superu

Families and Whānau Status Report

2018

Our purpose

The purpose of the Social Policy Evaluation and Research Unit (Superu) was to increase the use of evidence by people across the social sector so that they could make better decisions – about funding, policies and services – to improve the lives of New Zealanders and New Zealand's communities, families and whānau.

Due to Superu's disestablishment on 1 July 2018, the families and whānau work programme is now managed by the Ministry of Social Development (MSD). This report was prepared by MSD under delegation from Superu.

Acknowledgements

Executive summary

The Families and Whānau Wellbeing research programme reflects both Western science and te ao Māori perspectives as we develop, interpret and contextualise our research about the wellbeing of New Zealand families and whānau.

This executive summary presents an overview of the families and whānau work programme as the platform for the 2018 Families and Whānau Status Report. We describe research findings and key themes across the family and whānau work streams, followed by implications and a summary of report chapters. For the first time we present a discussion about the commonalities arising from the families and whānau research findings and we conclude with the future direction of the families and whānau wellbeing programme.

The Families and Whānau Wellbeing work programme

When we first established the families and whānau work programme, we developed two distinct frameworks for viewing family and whānau wellbeing (see pps 23-25). The Family Wellbeing Framework identifies four core family functions, and the factors that influence and contribute to the ability of families to function well. The Whānau Rangatiratanga Framework takes a Māori world view. This framework uses tikanga Māori principles and capability dimensions to frame our approach to measures of whānau wellbeing. The family and whānau wellbeing work streams, which are grounded in separate conceptual and measurement frameworks, have three common key focus areas:

• Ongoing development of our families and whānau wellbeing frameworks. Over the past five years, the frameworks have guided our development, use and analysis of family and whānau wellbeing data. As a consequence, we will continue to develop the frameworks and further explore and update wellbeing indicators.

• Growing the evidence base. Our research will include a growing range of quantitative and qualitative evidence. As part of our ongoing wellbeing work, both work streams will focus on improving the quality and availability of wellbeing data at the family, whānau and individual level.

- Evidence to action. A key function of the research is to show how evidence can support the development of policies and programmes that focus on the wellbeing of families and whānau. Both work streams will continue to seek opportunities to inform policy, programme development and evaluation from a family and whānau wellbeing perspective.

An overarching theme emerging from ongoing development of our families and whānau work programme is: **to grow our understanding and capability in working between both Western science and te ao Māori world views**.

Family wellbeing research: key findings

Over the past year, Superu has collaborated with the Ministry of Health and Statistics New Zealand to successfully add family type classification to the individual records of the New Zealand Health Survey (NZHS) for the first time. Soon, family type will be an ongoing feature of the NZHS data, allowing for new research to be undertaken on health and family wellbeing.

Health is a key focus for improving the wellbeing of sole parent families

We took a broad analysis of the 2015/16 NZHS to examine the health outcomes, health behaviours, and access to health services for adults and children across family type. Our analysis found:

- Sole parents continue to be a group of concern with high rates of psychological distress, smoking, obesity and asthma. They also struggle with food security – 40 percent cannot always 'eat properly' and over a quarter rely on others or food banks to provide food when they don't have enough money to meet their needs.

- Poor mental health is more prevalent for families with one adult than for coupled families. We found a quarter of older people living alone and nearly a third of younger people living alone have been diagnosed with a mental health condition. Additionally, young people living alone have high rates of psychological distress, nearly double that of all adults.

- Unhealthy behaviours/risk factors are highest among sole parents, young people living alone and those not in a family nucleus (eg flatting).

Multiple disadvantage research programme

The 2017 Families and Whānau Status Report presented our (and New Zealand's) first measure of multiple disadvantage, and the findings from our analysis of the 2014 General Social Survey (GSS). This original measure uses 17 indicators from the GSS to assess whether someone is experiencing disadvantage in any of eight life domains: Income, Material Wellbeing, Employment, Education, Health, Housing, Safety and Connectedness.

This year, we report the results of two projects that build upon the foundational work presented in the 2017 Status Report. The first uses combined General Social Survey (GSS) data to examine whether there are differences in the rate and type of multiple disadvantage faced by families across region and ethnic grouping. The second leverages the recent addition of 2014 GSS data to the Integrated Data Infrastructure (IDI), a large database of linked government administrative data, to explore how government expenditure maps to individuals with different levels of disadvantage.

Prevalence of multiple disadvantage across regions differs but the types of disadvantage are broadly the same

In our analysis of multiple disadvantage across regions in New Zealand, we found:

- At a national level, the prevalence of multiple disadvantage is 16.9 percent of adults, with this figure ranging from 14.1 percent (for Wellington) to 26.2 percent (for Northland) across the regions.

