of identity and culture amongst NZ born Samoans has been explored in previous research by Macpherson (1999), which describes young NZ-born Samoans having the space and confidence to redefine what it means to be Samoan, and to challenge the notion that this must rest on what their parents have previously defined as core competencies (MacPherson, 1999). As a result, some NZ born Samoans have taken elements of Samoan culture, and filtered them through their own experiences, in order to build them into a new distinctive identity. This process of redefinition and use of more contemporary markers of identity is occurring constantly, and is seen in many forms including, art, tattoos, film, radio, wearing Samoan motifs on clothes, as well as sport (Anae, 2001).

7.3.5 Risk-taking behaviours, physical health and activity

Theme: Conscious efforts to curb excessive risk-taking behaviours

During discussions regarding risk-taking behaviours which could affect physical health and well-being, most fathers professed being regular alcohol drinkers during their lives. Yet, upon becoming a father, some participant fathers had consciously decided to quit drinking, and the rest had reduced their frequency of drinking events. While fewer of the participant group had been tobacco smokers, a similar pattern emerged, with some choosing to quit upon becoming a father, and the remainder drastically reducing their amount of smoking.

Fathers who were still drinking or smoking reported making a conscious choice to do it away from their children, in order to minimise the harm and influence for their children. One participant talked about the attitudes and influence of peers and other family members who were also smokers or drinkers. These influences made it more difficult to quit or even reduce his smoking.

> *"I try and give it up, but it's really hard, I'm surrounded by family who smoke and drink and all these bad things. And we catch up with drink. But I try and get the kids out as much as I can cos I don't want them to see."*
>
> (SG1-V3, NZ born, late 30s)

These sentiments are endorsed in previous smoking research amongst Pacific people by Erick-Peleti (2008). The research findings highlighted that peers and other household members can have either a positive or negative influence on the smoking behaviour of individuals, depending on whether these peers were smokers or non-smokers.

An important discovery to emerge during discussions with the Samoan participants in this study was the conscious efforts of all participant fathers, to educate their children about the use and potential health risks associated with drinking alcohol and smoking. This was seen as vital in enabling their children to make informed choices once they were older.

Theme: Importance of sport and health in everyday life

Physical health and participation in physical activity were significant and important when discussed amongst Samoan participant fathers. The majority of fathers reported

being very active in their earlier years, with some still currently involved in sports teams and clubs. This attitude of maintaining good physical health and well-being is actively encouraged and nurtured by fathers amongst their children.

> *"I did athletics in my days. I think it's about keeping fit and getting a healthy lifestyle. Just for the kids to do it when they're small and carry on as they get old and teach them how important fitness and that is yeah."* (SG3-V9, Island born, mid 30s)

All Samoan fathers were conscious of the benefits of physical activity in helping to prevent poor health. One participant shared a story about his father passing away from cardiovascular problems, and this event had provided even more motivation to exercise and be healthy.

> *"Cos you know a lot of our people even my dad has passed away coz of heart attack at 49 and that was very young. That's why for me I love training, I do my own training, but I also want to try and take the kids for a walk. Me and my wife take them for a walk and take them to the park just to get them to run around."*
> (SG1-V1, NZ born, mid 30s)

All Samoan fathers were highly supportive of their children playing organised sports. Consequently, they were often willing to support their efforts by transporting the children to games and sports practices.

> *"I think it's important for the kids. As long as you support whatever they want to do. I'm pretty much involved with their sport now…Trying to get involved, yeah it's important."* (SG1-V2, NZ born, mid 30s)

7.3.6 Environmental influences and support services

Theme: Elder males as a source of advice

During discussions concerning potential sources of advice and counsel regarding their parenting and raising children, most fathers indicated they were most likely to

approach their pastor, or older fathers/males for advice or help. Furthermore, participants reported that they were very unlikely to confide in family members if they needed advice.

> *"I'd go to wise men, guys who have good advice, or other men. For us at our church we have older men... What they've gone through and just trying to tell us and teach us and just help us out with advice and those things. But we always have our pastor. You can always go talk to him."* (SG1-V1, NZ born, mid 30s)

Theme: Struggle to balance work and family involvement

All the fathers articulated their desire to spend more time with their children. Yet, many spoke of their need to work long hours in order to meet their financial commitments and provide for their family. The majority of the fathers were employed in low-paying, hourly-based jobs, which routinely entailed working overtime hours just to have enough money to live on. In effect, work was often seen as a necessity and not as a choice, and they would much rather be at home with the children, which reflects similar sentiments expressed in prior research by McCallin et al. (2001).

> *"I'm always at work. When I'm at home, I'm tired. It's mainly in the weekends I get time to spend time with the kids, it's in the weekend cos work is really important to pay the bills and get the kids what they want."* (SG3-V10, NZ born, late 30s)

When the opportunity to be involved with their children arose, most fathers talked about making sure the time they do spend with their children is quality time. In addition, many of the fathers spoke of making a conscious effort to try and have more time with their children, when commitments made it possible.

> *"You just don't want to spend a lot of time, but I want it to be quality time. Cos there's a difference between a lot of time and your eyes are on the TV and they're talking to you and sometimes I do have those habit."* (SG2-V6, Island born, late 30s)

Theme: Pride and enjoyment in being a father

All of the participants in the study expressed their pride and enjoyment in being fathers, and having the opportunity to witness their children's overall development as they grew older. One father expressed the perspective that creating the bond of love and care with his child was crucial in ensuring that they would remain connected when they grew older. This was perceived not only as a source of enjoyment, but as a sign of successful fatherhood and parenting.

> *"What I enjoy the most is just them being children. The little ones like you hug them and hold them and even now they come and lie on you when you sleep and when they grow up they still come and sleep on you."* (SG3-V9, Island born, late 30s)

The majority of participants expressed their belief that their fathering behaviours and practices had a definite overall positive effect on their children's development and behaviour. One participant mentioned implementing healthy eating practices at home, in order to benefit the children now, and teach them for the future.

> *"For us we make sure there are vegetables, we stop buying the fizzies. We're just trying to get them eating properly and eat the right food. Just trying to tell them, these things are here the fatty foods is not good for your health."* (SG1-V3, NZ born, late 30s)

Theme: Need for more support services

Participants overwhelmingly felt there should be more information available for all Pacific fathers, as currently there is little information available, and they are not readily aware of any services specifically available to them. These sentiments were expressed by all of the fathers who were part of the study. One participant felt that there were

services for many other social issues (e.g. drinking and smoking), but little available for fathers, particularly Pacific specific information or advice.

> *"There is none. There's other services like booze centres, and gambling and that. Not really for dads. Maybe there is but it's not out there, like it's just not advertised. Not for Pacific Island dads."* (SG1-V3, NZ born, late 30s)

Further discussions led some participants to express the idea of developing a television media campaign around Pacific fathers and their needs. It was anticipated that this resource could provide a very useful platform for engaging fathers, and providing the information which would be relevant and useful for Pacific fathers in NZ.

Several fathers expressed their desire to have Pacific specific services for fathers available, in order to target and direct resources to those with the most need.

> *"Yeah, you had that John Kirwan ad on TV aye. You know the rugby player for depression…Need to have a Michael Jones campaign – to raise awareness for fathers. Sending a message to Pacific men, with Tana Umaga, yeah, someone like that because those are two powerful men at the moment. They can move mountains."*
> (SG3-V7, NZ born, late 30s)

Theme: Changing disciplinary measures

Many fathers spoke of harsh physical discipline which they had experienced at times during their own childhood. As a result, they were adamant that harsh physical discipline was definitely unacceptable in raising their own children. Particular mention was made of the *Crimes (Substituted Section 59) Amendment Act 2007* concerning physical punishment of children. There was a definite awareness amongst the fathers of the ramifications of this piece of legislation, and that smacking was now an unlawful

form of discipline for children. Consequently, many of the participant fathers reported making a conscious effort to use more positive forms of discipline, when trying to modify their children's behaviour.

> *"Instead of smacking…You put some things in place, take your privileges away, send them to their room, time out. Um, just talking to them telling them Hey, don't do that and then explain."* (SG1-V2, NZ born, mid 30s)

Previous research examining Pacific Islands parents and smacking has established smacking as a prevalent form of discipline employed amongst Pacific parents (Schluter, Sundborn, et al., 2007), although these rates were not significantly different to published European rates. In fact, current research has demonstrated that most NZ parents have also smacked or physically punished their children at one time or other (Millichamp, Martin, & Langley, 2006), while Smith et al. (2004) contends that approximately half smack their children at least once a week.

Nonetheless, Fairbairn-Dunlop (2001) suggests that harsh discipline has been perceived by some communities to be a typical part of Pacific culture or Pacific religious beliefs. However, literary work from Vailaau (2005) refutes that harsh discipline is part of Samoan culture or religion. Along with research from Cowley-Malcolm (2005), he contends that harsh discipline may actually have been a by-product of the introduction of Christianity to the Islands. Moreover, analysis of old Samoan proverbs and language forms, led Vailaau (2005) to conclude that there is no evidence proving smacking as part of the Pacific way of parenting, and indigenous Samoan parenting values in fact promote the protection of children.

> *"Samoan way is not smacking. I do smack my kids, I believe in discipline and a bit of smack, but when you fasi (smack) them to the very max, then that's not the Samoan way."* (SG3-V8, Island born, early 40s)

Research amongst Pacific peoples by Schoeffel et al. (1994) has noted that the precedent for physical discipline of children, generally stemmed from learned cultural patterns of behaviour that imply physical discipline is the loving way of socialising children. Although severe beatings were disapproved of, some form of physical discipline was accepted as an appropriate way of teaching children desired behaviour. However, research information from McCallin et al. (2001) has established a gradual shift away from using strict physical punishment strategies, and towards finding new ways of shaping children's behaviour.

7.4 Findings from conversations with Cook Island fathers

Table 7.1 displays the key characteristics of the sample of Cook Islands fathers who participated in this phase of the overall thesis. There were seven Cook Islands fathers in this study, five fathers who were born in the Cook Islands and migrated here in their late teenage years, and the remaining two fathers born in NZ. All of the Cook Islands fathers were employed in either full-time or part-time work. All of the fathers were married, and reported that they were part of the daily upbringing of their children. Most of the fathers were in their late 30s to early 40s, although there were also two fathers who were in their early 50s.

A number of themes emerged from the focus groups and interviews, and they are presented, along with the representative quotations in the following section 7.4. The quotations are coded by focus group/individual interview number (CG1, CG2, CG3, and CG4) and by speaker, and have been drawn from 7 speakers (V1 to V2 in CG1, V3 to V5 in CG2, V6 in CG3, and V7 in CG4). Age group and place of birth information is also included for each quotation.

The themes are grouped under the six main topic areas, namely; childhood experiences and their influence on fatherhood, mental health and well-being, Christianity and the role of the church, cultural knowledge and practices, risk-taking behaviours, physical health and activity, and environmental influences and support services.

7.4.1 Influence of childhood experiences upon fatherhood

Theme: Raised by extended family

During discussions with the Cook Islands fathers about their upbringing and childhood, about half of the participant fathers reported being raised by their parents. However the other half indicated they were raised by a range of different family members e.g. grandparents, uncles/aunties, older siblings. For these participants there was often a combination of family members helping with raising the child, depending on the situation or circumstances at the time e.g. financial difficulties at home, children are needed to be companions for grandparents or other relatives.

> *"I was bought up by my uncle and grandparents. It's shared, but mainly I was raised by my uncle, grandparents..It's a custom of the Cook Islands, especially for the grandparents, aunty or uncle, it's happening even now, not just in the past, even now."*
> (CG2-V3, Island born, early 40s)

These findings are consistent with those of Hakaoro (2003), who suggests that being raised by grandparents or other family members is a customary practice amongst Pacific cultures, particularly within Cook Islands culture. Individuals raised by grandparents often enjoy a special status within their family, and are frequently privy to special or intricate knowledge of family traditions or tikanga, passed to them during their time with their grandparents. In fact, Vai'imene (2003) contends that it was often the role of grandparents to educate their grandchildren about the traditions and customs of their culture, the roles and responsibilities of children and adults, genealogies and histories of land entitlements, and numerous other protocols associated with being a Cook Islander. Conceivably, this model of communal or shared child-rearing is beneficial in sharing the burden as well as providing a network of

people who look after and protect the child, and which the child can turn to when they need help or support. However, as noted by Vai'imene (2003) changes in lifestyle, employment, and travel separate the child from frequent contact with their grandparents. Thus, many children now grow up knowing very little of their cultural heritage.

Theme: Lessons from the past

Subsequent conversations with the participant fathers focused on the role played by their own fathers in influencing the manner and approach with which they raised their children. Those participants raised by their father all acknowledged the considerable effect which their fathers exerted in shaping their fathering practices. Similarly, participants who were raised by their grandparents or other family members, identified their grandfathers or significant male role model respectively, as performing an influential role in determining how they raise their children today.

The main values or beliefs identified by participants as being learnt from their father figure were identified as; teaching their sons cultural knowledge, such as how to speak and understand their native Island language, being knowledgeable around the laws and customs of the land/village/island, and being proficient in the skills necessary to work and toil the land e.g. how to fish or how to plant taro.

There was a definite sense of importance concerning physical competency and knowledge of how to provide and survive using the land. This is likely related to the concept of teaching sons how to be a good provider for his family, as well as the perception that a sign of wealth is the abundance of crops or animals which you produce (Tai'a, 2003).

> *"I think during my upbringing…mainly tried teaching us the language and the law of the land…that we have to respect each other and the culture. I think it's different in the Islands cos the Islands have different things, but it's the same too."*
>
> (CG1-V1, NZ born, late 30s)

Theme: Importance of strong work ethic

In their upbringing many fathers spoke of being taught to be self-sufficient. They were often shown how to do things only once, and then told to keep practicing that. This practice may be reminiscent of traditions amongst past generations of Cook Islands men, wherein these forefathers were dependent on the land and sea for food and survival (Tai'a, 2003). Hence, the ability to be independently successful in fishing and cultivating the land was essential.

> *"I was taught as a child the importance of fishing and working the land...this was the way to survive and provide for the family."* (CG2-V3, Island born, early 40s)

One participant father identified the aspiration to be a hard-worker as a vital requirement to succeeding in life. He spoke of how his father would often say that to be successful in life or anything else, you had to work hard and keep trying, even if at first you might fail. As a result, a strong work ethic was instilled in him from an early age, and he credits this attitude as being responsible for much of the success which he has enjoyed during his life, and which he is keen to pass on to his children.

"My Dad would often tell me - Success comes to those that work, work, and work."
(CG1-V1, NZ born, late 30s)

7.4.2 Mental health well-being

Theme: Cohesion and support within the family

Interviews with the Cook Islands fathers in the study encompassed some brief discussion regarding mental health well-being, depression or unhappiness, particularly prior to and following the birth of their children. Most participant fathers mentioned that mental health or depression were not an issue either for themselves or their partner, as extended family members were often present to support and assist if needed.

"Yeah, I think it's not common amongst Pacific people because there is family to be helpful." (CG4-V7, Island Born, late 30s)

One father recounted his experience of feeling mental distress three months after the birth of the child. However, he explained that this was likely due to losing his job and being unemployed for six months during this period. Once he was able to find new employment with a stable income, he felt things definitely improved.

"I felt a bit depressed because my wife had the kids and money was quite tight for a while so the pressure was starting to get to me…but once I got a decent job after 6 months I was fine." (CG1-V1, NZ born, late 30s)

7.4.3 Christianity and the church

Theme: Generational involvement and influence of the church

Conversations with Cook Islands participants about their childhood experiences and encounters with Christianity and the church were largely positive. Most of the

participant fathers contend that Christianity and the values which they learnt through their involvement in the church since childhood, continued to play a significant part in their lives.

> *"In my family my religion and church is important. It's either school or religion, that's all we learn in the home, so it's a big factor in my home."*
>
> (CG4-V7, Island born, late 30s)

In identifying important values and beliefs which were imparted or shared with them during their upbringing, many participant fathers identified active involvement and attendance at church, and the necessity of respecting elders and other people. These beliefs are common tenets of Cook Islands culture and reinforce the strong underlying support and encouragement present in many Cook Islands families and communities (Crocombe & Crocombe, 2003b).

> *"To pray and go to church, and respect the older people was always passed on to us when we were growing up."* (CG2-V4, NZ born, early 50s)

The values and beliefs garnered during their childhood experiences with the church left many participant fathers eager to raise and expose their children to the same experiences and encounters e.g. church activities, Sunday school, youth groups. Interestingly, two of the Island born fathers spoke of their beliefs around religion, and customary practices of prayer before undertaking any important activities e.g. fishing, swimming, or travelling into the bush/plantation. This tradition was perceived to improve the chances of a successful endeavour, as well as bolster the likelihood of a safe return, and from their experiences the outcome had always been positive.

Previous literature around this practice has mentioned respect and encouragement of spirituality as key elements of all activities. Therefore, all activities are 'opened' and 'closed' with a prayer in acknowledgement of the sanctity of life, and to encourage a peaceful and harmonious existence with the surrounding environment (Crocombe & Crocombe, 2003a).

Theme: Reluctance to force beliefs on children

A few participants spoke of church attendance and involvement as less of a priority in their everyday lives, despite the whole experience of a Christian upbringing and childhood. Consequently, they believed it was more advantageous to allow their children the liberty to discover and develop an interest in Christianity and the church for themselves.

> *"For me I believe in a higher power but I am reluctant to force my kids to go along, as long as they know there is something out there greater than yourself, it's up to them to find out for themselves when they get older."*
>
> (CG4-V7, Island born, late 30s)

7.4.4 Cultural knowledge and practices

Theme: Need to protect Cook Islands language

Cook Islands culture has a considerable influence on some participant fathers' behaviours and practices regarding their children, especially amongst those born in the Islands. They identified Cook Islands language, customs and practices as key components of Cook Islands culture, and expressed their enthusiasm in sharing and imparting their cultural knowledge with their children.

> *"Yes, I think culture is a huge influence…I have an oldest daughter that does not speak the language fluently, but she tries to, and she can sing all the Cook Islands songs I teach her."* (CG2-V4, NZ born, early 50s)

Some participants discussed their perception of a noticeable decline in the use of Cook Islands languages and other cultural practices amongst the present generation of young Cook Islands people, both in the Cook Islands and here in NZ.

> *"Yes, back in the islands especially in Rarotonga, everyone in Rarotonga is a Cook Islands but they speak English. Why don't they speak their own language? Also the parents, they don't speak their language at home."*
>
> (CG2-V3, Island born, early 40s)

A research report from Taumoefolau et al. (2002) examining Pasifika languages in South Auckland, NZ supports the participants' perceptions of a declining use of Cook Islands languages. The report indicates that Cook Islanders have a lower proficiency in their community language(s) than do Samoans or Tongans, despite the Cook Islands community being numerically larger in size than their Tongan counterparts in Manukau, Auckland and throughout the country (Taumoefolau et al., 2002).

Previous examinations concerning the enhancement of social cohesion in order to improve health outcomes for Cook Islands people, highlights the necessity of culture in achieving this goal (Crocombe & Crocombe, 2003a). Researchers found that grounding in one's culture and history, and a good knowledge of language and expression, were key components necessary for giving Cook Islands children a positive sense of identity and pride, and improving their confidence, integrity, and success in life (Crocombe & Crocombe, 2003a). Thus, the choice amongst some of the participants to actively

impart and support the enhancement of their children's Cook Islands cultural identity is highly positive, and portends a brighter future for those children.

Interestingly, during discussions concerning the preservation of language for future generations, one participant spoke of the different Cook Islands dialects that exist and are employed in the homelands. He believed that the preservation and utilisation of language in the outer islands of the nation was being sustained.

> *"I think the outer islands, they don't speak English, cos when I go to Mangaia they speak the language (Mangaia), because they have their own dialect, same with Mauke and the northern group. It's seems Raro, because they are the centre…that English is the language there. And on top of that is the tourism."*
>
> (CG4-V7, Island born, late 30s)

Prior research about Cook Islands Māori language has established it as an Eastern Polynesian language. Excluding Pukapuka and Nassau, each of the inhabited Cook Islands has its own distinct dialect of Cook Islands Māori (Goodwin, 2003). Participants considered Rarotonga a special case because of the increased presence of tourists and non-native residents, which initiated a greater use of the english language. However, as Cook Islands people are NZ citizens and have free movement between the two nations, this could account for the increasing dependence on English language, and subsequent decline in the use of Cook Island Māori.

Theme: Knowledge of extended family and heritage

An important competency or aptitude of Cook Islands culture, which participant fathers believed was important to possess, was a sound knowledge of their extended family and Cook Islands heritage.

> *"Family is important and being able to tell others who you are and where you come from…else you get lost in the crowd."* (CG1-V1, NZ born, late 30s)

This concept reflects similar sentiments expressed by Cook Islands researchers examining changes in Cook Islands culture in the 21st century. Their findings highlight the importance of knowing ones extended family, as well as the ability to follow one generation of family back from grandparents (Crocombe & Crocombe, 2003a). This capability is useful not only in determining ones family history and identity, but also in establishing genealogical links and rights for land ownership and usage, which can have economic considerations for the family (Wichman, 2003).

Theme: Turning away from traditional culture

For the two NZ born Cook Islands fathers, Cook Islands culture featured less significantly in their lives, and the way that they raise their children. In discussions with one father about his childhood and being reared by his grandfather, he spoke of some of his negative experiences of physical violence and alcohol misuse perpetrated by his grandfather. As a result, this participant was very hesitant and less inclined to incorporate cultural practices, and knowledge into his parenting, as he had grown up associating these things with negative events.

> *"Yeah, he was always drinking and coming home drunk…then hitting me or my grandmother…I couldn't wait till I was old enough to stop him."*
>
> (CG2-V4, NZ born, early 50s)

Another NZ born father spoke of realising that both he and his children were raised in NZ not the Cook Islands. He felt that it was of greater importance to learn how to exist and settle within the NZ cultural system, as opposed to the traditional Cook Islands culture. He continued that if the children became interested when they had grew older, then that would be their decision, but for the moment cultural knowledge and practices do not greatly influence his fathering behaviours.

> *"If they want to learn it I don't mind…but I'm not going to push it. I have never had it in my life so there is no real big push."* (CG1-V1, NZ born, late 30s)

7.4.5 Risk-taking behaviours, physical health and activity

Theme: Conscious effort to curb risk-taking behaviours

Most participant fathers reported a history of regular alcohol drinking or smoking during their earlier adolescent and young adult years. However, all reported that they have since either severely reduced or ceased drinking or smoking, with the key motivation being their children and the negative influence their behaviour could potentially have on their children's health.