- Education and Health are, generally, the two areas where disadvantage affects the highest proportion of adults in each region. The exception is Otago (Income is the largest issue followed by Education) and Auckland (Housing is the second-largest issue behind Health).

Māori and Pacific families are more likely to experience disadvantage, particularly in the area of housing

Overall, higher proportions of adults in Māori (27.7 percent) and Pacific (31.6 percent) families face multiple disadvantage compared to those in Asian (13.7 percent) and European (14.4 percent) families.

- Adults in Pacific and Māori families were most likely to be disadvantaged in Housing (47 percent and 34 percent respectively). Education was the second most common disadvantage for Māori families (33 percent) while Material Wellbeing was the second most common for Pacific families (28 percent).

- Conversely, European families were most likely to be disadvantaged in Health (26 percent) followed by Education (25 percent), and Asian families in Housing (25 percent) followed by Health (21 percent).

Average government expenditure increases with the number of disadvantages faced

Using linked GSS and IDI data, we calculated the average government expenditure for respondents to the 2014 GSS in the year after the date they took the survey.

Average government expenditure ranges from around $3,000 for those with no life domains in disadvantage to around $15,000 for those with five or more.

Superannuation payments tend to account for a greater proportion of spending for those with fewer disadvantages, while income support spending forms a greater proportion for groups with higher levels of disadvantage.

A significant minority of adults facing multiple disadvantage receive relatively low levels of government spending

We find that a significant minority of adults facing multiple disadvantage have either no spending attributable to them, or spending of $3,000 or less – $3,000 being the average level of spend for someone with no domains in disadvantage. This is concerning as it suggests agency spending may not be reaching many of those it is intended to help.

Before we make too much of this finding, however, it is important to point out that there are several other reasons why someone might appear to not have any government spending attributed to them individually in the IDI. For example, only the data of the adult respondent were linked and not that of other members of their family or household. We were unable to consider in our analysis the spending attributable to other family members.

While data issues may account for some of this low spend, it is unlikely to explain all of it. We intend to expand this work as part of our future work programme.

Having children at a younger age is associated with higher likelihood of experiencing multiple disadvantage for sole parents

Sole parents who are younger, have young children, belong to a Māori or Pacific family, are female or have more than three children, are more likely to experience multiple disadvantage.

Age of the sole parent and age of the youngest child were the characteristics associated with the greatest likelihood of facing multiple disadvantage.

Having children at a younger age is associated with higher likelihood of experiencing multiple disadvantage:

- In particular, sole parents who had their first child below the age of 20 were nearly two and a half times as likely to experience multiple disadvantage than sole parents who had their first child aged 25 to 35. The size of this effect is notable, with one in five sole parents having their children under the age of 20, and 84 percent of those parents experiencing multiple disadvantage at the time of the taking the GSS.

Low income and Housing were the most common disadvantages for sole parents with multiple disadvantage, irrespective of their age, gender, ethnicity:

- Nearly four out of five sole parents facing multiple disadvantage had a low income, and nearly two-thirds were facing problems with their housing condition and/or overcrowding.

Implications of the families research findings

This year's report presents three key pieces of work completed by the families research stream across 2017/18. Together, this research aims to improve our understanding of family wellbeing in New Zealand by highlighting areas in which access to information and data needs to be improved to allow answers to key questions about how families are faring. Below we outline what we believe to be the key policy take-aways from each of these pieces of work.

A tailored approach to supporting families is needed

Our analysis of health outcomes across family types shows that the health challenges facing families varies by family type. For example, poor mental health was found to be more prevalent for families with one adult than for coupled families. These differences are likely to have an impact on how we might effectively support families to address these issues. For example, the level of available support from friends and family is likely to look different for adults living on their own than for adults with a spouse, partner or adult child who can assist with their care.

This means that different families are likely to differ both in terms of their overall resilience, and in terms of the level of resilence they have to overcome specific challenges that arise as part of their journey. Policy makers will, therefore, need to consider not just the type of support required by families facing disadvantage, but the way in which families can most effectively receive this support, and how this should be prioritised to assist families with what they see as their biggest barriers to wellbeing.

A significant portion of individuals facing multiple disadvantage are receiving limited government spending

Our exploratory analysis of how well government spending matches need, particularly for those with multiple disadvantage, highlights that further thinking is needed about how to prioritise and design support that is responsive to the most vulnerable families. Results from this research indicates that government spending on support for individuals appears to scale according to their level of need, such that individuals facing disadvantage in more life domains receive higher average levels of government spend than those with few.

However, the research also identified a significant proportion of individuals who are facing multiple disadvantage but appear to be receiving very limited spend, or in some cases, no recorded spend. While there are a number of reasons why government spending might not be captured for the individuals in this situation, it is unlikely that data issues explain the entirety of those with disadvantage and low spend.

The relative lack of support could be caused by many different factors, including issues with the way in which services are attempting to engage with families, or issues with the criteria that need to be met for services to be provided to families. Whatever the case, our results indicate the need for further thinking and research into how social services can more effectively ensure that the required type and level of support is reaching families who require assistance to overcome the unique challenges that they face.

Interventions responsive to family type could be more accessible

The finding that sole parents are faring worse than other New Zealand family types speaks to the need for an awareness of the impact that environment and family structure have on the challenges that families face and, therefore, the type and level of support they need. However, as mentioned above, consideration must be given to the most effective method for ensuring this support reaches the most vulnerable families. Although interventions that universally target disadvantage in income and housing are likely to result in positive outcomes for most sole parent families, careful consideration will need to be made as to the most appropriate way of providing this support so that it is accessible to a diverse range of families.

Whānau wellbeing: key themes

A range of drivers continues to shape the measurement of whānau wellbeing

Significant political, developmental, economic, cultural, social and methodological drivers have shaped Māori population scholarship and measurement, and continue to do so. Consequently, the development of whānau wellbeing measures is more than an exercise in research and scholarship. It is a lived reality for whānau who need to be assured that:

- data and information collected about whānau is relevant to and meets the needs of priorities identified by whānau, hapū, iwi and Māori

- whānau data and information is collected, interpreted, used and protected in the interests of whānau and whānau development

- new data and information about whānau wellbeing will be used to better inform policies and programmes that impact on whānau.

These issues highlight why it is so important that te ao Māori measurement frameworks continue to frame a strategic and culturally authentic approach to measures in whānau wellbeing.

Research, policies and programmes that impact on Māori have a dual purpose

As an Indigenous Peoples and Treaty partner, Māori have travelled in very different cultural, social, economic and environmental directions to that of non-Māori. They have come from near annihilation as a population at the beginning of the twentieth century, coped with the erosion of Māori culture, identity, language and land and been forced to assimilate with Pākehā society, often through housing policies. Whānau Māori today are grounded in this history. Therefore, research, policies and programmes aimed at the wellbeing of Māori need to be based on two distinct pathways:

- to support Māori wellbeing research and development priorities

- to enable both Treaty partners to determine how well Māori are faring, compared with Māori over time and with New Zealand as a whole.

Both types are needed. This is an 'and' plus 'and' research and evidence story.

The 'kāinga home space' is a key enabler of whānau wellbeing

Housing for Māori is much more than the physical dwelling. Applying a tikanga Māori lens to policy and research on housing opens further opportunities for growing and designing communities that nurture whānau. This in turn creates new definitions and measures of housing quality and adequacy to support whānau wellbeing.

Māori housing is not an 'add on' to mainstream housing policies

Traditionally, and today, in the places where whānau kept alive the ancestral fires of occupation that signify hapū and tribal territories, the existence of kāinga is inextricably interwoven with whakapapa, identity and land.

How whānau conceive of 'home' is so fundamental to Māori wellbeing and development that whānau-centred housing research, policies and programmes need to be central to all social policies that focus on Māori health and wellbeing. In order to do so effectively, researchers and policy makers need to fully appreciate the diverse pathways that whānau have travelled since the signing of the Treaty of Waitangi.

Māori housing is a complex interplay of historic and existing factors

The research explores associations between socio-demographic variables, housing quality, and self-rated individual and whānau wellbeing. Housing issues are commonplace, with nearly half reporting two or more problems with housing quality.

After controlling for demographic characteristics and area level deprivation, self-assessed income adequacy is the factor most closely connected to having a major housing problem. All things being equal, those with 'just enough' income were 9 percent more likely than those with 'enough' income to have two or more housing problems, while those with 'not enough' income were 14 percent more likely to have two or more housing problems (see Appendix 5 Table 33 for average marginal effects).

A strong association between housing quality (having a major housing issue) and physical health was present for Māori, over and above any other socio-demographic variable (including age, area level deprivation and income adequacy).

This research needs to be set against the circumstances of whānau Māori, who are disproportionately affected by food poverty, fuel poverty and housing poverty. These multiple and intersecting issues, many of which are influenced by underlying structural determinants, constrain housing choices and the capacity of Māori to freely exercise whānau rangatiratanga, to the detriment of individual and whānau wellbeing.

The Whānau Rangatiratanga Framework highlights whānau narratives as evidence

The application of the Whānau Rangatiratanga Framework to the E Tū Whānau initiative highlights the significance of whānau narratives and voice as whānau contextualise their world. In this they use familiar concepts and processes to describe and define their own day-to-day experiences.