> *"I don't smoke in the house or around them. I do it away from them. I go outside. I drink outside and yeah. None of them smoke. I don't want them to. I'm not happy with them if they do that."* (CG2-V4, NZ Born, early 50s)

Theme: Importance of sport and health in everyday lives

Most participant fathers acknowledged that they had been very physically active in their own upbringing and childhood. Most of the fathers recounted their involvement in sports teams and clubs during their younger years, and many had still maintained those relationships and networks right through to the present.

"I started with the Otahuhu club, then I went to Mt Wellington. Played for Papakura, played for Otara, my longest season was with Otara, about 20 seasons. Way back. Then I retired."
(CG2-V4, NZ born, early 50s)

For those fathers raised in the Cook Islands, an inclination towards being physically active may be due to the physical nature of daily activities, such as working in the plantation, fishing, and everyday chores. Regular physical activity was also achieved through participation in village sports teams which were well established in the Cook Islands since the mid 1960s (Sijp-Marsters, 2003). This involvement in sports often continued following migration to NZ. This passion for participation and involvement in sports and physical activity has tended to be passed on to the children of most participants in this study.

"Yeah, I get them to play at school, to play rugby. I think that's one of the best things in the family to get into sport and all these things to get them fit for their future."
(CG2-V4, NZ born, early 50s)

Most fathers keenly acknowledge the importance of keeping children healthy and active through sports, and they recognise the future benefits of this healthy lifestyle for their children as well. Some participant fathers protest at constantly having to transport their children to sports practices and games, especially when the family has

only one vehicle for usage. Nevertheless, they perceive the importance of ensuring their children participate in physical activity, and the social benefits of interacting with other children, as far outweighing any personal inconvenience regarding transport. For example, one participant discussed his commitment to transporting his son to his training and games, despite the burden on time and availability due to work obligations.

> *"I work too much, I work 6 days for the last 2 years. But I try and do for my son. I only got a bit of time to take my son to training and to his games."*
>
> (CG2-V3, Island Born, early 40s)

Another participant father recounted his preference to see the children outside being active, rather than inside watching television or playing videogames. Consequently, he made it a point to actively encourage the children to spend more time playing outside than being indoors all the time.

> *"In the home the TV is hardly ever on, I always encourage them to get outside and play. It's better for them to be running around instead of sitting in front of a square box."*
>
> (CG3-V6, Island born, early 40s)

7.4.6 Environmental influences and support services

Theme: Support and advice from other fathers/minister

When asked about people or key sources of advice for parenting, the majority of participants reported that they would likely seek counsel from their church minister or other fathers that they knew. In addition, they were unlikely to seek advice from family members, as they were reluctant to tell them what was going on in their business.

"I would probably get my church minister or other fathers that I knew to help me out with advice and those things. Not really my family cause I wouldn't want them to know my business." (CG2-V5, Island Born, late 30s)

Theme: Stress of balancing work/family commitments

The majority of participant fathers expressed their desire to have more time available to spend with their children. They found it a constant struggle trying to balance work commitments, provide for the family, and spend quality time with their children. Although all of the fathers spoke of a strong feeling of commitment towards working to provide for the family, many felt they would definitely spend more time at home with their families if they had a choice, particularly when they considered the lack of time that they experienced with their own father during childhood.

"Yeah, I wish I could be a millionaire so I could have all the time with my kids because my parents never spend much time with me, so I don't want to do that. I want to spend as much time with my kids." (CG4-V7, Island Born, late 30s)

In further discussions about spending time with their families, most fathers spoke of feeling very protective of their children and indicated that they did not like their children to sleep away from home. If they did sleep away from home, then children could only be away for a few nights. This was especially the case for those fathers raised by their grandparents, as they felt that they would have liked more time with their own parents. The custom of being raised by grandparents is a common occurrence within the Cook Islands, and has often been seen as beneficial in terms of reducing the burden for parents in bigger families with many children to care for. However, some of the fathers mentioned that they did not enjoy their childhood

experience of not being around their parents. Therefore, these fathers were eager to ensure their own children do not have the same experience.

> *"Yeah, cos I never had that..spend time with my parents. So as a father I don't want my kid's grandparents to look after them. That's why me and wife always look after them…the grandparents they come and get your kids aye…but I always say to my wife just one night."* (CG2-V3, Island Born, early 40s)

Theme: More support services needed

Several fathers indicated that they would like to see more services and information available to help them with their fathering, and provide help if needed. They spoke about the benefits of sharing experiences with other Cook Islands fathers, and the ability to learn how to better support their children to be successful in their own lives.

> *"It would be great to have something there for our Cook Islands fathers, the chance to share our ideas and stories, and learn more about how to help our kid's success in life."* (CG2-V3, Island Born, early 40s)

Theme: Changing disciplinary practices

Following discussions concerning the use of discipline in raising children, the majority of Cook Islands fathers reported that discipline of their children's behaviour usually occurred through grounding or confiscation of belongings.

> *"With my kid's behaviour, if they start getting cheeky or things like that, one thing is that they don't watch TV, they don't go on the computer, they don't ring their mates. Also, there is grounding."* (CG1-V1, NZ Born, late 30s)

Another participant divulged his own strategies and practices when trying to discipline his children.

> *"What I do is I try and use my mouth. I try and scare them. Usually they crack you know. If I had to use force I'd probably break something on them which I don't want to do."* (CG2-V4, NZ Born, early 50s)

This father felt using verbal discussion and positive non-physical measures to discipline his children was more effective than using physical methods. This is somewhat contradictory to the manner in which most of them were raised, and indicates a conscious decision by most to utilise different methods of discipline for children, rather than just physical means.

Table 7.2 Summary table of qualitative themes amongst Samoan and Cook Islands fathers

	Samoan Fathers	Cook Islands Fathers
Childhood experiences and their influence on fatherhood	• Challenges of providing for the family • Lessons from the past	• Raised by extended family • Lessons from the past • Importance of strong work ethic
Mental health well-being	• Cohesion and support from within the family	• Cohesion and support from within the family
Christianity and the church	• Generational involvement and influence of church	• Generational involvement and influence of the church • Reluctance to force beliefs on children
Cultural knowledge and practices	• The Samoan way • Protecting the Samoan language • Samoan sportspeople as contemporary cultural markers	• Need to protect Cook Islands language • Knowledge of extended family and heritage • Turning away from traditional culture
Risk-taking behaviours, physical health, and activity	• Conscious efforts to curb excessive risk-taking behaviours • Importance of sports and physical activity to healthy everyday lives	• Conscious efforts to curb excessive risk-taking behaviours • Importance of sports and physical activity to healthy everyday lives
Environmental influences and support services	• Elder males source of advice • Stress of balancing work and family commitments • Pride and enjoyment in being a father • Need for more support services • Positive disciplinary measures	• Support and advice from other fathers/minister • Stress of balancing work and family commitments • More support services needed • Changing disciplinary measures

Table 7.2 displays a summary of the key qualitative themes that emerged from the qualitative discussions with both Samoan and Cook Islands fathers in the study.

7.5 Discussion

The ensuing section provides a discussion concerning the qualitative phase of this thesis. It includes an overview of key emergent themes from the six main topic areas which have influenced the fathering practices of participants, and some comparisons between particular subgroups of fathers.

7.5.1 Childhood values influence fatherhood

All of the fathers in the study acknowledge the significant influence that their father or father figure exerted in shaping the manner in which they raise their children. This influence is primarily exhibited through the belief systems which they attempt to instil in their children. Since the early 1980s, numerous psychological studies have shown that childhood interactions with parents, siblings, and peers, have a significant influence on their values in later life (Ashford & Saks, 1996; Bornstein, 2002; Parsons, Adler, & Kaczala, 1982). Further research from a report published by Simpson et al. (2007) found that relationships and attachments experienced in childhood influence the way in which individuals think, feel, and behave in their adult relationships. This is largely because childhood influences can determine the beliefs about the world which are stored in the mind through behavioural conditioning. In adult life, all new information that we receive is compared against these beliefs. For example, a father may influence his child's views about fatherhood through his example. If he is a strict and violent father, his child is likely to believe that this is how fathers should assert their authority, and this will influence his/her behaviour towards his/her own children in later life.

Amongst most of the participant fathers in this Phase II research, a number of the key values imparted to their children are directly related to principles they were instilled with during their childhood e.g. respect for elders and other people, importance of culture and traditions, and to always work hard to achieve your goals. The majority of fathers profess their rationale for utilising these ideals to their children, as the positive influence these values have had in their own development. In raising their children to respect other people, to understand and be familiar with their traditional culture, and to work hard, the participant fathers felt that they were contributing to the positive development of their children.

Although parents have a major influence on the early beliefs of children, values can change if new information is received that contradicts their child's original values (Bornstein & Lansford, 2009). Beliefs formed during childhood can be altered during adulthood as new information we receive modifies or replaces the old belief. However, this depends on how we interpret the new information. If the new information is perceived as less reliable, it may be rejected and the childhood values maintained (Bornstein, 2006). The problem is that all new information received is judged against our existing beliefs formed in childhood, so the mind is already biased against new information which deviates from this norm. This does not mean that values cannot be altered, but that it is much harder to make open-minded judgements (Bornstein, 2002). Over time, childhood influences become less effective because of the larger amount of experiences and knowledge, which can be used to make judgements. Changing values is usually a slow process, as it involves modifying or removing beliefs

that have existed for many years and are deeply ingrained into the mind (Bornstein, 2006).

Many of the Samoan and Cook Islands fathers in this thesis made a conscious decision to be less like the authoritarian and often remote father they were raised by, and instead be a father whom wants to play a larger, and more active, part in raising his children. The changing nature of fathers and fatherhood is one aspect of broader social changes to families and to gender roles (Cabrera et al., 2000), and while other fathers may find this a source of discomfort, the participant fathers in this study appear to welcome the flexibility this new role and its expectations bring.

7.5.2 Mental health and well-being

Most participant Samoan and Cook Islands fathers reported that mental health issues and depression were not significant concerns for either themselves or their partners. The majority of participants expressed the opinion that having extended family who were both highly supportive and available to help with issues if needed, were strong protective factors in reducing the chances of mental anguish and stress for them. This estimation strongly supports the link between high levels of family support and social connectedness, and a reduced risk of negative mental health outcomes.

A significant gap exists not only in national information about mental health disorders in the general NZ population (Finau, 1999), but more specifically in the Pacific populations now resident in NZ (Foliaki, 1997). Previous NZ studies have had too few

Pacific people to generate reliable prevalence estimates for major mental disorders (Oakley-Browne, Joyce, & Wells, 1989; Wells, Joyce, & Bushnell, 1989). While international literature points towards migrants having a lower lifetime prevalence of mental disorders (Vega, Kolody, & Aguilar-Gaxiola, 1998), national data on acute admissions of Pacific people to psychiatric and forensic institutions indicate higher rates of hospitalisations amongst Pacific people for psychotic disorders. Information on the prevalence of mental disorders among Pacific people in NZ has previously been drawn from the few prevalence studies performed in the Island nations (Allen & Laycock, 1997) or from Pacific people's use of mental health services in NZ (Bridgeman, 1996; Ministry of Health, 2005). Similarly, admission rates to inpatient facilities have been relied on to estimate the burden of mental disorder in the Pacific population (Bridgeman, 1996).

Pacific people in NZ are commonly characterised by a history of migration from Pacific Island nations. This has resulted in experiences of rapid acculturation and socio-cultural change. Significantly, rapid socio-cultural change has also been linked to mental illness among Pacific peoples, and an increase of risk-taking behaviour, such as drug and alcohol abuse (Bridgeman, 1996; Ministry of Health, 2005). The international literature indicates that social adversity and lower SES is commonly associated with an increased risk for psychiatric disorders (Dohrenwend, 2000). It is also well established that the relatively low SES of Pacific peoples is an important determinant of poor health outcomes (Ministry of Health, 2008b).

Research evidence from the Te Rau Hinengaro NZ Mental Health Survey has provided some landmark findings (Oakley-Browne et al., 2006). The survey incorporated a high level of Pacific involvement in the study design and implementation, and more importantly, oversampled Pacific participants to enable sufficient numbers of Pacific people to contribute and provide estimates of acceptable precision. A key finding from the Te Rau Hinengaro study established that Pacific people experience mental disorders at higher levels (23.9%) than the general (19.2%) population. This is particularly significant as it is contrary to previously held beliefs that Pacific peoples have relatively low levels of mental illness. While this finding is confounded by the young age structure of the Pacific population, it provides important information for future policy planning.

Although the Samoan and Cook Islands fathers in this study reported an absence of mental health issues within their families, these findings highlight the potential risk that exists for their mental health in the future. Previous research findings from the Te Rau Hinengaro NZ Mental Health survey indicate that recent migrants from the Pacific Islands tend to have lower rates of mental illness compared with NZ-born Pacific peoples. This could suggest that the length of time exposed to the NZ environment may be associated with higher levels of mental disorder among Pacific people.

Strong social cohesion within Pacific families and cultures may play a role in explaining differences in the prevalence of mental disorder amongst NZ born and Island born Pacific peoples. This concept is explored by some Samoan and Cook Islands fathers in

this thesis, who identify family support and cohesion as important mechanisms. Family support and cohesion may help to reduce the risk of mental disorder within their families (Cabrera et al., 2000). The notion of social cohesion refers to the relationships people have with others and the benefits these relationships bring to the individual as well as to society (Ministry of Social Development, 2010). It includes relationships with family, friends, and neighbours, as well as connections people make through paid work, sport, and other leisure activities, or through voluntary work or community service. These relationships and connections can be a source of enjoyment and support. Research suggests that families with strong social support, connectedness and participation may provide a framework that prevents mental illness (Friedli, 2009). Nevertheless, there is a need for further research investigating the relationship between adverse socioeconomic conditions, the breakdown of traditional social structures, Pacific values, and mental health and well-being.

7.5.3 Christianity and church involvement

Most fathers in this thesis consider spiritual or religious affiliation and involvement to provide a strong positive influence on their children. Most fathers are very proactive in encouraging and ensuring that their children are involved with the church. Moreover, even fathers who do not regularly attend church services valued the positive influence that religion and the church possesses. Consequently, these fathers made sure their children attended and were involved with the church. The overarching belief amongst fathers regarding the church and religion is that it provides a framework of important values or beliefs which they wish to impart to their children. It is also seen as a major

support network and positive influence for themselves and their families. By encouraging and facilitating their children's involvement in the church, most fathers believe that they are ensuring the positive development of their children.

The church was also seen as an essential source of support and assistance. Many participants identified their church minister as a potential source of advice regarding fathering issues or queries. This attitude reflects similar responses from a report for the Families Commission in which a large group of Pacific fathers identified church-based services as the most useful form of support for their fathering needs (Luketina et al., 2009). As mentioned earlier (section 7.3.3), the relatively large numbers of Pacific people (83%) that indicate some form of religious affiliation, makes church settings an ideal location for establishing support services for Pacific fathers.

Within the existing literature about fatherhood, many studies suggest that religion may be an important factor in leading fathers to become more involved in their children's lives. Active involvement in a religious community can be beneficial to family life by providing opportunities for families to interact with one another, resources for building and maintaining healthy relationships, parenting guidance and support, and a moral community that helps to enhance one's feeling of connectedness with others (D. Abbott, Berry, & Meredith, 1990; Edgell, 2006). Indeed, research from Petts (2007) suggests that men increase their religious involvement after the birth of a child. Religious participation appears to strengthen and encourage fathers to be more involved in their children's lives, which is subsequently beneficial for children's

development (Bartkowski, Xu, & Levin, 2008; King, 2003; Mahoney, Pargament, Murray-Swank, & Murray-Swank, 2003; Wolfinger & Wilcox, 2008).

7.5.4 Cultural knowledge and practices

One of the foremost ideas to emerge from the participant discussions is the bearing of culture on the participants fathering styles and activities. Many of the fathers spoke of important cultural traditions and beliefs which they were raised with, and which they now tried to impart to their children. Fathering, and parenting in general, is a key mechanism for transferring cultural values and practices between generations – for example, awareness of and connection to genealogy and how it can shape the present and future; values and practices relating to roles, functions and responsibilities; and spirituality and cultural identity (Families Commission, 2010).

Many of the fathers also spoke of the important influence of culture in the way they chose to raise their children. Cultural ideals, values and beliefs can shape parenting style and choices. Previous research regarding culture and parenting suggests that within any culture children are shaped by culturally regulated customs or child-rearing practices, and culturally-based belief systems (Harkness & Super, 1995). Culture can also determine communication patterns and behaviours, including non-verbal and verbal communication strategies (Ontai & Mastergeorge, 2006). This is evident amongst the participants when describing interaction with their father as being somewhat non-verbal. Instead, visual demonstrations and examples characterised the communication strategy. Likewise, cultural values and tradition can influence discipline

strategies – for example, where respect for elders is important, shaming can be used to promote it (Ontai & Mastergeorge, 2006).

Culture also influences bonding behaviours. For example, in Pacific cultures with large extended families, parents encourage children to bond with multiple people. Family structure and roles are also culturally defined and different cultures define family differently. For example, in Pacific families the extended family is normative and all members (which often includes the wider community) are responsible for children, and can be involved in decisions on parenting and child-rearing (Ontai & Mastergeorge, 2006). Finally, culture can also play a critical role in the goals parents set for their children. In some cultures, for example, independence may be a desired outcome to achieve as young adults. Parents are therefore mindful of this goal when raising their children (Keller et al., 2004).

7.5.5 Environmental influences and support services

Use of positive disciplinary practices

The majority of Samoan and Cook Island fathers reported experiencing a large amount of physical discipline during their upbringing. However, in raising their own children all of the fathers acknowledged the necessity to find more positive measures to discipline their children. As a result, most of the fathers make a conscious effort to find alternative and more positive methods to discipline their children.

Disciplinary practices in families have been known to have a lifelong effect on the well-being of children. A report from the Families Commission (2009) explored the views, experiences and practices of a sample of 100 NZ parents and families, relating to the discipline of their pre-school children. A small number of parents thought that smacking or shouting were effective disciplinary techniques, and most of those who did think smacking was effective used it infrequently and as a last resort. Many parents reported predominantly using positive disciplinary methods such as praise and rewards, and while punitive methods such as smacking or shouting were used, they were much more infrequent. This may suggest that recent changes in the law, and public campaigns against family violence, are beginning to change the attitudes and practices of parents.

As mentioned earlier in this thesis (section 7.1.5), previous research has established that smacking was a prevalent form of discipline employed amongst Pacific parents (Schluter, Sundborn, et al., 2007), and the concept of harsh discipline has been perceived by some communities to be a typical part of Pacific culture or Pacific religious beliefs (Fairbairn-Dunlop, 2001; A. Smith et al., 2004). However, research from McCallin et al. (2001) describes a gradual shift amongst Pacific parents, away from using strict physical punishment strategies, towards finding new ways of shaping children's behaviour. These sentiments are reiterated in a report from the Families Commission which revealed that the majority of parents took an authoritative (firm but warm) approach to discipline and parenting (Families Commission, 2009a).

The Samoan and Cook Islands fathers in this thesis appear to have been influenced by and reacted against their fathers disciplinary practices. For example, Samoan and Cook Islands fathers report being less inclined to utilise physical discipline measures when dealing with their children. Although there is evidence that suggests parents tend to use similar disciplinary practices to those they experienced as children, it is important to note that childhood history does not predetermine parental discipline practices, as there is evidence that parents can and do reject the practices of their own parents (Gollop, 2005).

Need for more information/support services

A key barrier or challenge for the Samoan and Cook Islands fathers in this Phase II research is the lack of services and information available specifically for Pacific fathers. Many fathers indicated that they would be eager to see more fathering information available. Moreover, they felt that developing a media awareness campaign with Pacific role models, would effectively facilitate and provide information for fathers about available services and support. The lack of services specifically tailored towards fathers in NZ is highlighted in a research policy document by Pudney (2003). The report suggests that in the past fathers have been hesitant to step forward to ask for help, however the time is now right for specific services for fathers to be designed and provided by fathers themselves (Pudney, 2003).

A research survey from the NZ Families Commission (2009) surveyed fathers about support services which could assist them in their fathering. Of those who answered the

question, 54% indicated that they would like some support, although they tended to be unspecific about what form this support should take (Luketina et al., 2009). Also, while some fathers thought that there should be more courses about fathering, a significant challenge for providers of fathering courses could be to maximise attendance. Ideally, the best approach may be to provide courses where and when fathers can most easily access them e.g. within local schools, churches or workplaces.

Overall, a greater awareness of ethnic differences in fathering patterns must be noted when designing programmes to support fathers. Research about fatherhood in NZ, noted that European families place a stronger emphasis on the nuclear family, while other ethnicities such as Pacific peoples place a stronger emphasis on the extended family (Pudney, 2003). Thus, it is important that fathers from Pacific ethnic groups, are able to contribute to formulating fathering polices affecting them, rather than assuming that 'one size fits all'.

Balancing time between work and family

A significant challenge disclosed by Samoan and Cook Islands fathers in this Phase II research was the desire to spend more time with their children. However, there was a general inability to do so amongst fathers due to work commitments and the pressure to provide the basic needs for the family. Some research participants mentioned feelings of regret at not having the opportunity to spend more time with their own father during childhood, and these sentiments had motivated them in their intentions to be more involved with their children. The majority of fathers were very conscious of the pressure to provide for their families, yet due to work commitments and other

obligations, they were often unavailable or too physically tired to spend more time with their children.

These sentiments reflect similar desires expressed by NZ families interviewed for a Families Commission research report (2009) on parents' long working hours and the impact on family life. The participants in this study indicated that there were negative effects for children, mothers and family life in general, from fathers working long hours. The families spoke poignantly about children missing their fathers, and fathers wanting to spend more time with their children. In addition, some of the fathers interviewed for this NZ Families Commission research, expressed the simultaneous ambition to both be a good provider (necessitating working long hours), and to spend more time with their children.

While many Samoan and Cook Islands fathers in this Phase II research see their role of family provider as an expression of good fathering, a key concern is the tension in fulfilling their role as provider and their role as father. Interpretations of the definitions of the role of father are showing new possibilities with the emergence of the 'nurturing father' role for men who care for their children while their partners work (Haas, 1993). Research from Jump & Haas (1987) examined the changing role of fathers in dual career settings. In interviews, they found that while most fathers described fathering as demanding, they were coping and satisfied in their new role involved caregiver. Areas they found particularly difficult concerned conflicts between their role as providers versus their new role as involved, nurturing fathers. However,

despite some signs of change, the majority of fathers continue to interpret the central role of fathers as that of a provider.

Related research by McNaughton and O'Brien (1999) exploring workplace issues amongst NZ fathers found that fathers in two-parent households with pre-school-aged children were more likely to work full-time than any other group, reflecting greater financial pressure with increased family size. Similarly, Yeung and Glauber (2007) found that two parent children of low income earning fathers have less fathering time than two parent children in higher income earning families.

Most of the Samoan and Cook Islands fathers in this Phase II research expressed their desire to be more involved and engaged with their children. This sentiment could be linked to a mounting influence of NZ societal values and expectations around fathering, and the concurrent declining influence of traditional Pacific cultural values and attitudes. Moreover, during their own childhood, the majority of participant fathers felt that they did not have the opportunity to spend as much time with their fathers as they wanted. As a consequence, when raising their own children they are conscious of being more involved and active in maximising the time spent with their children.

The introduction of more flexible work arrangements to assist fathers to be involved with their families could be a strategy worth exploring. Research from Cohen (1993)

established that to maximise the availability of time and input of men in parenting will require reducing or restructuring expectations of them as workers. Employer flexibility could encourage employees varying their start and finish times of work, and or allowing time off for family events or family members are ill. Moreover, a research report from the Families Commission examined the availability and benefits of flexible work with a survey of 1,000 family members, augmented with 11 focus groups and 15 in-depth interviews (Families Commission, 2008a). The employers of most of the men in the sample offered flexible work arrangements, and the majority of the men availed themselves of these arrangements. The results also showed that employees have more trouble balancing work and family time, and feel that their family time is more pressured, when they do not have flexible work arrangements available to them.

Parental leave is another option which may allow fathers the opportunity to become more involved with their children while they are babies. Ideally, it would need to be of reasonable duration and adequately funded so that there is no significant loss of family income. As discussed earlier in this thesis (section 6.1), fathers spending time with their babies is associated with stronger attachment and more involvement with the children at later ages, leading to various child-development benefits. Other benefits include less family stress and less likelihood of maternal depression.

According to the Parental Leave and Employment Protection Act (1987), eligible employed fathers are entitled to up to two weeks' leave around the time of the birth, and up to 52 weeks extended parental leave, less any maternity leave taken. Fathers

taking either of these two types of leave may not be entitled to payment, depending on variations to employment conditions or individual circumstances. Mothers are entitled to 14 weeks' paid parental leave, and any or all of their entitlement can be transferred to their partner. Financial considerations often prevent fathers from taking up unpaid parental leave, reducing their opportunities for spending time with their babies. A report from the Families Commission advocates for a progressive increase to the duration of paid parental leave and the level of payment for fathers (Families Commission, 2009b). However, as yet little practical changes have resulted from these recommendations.

Maintaining or enhancing cultural connectedness

A topic of tension that emerged from this research was culture and the ability to maintain cultural connectedness and engagement whilst living in NZ society. The majority of fathers were aware of the importance of Pacific culture in their upbringing and the positive values and beliefs which they learned through some of their cultural experiences growing up. As a result, many fathers make an effort to introduce or promote the importance of traditional culture to their children, through exposure to traditional language, dance and songs, foods, and customs.

All Samoan and Cook Islands participant fathers in this Phase II research maintained that their principal ambition or aspiration is to protect and educate their children, so that they will have more opportunities and be able to make the right choices for

themselves in the future. The majority of fathers felt that cultural connectedness plays an important role in assisting their children to achieve these ambitions.

Culture-specific patterns of parenting can make for variations in childrearing practices. While parents in all societies are expected to nurture and protect young children (Bornstein, 2002, 2006), it is clear that culture influences a wide array of family functions including roles, decision-making patterns, and cognitions and practices related to childrearing and child development (Benedict, 1983; Bornstein & Lansford, 2009). The complex transformations which take place when families emigrate from to another society may affect parenting.

Conceptual models of successful parenting are drawn upon by migrant parents from their original cultural context. When they migrate to a new culture, migrant parents find that socialization agents in the receiving culture, such as other parents, teachers and professionals, may possess different perceptions of the successful parent and different strategies for childrearing (Roer-Strier, 2001). This circumstance prompts most acculturating parents to become bicultural in some degree, simultaneously adopting cognitions and practices of their new culture while retaining those of their old one (Chia & Costigan, 2006; Ryder et al., 2000). In acculturating, migrant parents must decide which cognitions or practices to retain from their indigenous culture, which to modify, and which new conventions to adopt.

7.5.6 Fathers influence upon the health and well-being of their children

During the qualitative conversations, Samoan and Cook Islands fathers mentioned some specific examples of practices or tendencies, which positively influence the health and well-being of their children.

(i) Promoting physical activity and health amongst their children

All fathers in the study spoke of their own childhood involvement in sports and physical activity, and the positive benefits for their overall health and well-being. Consequently, many fathers are strong advocates for good physical activity and health for their children. Moreover, they strongly promote and support the involvement of their children in sports teams and sports events. This resolution regarding physical activity and health amongst the participant fathers is heartening, in view of the considerable amount of literature concerning the relationship between low levels of physical activity among fathers and obesity amongst their children (Burke et al., 2001; Fogelholm et al., 1999; Trost et al., 2001).

Comparable research findings highlight the influence parental role models play in fostering health behaviours among their children. For example, parental support for physical activity has been identified as a significant positive influence in children's physical activity participation (Trost & Loprinzi, 2011). Through activities such as playing with children, providing transportation to parks and activity facilities, and reinforcing physical activity participation, parents can increase physical activity participation among pre-schoolers (Trost & Loprinzi, 2011). Moreover, physical activity

levels amongst fathers appear to be associated with the physical activity levels of their children despite genders (Ferreira et al., 2006). Further research suggests that increased pre-schooler physical activity is a result of parent activity prioritization and parental support (Oliver, Schofield, & Schluter, 2010). The encouragement of appropriate physical activity levels among young children is crucial in the home environment, and mechanisms to support parental engagement in activity with their children are vital.

An encouraging discovery from the discussions with Samoan and Cook Islands fathers was the acknowledgement and encouragement of their children to spend more time being physically active, instead of watching television and engaging in sedentary behaviours. This is particularly encouraging considering the findings from Sport and Recreation Council of New Zealand (SPARCNZ) statistics which suggest declining activity levels among New Zealanders aged 5–17 years (9% are sedentary and 22% relatively inactive), and that Pacific people aged 5–17 years are much less active (19% are sedentary and 48% relatively inactive) (Sport and Recreation New Zealand, 2003). With the growing trend of both parents being active in the workforce, efforts are needed to remind parents of the important role they play in ensuring adequate physical activity by their children is a priority (Tucker, van Zandvoort, Burke, & Irwin, 2011). Prior investigation amongst parents of pre-schoolers found many who reported being “too busy” and “too tired” to actively play with their children, resulting in increased time in sedentary behaviours (Goodway & Smith, 2005).

Social cognitive theory suggests that a supportive environment is necessary for establishing and maintaining positive health behaviours (Bandura, 1986). Accordingly, parents possess the capacity to influence their child's participation in physical activity by providing the appropriate support for such activity. This support may come in a variety of forms, including informational, emotional, and instrumental support (Taylor, Baranowski, & Sallis, 1994). Informational support includes providing physical activity-related advice to the child. Emotional support includes letting the child know you care about their physical activity behaviours, while instrumental support includes facilitating access to physical activity opportunities by signing the child up for physical activity programmes and providing transportation (Taylor et al., 1994). Similarly, a review of 71 studies which examined the relationship between parental support and child physical activity found that there was strong evidence for a positive association between parental support and child physical activity (Trost & Loprinzi, 2011). Finally, given the disturbingly high level of Pacific children who are overweight or obese, perhaps family based interventions involving fathers and other family members, may prove most effective in addressing the issue of nutrition and physical activity amongst Pacific children in NZ.

(ii) Modifying risk-taking behaviour and promoting responsible behaviour amongst their children

Many fathers involved in this study confessed to making a conscious decision to reduce or stop using alcohol or tobacco, because of the detrimental effect on both their children's health, and their own ability to function effectively as fathers. As a

result, they were mindful of educating their children about the harms of drinking and smoking, as well as encouraging them not to indulge in such behaviours. In addition, fathers who did use tobacco or alcohol were mindful of doing so discretely, away from their children, to reduce potential influence or harm.

These results reflect similar findings from a large longitudinal study of mothers, partners, and their children in the North Island of NZ (Morton et al., 2010). Information concerning smoking behaviours showed that close to half (45.6%) of all partners who have ever smoked made changes to their smoking patterns during the mother's pregnancy, and partners who identified as Asian, Pacific or Māori were more likely to make changes than those who identified as NZ European. The most common changes were cutting down the number of cigarettes per day, stopping smoking and smoking outside only (Morton et al., 2010).

Little is known about the impact of Pacific parental drinking behaviour on their children's physical and mental health, behaviour, and educational performance, despite disproportionate patterns of heavy use as evidenced by drinking surveys (Habgood et al., 2001; Huakau et al., 2005). Some implications can be drawn from the literature on the history of indigenous drinking practices as well as the studies on the effects of drinking upon children in low-income families. However, given that many Pacific families already experience socio-economic disadvantage, it is likely that the poverty cycle and negative impacts upon children would be exacerbated by the addition of parental alcohol abuse problems (Families Commission, 2006).

Relatively scarce information exists regarding the impacts of Pacific fathers smoking on their child's health and well-being. However, information from a nationally representative survey of 14-15 years old students found that parental smoking is a consistent risk factor for smoking uptake with children, amongst all ethnic groups (Paynter, 2010). Also, while maternal smoking appears to have a greater effect in terms of attributable risk of smoking uptake compared to the fathers, paternal or fathers smoking does appear to have an additive effect when both parents in the home smoke.

Further research is needed to understand the specific dynamics and impacts of smoking and drinking upon Pacific children. Moreover, the positive intentions by Samoan and Cook Islands fathers in this thesis to reduce alcohol and tobacco consumption for their children, should be celebrated and supported. The intent is commendable given the evidence indicating high rates of smoking and harmful drinking behaviour amongst this group (Huakau et al., 2005; Ministry of Health, 2009b).

It is encouraging to note that fatherhood appears to be a key trigger for Pacific fathers in smoking and alcohol cessation, and highlights the need for developing this concept for cessation and health promotion services. Previous research concerning fatherhood as a motivator for smoking behaviour change has established similar findings (Gage, 2007). Individual interviews were conducted with 23 rural, working-class men from Mid-Missouri, USA during pregnancy and post delivery. The transition to fatherhood

motivated men to protect their babies from the effects of cigarette smoke. In addition, motivation, cessation goals and smoking behaviours changed during the course of pregnancy and post-delivery in response to men's growing awareness of fathering roles and responsibilities. Thus, pregnancy can be considered an opportune time to promote smoking behaviour change with men in the context of their transition to fatherhood.

7.5.7 Contrasts and comparisons between subgroups of fathers

NZ-born and Island-born fathers

Amongst NZ born and Island born fathers in this study, the cohort of Samoan fathers all report similar encounters and experiences during their childhood, with most recounting that their shared experiences played a major role in shaping their fathering practices and behaviours. Many of the Samoan fathers discussed how these experiences, both positive and negative, were instrumental in determining the values and beliefs which they strive to instil in their own children, regardless of their own place of birth.

However, some differences were reported amongst Cook Island fathers in the study, specifically regarding their recognition and acceptance of the importance of Cook Islands culture in their fathering behaviours, and the importance and influence of Christianity and the church. For example, fathers who were born and raised in the Cook Islands continue to maintain strong links with their culture and the church, and they proactively impart and reinforce these values and beliefs to their children. In

comparison, fathers who were born and raised in NZ do not seem as strongly connected with these values, and this may be a result of the influence of mainstream NZ culture, or the different overall environment in which they were raised.

This difference in perspectives and values amongst NZ born Cook Islands fathers subsequently affects the values and beliefs which they impart upon their children, which, given the positive benefits associated with stronger alignment with traditional cultures (Borrows et al., 2010), could be detrimental to the development and future outcomes of their children. Consequently, targeted endeavours to educate NZ born Cook Islands fathers about the important role that their Cook Islands culture can play in increasing the likelihood of positive developmental outcomes for their children, may be beneficial. Moreover, efforts to encourage the maintenance of traditional Cook Islands culture within Cook Islands families could also be advantageous.

Examination of experiences of first and second generation NZ born Samoan fathers discovered similarities amongst Samoan fathers regarding their values and beliefs during their upbringing, and also in their own fathering practice. However, amongst NZ born Cook Island fathers, first generation fathers were more strongly embedded in their traditional culture, while second generation fathers were more indifferent to their traditional culture and beliefs.

Prior research into the relationship between acculturation and selected health outcomes amongst Pacific fathers and mothers, including a large number of Samoan and Cook Islands fathers, established that individuals who were more strongly aligned with their traditional or Pacific culture tended to have better health outcomes than individuals that are more assimilated with mainstream culture, or individuals that are integrated with both the mainstream and traditional cultures (Borrows et al., 2010; Tautolo, Schluter, Paterson, et al., In press). These findings suggest the presence of something protective or positive in relation to health outcomes. Those who maintain and remain strongly aligned with their traditional culture, positively influence their health status in NZ.

7.5.8 Strengths and limitations of the research

In terms of the strengths of this qualitative research study, a positive feature was that the interviewer for the research was a father and speaker himself of both Samoan and Cook Islands descent, with lived experience and understanding of Samoan, Cook Islands, and NZ cultures. This was perceived as highly beneficial in ensuring and facilitating a successful recruitment and data collection process, as well as following HRC Guidelines on Pacific Research by enabling the development of meaningful engagement in a culturally competent manner (Health Research Council, 2005). Another factor in the success of the project was the overall methodology and design of the study, which allowed the research team to engage and recruit a participant group which could potentially have been very problematic to connect with.

Previous work examining barriers and difficulties in recruiting minority populations for research studies identified several strategies, which were implemented in this study to alleviate these obstacles. For example, the choice of a culturally appropriate venue and facilitation process, and the use of a Pacific advisory group were all components of the methodology that were vital in ensuring the success of the project. Furthermore, when considering and designing the recruitment process for this Phase II research, there were very few established fathers groups which were suitable for this study. As a result, using the PIF Study cohort of fathers was crucial and advantageous in facilitating the interviews of Samoan and Cook Islands fathers.

An encouraging outcome of this research was that it is the first time this specific kind of investigation with Samoan and Cook islands fathers has been undertaken. Moreover, the fathers themselves were able to identify some of their own needs, and articulate particular strategies or interventions which they felt would address them.

The findings from this analysis also form part of a peer-reviewed report to the Families Commission concerning the health of Pacific fathers, and their fathering behaviours and practices. As a result, Pacific research capacity is being developed through this project, and may be highly valuable in future research studies and projects involving Pacific health.

Despite the attempt to use a robust framework for undertaking this research, there must be some acknowledgement of the limitations inherent in this project. Firstly, the

geographical location is confined to South Auckland and only a small number of males, both in total and from each ethnic group, are represented. Similarly, the sample of participants was only taken from consenting PIF fathers.

In addition, consenting participants who took part in this study of Samoan and Cook Islands fathers were a self-selecting group. In other words, they could generally be more healthy (non-depressed), more aware, and more conscientious fathers, and therefore be more likely to engage and be eager to participate in the project. Nevertheless, the sample population is gathered from the largest Polynesian city in NZ, and the participants are all from a range of socio-economic backgrounds.

Although this sample does provide some insight into the concerns about fathering within these groups, and offers the ability to draw inferences from the experiences of parents, it is lacking in information concerning health issues such as mental well-being, and smoking, prior to being a father as part of the overall PIF Study. This absence of information does make it difficult to definitively state whether changes are due to parenting or prior exposure or circumstances.

Within this qualitative research only two 'Pacific' ethnic groups are represented. While the researchers do not claim the findings of the qualitative investigations as representative of all Pacific peoples in NZ, a study of this kind does give us some insights into parenting and fathering behaviours amongst Pacific people.

Concerning participant responses to mental health questions, an important point to consider is that those fathers with depression or other mental health issues may be more unlikely to agree to participate in this study, or they may be unlikely to disclose this sort of information in the focus groups setting. Therefore, this differential participation could potentially affect the findings from this qualitative study.

There were a number of logistic and participant issues in recruiting and engaging with the potential participants for the Cook Islands sample of fathers. This process was particularly challenging as the participant population group can be difficult to engage with, and may often be reluctant to engage in activities of this nature. In order to recruit sufficient numbers of fathers for this project, we made contact with every eligible participant, and yet were still only able to successfully recruit seven fathers to take part. Although this process of recruitment, follow-up, and successful participation in this project was often demanding, it was also very rewarding in terms of collecting unique and useful information, but also in characterising the challenges in dealing with minority ethnic groups for research and determining strategies to overcome these issues. Overall, it was deemed by the researcher to be an enjoyable experience, and highlighted the importance of cultural awareness and understanding in order to adapt and adjust the research strategies to gather the required information.

7.5.9 Implications of the research

A strong indication from this research was the need for further investigation into the area of fathering and especially amongst Pacific fathers. There is a definite lack of

information in this area, particularly amongst different Pacific ethnic groups. Further research is essential to increase understanding and identify the issues and needs amongst these communities, and thereby help to formulate strategies which will address these needs. Additionally, the project identified the necessity to develop father specific services and information resources, especially for Pacific ethnic groups. The few services that are available are not specifically targeted at fathers, and are often very poorly resourced or equipped to handle the differing needs of the range of Pacific ethnic groups in the community.

Finally, a concerted effort should be made to increase the awareness amongst fathers and the community, about the vital role which fathers play influencing their children's development, and therefore the shape of their future communities. Participants in the project highlighted the use of a national media campaign similar to other health awareness issues such as 'breast cancer week', where there might be a fathering week with activities and events all culminating with 'Fathers Day' at the end of the week. A similar initiative operating over the past few years within the Waitakere community in Auckland has proven highly successful (Dyer & Mullins, 2009). The annual week-long event coordinated by Violence Free Waitakere and the local council has been running for the last four years, and features a range of fun and informative activities to champion the role fathering has in the community. The week aims to provide a forum for fathers to talk about the issues they face and celebrate the successes in their roles as fathers. It also introduces men to a range of services and support networks available in the community and highlights the role fathers play in the future of Waitakere.

7.5.10 Summary

It is evident from the qualitative findings of this thesis that the Samoan and Cook Islands fathers in this study, not unlike all fathers, face many challenges in raising their children. Discussion over the course of the interviews included subjects such as the influence of childhood upbringing, religious involvement, cultural knowledge and practices, and risk-taking behaviours, and their impact on the fathering behaviours of participants. Many fathers spoke of considering past experiences and knowledge of culture and religion, to influence their approach in striving to be a successful father for their own children.

Despite the challenges they may face, Samoan and Cook Islands fathers are eager and enthusiastic about being great, highly competent, and involved fathers. The fathers in this Phase II research also report that provisions concerning flexible work hours and improved availability of information and fathering support services are needed. The participants suggest that if strategies are implemented to address these needs, father involvement and engagement amongst Pacific fathers would increase, leading to better outcomes for Pacific children.

Chapter 8: Discussion

8.1 Introduction

This chapter outlines the overarching issues and themes concerning Pacific fathers and their children discussed in this thesis. It provides an overview of some key components of mental health, smoking, and father involvement amongst a cohort of Pacific fathers, and how these attributes are influenced by differences in acculturation status and ethnicity. In addition, this chapter examines how these attributes affect the health and fathering behaviours of this cohort of Pacific fathers living in NZ. Information for this overview is garnered from quantitative data collected from the entire cohort of fathers in the PIF Study, as well as qualitative information collected from a sub-sample of Samoan and Cook Islands fathers within the PIF Study. This discussion chapter highlights the significance of the issue of Pacific fathering, and explains some of the strengths and limitations of this research. This chapter concludes with a section emphasising future considerations and recommendations for further studies in the field of Pacific fathering.

8.2 Research significance

There is growing recognition of the role of fathers in child-raising and their important contribution to the health and well-being of their children. The importance of fathers and fathering behaviours has been recognized as a priority area by international bodies, including the World Health Organization (2007). In addition, major policy and research priorities outlined by the NZ Families Commission (2008b), and the Health Research Council of New Zealand (2007), identify the need to increase understanding

of health issues involving family support and social support structures, especially those which promote resiliency amongst children and young people in NZ (Gluckman, 2011).

As indicated in this thesis, fathering and father behaviours encompass a very broad (if not limitless) range of areas and aspects, which in turn have the potential to affect children, families, and societies in an equally broad myriad of ways. Consequently, this thesis has been deliberately limited to consider only a handful of sentinel slices or key variables of Pacific fathering and the ways in which they influence Pacific children. This allowed a detailed examination of these important variables; an examination that is likely to spill-over into other aspects of Pacific fathering.

Fathers and fathering have been a neglected area in research on families. A review of the available literature found very few representative surveys focusing directly on NZ fathers (Luketina et al., 2009). Little is known about the circumstances of NZ fathers and their support needs, despite overseas research indicating that families receive enormous benefits from fathers who feel supported and valued in their role (Howard et al., 2006; Pleck & Masciadrelli, 2004). In examining the little available research about fathering in NZ, it was evident that few studies had an adequate representation of Pacific fathers (Gage, Kirk, & Hornblow, 2009; Luketina et al., 2009) to enable accurate conclusions and recommendations to be developed. Therefore, an important motivation for undertaking this research was to set a research platform on fathering generally, and particularly research concerning Pacific fathers.

In order to understand and develop a range of supportive and educational services for Pacific fathers, an examination of fathering behaviours and practices amongst Pacific fathers in NZ is essential. To this end, this research has identified specific attributes which influence fathering behaviours by Pacific fathers. These attributes included the impact of mental health on fathering routines and possible methods for alleviating potential negative consequences, and the influence of risk-taking behaviour such as smoking on the fathering practices of Pacific fathers. In addition, this research also explored the involvement of fathers with their children, and associations between fathering practices and child behaviour outcomes.