The Whānau Rangatiratanga Framework provides key insights for an ongoing evaluation of E Tū Whānau. When the whānau narratives were directly mapped to the Whānau Rangatiratanga Framework, they populated the framework in ways that were not evident from mapping only the E Tū Whānau outcomes. In doing so, we were able to develop potential indicator areas directly from the whānau narratives. This means that the whānau narratives are directly informing any evaluation of the E Tū Whānau programme.

Whānau wellbeing: contextual, statistical and experiential evidence

This year, we present three wellbeing sections in our Whānau chapter. The first two explore housing from a Māori perspective through two quite distinct evidence bases. The first chapter draws on **contextual evidence** to provide an overview of the housing history and circumstances for whānau. The second section provides **statistical evidence** about Māori views of their housing circumstances, and its relevance to whānau wellbeing.

The third section draws on **experiential evidence** presented in the formative evaluation of E Tū Whānau. This section maps the E Tū Whānau outcomes to the Whānau Rangatiratanga Framework to better explore the interplay between whānau capabilities and outcomes for those whānau engaged with E Tū Whānau.

Ka mua ka muri – an overview of Māori housing and wellbeing

An overview of Māori housing is presented against a backdrop of the significant social, cultural, economic and political changes in New Zealand society. This section in the whānau stream presents the contextual evidence against which research findings are interpreted.

Applying this understanding to Māori housing requires a reframing of 'Māori housing' policies to incorporate a Māori world view and Māori understandings of whānau wellbeing and of kāinga in today's world. In order to do so effectively, researchers and policy makers need to fully appreciate the diverse pathways that whānau have travelled since the signing of the Treaty of Waitangi.

Housing quality, health and whānau wellbeing

This research evidence is the first nationally representative survey of housing quality by Māori. As a consequence it presents a platform for ongoing research in this area.

Over two-thirds (68 percent) reported at least one housing problem of any magnitude and nearly half reported two or more housing quality problems (47 percent). In terms of serious housing issues, more than one in four Māori adults live with at least one major housing quality problem (28 percent), and nearly one in six (14 percent) live with at least two major housing problems. As the authors identify, there is a relationship between whānau wellbeing and housing quality. Almost 40 percent of whānau were living in houses that were hard to heat. These findings are part of the wider context for individuals and whānau with particular experiences of material deprivation and wellbeing outcomes. Further housing research priorities may include:

- Exploring housing quality and cultural factors. For example, the extent and nature of housing problems affecting Māori who are haukāinga (those living within 30 minutes of their ancestral marae) versus those living more distant from their marae, and whether housing quality affects levels of manaakitanga or marae engagement.

- Expanding the definitions and measures of housing quality to incorporate measures animated by Māori cultural values of what 'tika homes' (valid or appropriate) might mean. This would also include development of culturally informed measures of housing adequacy that account for housing characteristics that support whānau wellbeing and whānau function.

- Developing indicators of cultural access (eg distance to ancestral homelands, distance to Māori medium education, share of the area population who are Māori, share of population who speak te reo Māori, etc). Further indicators could incorporate geographic threats to health and wellbeing that may be disproportionately experienced by Māori (eg noise and air pollution; lack of access to green spaces, public transport, and hospitals; proximity to liquor stores and fast food retailers).

- Focusing on tamariki to understand the impact of housing on Whānau Ora given the absence of children (those aged under 15 years) in the Te Kupenga dataset, and the well-established links between housing quality and children's health outcomes.

Use of the Whānau Rangatiratanga Framework to inform an evaluation of E Tū Whānau

This section explores how the Whānau Rangatiratanga Framework can be used to evaluate the E Tū Whānau initiative. We wanted to understand the utility of the framework in evaluating a broader suite of Ministry of Social Development Kaupapa Māori programmes. Our objective was to determine how the Whānau Rangatiratanga Framework, which is a capability-based measurement framework sourced in te ao Māori, can support and strengthen our understanding of E Tū Whānau outcomes and whānau voice.

The Whānau Rangatiratanga Framework provides key insights for an ongoing evaluation of E Tū Whānau. When the whānau narratives were directly mapped to the Whānau Rangatiratanga Framework, they populated the framework in ways that were not evident from mapping only the E Tū Whānau outcomes. In doing so, we were able to develop potential indicator areas directly from the whānau narratives. This means that the whānau narratives are directly informing any evaluation of the E Tū Whānau programme.

Strengthening the evidence base through looking across family and whānau research streams

The research model we adopted to frame the development of this work programme was *He Awa Whiria – Braided Rivers*.