An important significance of this research is the effect which acculturation exerts on the health and fathering behaviours of Pacific fathers in NZ. The processes of migration and acculturation can often require alterations of social identity and self-image to accommodate these dynamic processes (Schluter et al., 2011). As a result, culture-specific patterns of parenting including roles, decision-making patterns, and cognitions and practices related to childrearing and child development (Benedict, 1983; Bornstein & Lansford, 2009) may be subjected to complex modifications when families emigrate from one society to settle in another. Understanding the impact of migration and acculturation on Pacific people, as well as their processes for developing social support systems in a new culture, is crucial to meeting the needs of these population groups.

While some knowledge is available about the health status of Pacific males and how that influences their families (McKinlay, 2005), it is still unclear how each of the health

attributes influence the fathering behaviours and practices of Pacific fathers in NZ (Hendricks, 2004). This ambiguity is partly due to a little understanding about the influence of these parameters in the Pacific context, and how the presence or absence of these variables may influence or apply to the fathering activities of Pacific fathers. Similarly, the magnitude and extent to which these parameters affect and influence the motivations and behaviours of Pacific fathers is also unclear. This research has sought to identify and examine these underlying motivations through a mixed-methods approach comprising both quantitative and qualitative data collection and analysis. In the initial explorations of quantitative data from the PIF Study, statistical techniques were used to identify and highlight significant findings for Pacific fathers. Further clarification was achieved by carrying out in-depth qualitative interviews to examine the underlying impact of these findings on the fathering conventions and practices of Pacific fathers.

The data from the PIF Study is epidemiologically innovative because the mother/father/child triad all actively participate. Consequently, this epidemiological study is in a unique position to examine and report on fatherhood for Pacific families in NZ. The utilisation of data from PIF fathers in this research also provides an opportunity to investigate ethnic specific differences in contemporary Pacific fathering practices and behaviours. The identified research results may provide evidence to assist in the identification of priorities and practices for future interventions.

In terms of policy implications, parenting and particularly fathering roles and practices have become an important health priority in recent times (Families Commission, 2008b). This is especially significant when considering the potential effects of fathering behaviours on child development and health outcomes (Health Research Council, 2007). Furthermore, the need for increased understanding of how fathering roles and practices promote cohesion and influence educational aptitude and success for their children, is another key issue that has been identified as requiring further research (Families Commission, 2009b). Research findings from this thesis will benefit the formulation of effective strategies and policies to address these priority needs. The findings may also support the development of resources, and assist or instigate further research in this area. Finally, this research will aid health professionals and Pacific communities, thereby contributing to improved health for Pacific children and families in NZ.

8.3 Health of Pacific fathers in New Zealand

8.3.1 Prevalence and impact of mental disorder

Mental health problems within Pacific families have previously been reported as attributable to increased stress and higher depression amongst post-natal mothers (Munk-Olsen, Laurensen, & Pederson, 2006; Murray & Cooper, 1997). However, research by Paulson & Bazemore (2010) suggests that fathers may also suffer the ill-effects of mental illness caused by increased stress and pressure following the birth of a child. Analysis of the GHQ-12 responses for Pacific fathers in this thesis identified 3.9% of fathers as symptomatic for potential psychological disorder in the first year

following their child's birth, rising to 6.7% and 9.8% in the 2-year and 6-year postpartum phases respectively.

Research from Davis (2008) provides some of the only evidence available concerning the use of the GHQ-12 within the NZ population, and explores the use of the GHQ-12 instrument to identify psychological distress among patients in a NZ general practice setting. Using the same scoring method and threshold employed in this thesis, the findings from Davis (2008) identified 33% of patients as 'symptomatic cases' for some form of psychological distress. Given this level of GHQ-12 indication, and despite differences in sample comparability, the results from this research indicate that Pacific fathers have considerably low rates of mental disorder.

These low rates of mental disorder appear to contradict the predicted pattern of mental disorder exhibited by fathers and parents of young children. For example, research from Paulson & Bazemore (2010) indicates that the number of men battling postpartum mental health issues could equal that of their female counterparts. In addition, data from the Postnatal Depression Association of Australia (2011) suggests that post-natal depression could affect between 10-33% of fathers, following the birth of a child.

The prevalence rates amongst Pacific fathers in this research thesis were below these prevalence estimates of 10-33% in every measurement wave. This low prevalence could be due to factors such as the presence of increased family support from

extended family after the birth of children. This family support may help to alleviate stressful situations, and thereby contribute to a decreased occurrence of any mental health issues (Cohen, 2004). The qualitative focus group findings from this thesis support this view, with participant fathers reporting mental health issues and depression as inconsequential for both themselves and their partners. Furthermore, the fathers indicated that the availability of extended family members to support and help with childcare or other issues, was a strong protective factor against mental anguish and stress. This link between high levels of family support, social connectedness, and a reduced risk of negative mental health outcomes is in line with Friedli (2009), who highlights strong social support, connectedness and participation within families as providing a protective context that prevents mental illness.

The low prevalence of potential mental disorder amongst Pacific fathers could also be attributable to under-reporting. Previous research from McKinlay et al. (2009) which examined the health care needs of NZ men, suggests that NZ men are less likely to see health professionals or to admit that they are suffering from any health issues. Moreover, while post-natal screening is often undertaken during routine medical checkups with mothers, similar testing amongst fathers is less likely to be administered. This reluctance amongst men to discuss health issues, or to undergo routine health check-ups, could potentially underestimate the presence of many health issues for Pacific men, including mental health.

Clearly, perceptions of mental illness amongst Pacific people can differ from the more commonly utilised non-Pacific perspectives. For example, responses to illness and patterns of treatment seeking reveal that Pacific people often draw on traditional models of treatment and healing resources to make sense of health symptoms (Norris, Fa'alau, Va'ai, Churchward, & Arroll, 2009). Furthermore, in Pacific families it is likely that symptom interpretation and decision making about treatment may be done at the family level rather than the individual level. Although an individual might hold a particular view of what symptoms mean and what to do about them, they may not act on this if overruled or persuaded by other family members (Norris et al., 2009). In addition, as is well documented, Pacific people have a holistic attitude to robust mental health which requires that all aspects of a person's life, such as spiritual, physical, emotional, and family, to be in harmony (Ministry of Health, 2005; Pulotu-Endemann, 2009).

Nonetheless, despite the initial low prevalence rate, the increasing trend of potential mental health disorder within the cohort of Pacific fathers is a real concern; not just for the functioning and well-being of the fathers themselves, but also for the overall well-being of the family unit. Unimpaired mental well-being amongst fathers is associated with better cognitive functioning (Dubowitz et al., 2001), improved psychological outcomes in later life (Sarkadi et al., 2008), increased father involvement, and positive health behaviours for their children and maternal counterparts (Teitler, 2001). As a result, although relatively low levels of potential

mental disorder were reported amongst Pacific fathers in this thesis, any potential distress should not be ignored.

Associated risk factors for mental disorder

In addition to time postpartum, being a regular smoker was also significantly associated with potential psychological disorder for Pacific fathers. Despite a lack of research regarding the effects of smoking on mental health in NZ (Mental Health Foundation of New Zealand, 2008), international research indicates that smoking prevalence is significantly higher amongst sufferers of mental health problems compared to the general population (Meltzer et al., 1995), with daily cigarette consumption considerably higher amongst smokers who have mental health problems (Brown, 2004).

The higher smoking prevalence among mental illness sufferers may relate to the use of smoking as a coping mechanism for dealing with feelings of isolation and mental illness (Brown, 2004). Moreover, Patkar et al. (2002) suggests that the nicotine in cigarettes may relieve some of the side effects of medication for mental illness sufferers, thereby encouraging them to continue smoking. Regardless of the reason, since smoking is associated with numerous deleterious health outcomes, concerted health promotion efforts are essential for reducing smoking rates in all populations groups, including Pacific fathers.

The quantitative findings from this thesis have also demonstrated a significant association between full-time employment and mental illness. Earlier research from a NZ Mental Health Commission report (1999) noted that employment and mental health were strongly associated, and that employment assisted mental illness sufferers in their recovery and decreased their dependence on services. The qualitative findings from this thesis support this perspective, with many fathers identifying employment and the ability to provide for their families as a strong value and motivation in their lives. Additionally, many fathers viewed unemployment as a source of stress and anxiety in their lives (see section 7.5.5). Obtaining steady employment could be perceived by Pacific fathers as successful fulfilment of a key responsibility, as well as alleviating the stress and pressures associated with providing economically for their families.

Although research indicates that employment offers real benefits for people with experience of mental illness, the reality is that unemployment rates amongst this group are higher compared to the general population. For example, compared to other disability groups, people with experience of mental illness have the lowest rates of employment (Jensen et al., 2005). In the United Kingdom, estimates of unemployment levels among people with experience of mental illness range from 61% to as high as 96% (Crowther, Marshall, Bond, & Huxley, 2001). Several factors contribute to and influence unemployment rates amongst people with experience of mental illness. For example, rates of unemployment are particularly high (approximately 85%) for people experiencing symptoms of severe mental illness (Crowther et al., 2001). Similarly, the

types of mental disorder experienced can be influential upon employment. Research from Wewiorski & Fabian (2004) found that people with experience of anxiety or depression are more likely to be employed compared to people with experience of schizophrenia or bipolar disorder.

The findings from this research suggested that Pacific fathers who were separated or single were more strongly associated with developing potential mental disorder than fathers who were married or in de facto relationships. Evidence from international longitudinal research by Cox et al. (1999) and Hyoun and McKenry (2002) supports these findings, and asserts that married spouses are sources of beliefs and validators of identity for their counterparts. This security can lead to positive resilience when dealing with everyday stresses. Conversely, contentions are that marital disruption can create vulnerability to mental stresses, with divorced people reporting worse mental health due to stresses and strains associated with role transitions (Aseltine & Kessler, 1993; Waldron, 1996). A re-emphasis of the importance of marital relations emerged in the qualitative discussions with Samoan and Cook Islands fathers in this thesis. Strong conviction emerged amongst fathers on this point, with several fathers highlighting social support, connectedness, and cohesion as essential safeguards from potential mental disorder and stress.

Finally, the quantitative findings indicated a strong association between Cook Islands or Tongan ethnicity and indications of potential mental disorder amongst fathers in this doctoral thesis. This is a significant finding given the little ethnic specific

information regarding the prevalence of mental illness amongst Pacific men and fathers in NZ. Pacific approaches and understandings of mental illness can differ markedly from non-Pacific perspectives (Norris et al., 2009), and there is a likelihood that some Pacific ethnic groups describe and articulate mental illness in ways unique to their particular culture (Ministry of Health, 2005). For example, Samoan perceptions of mental illness are frequently described in terms of spiritual relationships or the breaking of forbidden traditions (Pulotu-Endemann, 2009; Tamasese et al., 1997).

It must also be acknowledged that different ethnic groups may interpret questions from the GHQ-12 measurement tool in different ways. Thus, differences in GHQ-12 indication may be an artifice of differences in ethnic-specific validity for this measure. There has been little work done to validate and measure the psychometric properties of the GHQ-12 for application within Pacific populations. However, previous studies by Chan (1985) which examined the effect of language on GHQ-12 responses, found that certain differences emerged at the item level of the questionnaire, attributable to linguistic and cultural factors. The key issue for these differences related to the difficulty for participants in understanding the items in the questionnaire (technical validity). It must be noted that a large number of the sample of Pacific fathers in this thesis reported not finishing secondary school, and it may be that competence in English language was also a factor here. Consequently, technical validity could have affected the extent to which GHQ-12 items were adequately understood by respondents. That aside, further research is necessary to identify and understand what

particular issues and concerns make Cook Islands or Tongan fathers more strongly associated with potential mental illness.

In considering the small array of variables significantly associated with mental well-being, an interesting null finding was displayed by the acculturation variable. The non-significant relationship between acculturation and mental well-being within the cohort of Pacific fathers was unexpected, considering the significant association of acculturation with an extensive selection of factors in previous PIF research findings (Borrows et al., 2010; Erick-Peleti et al., 2007; Iusitini et al., 2011; Paterson, Carter, Gao, et al., 2007).

Acculturation is a complex concept which has recently become of interest in public health, yet most of the acculturation measures commonly utilised employ either proxy measures or unidimensional scales which lack precision and suitability (Thomson & Hoffman-Goetz, 2009). Unlike previous research which has relied on other proxy methods for acculturation assessment, such as time spent in a country, or country of birth, this doctoral research utilises a tool designed specifically for measuring or assessing acculturation (Berry, 2003; Borrows et al., 2010; Tsai et al., 2000).

The strength and suitability of the acculturation measure utilised in this thesis is highlighted when comparing participant data for acculturation status to years in NZ, and birthplace; two commonly used proxy measures of acculturation. These results emphasize that birthplace, or time spent in a place, do not necessarily dictate the

cultural alignment of an individual, and that other underlying factors may instead be responsible (Schluter et al., 2011). Moreover, the acculturation measure utilised in this thesis is an appropriate and theoretically grounded tool, that is better designed to epidemiologically capture and investigate this dimension.

Prior research examining the relationship between acculturation status and an extensive selection of maternal and infant health risk factors amongst Pacific mothers, indicates that individuals characterised as being separationalists (people with strong traditional Pacific cultural alignment) had the least OR for exhibiting any of these maternal and infant risk factors. In comparison, assimilationists (people with strong mainstream NZ European cultural alignment) exhibited the highest OR for exhibiting these same maternal and infant risk factors (Borrows et al., 2010). This finding suggests that individuals with stronger alignment to their Pacific culture may have more favourable health outcomes compared to those who are more aligned to the mainstream Western culture. This relationship is supported by previous international research indicating an intrinsic link between culture and health (Helman, 2000; Sam, 2006) and acknowledging culture as an important determinant of health status (Snowden, 2005; Spector, 2002). Moreover, studies involving Pacific mothers and infants in NZ (Borrows et al., 2010), Turkish immigrants in both Germany and Canada (Ataca & Berry, 2002; Berry, 2006), and Hispanic immigrant women in the USA (M. E. Jones et al., 2002), have established that migrants who retain their own cultural attitudes and behaviours without adopting attitudes or behaviours from the new culture, were likely to experience more positive health benefits. Nevertheless, further

research is needed to understand precisely what underlying aspects of traditional or Pacific culture may be implicit in promoting this improved protection.

Summary

A small but significant proportion of Pacific fathers in this thesis appeared to suffer from potential mental disorder. This will have implications for their families and children, particularly in terms of intimate partner violence, temporal involvement with the family, and the ability to provide necessary resources for everyday life (Families Commission, 2009b; Mental Health Commission, 1999; Schluter, Paterson, et al., 2007). However, future measurements over time are needed to establish whether this increasing prevalence of potential mental health disorder continues, plateaus or declines with advancing child age.

Pacific fathers who are regular smokers, are unemployed, have a marital status of separated or single, or are of Cook Islands or Tongan ethnicity, had significantly increased association with being symptomatic for potential psychological disorder. Consequently, further investigation should be conducted to determine the specific element of variables, particularly in terms of ethnicity, responsible for these associations.

8.4 Health behaviour of Pacific fathers in New Zealand

8.4.1 Prevalence and impact of smoking

Tobacco smoking was investigated to determine the impact of smoking on this cohort of Pacific fathers, and to identify significant associations with important SES variables. The analysis of quantitative results identified 40.3% of Pacific fathers as current smokers during the first year following the birth of their child. In comparison, prevalence estimates from the 2009 NZ Tobacco Use Survey indicate 21% of European males, 16% of Asian males, and 40% of Māori males are current smokers (Ministry of Health, 2010). The high prevalence of smoking within this cohort of Pacific fathers is concerning for the well-being of the fathers themselves, as well as for their families and households. Research from Juradoa et al. (2004) suggests that fathers who smoke are a potential major contributor to environmental tobacco exposure within a household. Furthermore, children are particularly vulnerable to the detrimental effects of passive smoking, and a clear relationship exists between parental smoking and the prevalence of asthma and respiratory problems amongst school age children (Boldo, 2010; Cheraghi & Salvi, 2009; Cook & Strachan, 1997, 1999).

Discussions during qualitative focus groups with Samoan and Cook Islands fathers revealed most fathers had either quit or reduced their smoking once they became fathers. This finding appears contrary to the high (40.3%) prevalence rate of smoking within the cohort, suggesting that we may have had a biased group of fathers who participated in the qualitative phase. Nevertheless, this encouraging finding suggests that recent fatherhood may be an opportunistic intervention point for Pacific fathers

in terms of smoking cessation, and highlights the need for more development around this concept for cessation and health promotion services. Research conducted by Gage (2007) with 23 rural, working-class men from Mid-Missouri, USA, found that fatherhood motivated fathers to protect their babies from the effects of cigarette smoke. The motivation, cessation goals and smoking behaviours of these fathers changed during the course of pregnancy and post-delivery in response to father's growing awareness of fathering roles and responsibilities.

For this research, a parsimonious multivariable model was devised to identify key factors associated with smoking amongst the Pacific fathers. The final model included acculturation status (p-value=0.008), educational qualifications (p-value=0.02) and current alcohol drinking status (p-value<0.001). Further examination of these variables indicated that an acculturation status of assimilationist, having no formal educational qualifications, and drinking alcohol more than once a month, all had significant increased odds for being a smoker compared to being a non-smoker. In terms of acculturation and cultural alignment, results indicate that fathers who are strongly aligned with traditional Pacific culture (i.e. separators and integrators) have a lower OR for being smokers compared to fathers who have less alignment to traditional Pacific culture (i.e. assimilationist and marginalists) (see Table 5.3). This finding is notable given that there is no research previously undertaken that specifically addresses the association of cultural alignment and smoking amongst Pacific people in NZ.

Eradicating smoking is viewed as the single most important and attainable policy action to reduce inequalities in mortality for Māori and Pacific peoples (Smokefree

Coalition of New Zealand, 2009). Findings from this thesis provide a compelling justification for creating a smokefree nation in the near future. This is especially relevant for Pacific communities which, in comparison to the total NZ population, constitute a predominantly youthful populace (Statistics New Zealand and Ministry of Pacific Island Affairs, 2010).

Although little research exists regarding the effects of acculturation on smoking prevalence in NZ, international research indicates that smoking prevalence is significantly higher among migrant individuals that have become more assimilated with the dominant culture or more Western culture (Bethel & Schenker, 2005; Ma et al., 2004). Conversely, smoking prevalence is reportedly lowest amongst those individuals who remain more strongly aligned to their traditional culture. Results from this thesis support these previous findings; however it is notable that in this cohort of fathers, approximately two-thirds of fathers had emigrated from Pacific nations which have higher smoking prevalence than NZ, where they now reside. In contrast, in many other studies, the origin country has lower smoking rates compared to the host country of domicile.

Research findings suggest that cultural targeting may be one method for successfully reducing smoking rates, and contributing to a smokefree NZ by 2025. This approach could prove most effective alongside other strategies such as reducing the availability of tobacco, eliminating cigarette displays, and implementing plain packaging on

cigarettes, which have all been proposed by a NZ government health select committee inquiry into the tobacco industry (Māori Affairs Committee, 2010).

Associated risk factors for tobacco smoking

Pacific fathers who have a tertiary qualification had a lower OR for being a smoker compared to fathers who had no formal qualifications. This finding complements and confirms information from NZ based studies which indicate that male smoking prevalence is highest among individuals with lower educational qualifications (Hill et al., 2005; Stanton & Silva, 1993). However, it is unclear whether educational status is a strong predictor of smoking uptake and behaviour, or whether it is in fact a marker of broader socioeconomic disadvantage which must be addressed in order to influence smoking behaviour.

Finally, Pacific fathers who were regular alcohol drinkers had a higher OR for being a smoker, compared to fathers who did not drink alcohol. This is consistent with international literature which reports that alcohol drinkers are more likely to also be smokers, when compared with non-drinkers (Little, 2000; Reed et al., 2007). Alcohol and tobacco usage are risk factors for a large number of health outcomes such as cardiovascular disease, mental illness, and cancer, and thereby represent a serious problem in public health (Jemal, Chu, & Tarond, 2001; Liang & Chikritzhs, 2011; Mannino, Ford, Giovino, & Thun, 2001). It is clear from the data that there is a significant relationship between alcohol consumption and tobacco use for Pacific fathers, over and above the other significant variables. Perhaps in certain social

situations individuals who drink will also smoke, while the use of alcohol and tobacco as a form of stress relief could partially explain the co-occurrence of these two behaviours. Clearly, a better understanding of how alcohol use relates to tobacco use may help to provide harm-reduction strategies which in turn can help alleviate the effects of both risk factors.

Summary

Smoking rates for Pacific fathers in this study are relatively high compared to results from other tobacco surveys which feature Pacific participants (Ministry of Health, 2010). Pacific fathers who had lower Pacific cultural alignment, no formal qualifications, and drank alcohol at least once a month, were significantly associated with being a smoker. In addition, Pacific fathers with stronger alignment or affinity to their traditional culture, had a decreased OR for being a smoker. It can be argued that comprehensive tobacco control strategies which maintain, enhance and celebrate fathers' Pacific cultural identity within the NZ context, may be more effective in reducing smoking rates among Pacific men. Moreover, fatherhood may represent an opportunistic point for intervention with smoking fathers, with many fathers in this study indicating their increased motivation to reduce or quit smoking following the birth of their children.

8.5 Participation and involvement amongst Pacific fathers in New Zealand

8.5.1 Pacific father involvement

Measurement of father involvement amongst participants in this thesis indicated that the majority of Pacific fathers reported very high levels of involvement with their children. The median score for overall total father involvement was 5.9 out of 6, and was equally high for the 5 individual dimensions of father involvement. These quantitative results are supported by sentiments and descriptions expressed by Samoan and Cook Islands fathers, during the qualitative phase of this thesis. Many fathers described themselves as having regular involvement in supporting and raising their children, especially regarding transport, encouraging participation in sports, and providing and encouraging them to do well at school. The high levels of involvement reported by Pacific fathers are extremely heartening, considering the vast amount of research identifying the significant relationship between increased father involvement and positive child behaviour outcomes (Dubowitz et al., 2001; Flouri, 2008; Sarkadi et al., 2008).

In the qualitative discussions with Samoan and Cook Islands fathers, the fathers describe some of the factors influencing their level of involvement in raising their children. Childhood values of respect for others and working hard to provide for the family, cultural knowledge and traditions such as language and genealogy, the importance of physical activity, and the importance of the church or Christianity were some of the underlying principles which fathers reported as being strongly influential.