It is important to recognise at the outset that Māori are represented in both the whānau and family wellbeing work streams. In the whānau work stream, our research, analysis and overall interpretation of whānau data is framed by the Whānau Rangatiratanga Framework which is grounded within te ao Māori. As such, it speaks to Māori cultural imperatives and understandings about how whānau are to be defined, what is wellbeing and how wellbeing should be measured.

The families work stream is informed by the Family Wellbeing Framework, which is grounded in Western science and research. This work stream reports on the wellbeing of Māori families alongside all New Zealand families and ethnicities, to describe the overall picture of the wellbeing of New Zealand families.

While we can learn about Māori family wellbeing by looking across the families in the families stream, to fully understand whānau wellbeing as defined by Māori themselves we need to turn to the whānau work stream. By looking across both streams we gain a fuller picture of family and whānau wellbeing.

Our previous research: family relationships, whanaungatanga and connectedness

Our previous research identifies complementary findings that contribute towards wellbeing. For example, our 2016 and 2017 reports emphasise the importance of relationships and connections to both families and whānau. In 2016, the families research showed that while Māori and Pacific families tended to report lower wellbeing scores than those for European and Asian families, they tended to have higher wellbeing scores for indicators in the 'Relationships and connections' theme.

In 2017, the whānau research drew on Te Kupenga to explore subjective whānau wellbeing. A key finding was that the quality of whānau relationships is extremely important for whānau to thrive, and that Māori who feel that their whānau get along very well are much more likely to rate their whānau wellbeing very positively.

Complementary areas of research in this report

In this report three areas of commonality across the work streams emerge:

1. Multiple disadvantage domains and wellbeing – housing

   The families work stream chapter on multiple disadvantage found that Māori families are facing particular challenges with housing conditions. Above all else, this was the most prevalent domain of disadvantage for Māori families in New Zealand. Housing conditions identified were a house that was cold, in need of immediate and extensive repairs, and had mould. We note similar findings reported by Māori themselves in the Te Kupenga survey in the whānau stream of work. In the whānau stream the three individual housing issues most strongly correlated with income adequacy were a house that was hard to heat, in need of repairs and damp. The whānau stream further explored the link between these descriptive findings about housing and whānau wellbeing. Māori respondents with two or more major housing issues were significantly less likely than those with only one major issue to report a high level of whānau wellbeing.

2. Sole parent families

   We also see common research findings in our research into sole parent families. The families stream found that over half (55 percent) of Māori sole parent families faced multiple disadvantage. Income and housing were two of the most common types of disadvantage faced. Research from the whānau stream strengthened this finding. Our analysis of Te Kupenga showed that, among sole parent Māori households, the two major problems were having a house that was hard to heat (24 percent) and having a house that was damp (17 percent). Previous analyses of Te Kupenga (Superu 2015) have also highlighted that Māori living in sole parent households with one or more children under 18 years have the lowest home ownership rates amongst all whānau types experience high levels of economic insecurity, with only 36 percent thinking they have enough income to meet their everyday needs.

   In order to fully understand the significance of the above findings for whānau, they need to be set against the significant background of historic economic and social inequalities with entrenched Māori housing poverty and intergenerational disadvantage. When viewed through this lens, it is not surprising that Māori families are most likely to experience significant and multiple disadvantage. It is only by drawing on the contextual evidence from the whānau stream that we can explain key socio-political and economic drivers for the research findings from both the family and whānau streams.

3. Both work streams seek better research and data about family and whānau wellbeing

   Our research programme seeks to extend the wellbeing research and the data available to support a stronger data narrative around family and whānau wellbeing. Our work using linked survey and administrative data shows the power of linked data and we support further development of these data resources to enable future family and whānau wellbeing research.

The families work stream demonstrated the need for more and better quality data on families in New Zealand. There have been recent improvements in wellbeing data by family type. However, there is still much work to do to adequately capture the diverse structure of families and the wide range of factors that contribute to overall family wellbeing. This includes the development of longitudinal data and a more comprehensive source of family wellbeing information in official surveys and administrative data.

New data developments are not taking place on an even playing field. The whānau work stream has identified that currently Te Kupenga is the only nationally representative dataset that provides information on whānau wellbeing. Like the family stream, the whānau stream has a need for nationally representative longitudinal data on whānau wellbeing. However, it is particularly important that we expand the somewhat narrow interpretation of housing quality. We need to develop culturally informed measures of housing adequacy that account for housing characteristics that support whānau wellbeing, for example, including indicators of cultural access to reflect key aspects of housing that whānau Māori consider important to their wellbeing.

In order for the official statistics system to generate more relevant whānau wellbeing data from within the IDI, te ao Māori frameworks could well be employed to better frame our thinking about what data could be added to it. The aim would be to meet the growing demand for new and better whānau wellbeing research. Finally, both work streams are preparing for new data releases – the census, Te Kupenga and GSS. These will be analysed in 2019 to contribute to the 2020 Families and Whānau Status Report.