A significant challenge disclosed by Samoan and Cook Islands fathers was their desire to spend more time with their children, and their general inability to do so because of work commitments and the pressure to provide the basic needs for the family. Some participants mentioned feelings of regret at not having had the opportunity to spend more time with their own fathers during their childhood. As a result, they said that these sentiments had motivated them in their intentions to be more involved with their own children. The majority of fathers were very conscious of the pressure to provide financially for their families. At the same time many fathers said that they were often unable, or too physically tired, to spend more time with their children due to work commitments and obligations.

This attitude is supported by findings from a small qualitative study undertaken by the Families Commission (2009b), which investigated parental work hours and the impact on family life. The participants in this research study indicated that there were negative effects on children, mothers, and family life in general, caused by fathers working long hours. The participants spoke poignantly about children missing their fathers, and fathers wanting to spend more time with their children. In addition, the fathers in this Families Commission study, expressed the conflict of competing demands, the pressure of working long hours to be a good provider, versus the need to spend more time and be involved with their children.

A large concern for many Samoan and Cook Islands fathers interviewed in this thesis was the internal conflict or clash between fulfilling their role as family provider, and

discharging their role as a father. During their own childhood, the majority of participant fathers felt they did not have the opportunity to spend as much time with their fathers as they needed. Consequently, in raising their own children they are conscious of being more actively involved and trying to get as much time with their children as possible. A potential consideration to address this struggle or conflict between work and family obligations is the introduction of more flexible work arrangements. This may assist fathers to be involved with their families while still devoting the required amount of time to the workplace. Another suggestion from a NZ Families Commission report advocates for a progressive increase to the duration of paid parental leave and the level of payment for fathers (Families Commission, 2009b). However, as yet little practical changes have resulted from these recommendations.

At the same time, potential limitations of these research findings do exist, primarily due to the self-reported nature of the information. Participants may be inclined to overestimate their level of involvement with their children, in order to conform to preconceived societal norms of parenting behaviour (Paulhus, 1991).

8.5.2 Father involvement and resultant child behaviour outcomes

Quantitative findings within this thesis indicate that approximately 20-30% of Pacific children within the study display some form of internalizing or externalizing behaviour problem. While literature from previous studies using the CBCL instrument suggests a careful approach to using individual summary scores as absolute indicators of problem behaviour, prior research from Hermanns & Leu (1998) suggests that early recognition

and identification of child behavioural problems is valuable for successful prevention measures.

Prior research findings utilising PIF Study data and the CBCL instrument indicate that Pacific children who were identified as in the clinical range for problem behaviour at age one year, were significantly more likely to be in the clinical range again two years later, compared to non-clinical children (Paterson et al., In press). Moreover, findings from international longitudinal studies in Australia have also demonstrated early childhood problem behaviour as a strong predictor of adolescent antisocial behaviour (Bor et al., 2004). In addition, research studies which have followed children through to adulthood have found nearly 10-fold increases in costs to public services attributed to child emotional and behavioural disorders (Knapp et al., 2002). Information about the risk factors underlying the prevalence and patterns of child behaviour problems amongst Pacific children is an essential component of sound public health policy. There is an increasing recognition of the need to develop programmes based on a developmental understanding of the origins of antisocial behaviour (Tremblay, 2010). Left untreated, disruptive and aggressive behaviour in childhood is very likely to persist and evolve into antisocial behaviours in adulthood (Elgar et al., 2004).

Quantitative analysis of data within this thesis confirmed a significant association between father involvement and child behaviour outcomes for Pacific fathers and children. Pacific fathers with involvement scores in the highest quartile had children exhibiting significantly lower levels of problem behaviour. These findings complement

and confirm previous research findings which highlight the important influence that father involvement has on the development of children (De Luccie & Davis, 1991; Dubowitz et al., 2001; Sarkadi et al., 2008). The essential role of fathers within Pacific families must be considered, and a concerted effort made to educate Pacific fathers about the importance of their role in shaping the future development of their children.

This research establishes a clear link between levels of father involvement of Pacific fathers and positive behaviour outcomes for Pacific children. Encouraging fathers to be more involved with their children is likely to produce benefits not only for their families, but for the future generations of NZ as well (Gage et al., 2009; Luketina et al., 2009). The fathering involvement of Pacific men has received scant attention in the literature, especially concerning their motivations and behaviours. Yet, as this research has shown, Pacific fathers are clearly a major contributor to positive developmental outcomes for their children. With the Pacific population projected to comprise approximately 10% of the total NZ population within the next decade (Statistics New Zealand and Ministry of Pacific Island Affairs, 2010), it is vital to have more understanding of the interactions between Pacific fathers and their families, and especially their involvement with their children.

In the quantitative analysis, a parsimonious multivariable model was devised which identified key factors associated with father involvement and child behaviour outcomes. The final model included acculturation status (p-value=0.050), ethnicity (p-value<0.001) and current smoking status (p-value=0.015). Further examination of

these variables indicate that an acculturation status of assimilationist, being of Tongan ethnicity, and being a current smoker, all had a greater likelihood of increased father involvement and decreased child behaviour problems.

The association between acculturation and father involvement indicated that Pacific fathers who were less strongly aligned to their traditional Pacific culture i.e. assimilators and marginalists, had greater odds of behavioural problems amongst their children compared to fathers who were strongly aligned with their traditional culture i.e. separators & integrators. Although not significant (p-value=0.51), this trend may relate to the common saying of 'it takes a village to raise a child', whereby extended family members and neighbours are all involved in child-rearing and teaching a child (Schoeffel et al., 1994). In these contexts, there is no clear expectation that fathers be specifically involved with their children. Instead their role is primarily concerned with providing the basic necessities for the family and their children.

A central discovery to emerge from qualitative discussions with Samoan and Cook Islands fathers was the influence of childhood values. It was found that a number of key values and beliefs the Pacific fathers tend to impart to their children were directly related to principles and ideals they had learnt during their own childhood e.g. respect for elders and other people, importance of culture and traditions, and to always work hard to achieve your goals. The majority of fathers discussed their rationale for imparting these ideals to their children and utilising the ideals themselves as being due to the positive impact these values have had in their own development or everyday

life. In raising their children to respect other people, to understand and be familiar with their own traditional culture, and to work hard, the participant fathers felt that they were contributing to the positive development of their children.

Another emergent theme from qualitative discussions with Samoan and Cook Islands fathers was their eagerness to have more information for fathers regarding available services and assistance. Previous research in NZ by Pudney (2003) suggests that fathers have in past years been hesitant to step forward to ask for help. However, Pudney suggests the time is now right for specific and appropriate services to be designed for fathers, and delivered by fathers themselves. A research report by Luketina et al. (2009) interviewed fathers about support services which could assist them in their fathering. Of those who answered the question, 54% indicated that they would like some support, although they tended to be unspecific about what form this support should take (Luketina et al., 2009). Ideally, the best approach could be to provide courses where and when fathers can most easily access them.

Research by Pudney (2006) expressed the view that fathers might benefit from having fathering courses at their workplaces. However, Luketina et al. (2009) suggest that conducting courses in the local community, either through a local community group, or at a local school or a church would be more effective. In addition, this research confirms that a greater awareness of ethnic differences in fathering patterns must be taken into account when designing programmes to support fathers. Research in NZ by Pudney (2003) notes that European families place a strong emphasis on the nuclear

family, compared to Pacific peoples who place a strong emphasis on the extended family. It is important that fathers from minority groups, such as Pacific, are able to contribute to fathering polices affecting them, rather than health providers and services assuming that 'one size fits all'. In addition, men tend to engage with the health system far less than they should (Pinkhasov et al., 2010). Focus is needed on improving access and engagement strategies, especially given the changing role of fathers, and their hand in caring for their children (Cabrera et al., 2000).

Summary

Pacific fathers in both the quantitative and qualitative phases of this thesis report high levels of involvement with their children. A significant relationship exists between father involvement and child behaviour outcomes amongst Pacific fathers and children within this study, reinforcing that Pacific fathers be encouraged and supported to continue to be highly involved with their children. However, further qualitative research is needed to investigate the underlying motivations and behaviours around father involvement and fathering amongst Pacific men. These findings can be useful to guide social policy and targeted intervention programmes that are focused on the well-being of Pacific fathers and their children. Moreover, these findings may draw attention to the differences in parenting practices among the groups which make up the Pacific population in NZ, and stimulate the development of empirically based ways to approach these complex phenomena.

8.6 Overview of research

8.6.1 Research contribution

The findings from this thesis highlight the high value of the data collected from the Pacific Islands Families (PIF) Study over the last ten years. As mentioned, this PIF cohort comprises the first, large, and culturally diverse cohort of Pacific families in NZ, including mothers, fathers, and children.

This research underlines the importance of Pacific fathers in enhancing and developing healthy and resilient Pacific families. As is well documented, Pacific families play a significant role in the health and well-being of Pacific peoples collectively, and as individuals (Tiatia & Foliaki, 2005). Moreover, Pacific families are regarded as the centre of the community and way of life, and they provide identity, status, honour, prescribed roles, care and support (Tiatia & Foliaki, 2005). Thus, healthy and strong families form the basis for successful Pacific communities, in which individuals can grow and develop to their full potential (Ministry of Pacific Island Affairs 2008). Organisations and individuals concerned with the health of Pacific fathers, children, and their families must be made aware of this reality, and government support for healthy fathers and Pacific families is therefore essential.

This thesis makes a significant contribution to the limited data available about parenting within the NZ Pacific community and the cultural context of fathering, in particular the influence of acculturation. The research utilises an appropriate theoretically grounded acculturation measure to epidemiologically capture and

investigate this dimension. Moreover, this acculturation tool has been modified and validated to make it appropriate for use with NZ and Pacific participants (Borrows et al., 2010), providing a more accurate and reliable method for assessing acculturation within the cohort of Pacific fathers. This thesis makes a contribution to uncovering and examining the relationship and significant factors which influence Pacific-specific fathering behaviours, and how the participant fathers modify their cultural practices for raising children in NZ society. In doing so, this research enhances and develops the knowledge base concerning this important yet under researched area of Pacific health.

This research also emphasises the realisation that Pacific peoples' experience of health care is influenced by cultural beliefs and values. Given the dynamic nature of the Pacific population in NZ, these cultural beliefs and values are diverse and evolving. In general, Pacific peoples in NZ maintain strong links with the Pacific Islands, through family, culture, history and language. Thus in supporting Pacific fathers and their role in raising their children, support services and workers must engage and assist using culturally-appropriate resources, methods, and approaches.

The strong study design, robust procedures and protocols, and the sophisticated logistic regression and GEE model analytic techniques employed to examine data from the PIF cohort over time, are key features of this research. These analytical methods have enabled the identification of both positive and negative health outcomes amongst participants. An understanding of the mechanisms and processes leading to these outcomes allows empirically based recommendations to be developed. In turn,

these strategic recommendations may contribute to improving the well-being of Pacific families, and NZ society as a whole.

Finally, this study has utilised a suite of internationally recognised, standardized instruments, such as the GHQ-12, CBCL, and IFI scales. Each of these measurement tools has been utilized and validated in prior research studies, underlining their appropriateness and the robustness of results from this study. This is particularly relevant for the IFI scale, which measures the quality of parent-child interactions, rather than the quantity of them. This factor is important considering that positive child outcomes arise principally from the emotional quality and closeness of the father-child relationship, rather than temporal involvement *per se* (Cabrera et al., 2000).

8.6.2 Challenges/limitations of this research

A number of limitations were encountered in conducting this research. Firstly, there are a few limitations to the quantitative information used for this research. There may have been some bias due to the sampling-frame utilised during the recruitment at the beginning of the PIF Study. Eligible families could potentially not have participated, and these families are likely to have been different to those families who did consent to participate in the study. Also, the recruitment process to engage fathers to participate in the study required talking to the mothers in order to gain consent to contact and invite the father's participation. A limitation of this process was that a strained

relationship between the mother and father could exclude some fathers from being able to participate.

The quantitative data collected and analysed in this thesis was obtained from self-report questionnaires administered to participants. As is well documented, the use of self-reports information is subject to recall and social-desirability biases. Similarly, prevalence rates of smoking were based on self-reported information, and have not been validated by any biochemical tests. It is likely that respondent fathers may have been reluctant to endorse items that described behavioural and child-rearing practices that they saw to be less socially acceptable. However, self-reported data on current smoking status can have high validity, and this has been demonstrated in previous research regarding the prevalence of smoking measured using self-report data (Patrick et al., 1994; Studts et al., 2006).

Secondly, the presence of a ceiling effect concerning the father involvement scores derived from participants, may also have contributed to some misinterpretation of results. Thirdly, attrition bias within the sample should be noted when interpreting the quantitative findings from this thesis. Most data used in the quantitative analysis of father involvement and child behaviour was collected from fathers at the 6-year measurement phase. However, due to attrition and missing information from some participants, it was necessary in some instances to utilise paternal or maternal information collected at the 1-year measurement wave. This provided the information necessary to compare characteristics of the group of participating fathers at the 6-

years measurement phase, and the group of non-participating fathers at the 6-years measurement phase. The comparative analysis indicated an overall lack of differential bias between the two groups of fathers, and responses were deemed to be generaliseable between the two groups.

Important selection/participant biases were also likely to affect the information collected in the Phase II qualitative component. It is likely that most participants in the research were motivated fathers, and as a result, important response biases must be acknowledged. For example, many of the Cook Islands fathers chose not to participate in this research. As a result, the group of fathers that did participate are likely to be a very select and involved group.

In considering the utilisation of some of the measurement instruments or questionnaires used in the study, the validity and suitability of some of these instruments for use with different Pacific ethnic groups has not been tested. Although many of the instruments have been internationally recognised and validated, very little validation work has been undertaken involving Pacific populations. Moreover, the data and information collected as part of this research has only examined a fragment of 'fatherhood' and the effect of these features on children. There are likely to be important or other relationships and factors concerning Pacific fathering which warrant further study. In addition, there may be wide differences between reported perceptions of fathering and associated behaviours, and what is actually implemented or executed.

8.6.3 Suggestions for further study

The findings of this study illustrate many of the substantial health risk factors experienced by a group of Pacific fathers. Furthermore, they show how these factors are associated with and influence the fathering behaviours and practices of Samoan and Cook Islands fathers, as they raise their children in NZ. However, fathering behaviours encompass a very broad if not limitless range of areas and aspects. Therefore, a suggestion for further research might be to examine variables of fathering beyond those undertaken within. For example, an interesting area for further research could be to explore the role of grandfathers within Pacific families, particularly regarding child-rearing and potential role differences between NZ and their home islands.

Another prospective suggestion for enhancing the findings of this study would be to explore the same themes of enquiry from the qualitative component with other Pacific ethnic groups of fathers. Although they tend to be grouped together in research and policy, Pacific people are not a homogeneous group. As noted by Macpherson (1999), Pacific migrants to NZ have been grouped together and forced to adopt the label 'Pacific Islanders' as a result of migration to NZ and in part as a result of colonial processes. Thus, exploration of the underlying influences of fathering behaviours and practices amongst different Pacific ethnic groups, such as Tongan or Niuean families, would provide insight and appreciation of the needs of these fathers, and contribute to improved health for their children and families.

Further enhancement of the findings from this study could also be garnered by undertaking research with Samoan and Cook Islands fathers and families resident in their native Pacific Islands. The findings from this thesis highlighted the influence of acculturation and cultural alignment on the fathering practices of Samoan and Cook Islands fathers in the study. Just as culture is a dynamic process, it is likely that there are changes in fathering behaviours occurring in the Pacific Islands, as well as NZ. Comparative analysis could enable a more in-depth examination of the processes of migration and the cultural and socioeconomic factors found in the Pacific Islands which influence fathering behaviours. Moreover, a shortcoming of much of the research examining migration/acculturation and parenting is that no research has followed the same families before and after migration to understand how parenting practices are influenced or differ by acculturation.

Ultimately, this study highlights the importance and value of longitudinal information when investigating issues such as parenting and fathering. Examining trends and changes in fathering behaviour and associated factors over a period of time, is essential for making accurate evidence-based decisions and assessments which are appropriate to the changing needs of the population.

Additional advancements to both this study and future examinations of Pacific fathering should entail the use of a specific focus on the intergenerational influences and patterns of fathering behaviour amongst Pacific ethnic groups. Previous research has highlighted at least three key sub-categories of Pacific Island people within the

Pacific Island ethnic groups based on place of birth (MacPherson, 1999). Firstly, Pacific Islanders who were born and raised in the Pacific Islands and who have migrated as adults, then Pacific Islanders who were born in the Pacific Islands but then raised from childhood in NZ and lastly, those Pacific Islanders who were born and raised in NZ (Mafile'o, 2005). Understanding the diverse experiences of Pacific fathers within these groups, and how these experiences impact on subsequent generations would be a useful focus of enquiry in discerning the fathering practices of Pacific fathers and their influence on the development of their children.

8.7 Future recommendations

8.7.1 Future research directions

This study establishes a research platform for Pacific Island fathers. The ethnic diversity, relatively small population sizes, and traditional value systems make a single study addressing all issues relating to Pacific fathers difficult. However, the research format and process could be replicated for use with other Pacific ethnicities.

Additionally, further study may be carried out taking specific aspects of the empirical findings outlined in this thesis. Chapters 4, 5 and 6, cover a diversity of areas including mental health and well-being, smoking behaviour, acculturation, father involvement, and child behaviour. Future research should explore these and different domains in order to capture the rich, deep, complex concept of fatherhood amongst Pacific people in NZ.

As mentioned previously (section 8.5.3), enhancement of this research could be garnered through a comparative examination of Samoan and Cook Islands fathers and families resident in their native Pacific Islands. The influence of acculturation and cultural alignment on the fathering practices of Samoan and Cook Islands fathers in NZ is evident within this thesis. Comparative data could enable a closer examination of the migration, cultural, and socioeconomic factors found in the Islands, which influences fathering behaviours. Also, including Pacific fathers located in other geographical areas of NZ would be beneficial, in order to examine whether they are impacted by similar or different issues.

Although the focus of this thesis has centred squarely on fathers and their impact on their children's health and well-being, future research in this area may benefit from an examination of how the quality of relationship between the mother and father can impact on their child's health and well-being. A dimension of the father involvement measure utilised in this thesis examined mother support and how fathers supported their partners through sharing of child-rearing activities and practices. However, a deeper and more focussed examination of how the interactions and relationship between Pacific parents impacts on their children's health and well-being would be useful.

8.7.2 Recommendations

In light of experience acquired during the course of this research, the review of the literature, and the findings from the data and interviews, several research and policy recommendations are outlined in the following section.

Extensive dissemination of key findings and approaches from this research

Information sources for Pacific fathering practice and behaviour in NZ are very limited, and most existing research has not recruited a reliable sample of Pacific fathers to be able to draw accurate conclusions. Without evidence-based research, there may be a tendency to make do with opinion-based approaches which do not provide all the perspectives required to meet the needs of men and fathers (Macdonald, 2006). Consequently, this thesis contributes to addressing this gap in the knowledge base. Dissemination and presentation of key discoveries from this thesis at Pacific health conferences is important. In addition, publication of important finding in academic journals and other sources is crucial, to ensuring this research supports improved health and well-being outcomes for Pacific fathers and their children in NZ.

Culturally-appropriate research methods

This thesis research emphasises the necessity for a robust method/measure for examining father involvement and behaviour, which is both culturally appropriate and applicable to Pacific populations. The Inventory of Father Involvement scale developed by Hawkins (2002), and modified before usage in this project, examines five different dimensions of fathering. However, it does not take account of the influence of cultural traditions and practices, and issues of migration and navigation through mainstream

NZ society, which are likely to be experienced by Pacific fathers and families in NZ. Previous research has highlighted these factors as significant influences for other health and social issues. Findings from this study indicate a similar pattern of difference may be at play, with acculturation being a significant mediating variable for both father involvement and child behaviour outcomes (see Table 6.7). Further postdoctoral research is planned aimed at developing a Pacific-specific fathering behaviour and involvement measure for use amongst Pacific fathers in NZ.

Culturally appropriate services to meet the needs of Pacific fathers

An important recommendation from the analysis is the need for more father specific services, specially developed and appropriate for Pacific fathers. This may support Pacific fathers to negotiate their way through mainstream NZ society, as well as facilitating the incorporation of Pacific values and ideals into their fathering. Like all users of the health care system, Pacific people want services that meet their needs and expectations (Pacific Health Research Centre, 2003). Research emphasises that Pacific peoples can experience barriers in access to and use of services across the health system (CBG Health Research 2006, Pacific Health Research Centre 2003, Ministry of Health et al 2004). These barriers may be financial, cultural, logistical, physical or linguistic, and each are a factor in Pacific peoples not fully benefiting from health services provided in NZ, to the same extent as other groups (Tobias and Yeh 2009). Alongside this, the lack of appropriate services and assistance has been highlighted as a contributing factor to low utilisation of health and support services by men in NZ (McKinlay, 2005; McKinlay et al., 2009). Health services specific to men's needs are

necessary if we are to improve the health status of men and fathers (Monaem et al., 2007). Support services for Pacific fathers should in the first instance focus on what works for Pacific people and communities, and in turn be configured to respond to the needs and expectations of Pacific fathers.

The research evidence in this thesis highlights several potential policy implications concerning interventions to reduce smoking prevalence, and strengthen or nurture healthy Pacific families. Research findings from this thesis suggest that cultural targeting may be one method for successfully reducing smoking rates, and this approach could prove most effective alongside other strategies such as reducing the availability of tobacco, eliminating cigarette displays, and implementing plain packaging on cigarettes.

Pacific fathers are better supported to be healthy

Pacific people have beliefs about individual health, family or community needs, and those realities may be different from other New Zealanders (Ministry of Health 2008a). These beliefs may influence health choices and behaviours e.g. Pacific financial priorities of meeting their immediate family needs, donating to church, and overseas remittances (Tait, 2009) undoubtedly can impact on familial ability to pay for health services. Moreover, men are already unlikely to access services, suggesting that support must be made appropriate and relevant to the needs of this group (McKinlay et al., 2009).

There is strong evidence supporting the influence of health-related behaviours, access to health care and environmental and socioeconomic factors on health (Commission on Social Determinants of Health, 2008). Environmental and socioeconomic factors, particularly income, education and employment, have a significant impact on the health of populations (Mills, 2010). There are often complex interactions between individual risk factors such as tobacco smoking or excessive alcohol use, and wider environmental influences such as the availability or access to tobacco and alcohol, in maintaining health or causing illness (Macdonald, 2006). However, many of the determinants of health are alterable to improve health and well-being of Pacific fathers and their families.