Future directions: families and whānau work programme

On 1 November 2017 the Families and Whānau Wellbeing work programme was delegated to the Ministry of Social Development (MSD) by Superu and is MSD's responsibility from 1 July 2018 with the disestablishment of Superu. The transfer of the work programme creates opportunities for both work streams to further engage with core policies and programmes that impact on families and whānau.

A key function of the research programme is to show how evidence can support the development of policies and programmes that focus on the wellbeing of families and whānau. Both work streams will continue to seek opportunities to inform policy and programme development and evaluation from a family and whānau wellbeing perspective. In doing so, MSD will continue to develop our wellbeing frameworks to strengthen their applicability and utility, and extend our existing conceptual and measurement dimensions to further our family and whānau wellbeing research.

MSD hopes to explore the following areas in the 2019 report:

1. Understanding transitions between family types

   The families work stream will focus on understanding the transitions between family types across the life course, and the impact that associated changes in life circumstances and challenges have on family wellbeing. This will involve developing a greater understanding of how the needs and resilience of families change from adolescence, to couples without children, to couples or sole parents with children, and after children have reached adulthood.

2. Family wellbeing and the life course

   MSD will also assess how changes in government policies and interventions impact on the past, current and future wellbeing of families at different points in their life course. This research will guide intergenerational and long-term thinking about how policies are developed and implemented, and the likely impact that these policies will have on the wellbeing of different types of families.

3. Expanding our previous work

   An additional focus for the research programme will be on expanding the previous work we completed on social relationships and connections, and their relationship to family wellbeing. We have identified a gap in knowledge and research focusing on this pivotal facet of family wellbeing and MSD hopes to extend understanding of this area and identify promising directions for more detailed future research. MSD hopes to present this research in the 2019 Families and Whānau Status Report.

4. Te Kupenga and sustainability of te ao Māori

   In 2019 the whānau work stream will focus on Te Kupenga and the Census. The Whānau Rangatiratanga Framework will frame MSD's focus on whānau wellbeing and sustainability of te ao Māori, particularly the relationship between te reo Māori and whānau wellbeing.

5. Applying the Whānau Rangatiratanga Framework to programme evaluation

   In this report, we learned how the framework can highlight the significance of the E Tū Whānau narratives to inform an evaluation of this initiative. MSD will continue to draw on the insights gained through this process in the ongoing evaluation of the E Tū Whānau initiative.

6. A focus on intersectoral engagement

   At Te Ritorito 2017, the two-day forum on whānau, hapū and iwi wellbeing, we identified a range of complementary te ao Māori measurement frameworks that share common principles, definitions and overall directions to support whānau, hapū, iwi and Māori wellbeing. MSD is seeking to further engage with organisations working in this area as well as further collaborate with Māori wellbeing researchers and research institutions to gain a strategic overview as to how these frameworks can work together to strengthen whānau wellbeing. MSD will also work with Te Puni Kōkiri in preparation for Te Ritorito 2019, to support the development and implementation of whānau-centred research, policies and programmes.

In drawing on He Awa Whiria as a metaphor for our families and whānau research, we grow our understanding that different world views do not have to exist in a state of tension. Ambiguity can be a productive source of innovation and negotiation between two different perspectives. As noted by the Bridging Cultural Perspectives Steering Group (Arago-Kemp and Hong, 2018):

> *... both streams start at the same place and run beside each other in equal strength. They come together on the riverbed and then they move away from one another. Each stream spends more time apart than together. In the model, when they do converge, the space created is one of learning, not assimilating. This project aims to increase the integrity of both streams in order to represent wellbeing for all people.*

References

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Mihi whakatau

E ngā mana, e ngā reo, e ngā karangatanga maha tēnā koutou katoa. Koutou kua whetūrangitia, haere atu rā, haere atu rā, haere atu rā ki te kāinga tūturu mō tāua te tangata. Tātou te kanohi ora, tēnā koutou, tēnā koutou, tēnā koutou katoa. Anei te Pūrongo 'Families and Whānau Status Report' hei paihere i ō tātou whānau huri noa i te motu, hei kōrero whakahirahira mō te iwi whānui. Nō reira tēnā tātou katoa.

Foreword

This is the sixth in a series of reports by Superu in its mandate under the Families Commission Act to report annually about family and whānau in New Zealand.

Since the passing of the Families Commission Act 15 years ago we have seen a significant shift in the involvement of family and whānau in public policy and its execution. Whānau Ora and Oranga Tamariki have placed more emphasis on the contribution that adequately-supported family and whānau make, while initiatives in family violence and mental health that protect family life have come into prominence. It's been a long time since 1840, but there are areas of public policy that now recognise that whānau are different from the nuclear family that has long been the target of policy.