While there have been some improvements, Pacific people are still worse off than other New Zealanders across a range of socioeconomic indicators (Ministry of Health, 2008c). Improving Pacific peoples' incomes, education, employment and housing is critical to improving their health outcomes. Furthermore, as demonstrated by the findings in this thesis, smoking, physical activity, and other social determinants are interconnected and influential factors in the manner in which Pacific fathers raise their children. It is important that Pacific people have greater engagement identifying and developing effective approaches that will work for them.

As outlined in the Ala Mo'ui: Pathways to Pacific Health and Wellbeing 2010–2014 report produced by the NZ government (Minister of Health and Minister of Pacific Island Affairs, 2010), ensuring more effective support for Pacific people to be healthy

requires work and collaboration across the Ministries of Social Development, Health and Education. Initiatives should be implemented to equip Pacific communities with the knowledge to support their families, while drawing on cultural strengths to formulate healthy relationships and fathering behaviour. Fostering greater Pacific participation can help to increase wider knowledge and understanding of Pacific health issues and encourages collective ownership and action on health issues.

Successful Pacific fathers play a significant part in raising successful Pacific children. These children will play an integral part in the future direction and leadership of this nation. Supporting Pacific fathers to make a positive impact on their families, and communities will also improve our chances as a nation, of reducing the large inequalities seen amongst Pacific people in the areas of health, education, welfare, and crime.

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Appendix I: Ethics approval

M E M O R A N D U M
Auckland University of Technology Ethics Committee (AUTEC)

To: Philip Schluter
From: **Madeline Banda** Executive Secretary, AUTEC
Date: 16 November 2009
Subject: Ethics Application Number 09/247 **The influence and involvement of Pacific fathers in their child's health and development.**

Dear Philip

Thank you for providing written evidence as requested. I am pleased to advise that it satisfies the points raised by the Auckland University of Technology Ethics Committee (AUTEC) at their meeting on 12 October 2009 and that I have approved your ethics application. This delegated approval is made in accordance with section 5.3.2.3 of AUTEC's *Applying for Ethics Approval: Guidelines and Procedures* and is subject to endorsement at AUTEC's meeting on 14 December 2009.

Your ethics application is approved for a period of three years until 16 November 2012.

I advise that as part of the ethics approval process, you are required to submit the following to AUTEC:

- A brief annual progress report using form EA2, which is available online through *http://www.aut.ac.nz/research/research-ethics*. When necessary this form may also be used to request an extension of the approval at least one month prior to its expiry on 16 November 2012;
- A brief report on the status of the project using form EA3, which is available online through *http://www.aut.ac.nz/research/research-ethics*. This report is to be submitted either when the approval expires on 16 November 2012 or on completion of the project, whichever comes sooner;

It is a condition of approval that AUTEC is notified of any adverse events or if the research does not commence. AUTEC approval needs to be sought for any alteration to the research, including any alteration of or addition to any documents that are provided to participants. You are reminded that, as applicant, you are responsible for ensuring that research undertaken under this approval occurs within the parameters outlined in the approved application.

Please note that AUTEC grants ethical approval only. If you require management approval from an institution or organisation for your research, then you will need to make the arrangements necessary to obtain this. Also, if your research is undertaken within a jurisdiction outside New Zealand, you will need to make the arrangements necessary to meet the legal and ethical requirements that apply within that jurisdiction.

When communicating with us about this application, we ask that you use the application number and study title to enable us to provide you with prompt service. Should you have any further enquiries regarding this matter, you are welcome to contact Charles Grinter, Ethics Coordinator, by email at ethics@aut.ac.nz or by telephone on 921 9999 at extension 8860.

On behalf of the AUTEC and myself, I wish you success with your research and look forward to reading about it in your reports.

Yours sincerely

Madeline Banda
Executive Secretary
Auckland University of Technology Ethics Committee

Cc: El-Shadan Tautolo elshadan.tautolo@aut.ac.nz

Appendix II: Information sheet and consent forms

Participant Information Sheet

Date Information Sheet Produced:
11th September 2009

Project Title
The influence and involvement of Samoan and Cook Islands fathers in their child's health and development

An Invitation
Talofa lava, Kia Orana, and Warm Pacific greetings
You are invited by Professor Philip Schluter (Co-Director of the PIF Study) and El-Shadan Tautolo (a Pacific PhD Student) to participate in a research project exploring how Pacific fathers behave and are involved in the raising of their children. Your participation in this study is entirely voluntary and you may choose to withdraw from the project at any time. This research will form part of a PhD research project and thesis, which is being undertaken by El-Shadan Tautolo.

What is the purpose of this research?
The purpose of this research project is to gain a better understanding of the behaviour and role of Pacific fathers in raising their children, and how this may influence future positive outcomes for their children. The information gained from this study will be used for a PhD research project being undertaken by El-Shadan Tautolo, and results may be published in relevant public health and academic journals. Findings will also be used to help people who work with Pacific children, families, and parents, understand and improve their response to the needs of Pacific families in New Zealand.

How was I chosen for this invitation?
You have been invited to take part in this study through your enrolment in the Pacific Islands Families Study. Inclusion criteria for this project will require the participant to be a Samoan or Cook Islands father, who has already given full informed consent to the main Pacific Islands Families Study. They must also be able to give full informed consent to participate to the research team.
Initially a full information sheet will be given to potential participants, outlining the study information to-date, details of this project and the aims and objectives, contact details of the research team, and an invitation to take part in the project. Interested participants will then contact the researchers indicating their expression of interest.

Each interested participant will then be contacted by phone to discuss the research further and to answer any further questions. Following acceptance from the participant agreeing to be part of the study, a full consent form will be sent for completion, outlining the basic requirements for the participants and emphasising the right to withdraw from the study at any time during the process. Receipt of a signed consent form will be an indication of a commitment to participate in the research.

Finally, the research team will make contact regarding the time and venue for the interview to take place. It is envisaged that the final cohort of participants will be selected to reflect a diversity of experience, and perspectives. This includes a range of acculturation or cultural alignment positions, a range of NZ and Island born, and a variety of geographical residences and age categories. It is anticipated that there will be 2 focus groups for each ethnic group (overall total of 4 focus groups), with approximately 5 participants in each focus group (overall total of 20 participants).
What will happen in this research?

This project involves interviews with Samoan and Cook Islands fathers who have a child enrolled within the Pacific Islands Families Study. As a participant, you will be asked to spend 60-90 minutes being interviewed by a researcher about your experiences as a father. The interview will be audio-taped and later transcribed for analysis.

What are the discomforts and risks?
Generally there is very small risk of discomfort during the interview, however depending on your individual circumstances, there is a possibility that you may feel uncomfortable or distressed talking about your experiences.

How will these discomforts and risks be alleviated?
You can choose not to talk about subjects that you find distressing, or withdraw from the interview and/or the study at any time. In addition, if you would like it, referral can be made to a counsellor to discuss any concerns following the interview.

What are the benefits?
Although there are no immediate personal benefits, the opportunity to share personal experiences which may be either positive or negative, could prove potentially beneficial for some participants. In addition, as a participant you will be contributing valuable information that will help to improve understanding and potentially provide better services for Pacific parents and their families in the future.

How will my privacy be protected?
All interview recordings and interview transcripts will remain strictly confidetial and will only be available to the research team. No information identifying you as a participant in this project will be included in any project reports or publications.

What are the costs of participating in this research?
Giving up your time is the only cost of participating in this research. If you choose to participate then you will take part in a 1-2 hour interview with a researcher. The researcher will contact you to organise a meeting at a place that is most convenient for you. Any travel costs will be reimbursed to you in the form of taxi or petrol vouchers.

What opportunity do I have to consider this invitation?
Please indicate if you would like to take part in the research to the individual that gave you this information, within two weeks of receiving this information sheet.

How do I agree to participate in this research?
If you agree to participate in this research, you are asked to complete a consent form. This will be provided to you by the individual you received this information sheet from. Once the consent form has been completed, your contact details will be passed on to the researcher who will make contact with you.

Will I receive feedback on the results of this research?
Each participant will receive a summary of the findings of this research. Participants can choose to have the summary sent to an address they provide, and/or attend an information meeting given by the research team. Summaries will be available once the study has been completed (approximately 12 months after your interview).

What do I do if I have concerns about this research?
Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Professor Philip Schluter – (09) 9219999 ext 7700 or via email philip.schluter@aut.ac.nz
Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTEC, Madeline Banda, *madeline.banda@aut.ac.nz* , 921 9999 ext 8044.

Whom do I contact for further information about this research?
Researcher Contact Details:
El-Shadan Tautolo – (09) 9219999 ext 7527 or via email elshadan.tautolo@aut.ac.nz

Approved by the AUT Ethics Committee on November 16th 2009. AUTEC Reference number: 09/247

Consent form

Project title: ***The influence and involvement of Samoan and Cook Islands fathers in their child's health and development***

Project Supervisor: *Professor Philip Schluter*

Researcher: *El-Shadan Tautolo*

- ○ I have read and understood the information provided about this research project in the Information Sheet dated 11 Sept 2009.
- ○ I have had an opportunity to ask questions and to have them answered.
- ○ I understand that the identity of my fellow participants and our discussions in the focus group is confidential to the group and I agree to keep this information confidential.
- ○ I understand that notes will be taken during the focus group and that it will also be audio-taped and transcribed.
- ○ I understand that I may withdraw myself or any information that I have provided for this project at any time prior to completion of data collection, without being disadvantaged in any way.
- ○ If I withdraw, I understand that while it may not be possible to destroy all records of the focus group discussion of which I was part, the relevant information about myself including tapes and transcripts, or parts thereof, will not be used.
- ○ I agree to take part in this research.
- ○ I wish to receive a copy of the report from the research (please tick one): Yes○ No○

Participant's signature: .....

Participant's name: .....

Participant's Contact Details (if appropriate):

……..

……..

……..

Date:

Approved by the Auckland University of Technology Ethics Committee on 16th November 2009 AUTEC Reference number 09/247

Note: The Participant should retain a copy of this form.

Appendix III: Questionnaire for focus group interviews

Background:

- Where did you grow up and spend your childhood years – Samoa or Cook Islands
- What place in the family are you – youngest/oldest

Family:

- When you were a growing up, who were your main caregivers?
- Who do you think had the most influence in your upbringing – Father/Mother etc. – Why do you say that?
- Looking back, what do you think were the main values and beliefs they taught you?
- If we focus on your father – were there any particular values or beliefs that your father tried to teach you? Can you give an example?
- And so in your own fathering are you doing the same as your father – or making some changes – tell us about these.
- Why have you changed/stayed the same?
- Do you expect the same behaviour of your sons/daughters?

Spiritual health:

- As a Pacific father, how important is religion/your church/minister in how you raise your children today?

Mental health

- Following the birth of your child, do you recall any situations where you or your partner may have experienced periods of depression or unhappiness?
- Do you think this influenced your behaviour as a father? If so how did this impact on your role as a father?

Culture

- During your upbringing do you feel you were raised in the Pacific way? (YES/ NO)
- Discuss – What do you think the Pacific way means?
- As a Pacific person, are you familiar with Pacific practices, customs,
- As a Pacific person, are you familiar with Pacific language, and traditions?
- How do these things influence how you raise your children?
- Do you think that Samoan culture is important to your children – At present or in the future?

Physical health

- Sport is usually a big part of Pacific lives – Did you play sport as a child/adult etc. and would you encourage your child to do the same
- Do you engage in any risk-taking behaviours e.g. smoking, alcohol, gambling etc.?
- What influence do you feel these behaviours might have on your children?
- Do you think it is okay for your children to do this when they get older – Why/Why not?

Environment/Time/Context

- As a Pacific father, where do you go if you feel you need help?
- In raising your child, do you feel that you have enough time together?
- As a Pacific father, what are some of the things you enjoy least/most in raising your child.
- How do you manage your children's behaviour, and how is this different from your own upbringing?
- As a Pacific father, what impact do you feel your fathering has on your child's health and development?
- What are some of the things which you think make a child healthy, happy, and secure?
- Do you feel there are appropriate services/resources available to help you in your fathering?

Appendix IV: Copies of articles directly related to thesis

Mental health well-being amongst fathers within the P**acific Island** Families Study

El-Shadan Tautolo

Philip J. Schluter

Gerhard Sundborn

Author information

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Correspondence

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Abstract

This article investigates the prevalence of potential psychological disorder amongst a cohort of primarily Pacific fathers in New Zealand over their child's first 6-years of life. The analysis is based on data collected at 12-months, 2-years and 6-years postpartum during the Pacific Islands Families Study, and uses the 12-item General Health Questionnaire (GHQ12) to assess the prevalence of psychological distress amongst participant fathers at each measurement wave. Various sociodemographic and potentially confounding variables were also investigated to determine their effect on the risk of developing potential mental health disorder. The majority of fathers within the study reported good overall health and well-being and their prevalence of 'symptomatic' disorder was initially low at 12-months (3.9%) but increased significantly at 2-years (6.6%) and at 6-years (9.8%) in crude and adjusted analyses (both P-values<0.001). In the adjusted analysis, the odds of symptomatic cases at 2-years was 1.7 (95% confidence interval: 1.1, 2.8) times that observed at 12-months postpartum and at 6-years the odds was 3.2 (95% confidence interval: 1.9, 5.2) times that observed at 12-months. Moreover, in the adjusted analysis, smoking status, marital status, employment status, and ethnicity, were all significantly associated with the risk of developing symptomatic mental health disorder.

Introduction

International perspective

Modern day fathers are experiencing increasing demands from both work and family life. The associated financial, psychological and physical strain placed upon fathers trying to balance work and family can also have an adverse impact on family life. However, unlike women, there is a surprising lack of research into male health issues, and particularly data concerning the health and well-being of fathers. What research that does exist highlights the potential effects of fathering roles and practices in influencing their child's behaviour and cognitive development.[1, 2] It also underlines the large potential for positive fathering to promote resiliency and improved mental health outcomes amongst young children.[3,4]

The importance of research on fathers and fathering behaviours has been recognized as key priority area by international bodies, including the World Health Organisation (WHO).[5] There is a clear need to develop a deeper understanding of health issues surrounding male health, fathering roles, and family support structures in promoting resiliency amongst children and young people. In response to this need, several international organizations and countries are now endeavouring to provide information to fill this knowledge gap on fathers. One example is the nationwide longitudinal study on Men's health in Australia, which has a key purpose of investigating some of the key issues which affect the health of males, and their potential impact on fathering roles and practices.[6] Likewise, a research study conducted through the University of East Anglia in the United Kingdom (UK), is exploring whether modern day fathers suffer from similar tensions to mothers when trying to balance their work and family life. These

findings may in turn allow consideration of whether these factors may impact on the well-being of the children.[7]

The mental health well-being of fathers is of particular importance to the function and well-being of the family. First time fathers can be particularly prone to depression after childbirth[8] with mild to moderate depression most likely.[9] Such depression is likely to place strains on the father's relationship to his partner and new child, arguably at a time when his involvement is most needed. Moreover, depressed new mothers receive more support from their partner than from any other individual, including medical staff.[10] Such support is likely to be compromised if the father himself has poor mental-health.

The mental health well-being of fathers is of particular importance to the function and well-being of the family.

New Zealand perspective

Within the New Zealand context, recognition of the fundamental roles of men and fathering in family function and health has received increased nationwide attention through the New Zealand Ministry of Health,[11,12] the New Zealand Families Commission,[13] and the Health Research Council of New Zealand. Once again there is a general lack of information on male health, fathering, and associated mental health issues. Nevertheless, one research report concerning fathers in West Auckland highlighted the increasing recognition of fatherhood as an important factor in successful health outcomes for their children.[14] The report also indicated that fathers have their own unique role in providing parenting support and assistance which is quite distinct from the mother. Therefore positive fathering behaviours must be nurtured and encouraged in order to enhance positive health outcomes for their children.[14]

New Zealand-based Pacific Perspective

Alongside the international and national significance of men's health and well-being, the lack of information or data concerning Pacific males and specifically Pacific fathers is another important motivation for undertaking research into this area. Currently there is a scarcity of research on parenting practices and styles amongst different cultural groups in New Zealand,[15] and research findings on Pacific Island parents in New Zealand are very limited and inconsistent. A greater understanding of fathers mental health and how fathering roles may promote cohesion and connectedness of children to schools or preschools, would be highly beneficial in helping to formulate better strategies and policies to improve the health of Pacific children and youth.[11] Quantifying the extent of mental illness amongst Pacific peoples in New Zealand has historically been a very difficult task, with most information about the frequency of mental disorders being generated using institutional statistics that tend to underestimate the true prevalence of mental disorder.[16] Furthermore, what figures are available have usually been grouped under a Pacific ethnic label which fails to capture any sub-ethnic differences and variations. Nevertheless, recent information and evidence from Te Rau Hinengaro[17] has contributed to a better understanding of mental health amongst Pacific peoples. Specific key findings from this study indicate that Pacific peoples experience higher rates of mental illness than New Zealanders overall. Furthermore, the 12-month prevalence of Pacific peoples experiencing a mental disorder was 25%, compared with 20.7% of the total New Zealand population.[18] However, one of the fundamental findings within the study was recognition of the need for further research in mental health and particularly amongst specific groups within the Pacific population such as Pacific youth and Pacific males. It is important to emphasise that this perspective is only reflective of the situation amongst New Zealand-based Pacific people, and may not represent the situation amongst Pacific people living in the Pacific Islands.

Pacific Islands Families (PIF) study

The Pacific Island Families (PIF) study is an ongoing longitudinal study of Pacific children. In addition to information collected on the children, data was also collected from mothers and fathers. Using a standardized measure of mental health well-being, this study aims to report the prevalence of potential psychological mental health disorders amongst a cohort of primarily Pacific fathers within the PIF Study over the first 6-years of the child's life. Additionally, important covariates for the potential mental health disorders are investigated.

Methods

Participants

The PIF study follows a cohort of Pacific Island infants born at Middlemore Hospital between 15 March and 17 December 2000. All potential participants were selected from births where at least one parent was identified as being of Pacific Island ethnicity and a New Zealand permanent resident. Participants were identified through the Birthing Unit, in conjunction with the Pacific Islands Cultural Resource Unit. Information about the study was provided and consent was sought to make a home visit.

Approximately 6-weeks postpartum, potential participants were allocated to a team of female Pacific interviewers fluent in both English and a Pacific language. In most cases the interviewers were ethnically matched to the potential participant. The interviewers visited the potential participant in their own homes, fully described the study with

the parent(s) and obtained the mother's informed consent. Once consent was obtained, the interview was carried out in the mother's preferred language. When the children reached their first, second, fourth and sixth birthdays all maternal participants were re-contacted and revisited by a female Pacific interviewer. Again, consent was obtained before the interview was conducted in the mother's preferred language. At the time of the first, second and sixth year interviews, mothers were asked to give permission for a male Pacific interviewer to contact and interview the father of the child. If permission and paternal contact details were obtained then a Pacific male interviewer contacted the father to discuss participation in the study. Once informed consent was obtained, fathers participated in one-hour interviews concerning family functioning and the health and development of the child. This interview was conducted in the preferred language of the father. Within the context of a wider interview, issues of paternal health were measured using various screening tools, including the 12-item General Health Questionnaire. Detailed information about the PIF cohort and procedures is described elsewhere.[19]

Ethical clearance

Careful consideration is always applied to the ethical aspects of this longitudinal study with Pacific peoples. Ethical approval for the PIF study was obtained from the Auckland Branch of the National Ethics Committee, the Royal New Zealand Plunket Society, and the South Auckland Health Clinical Board.

Measures

Psychological disorder at 1-year, 2-years, and 6-years:

At 1-year, 2-years, and 6-years measurement waves, paternal mental health was assessed using the 12-item General Health Questionnaire (GHQ12),[20] a self-report screening tool widely used to identify minor psychiatric disorder. Using the binary method, the GHQ12 was scored to give a total of 12 and a cut-point value of 2 was used to indicate potential psychological disorder.[20] Fathers who scored ≥2 were defined as symptomatic for potential mental disorder, and fathers who scored <2 were defined as non-symptomatic.

Socio-demographic and potential confounding variables: Socio-demographic characteristics and variables known association with potential psychological disorder were investigated, including age, ethnicity, being New Zealand born, and household income at baseline, highest educational qualification at baseline, current smoking status, current alcohol drinking status, current employment status, marital status and acculturation.

Development of acculturation measure:

This measure was adapted from the General Ethnicity Questionnaire (GEQ),[21] and two scales were developed: the New Zealand (NZACCULT) and Pacific (PIACCULT) version. Modifications were made to the GEQ to make it appropriate and relevant to Pacific peoples and New Zealand society as a whole. Specifically included were questions relating to language, social affiliation, activities, exposure in daily living and food, and also included questions relating to contact with Pacific family and relatives and attendance at church, both of which were considered important in a Pacific context in New Zealand society.[22] Similarly, inclusion of sport as a particular recreation was included because of the perceived importance of Pacific youth involvement in New Zealand sport and its importance in the context of the wider New Zealand society.[23]

Assessment of acculturation:

Using the model of Berry,[24-26] the acculturation variable describes four distinct categories for respondents depending on whether the acculturation strategy is freely adopted by the individual, or imposed by the dominant culture. Each of the respondents was individually scored on both the NZACCULT and PIACCULT scales and allocated to one of the categorical classes dependent on whether their individual score fell above or below the median of the full group, namely: Separationalist (Low New Zealand – High Pacific); Integrator (High New Zealand – High Pacific); Assimilationalist (High New Zealand – Low Pacific); Marginal (Low New Zealand –Low Pacific).

Statistical analysis

Categorical variable comparisons between groups were made using Fisher's exact test. Due to the longitudinal non-normal data, binomial generalized estimating equation (GEE) models were employed to investigate relationships between fathers mental health status over time in crude analyses and when adjusted for potential confounding variables.[27] Binomial GEE models were also used to model whether there were systematic patterns in attrition with sample sub-groups. An unstructured correlation matrix was employed and robust Huber-White sandwich variance estimators used for all GEE analyses. Statistical analyses were performed using SAS version 9.1 (SAS Institute Inc., Cary, NC, USA) and Stata version 10.0 (StataCorp, College Station, TX, USA) software and $\alpha=0.05$ was used to define statistical significance.

Results

Nine hundred and ninety-nine of the mothers interviewed at 12-months had partners who met eligibility criteria, of whom 825 (83%) were interviewed. Most, 820 (99%), were the biological fathers of the children with five adoptive or stepfathers. For ease

Table 1. Frequencies (percentage) of different socio-demographic variables at baseline over measurement waves (1-year n=825, 2-years n=757, and 6-years n=591).