What makes up a family could never be determined in crude tests of assessing whether someone is living 'in the nature of marriage', but the living arrangements that nurture children continue to grow in complexity. Without timely and regular appraisal of what families and whānau are like, then public officials, Courts, teachers, health providers and community organisations will operate with more confidence than they should about the difficult choices that they face in working with people. Ironically, much of the value of the families and whānau reports is the questions that they raise rather than the answers that they give.

We now know more about the significance of the impacts on children of violence in families and connections with family members who are incarcerated, and the disadvantages faced by those who lack the economic resources of the average family. We also have a window on the strengths of family and whānau that underpin resourcefulness, and where that can be fractured.

Most importantly, these publications have been written to be accessible to a very wide range of people, so that the basic facts, insights and findings that are distilled in them can readily connect a wide range of readers to matters that they face frequently, perhaps daily.

Some findings in this report and their policy implications

1 The distinctive characteristics of Māori housing that relate to the nature of whānau and kāinga space are usually ignored through the lack of recognition of the differences in common ownership forms, community connectedness and relationships, as well as the more obvious and longstanding different needs of size and affordability.

2 Support for the most vulnerable families must consider how they engage with the services and support that they are entitled to, and that monitoring the effects of service design, rationing and screening processes needs to be an integral part of service delivery.

3 That whānau are not only a target of service delivery, but in their own right also deliver services. It is important that targeting approaches reinforce the place of whānau in providing services rather than conflicts with this role.

4 While we have come a long way in identifying the nature and function of whānau, we have yet to embed this knowledge in the processes of agencies that are involved with whānau.

This report has been prepared for Superu by staff at the Ministry of Social Development.

I am delighted that this work has respected the independent mandate of Superu, and that the innovative analysis and insights make this a fine report to be the last one that Superu can be responsible for under its mandate from the Families Commission Act 2003.

Ngā mihi nui ki a koutou katoa.

Len Cook

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superu

01

Introduction

On 1 November 2017 the Families and Whānau Wellbeing research programme was delegated to the Ministry of Social Development. This includes the production of the Families and Whānau Status Report. The transfer of the work programme to the Ministry of Social Development presents a unique opportunity to work with a core government agency to further this foundational families and whānau research programme. For example, in this report, we have been able to explore how the Whānau Rangatiratanga Framework can inform an evaluation of E Tū Whānau, a family violence Ministry of Social Development service. This yields unique insights.

In the ongoing development of this work programme, the Ministry of Social Development will continue to draw on the rich legacy of research and evidence that has established the seminal platform upon which our families and whānau wellbeing research stands today.

1.1 Context of this report

Families and whānau have been both instruments as well as targets of public policy. As noted by Families Commissioner Len Cook (2013), the traditional public policy focus has largely been on segments of the family and less on the family or whānau as a whole. There are many social issues and priorities that impact on families and whānau. However, the evidence base to inform decision-making about families and whānau as a whole has been lacking.

It has been through the development of Whānau Ora that our awareness has grown about the type of evidence that such significant policy shifts may require. The Families and Whānau Wellbeing research programme seeks to support the growing body of research and evidence underway in the state sector. The aim of this is to inform decision-making around the wellbeing of families and whānau.

This report is the sixth in a series of Families and Whānau Status Reports. These provide an annual account of key research from our Families and Whānau Wellbeing work programme.

Reflecting Western science and te ao Māori perspectives

When we established the work programme, we developed a family work stream and a whānau work stream to reflect the two quite different world views influencing the research and development of family and whānau wellbeing in Aotearoa New Zealand. These are that of Western science, and that of te ao Māori (Arago-Kemp and Hong, 2018).

The research model that we adopted for this work was *He Awa Whiria – Braided Rivers*.[1] This model frames the family and whānau wellbeing work streams. The streams are grounded in two different wellbeing frameworks – the Family Wellbeing Framework and the Whānau Rangatiratanga Framework.

As noted by Arago-Kemp and Hong (2018)

> *The frameworks draw on two separate streams of knowledge about families and whānau … For instance, te reo Māori is highly valued amongst whānau and can be described as an integral part of whānau wellbeing. The He Awa Whiria – Braided Rivers model assists in the drawing out of this information by enabling us to delve more intimately into whānau wellbeing using a te ao Māori lens (Arago-Kemp and Hong, 2018).*

This model acknowledges the two distinctive approaches. It recognises that family and whānau are not interchangeable terms and mean very different things. Adopting the two frameworks strengthens our understanding of wellbeing across all families and whānau in New Zealand.