Variable	Measurement Waves 12 months n (%)	2 years n (%)	6 years n (%)	P-value
Age at baseline (years)				
<20	7 (0.9)	4 (0.7)	4 (0.9)	<0.001
20-29	314 (38.2)	215 (36.0)	145 (33.1)	
30-40	390 (47.4)	286 (47.8)	219 (50.0)	
≥40	112 (13.6)	93 (15.6)	70 (16.0)	
Ethnicity				
Samoan	440 (53.3)	350 (58.3)	213 (48.5)	0.12
Cook Islands Maori	73 (8.9)	50 (8.3)	32 (7.3)	
Niuean	26 (3.2)	19 (3.2)	13 (3.0)	
Tongan	199 (24.1)	121 (20.2)	142 (32.4)	
Other Pacific	28 (3.4)	20 (3.3)	15 (3.4)	
Non-Pacific	59 (7.2)	40 (6.7)	24 (5.5)	
New Zealand Born				
Yes	203 (24.6)	149 (24.8)	95 (21.6)	0.17
No	621 (75.4)	451 (75.2)	344 (78.4)	
Highest educational qualification at baseline				
No formal qualification	481 (58.4)	345 (57.7)	270 (61.8)	0.12
Secondary	220 (26.7)	163 (27.3)	96 (22.0)	
Post-secondary	122 (14.8)	90 (15.1)	71 (16.3)	
Acculturation				
Assimilationist	305 (37.0)	216 (36.0)	140 (31.9)	0.01
Separationalist	302 (36.6)	208 (34.7)	188 (42.8)	
Integrator	75 (9.1)	53 (8.8)	38 (8.7)	
Marginal	143 (17.3)	123 (21.0)	73 (16.6)	
Household Income at baseline				
$0-$20,000	216 (26.2)	185 (24.4)	152 (25.7)	0.005
$20,001-$40,000	486 (58.9)	455 (60.1)	334 (57.0)	
>$40,000	103 (12.5)	102 (13.5)	84 (14.2)	
Unknown	20 (2.4)	15 (2.0)	21 (3.6)	

Note: n=164 fathers included at 2 years did not participate at 12 months; and n=158 fathers included at 6 years did not participate at 12 months

of exposition, we shall refer to this group collectively as 'fathers' hereafter. Most, 786 (95%), fathers were living with the biological mother in a married (77%) or de facto (18%) relationship. Their mean age was 32.1 years (range: 17-65 years). At the 2-year interview, 938 mothers consented to the child's father to act as a collateral respondent of whom 757 (81%) consented and completed the interview, while at the 6-year interview 848 mothers consented and 591 (70%) fathers completed the interview. The numbers of fathers participating has significantly decreased over time (P<0.001). As father recruitment for each measurement wave was conditional on mother's consent, 164 fathers interviewed at the 2 year measurement phase did not participate in the 12 month phase, and 158 fathers interviewed at the 6 year measurement phase did not participate in the 12 month phase. Overall 1053 fathers are included in this study with 271 (26%) fathers completing one measurement wave, 444 (42%) fathers completing two and 338 (32%) fathers completing all three measurement waves.

Summaries of the frequencies and percentages of socio-demographic variables at baseline for the participants in the study over the three measurement waves are presented in Table 1. After accounting for the attrition over time, there were no significant differences in attrition across different ethnic groups, place of birth groups and highest educational qualification groups over the measurement waves. However, younger fathers, assimilationists and those fathers with lower household incomes were significantly more likely to attrite from the studies than their older, non-assimilationist and higher income counterparts. Despite the distributions of age, acculturation and household income changing over measurement waves, the overall percentage differences remained relatively small (Table 1).

Table 2 shows the frequencies and percentages for potential confounding variables amongst the participant fathers over the three different measurement waves. The findings indicate that the majority of participants in the study are married or in defacto relationships, are non-drinkers and non-smokers, and are in full-time employment.

Table 2. Frequencies (percentage) of different confounder variables over measurement waves (1-year, 2-years, and 6-years).

Variable	Measurement Wave 12 months n=825 n (%)	2 years n=757 n (%)	6 years n=591 n (%)
Marital Status			
Married/De Facto	789 (95.6)	724 (95.8)	568 (97.1)
Separated/Single	36 (4.4)	32 (4.2)	17 (2.9)
Current smoking status (cigs/day)			
Non-Smoking (0)	490 (59.5)	414 (54.8)	363 (62.1)
Regular Smoker (1-9)	123 (15.0)	175 (23.2)	90 (15.4)
Moderate Smoker (10-19)	169 (20.5)	123 (16.3)	87 (14.9)
Heavy Smoker (>20)	41 (5.0)	44 (5.9)	45 (7.7)
Current alcohol drinking status			
Non-Drinking	578 (70.2)	536 (71.0)	425 (72.0)
Monthly or less	209 (25.4)	185 (24.4)	117 (19.8)
2-4 times month	34 (4.1)	28 (3.7)	36 (6.1)
2-3 times week	3 (0.4)	8 (1.1)	12 (2.0)
Current employment status			
Unemployed	109 (13.2)	96 (12.7)	57 (9.6)
Full-time employment	666 (80.7)	605 (80.0)	485 (82.1)
Part-time employment	28 (3.4)	24 (3.2)	27 (4.6)
Full time parent	5 (0.6)	6 (0.8)	5 (0.9)
Student/other	17 (2.1)	25 (3.3)	17 (2.9)

The frequencies of symptomatic mental health indications over each measurement wave, estimated odds ratios (ORs) and associated 95% confidence intervals (95% CI) are presented in Table 3. In crude analysis, the results show that participants are 1.75 times more likely to be symptomatic at 2 years and 2.67 times more likely to be symptomatic at 6 years, than at the 12 month measurement phase; a significant time effect (P-value<0.001). The adjusted analysis results were similar to those of the crude analysis, indicating that this association did not appear to be confounded by the socio-demographics and covariates considered here (Table 3).

Table 3. Numbers, and frequency of symptomatic mental health indications from the GHQ12 over measurement waves since child's birth, together with crude and adjusted OR estimates and associated 95% confidence intervals (95% CI) derived from binomial generalised estimating equation (GEE) models.

Measurement		Symptomatic		Crude			Adjusted†		
Wave	Total	n	(%)	OR	(95% CI)	P-value	OR	(95% CI)	P-value
12-months	825	32	(3.9)	1.0	Reference	<0.001	1.0	Reference	<0.001
2-years	757	50	(6.6)	1.8	(1.1, 2.7)		1.7	(1.1, 2.8)	
6-years	591	58	(9.8)	2.7	(1.7, 4.2)		3.2	(1.9, 5.2)	

†Adjusted for all variables listed in Tables 1 and 2.

Table 4 presents the ORs and 95%CI for the socio-demographic and covariates used in the adjusted analysis. Ethnicity, current smoking status, employment status and marital status were all significantly associated with symptomatic mental health indications from the GHQ12. When studying these variables further, Cook Islands or Tongan ethnicity, being a regular smoker, being unemployed, and having marital status of separated or single all had increased odds for symptomatic mental health indications.

Table 4: Adjusted OR estimates and associated 95% confidence intervals (95% CI) derived from binomial generalised estimating equation (GEE) models for all variables.

Variable	OR	(95% CI)	P-value
Age (years)			
<20	1.0	Reference	0.42
20-29	2.0	(0.3, 16.3)	
30-40	2.6	(0.3, 20.5)	
≥40	3.3	(0.4, 27.4)	
Ethnicity			
Samoan	1.0	Reference	<0.001
Cook Islands Maori	2.9	(1.5, 5.6)	
Tongan	2.3	(1.2, 4.1)	
Other Pacific	0.8	(0.3, 2.2)	
Non-Pacific	2.3	(0.9, 5.5)	
New Zealand born			
Yes	1.0	Reference	0.06
No	1.8	(1.0, 3.2)	
Highest educational qualification at baseline			
No formal qualification	1.0	Reference	0.69
Secondary	1.0	(0.5, 1.9)	
Post-secondary	1.3	(0.7, 2.5)	
Acculturation			
Assimilationist	1.0	Reference	0.28
Separationalist	1.1	(0.5, 2.3)	
Integrator	1.4	(0.6, 3.1)	
Marginalist	1.8	(0.9, 3.5)	
Household Income at baseline			
$0-$20,000	1.0	Reference	0.42
$20,001-$40,000	1.0	(0.6, 1.7)	
>$40,000	0.7	(0.4, 1.4)	
Unknown	0.3	(0.1, 2.3)	
Marital Status			
Married/De Facto	1.0	Reference	0.004
Separated/Single	3.2	(1.5, 7.1)	
Current smoking status (cigs/day)			
Non-Smoking (0) Light	1.0	Reference	0.04
Smoker (1-9) Moderate	1.9	(1.1, 3.2)	
Smoker (10-19) Heavy	1.7	(1.0, 2.9)	
Smoker (>20)	2.1	(1.0, 4.4)	
Current alcohol drinking status			
Non-Drinking	1.0	Reference	0.35
Monthly or less	0.8	(0.5, 1.4)	
2-4 times month	1.7	(0.8, 3.5)	
2-3 times week	2.2	(0.4, 13.1)	
Current employment status			
Unemployed	1.0	Reference	<0.001
Full-time employment	0.3	(0.2, 0.6)	
Part-time employment	0.5	(0.2, 1.4)	
Full-time Parent	0.6	(0.1, 7.0)	
Student/other	0.6	(0.2, 2.2)	

Discussion

Prevalence of mental disorder

Our analysis identified 3.9% of fathers with potential psychological disorder in the 1st year after the birth of their child, increasing to 6.7% and 9.8% in the 2-year and 6-year postpartum phases. By comparison, findings from the Te Rau Hinengaro study indicate that currently amongst Pacific people 25% or 1 in 4 are mentally unwell.[17] Although the Te Rau Hinengaro study findings are based on a personal interview survey of a nationally representative sample of people aged 16 years and over living throughout New Zealand, making direct comparisons difficult. While low initially, the increasing potential mental health disorder within our male cohort is of concern for the function and well-being of the fathers themselves and the family unit. However, Pacific viewpoints of mental illness differ distinctly from Western medical approaches. Pacific cultures tend to view the cause of mental illness as being either spiritual or inherited, and treatment is delivered in the traditional way by traditional or 'spiritual' healers.[28] A holistic approach to mental health is often utilized by Pacific peoples, thus requiring that all aspects of a person's life – spiritual, physical, emotional and family – to be in harmony.[28] The application of this holistic framework to potential mental disorder amongst Pacific fathers, emphasizes the need to discern and understand potential risk factors which significantly increase the likelihood of developing mental disorder.

These findings highlight the necessity for further research to understand what particular issues and concerns make these ethnicities more susceptible to potential mental illness.

Significant risk factors

In addition to time postpartum, a number of other variables were found to be significantly associated with potential psychological disorder; being a regular smoker was one such variable. According to the Mental Health Foundation of New Zealand, there is little research available regarding the effects of smoking on mental health in New Zealand.[29] However, internationally it has been reported that smoking prevalence is significantly higher among people with mental health problems than among the general population.[30] Additionally, smoking prevalence was the highest among those people diagnosed with a psychiatric disorder, and daily cigarette consumption is considerably higher among smokers with mental health problem.[31] One of the major explanations put forward to explain smoking prevalence among mental illness sufferers is that it is a coping mechanism for dealing with feelings of isolation and mental illness. [31] Furthermore, previous research suggests that the nicotine in cigarettes may help to alleviate some of the side effects of medication for mental illness sufferers, thereby encouraging them to keep smoking.[32] Consequently, our research compliments previous international findings that indicate there is a significant association between smoking and mental health. It is, however, unclear whether smoking is a causal factor, or whether it is a proxy variable for other risk factors associated with potential mental disorder.

The relationship between full-time employment and mental illness was also significant with those who work full-time less likely to develop potential mental disorder compared to those who were unemployed. This finding is consistent with findings from a Mental Health Commission of New Zealand report[33] which found that employment and mental health were definitely linked and that employment helps mental illness sufferers in their recovery and decreases their dependence on services. Despite a lack of systematic research in New Zealand on discrimination experienced by people with mental illness in the labour force, people with mental illness and mental health service providers cite discrimination as a key barrier to employment more than any other factor, potentially affecting the chances for recovery and also increasing the likelihood of potential psychiatric disorder developing.[33]

Marital status was also significantly related to mental illness, with those who were separated or single being significantly more likely to develop potential mental disorder than those who were married or in de facto relationships. These findings concur with previous results which have revealed that married spouses serve as sources of beliefs and validators of identity, leading to positive self-image and a source of resilience when dealing with everyday stresses. [34] Likewise, marital disruption may create vulnerability to stresses, with divorced people reporting worse mental health due to stresses and strains associated with role transitions. [35]

Finally, the relationship between Cook Islands or Tongan ethnicity and mental illness was also found to significantly affect the likelihood of developing potential mental disorder. Apart from the Te Rau Hinengaro Mental Health Survey, little work has been done on the prevalence of mental illness amongst Pacific people, and particularly ethnic specific information on prevalence of mental illness. Our findings may support the proposal that Pacific approaches and understandings of mental illness differ markedly from western perspectives, and some Pacific ethnic groups describe mental illness in ways that are unique to their own particular culture. [28] For instance, Samoan perceptions of mental illness are frequently described in terms of spiritual relationships or the breaking of forbidden traditions. [36] Therefore, these findings highlight the necessity for further

research to understand what particular issues and concerns make these ethnicities more susceptible to potential mental illness.

Strengths of the research

The PIF study provides information from the first, large, and culturally diverse sample of Pacific fathers within New Zealand. The sample composition is approximately representative,[19,37] and although it suffers from significant attrition, remains reasonably representative over time (Table 1) suggesting that any findings are likely to be generaliseable. Other key features of this research are the strong study design and the sophisticated generalized estimating equation (GEE) model analytic techniques employed to examine data from the PIF cohort over time. Moreover, the PIF study design is multi-disciplined, broad-based and inclusive—capturing information from mothers, fathers and their children. In general the PIF study aims to identify and characterize both positive and negative health outcomes amongst participants, understand the mechanisms and processes leading to those outcomes, and make empirically based strategic and tactical recommendations to improve the wellbeing of Pacific children and families and thereby benefit New Zealand society as a whole.[37]

The GHQ12 is a standardized measure of general health, including mental health, used internationally – with good specificity and sensitivity.[38] The GHQ12 was developed as a screening instrument to provide information on the mental well-being of respondents. This is achieved by assessing normal healthy functioning, and the appearance of new distressing symptoms, rather than giving a specific psychiatric diagnosis.[20] A key strength of the GHQ12 instrument is its accuracy and ease of administration as a screening tool for the identification of symptomatic (those with potential psychiatric disorder) and non-symptomatic (those with no significant risk of potential psychiatric disorder), symptomatic being identified by specified cut-off scores.[38] Subsequent research has confirmed that despite its shortened form, the GHQ12 is as accurate in screening and case detection as longer versions of the GHQ.[38]

Limitations

A potential limitation to this research is the attrition seen amongst the cohort. Attrition, particularly differential attrition, is problematic as it can cause systematic bias within study findings. It has also been suggested that non-responders in longitudinal studies can often be those that are most likely to be the worst off or, in this instance, are more likely to be symptomatic of mental health disorder.[39] However, at baseline, the prevalence of potential mental health disorders was at its lowest. So while the subsequent measurement waves may underestimate the underlying rate of mental health disorders, the figures at baseline are likely to be robust.

While having strengths, the GHQ12 may also suffer from weakness. Despite its success as an accurate screening measure for psychological disorder, there are varying methods in which symptomatic or non-symptomatic cases are defined. For example, the traditional method of scoring the questions is a binary method but the GHQ can also be scored as a Likert scale or by assigning different weights to questions associated with illness or health.[40] The threshold or cut-scores for the GHQ not only vary with the scoring method and length of questionnaire but also across populations. As a result, there can be vastly different rates of case detection depending on which scoring method is employed for the analysis.[41] However, this is alleviated in our longitudinal study by explicitly articulating our threshold and then consistently employing this threshold over all measurement waves. This given internal validity to our study, and external validity for those studies adopting the same threshold level.

Another important limitation of the findings is the fact that family size, composition and child number and order was not measured from fathers or accounted for in the analysis. The composition of the household and number of children in the family unit could potentially affect the amount of stress present in the home and thereby increase the likelihood of potential psychiatric disorder.

Policy Implications

There is an obvious lack of robust information on the mental well-being of Pacific fathers, and although the prevalence rate of potential mental disorder is lower in our sample compared to the general Pacific population, there is an increasing trend over time. Therefore health of fathers should be targeted as a priority research objective, especially given their important role in influencing the health and well-being of children. Likewise, further investigation must be undertaken to examine some of the variables which significantly increase the likelihood of developing potential mental health disorder. Although some of the issues such as smoking are already key factors which have been identified as affecting health, more comprehensive research should be initiated to gain a more detailed understanding of the associations with potential mental disorder. This may help to establish potential strategies to mitigate or prevent the increase of potential mental disorder among fathers.

Conclusion

Within our cohort of participant fathers in the PIF study rates of mental health symptomatic indications were low but there is a significant trend of increase over time. Fathers who were regular smoking, being unemployed, being separated or single, and being of Cook Islands and Tongan ethnicity had significantly increased likelihood of being symptomatic for

potential psychological disorder. However, further investigation should be conducted to determine what specific element of variables is responsible for this relationship. Moreover, future measurements over time are needed to establish whether this increasing mental health symptomatic indication prevalence continues, plateaus or declines with advancing child age.

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Acculturation status has a modest effect on smoking prevalence among a cohort of Pacific fathers in New Zealand

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Abstract

Objective: This article explores the relationship between smoking prevalence and acculturation among a cohort of Pacific Island fathers resident in New Zealand.
Methods: Overall, 766 Pacific fathers were included in the analysis. Self-reported smoking status was assessed and compared with data from a robust epidemiological measure of acculturation status specifically designed for use amongst the Pacific population. Additional variables describing socio-demographic and other circumstances of the participating fathers were also incorporated in the analysis because of their known association with smoking behaviour.
Results: Overall, 40.3% of Pacific fathers were current smokers. Multivariable logistic regression showed that acculturation status was associated with smoking crude (p<0.001) and multivariable logistic regression models, when adjusting to socio-demographic variables (p=0.008).
Conclusion: Smoking rates for Pacific fathers in New Zealand are high. There appears to be a modest effect of acculturation on smoking prevalence, where those fathers with higher Pacific cultural identity have the lowest smoking rates. It is opined that the strength of identification and a holistic view of health enhances the motivations of Pacific fathers to be smoke-free in New Zealand.
Implications: Strategies which maintain, enhance, and incorporate fathers' Pacific cultural identity may be a useful addition to comprehensive tobacco control strategies to reduce the prevalence of smoking in Pacific people living in New Zealand.
Key words: Pacific, tobacco, fathers, acculturation, New Zealand

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Tobacco smoking has been identified as one of the most modifiable risk factors for poor health. Tobacco smoking is the single most preventable cause of death in the world, and is currently responsible for roughly five million deaths per year.[1] Within New Zealand (NZ), approximately, 5,000 deaths each year are attributed to direct tobacco smoking or second-hand smoke.[2] Moreover, particular sub-groups within NZ, such as Pacific peoples and other lower socioeconomic and ethnic subpopulations, carry a greater burden of smoking-related illness.[3] Current statistics regarding male smoking rates within NZ indicate that smoking is more prevalent among Pacific males (35%) compared to both European (23%), and Asian (20%), although Māori have the highest rates (40%).[4]

Within the Pacific region, the availability and quality of data regarding the prevalence of smoking in the Pacific Islands varies greatly. Although information regarding smoking prevalence is available through WHO publications,[5] information is often out-of-date with estimates for some Pacific countries dating back to the mid 1980s.[6] Nevertheless, more recent research publications indicate that male smoking prevalence within Pacific Island nations is still very high.[7] Information collected in 2004 indicated that Samoan males have a smoking prevalence of 49% and their Tongan counterparts have a rate of 53%,[8] significantly higher than the prevalence rate among Pacific people in NZ of 35%.[4] The most likely explanation for this difference is that NZ has a comprehensive tobacco control program that includes high taxation of tobacco products, advertising bans, restrictions on sale, good public-health campaigns and health warnings on tobacco products, smoke-free public places legislation, and freely available smoking-cessation treatment. Such strategies are recommended in the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC). This global public-health treaty provides support and guidance for legislation and other initiatives to reduce tobacco-related harm throughout the world.[9] Although NZ and all 14 Pacific Island countries that are member states of the WHO are parties to the FCTC, there are

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marked differences in the implementation of the recommendations set out in the FCTC.[10]

Related to this difference in tobacco control policy is a latent attitude of societal permissiveness towards smoking in Pacific nations compared to NZ. This may contribute to under-reporting of smoking status in NZ. Despite these international differences, smoking prevalence among Pacific people remains high. Although there has been an increase in research on tobacco use in recent years, there has been little investigation amongst diverse migrant populations, particularly specific groups such as Pacific fathers.

Acculturation and smoking

Acculturation has been defined as a process by which individuals or groups adopt aspects of another culture, often a dominant one, without completely relinquishing their own.[11] Aspects of the adopted culture may include beliefs, values, social norms and lifestyles.[12]

The research literature is replete with explanatory models of the acculturative process, most of which are multidimensional, involving numerous topics and factors.[13] These multidimensional topics range from those at the personal level, such as personality qualities and psychological adjustment,[14] language retention and community socialisation, to external acculturation drivers such as migration experience, micro- and macro-societal policies, and regional setting.[15] Two of the most common models of acculturation theory are unidirectional and bidirectional models of acculturation.

The bidirectional model proposes that acculturative adaptations lead to culture changes in either or both the migrating and host society groups. It is not inevitable that intergroup contact proceeds uniformly through sequential to ultimate assimilation.[16] Such insights generated by this bidirectional model challenge the ethnic melting-pot assumptions and promote exploration and resolution of political sensitivities among ethnicities.[17]

Many studies that have examined acculturation strategies in minority population groups have found preference for integration is expressed over other acculturation strategies, although notable exceptions with Turks in both Germany and Canada and Hispanic immigrant women in the US have been cited.[16,18,19]

All these contributions could be seen as underpinning Pacific community perspectives on cultural maintenance within NZ society. In NZ there is widespread official government dogma and minority community perception that cultural maintenance is important to health outcomes and that culturally specific information for minority groups on which to base optimal policy and services is necessary. The untested assumption is that such an approach will lead to improved health and social outcomes for Pacific peoples. An alternative 'popular hypothesis' in NZ would more likely support international perspectives and studies cited above that would expect more positive health outcomes for those effectively embedded in mainstream culture than for those embedded in Pacific culture or those marginalised from both cultures.

Research to date has revealed that acculturation status can have a significant influence on health and smoking behaviours of different population groups. Previous studies involving Korean-American, Hispanic, and Asian-American ethnic groups describe a trend of immigrant populations with low rates of risk factors migrating to countries where the dominant culture has a much higher rate of risk factors.[20-22] As these migrant populations spend longer in the new culture or environment, their prevalence of risk-taking behaviour tends to increase and reflect similar rates to that of the dominant culture. This was the finding of a NZ study looking at the relationship between acculturation and the risk of tobacco use in Asian youth.[23] Students who identified themselves as Asian, as compared to those identifying also with other ethnicities, were more likely to smoke. Asian students who had lived in NZ for longer and had become integrated into more traditional NZ European activities were more likely to smoke.

Intuitively, it seems reasonable that the converse would also be true. One of the relatively few studies examining migrant communities with high rates of smoking, and the effect of migrating to a country with a significantly lower prevalence of smoking, has been completed involving Arab Americans from the Middle East who settle in the US,[24] while similar studies involving Vietnamese and South East Asian migrants to the US have also been published.[25] Findings from these studies support the premise that an individual's level of acculturation, and alignment to either the traditional or the dominant culture, may influence either the reduction or maintenance of smoking behaviour. However, these findings might also reflect the degree of tobacco control within the new environment.

Utilising data from the Pacific Island Families (PIF) Study − an ongoing longitudinal study garnering information from Pacific families in Auckland − this paper investigates whether smoking prevalence among Pacific men is affected by their acculturation status, after accounting for other confounding factors.

Methods

Ethical approval for the PIF study was obtained from the Northern Region Y Ethics Committee.

Participants

Data were collected as part of the PIF Study. This study follows a cohort of Pacific Island infants born at Middlemore Hospital between 15 March and 17 December 2000. All potential participants were selected from births where at least one parent was identified as being of Pacific Island ethnicity and a NZ permanent resident.

When the children reached their first birthday, fathers participated in one-hour interviews concerning family functioning and the health and development of the child. Within the context of a wider interview, issues of paternal health were measured using various screening tools, including a bidirectional acculturation scale based on Berry's model of acculturation.[11] This scale used a modified version of the General Ethnicity Questionnaire (GEQ)[26] that was adapted for use within Pacific populations.[27] Detailed information about the PIF cohort and procedures is described elsewhere.[28,29]

For the purposes of this analysis, inclusion required the fathers to be of self-identified Pacific ethnicity, and to have been interviewed at the one-year measurement wave.

Definition of Variables

Smoking status

At one year, paternal smoking status was assessed using one specific question from the interview protocol. This question was "On average, how many cigarettes did you smoke yesterday?" Participant responses to this question were dichotomised into "current smoker" and "non-smoker" groups. Although biochemical confirmation of smoking status was not possible in this study, prior research has established the utility of self-report data as a reliable indicator of smoking status.[30,31]

Acculturation status

The acculturation measure chosen for the PIF study is an adaptation of the General Ethnicity Questionnaire (GEQ).[26] To suit the specific purposes of the PIF study, the scale was shortened and modified to develop the NZ (NZACCULT) and Pacific version (PIACCULT) of the GEQ.[27] The measure was modified to make it appropriate and relevant to Pacific peoples in NZ, so as to provide reasonable approximations of the acculturation process for this population. Questions relating to language, social affiliation, activities, exposure in daily living and food were included, as were questions relating to contact with Pacific family and relatives and attendance at church, both of which were considered important in a Pacific context in NZ society. Similarly, inclusion of sport as a particular recreation was included because of the perceived importance of Pacific youth involvement in NZ sport and its importance in the context of the wider NZ society. In shortening the scale, the most important objective was to reduce participant burden in an already long questionnaire, without compromising the ability to collect information relevant to the acculturation process and its inter-relationship with the other variables of interest. Examination of the acculturation measure yielded positive feedback from both pre-participant focus groups, as well as a Pacific advisory group which is part of the overall PIF study − this advice being integral to all substantive decisions on study content.[27] Moreover, the internal consistency of the measure was also examined, using Chronbach's α, and was found to be acceptable (α=0.81).[27]

The acculturation variable describes four distinct categories for acculturation status of respondents depending on whether the acculturation strategy is freely adopted by the individual, or imposed by the dominant culture. Each of the respondents was individually scored on both the NZACCULT and PIACCULT scales and allocated to one of the categorical classes dependent on whether their individual score fell above or below the median of the full group on each scale, namely: Separator (Low NZ – High Pacific); Integrator (High NZ – High Pacific); Assimilationalist (High NZ – Low Pacific); Marginalist (Low NZ – Low Pacific). All analysis incorporating the acculturation variable was carried out in terms of this categorisation.

Socio-demographic and potential confounding variables

Additional variables describing socio-demographic and other circumstances of the participating fathers were incorporated in the analysis to provide some background profile information of the participants in the study and also because of their known association with smoking behaviour. These variables included age, ethnicity, being NZ born, household income, highest educational qualification, current alcohol drinking status, current employment status, and marital status.

Data analysis

Statistical analyses were performed using SAS version 9.1 (SAS Institute Inc., Cary, NC, USA) and Stata version 10.0 (StataCorp, College Station, TX, USA) software and α=0.05 was used to define statistical significance, except where otherwise explicitly stated. Categorical variable comparisons between groups were made using Fisher's exact test. Statistical model development followed that advocated by Sun and colleagues.[32] Initial bivariable comparisons were employed to compare socio-demographic and potential confounding variables with smoking status using logistic regression models. All variables with a p-value<0.20 were then included in a saturated multivariable logistic regression model. A manual backward selection process was then conducted sequentially eliminating the least significant variable (using Wald's statistic) until all remaining included variables had an overall p-value<0.05. Once derived, the goodness-of-fit of this most parsimonious multivariable main effects model was checked using the Hosmer-Lemeshow test. This hierarchical model development approach, advocated in previous research by Sun and colleagues,[32] was employed to select the variables of most significance for multivariable analysis, and to reduce the chance of variable rejection due to confounding.[32]

Results

Overall, 766 Pacific fathers were included in the analysis. Most of the fathers interviewed at one year, 761 (99%), were the biological fathers of the children, with five adoptive or stepfathers. For ease of exposition, we shall refer to this group collectively as 'fathers'. Most, 727 (95%), were living with the biological mother of the child in a married (77%) or de facto (18%) relationship. The mean age was 32.1 years (SD 7.3 years) and the range was 17 to 65 years. A summary of the frequencies and percentages of socio-demographic variables at baseline for the participants in the study is presented in Table 1.

More than half the cohort is of Samoan ethnicity, and the majority were born in NZ. More than half have no formal educational qualifications, have a household income less than $40,000 per year, are in a married/de facto relationship, and have full-time employment. These numbers are consistent with national data on Pacific people collected during the 2006 Census[17] and from the 2002 Pacific Progress Report,[33,34] and so it might be asserted that the sample appears to be representative.[28,29]

Prevalence of smoking

A total of 308 (40.3%; 95% confidence interval [CI] 36.8%,

Table 1: Frequencies (percentage) of various socio-demographic variables among a cohort of Pacific Island fathers (n=766).

	n	(%)
Age at baseline (years)		
<20	6	(0.8)
20-29	290	(37.9)
30-39	363	(47.5)
≥40	106	(13.9)
Ethnicity (self-reported)		
Samoan	440	(53.3)
Tongan	199	(24.1)
Cook Islands Māori	73	(8.9)
Other Pacific	54	(7.1)
Birthplace		
New Zealand	612	(80.0)
Overseas	153	(20.0)
Years lived in New Zealand		
0-4	99	(15.7)
5-10	174	(27.5)
>10	359	(56.8)
Highest educational qualification at baseline		
No formal qualification	459	(60.1)
Secondary	203	(26.6)
Post-secondary	102	(13.4)
Household income at baseline		
$0-$20,000	200	(26.1)
$20,001-$40,000	457	(59.7)
>$40,000	91	(11.9)
Unknown	18	(2.4)
Marital status		
Married/De Facto	734	(95.8)
Separated/Single	32	(4.2)
Current alcohol drinking status		
Abstainer	542	(70.8)
Monthly or less	194	(25.3)
More than once a month	30	(3.9)
Current employment status		
Unemployed	105	(13.7)
Full-time employment	616	(80.4)
Part-time employment	26	(3.4)
Full-time parent/Student	19	(2.5)
GHQ – Mental health screen		
Potential indication	18	(2.3)
No indication	747	(97.7)

43.9%) fathers self-identified as being current smokers. In terms of ethnic sub-groups, 166 (37.9%; 95% CI 33.3%, 42.6%) Samoan fathers, 91 (45.7%; 95% CI 38.7%, 52.9%) Tongan fathers, 31 (42.5%; 95% CI 31.0%, 54.6%) Cook Islands fathers, and 20 (37.0%; 95% CI 24.3%, 51.3%) Pacific fathers of other ethnicity self-identified as being current smokers.

Acculturation and smoking: crude analysis

Smoking status was correlated with acculturation to catalogue the number of current smokers and non-smokers for each of the four acculturation categories (see Table 2). These acculturation categories indicate an individual's position measured on a bi-directional acculturation scale concerning affinity with both NZ and Pacific culture. Smoking rates were found to be significantly different between the acculturation groups (p=0.008). Marginalists and Assimilationists (both groups having lower Pacific cultural identification) had higher smoking rates of 48.3% and 44.9% respectively, whereas Integrators and Separators (both groups having higher Pacific cultural identification) had lower smoking rates of 31.2% and 35.3% respectively.

Acculturation and smoking: adjusted analysis

Table 3 presents the odds ratios (ORs) and 95% CI for the socio-demographic and covariates used in the bivariable and final most parsimonious multivariable logistic regression analysis of smoking. Initial bivariable analysis highlighted five variables which met criteria for inclusion in the multivariable analysis (i.e. acculturation status, educational qualifications, current alcohol drinking status, marital status, and years lived in NZ). The subsequent manual backward selection process yielded a final parsimonious multivariate model that included acculturation status (p-value=0.008), educational qualifications (p-value=0.02) and current alcohol drinking status (p-value<0.001), which were all significantly associated with smoking. When examining these variables further, being an Assimilationist, having no formal qualifications, and drinking alcohol more than once a month, all had increased ORs for being a smoker. In fact, drinking alcohol more than once a month had an OR= 3.96 (95% CI 1.79-8.76), and was the most significant variable associated with smoking. There was no reason to reject the adequacy of the final multivariate model (Hosmer-Lemeshow p-value=0.07).

Relating acculturation status against years in NZ and birthplace revealed significant relationships (both p<0.001). Cross tabulations revealed that 94.5% of Integrators and 80.8% of Separators had spent more than five years in NZ compared with 75.4% of

Table 2: Acculturation status and smoking prevalence amongst a cohort of Pacific Island fathers.

	Overall	Assimilationist High NZ, Low PI	Separationalist Low NZ, High PI	Integrator High NZ, High PI	Marginalist Low NZ, Low PI	p-value
Current smoking status						
Non-Smoker	456 (59.7)	145 (55.1)	172 (64.7)	75 (68.8)	61 (51.7)	0.008
Smoker	308 (40.3)	118 (44.9)	94 (35.3)	34 (31.2)	57 (48.3)	

Table 3: Bivariable and multivariable logistic regression results between smoking and potential predictor variables amongst a cohort of Pacific Island fathers.

	Non-smoking		Smoking		Crude analysis		Adjusted analysis	
	n	(%)	n	(%)	OR	(95% CI)	OR	(95% CI)
Acculturation status								
Assimilationist	145	(55.1)	118	(44.9)	1.80	(1.12-2.88)	1.69	(1.02-2.77)
Separationalist	172	(64.7)	94	(35.3)	1.21	(0.75-1.94)	1.05	(0.63-1.73)
Marginalist	61	(51.7)	57	(48.3)	2.06	(1.20-3.55)	1.50	(0.85-2.67)
Integrator	75	(68.8)	34	(31.2)	1.00	(reference)	1.00	(reference)
Age at baseline (years)								
<30	166	(56.3)	129	(43.7)	1.00	(reference)		
30-40	223	(61.6)	139	(38.4)	0.80	(0.59-1.10)		
≥40	66	(62.3)	40	(37.7)	0.78	(0.50-1.22)		
Ethnicity								
Samoan	272	(62.1)	166	(37.9)	1.00	(reference)		
Tongan	108	(54.3)	91	(45.7)	1.40	(1.00-1.94)		
Cook Islands Māori	42	(57.5)	31	(42.5)	1.20	(0.73-2.00)		
Other Pacific	34	(63.0)	20	(37.0)	0.96	(0.54-1.73)		
Birthplace								
New Zealand	370	(60.6)	241	(39.4)	1.00	(reference)		
Overseas	85	(55.9)	67	(44.1)	1.21	(0.85-1.73)		
Years lived in New Zealand								
0-4	62	(62.6)	37	(37.4)	0.78	(0.50-1.22)		
5-10	116	(66.7)	58	(33.3)	0.65	(0.45-0.94)		
>10	205	(57.3)	153	(42.7)	1.00	(reference)		
Highest educational qualification at baseline								
No formal qualification	260	(56.6)	199	(43.4)	1.44	(0.92-2.26)	1.65	(1.00-2.72)
Secondary	128	(63.4)	74	(36.6)	1.09	(0.66-1.80)	0.97	(0.57-1.65)
Post-secondary	76	(65.3)	35	(34.7)	1.00	(reference)	1.00	(reference)
Household income at baseline								
$0-$20,000	111	(55.5)	89	(44.5)	1.12	(0.68-1.85)		
$20,001-$40,000	283	(62.2)	172	(37.8)	0.85	(0.54-1.34)		
>$40,000	53	(58.8)	38	(41.2)	1.00	(reference)		
Unknown	9	(50.0)	9	(50.0)	1.40	(0.51-3.84)		
Marital status								
Married/De Facto	441	(60.2)	292	(39.8)	1.00	(reference)		
Separated/Single	15	(48.4)	16	(51.6)	1.61	(0.78-3.31)		
Current alcohol drinking status								
Abstainer	370	(68.5)	170	(31.5)	1.00	(reference)	1.00	(reference)
Monthly or less	76	(39.2)	118	(60.8)	3.38	(2.40-4.75)	3.19	(2.25-4.53)
More than once a month	10	(33.3)	20	(66.7)	4.35	(1.99-9.50)	3.96	(1.79-8.76)
Current employment status								
Unemployed	57	(54.3)	48	(45.7)	1.30	(0.86-1.98)		
Full-time employment	373	(60.7)	241	(39.3)	1.00	(reference)		
Part-time employment	14	(53.8)	12	(46.2)	1.33	(0.60-2.92)		
Full-time parent/Student	12	(63.2)	7	(36.8)	0.90	(0.35-2.33)		
GHQ – Mental health screen								
Potential indication	11	(61.1)	7	(38.9)	0.94	(0.36-2.46)		
No indication	445	(59.7)	300	(40.3)	1.00	(reference)		

Marginalists and 95.1% of Assimilationists. Similarly, 21.3% of Integrators and 0.8% of Separators were born in NZ compared with 1.7% of Marginalists and 46.1% of Assimilationists.

Discussion

Prevalence of smoking

Forty per cent of fathers were current smokers a year after the birth of their child. This is similar to findings from the Tobacco Trends 2008 Report which indicate that currently 35% of Pacific males are smokers.[4] This high prevalence of smoking within our male cohort is not only of concern to the function and well-being of the fathers themselves, but also for their children and the overall family unit.[35] For example, research among a sample of NZ parents, including Pacific parents, indicated that many participants perceived parental smoking as an important influence on smoking uptake in children. Additionally, the findings suggest that strategies to prevent smoking in children should include supporting parents to quit or make non-smoking the norm for themselves and their families.[36]

Reported smoking prevalence rates among males in Pacific countries are much higher than our cohort, with some Pacific countries reporting more than 50% of the male population being smokers. The timeliness and accuracy of this information is not without question. However, the higher rates of smoking in Pacific nations are likely to reflect the lack of legislation and regulation concerning the sale and purchase of tobacco products, an attitude of societal permissiveness towards smoking, and the widespread availability of tobacco products in most Pacific countries. These findings support the view that stronger legislation and regulations around smoking and support for smoking cessation in Pacific countries are critical to aid the reduction in smoking prevalence and associated personal and societal harm. Although Pacific nations have signed and ratified the FCTC, large gaps remain in implementation of the Articles of the treaty. National and international investment and commitment is needed to implement and sustain effective tobacco control measures. Collaboration between Pacific nations, and countries such as NZ and Australia, will also help ensure implementation of comprehensive policy and tobacco control practice.

Smoking and acculturation

The acculturation status of our cohort of Pacific fathers was significantly associated with current smoking status, even after adjusting for significant confounders, with results indicating that fathers who are more aligned with traditional culture (Separators and Integrators) are less likely to be smokers than fathers who have less alignment (Assimilationist and Marginalists) (see Table 3).

Both international data and data from NZ[23] show that individuals from cultures with low smoking prevalence are more likely to smoke as they become more assimilated with the dominant culture or more western culture.[21,22] Conversely, smoking prevalence is reportedly lowest among those individuals who remain more strongly aligned to their traditional culture. Emigrants from nations with higher smoking prevalence than the country where they now reside have been shown to have lower smoking rates than their native countries. This may reflect the state of tobacco control in the different countries, as is likely to be the case with NZ and Pacific nations. However, our data suggest that acculturation status is also related to the likelihood of smoking. One explanation for this phenomenon may be that Pacific perspectives of health readily acknowledge the influence of traditional cultural practices and beliefs on the overall health of individuals. This holistic perspective of health utilised by Pacific peoples proposes that all aspects of a person's life – spiritual, physical, cultural and family – are important for good health and well-being.[37] As a result, individuals that are more strongly aligned to their traditional culture and practices may be expected to have better health outcomes. Conversely, individuals that are not strongly aligned to their traditional culture may tend to be more vulnerable to poor lifestyle choices such as smoking and alcohol drinking.[27] However, the relationship between acculturation and smoking prevalence is unlikely to be 'clear cut' and the high smoking rates in Pacific countries suggest that strong affinity with traditional culture is not, in itself, a protective factor against smoking. Without regulation and effective tobacco control interventions, smoking rates in Pacific countries will remain high.

Other significant risk factors

A significant relationship between educational status and smoking status was reported, with those who have a tertiary qualification being less likely to smoke compared to those who had no formal qualifications. This finding is consistent with data from international research in which educational attainment has been associated consistently with adult smoking prevalence.[38] Similarly, information from NZ-based studies indicates that male smoking prevalence is highest among individuals with lower educational qualifications.[39,40]

Finally, current alcohol drinking status was also found to significantly affect the likelihood of being a smoker, with those who were regular drinkers having an increased likelihood of being smokers. This finding is consistent with international literature which has reported that individuals who are alcohol drinkers are more likely to be smokers, when compared with non-drinkers.[41] The low overall rate of alcohol use found in this study was surprising. Seventy per cent of the cohort reported that they abstained from alcohol, which is significantly higher than the proportion of Pacific male abstainers (39%) in the Pacific Drugs and Alcohol Consumption Survey (2002),[42] or the proportion of general NZ male non-drinkers (12%) in the 2000 National Alcohol Survey.[43] This raises the possibility of under-reporting of alcohol use in this cohort, with prior research amongst Pacific people in NZ identifying cultural stigmas towards drinking behaviours and acknowledgement of alcohol use.[44] This unease may contribute to a reluctance among this cohort to divulge their drinking status, especially considering their responsibilities as fathers of young children.

Strengths and limitations of the research

This is the first study to describe the relationship between acculturation and smoking in a cohort of Pacific fathers in NZ, and the findings support the growing body of literature regarding smoking and acculturation among different populations and ethnic groups. Unlike previous research which relies on other proxy methods for acculturation assessment, such as time spent in a country, or country of birth, this research utilises a tool designed specifically for measuring or assessing acculturation.[11,26,27]

Acculturation is a complex concept which has become of some interest in public health, however most of the acculturation measures commonly utilised employ either proxy measures or unidimensional scales which lack precision and suitability.[45,46] The strength and suitability of the acculturation measure utilised in this study is highlighted when comparing acculturation status with years in NZ and birthplace, two common proxy measures of acculturation. Not only do these results emphasise that birthplace or time spent in a place does not necessarily dictate the cultural alignment of an individual, but they also demonstrate that there are underlying factors that are culpable, and that an appropriate theoretically grounded acculturation measure is better designed to epidemiologically capture and investigate this dimension.

This acculturation tool has been modified and validated to make it appropriate for use with NZ and Pacific participants,[27] providing a more accurate and reliable method for assessing acculturation within minority or migrant sub-populations in NZ.

The PIF study also provides information from the first, large and culturally diverse sample of Pacific fathers within NZ. Moreover, the sample composition appears to be representative[28,29] of the major Pacific ethnic groups in NZ, and as such the findings can be generalised.

Despite these strengths, a limitation of the study is that prevalence rates of smoking are based on self-reported information, and are not validated by any biochemical tests. Moreover, the question "How many cigarettes did you smoke yesterday", which was used to quantify smoking status, has not specifically been used in other tobacco surveys in NZ. While it is likely to capture information on daily smokers, there are limitations to its measurement of 'intermittent' or 'non-daily' smokers, and comparability to other tobacco prevalence surveys. Nevertheless, prior research has established the utility of self-report data as a reliable indicator of smoking status, particularly within population based studies.[47,48]

Finally, more in-depth exploration of the underlying aspects of acculturation would be useful in determining the specific elements responsible for the association between acculturation and smoking behaviour. Moreover, these explorations may well benefit from investigating the effect that racism plays in explaining poor health of Pacific people in terms of smoking.

Conclusion

In summary, smoking rates for Pacific fathers in NZ were less than in the Islands for all ethnic and acculturation groups. However, fathers who had lower Pacific cultural alignment, had no formal qualifications, and drank alcohol at least once a month, had significantly increased likelihood of being a current smoker. Strategies that maintain, enhance and celebrate fathers' Pacific cultural identity within the NZ context, alongside comprehensive tobacco control strategies, may help to further reduce smoking rates among Pacific people.

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