Family Wellbeing Framework

The Family Wellbeing Framework shown in Figure 1 provides a comprehensive structure for understanding family wellbeing. It identifies four core family functions and six factors that influence the ability of families to fulfil these core functions. These core functions and factors contribute to family wellbeing across the domains. There is a complex interplay between the functions, factors and domains.

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1   *He Awa Whiria* was developed by Angus MacFarlane. Arago-Kemp and Hong note that the model allows for different cultural knowledge systems to function separately or together. Each 'stream' retains its on authenticity, while also having the potential to create new knowledge that can be used to advance understanding in two worlds.

Figure 1 _ The Family Wellbeing Framework

Family Wellbeing

Family wellbeing domains: Physical   Material   Emotional   Social

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Family functions

To care, nurture and support:
Families provide day-to-day care, nurturance and support to other family members, including children and family members with illnesses or disabilities and those needing support because of their age.

To manage resources:
Families draw on shared resources, including time, money and skills to solve problems and overcome setbacks (which provides material and financial support beyond what they can access as individuals).

To provide socialisation and guidance:
Families provide socialisation of family members and guidance on commonly held social norms and values (such as education, good health and positive connections).

To provide identity and sense of belonging:
Families promote a sense of identity, trust, belonging and security including through expressions of love, affection, happiness and respect and building social cohesion.

Influential and contributing factors

Health
Family members enjoy optimal physical and mental health.

Relationships and connections
Family members enjoy constructive relationships within their family and with wider family members, and have positive connections with the community and outside the family.

Economic security and housing
Family members live in economic security and independence.

Safety and environment
Family members are physically safe and live in a positive environment.

Skills, learning and employment
Family members have the knowledge and skills to participate fully in society.

Identity and sense of belonging
Family members have opportunities to learn values, languages and ideas and engage in traditions important to the family.

Family structure and transitions (eg, relationships, health, employment)

Contextual setting: Economic   Social   Cultural   Environmental   Political   Demographic

Whānau Rangatiratanga Conceptual Framework

The Whānau Rangatiratanga Framework provides a platform and a guide – from within a Māori world view – for collecting, analysing and using data about whānau wellbeing.[2]

The conceptual framework shown in Figure 2 shows that analysis of data about whānau wellbeing needs to be framed from within te ao Māori. The framework presents key tikanga Māori principles and capability dimensions. Collectively, the principles and capabilities frame our approach to the measures of whānau wellbeing.

Figure 2 _ The Whānau Rangatiratanga Framework

Whānau Rangatiratanga principles

Whakapapa
Descent, kinship, the essence of whānau, hapū and iwi.

Manaakitanga
Duties and expectations of care and reciprocity (acknowledgement of the mana of others, reciprocal obligations and responsibilities to other whānau and to those not connected by whakapapa).

Capability dimensions

Whānau wellbeing measures and indicators

Sustainability of Te Ao Māori

Human resource potential

Whānau

Wairuatanga
A spiritual embodiment (including religion, spiritual wellbeing, capacity for faith and wider communion, relationship with environment and ancestors, and the state of connectedness with the wider world).

Social capability

Economic

Rangatiratanga
Governance, leadership and the traditional nature of Māori society (including governance, leadership, authority and control, and whānau empowerment).

Kotahitanga
Collective unity (including unity as Māori, as whānau, and supporting whanaungatanga, leadership and resilience).

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2   This development is more fully described in the 2016 Research Summary: *The Whānau Rangatiratanga Frameworks: Approaching whānau wellbeing from within Te Ao Māori.*

The Whānau Rangatiratanga Measurement Framework

This framework was developed to frame our approach to Māori-specific domains, indicators and measures. It provides a tool with which to guide the identification of measures of whānau wellbeing and the systematic collection of data about whānau wellbeing over time.

The whānau rangatiratanga principles and the capability dimensions of the conceptual framework are portrayed as a dual-axis measurement framework in Figure 3 below. The framework has been further refined through developing an initial set of aspirational outcome statements which will evolve as this work progresses. The importance of this framework is that the Whānau Rangatiratanga principles provide the overall context for interpreting and understanding data about whānau wellbeing.

Figure 3 _ The Whānau Rangatiratanga Measurement Framework

Whānau Rangatiratanga principles					
Capability dimensions	**Whakapapa** Thriving relationships	**Manaakitanga** Reciprocity & support	**Rangatiratanga** Leadership & participation	**Kotahitanga** Collective unity	**Wairuatanga** Spiritual & cultural strength (Distinctive Identity)
Sustainability of Te Ao Māori (language, identity, culture, institutions)	Whānau have a positive relationship with Te Ao Māori	Whānau are able to foster and develop their connections to Te Ao Māori	Whānau exercise leadership in Te Ao Māori	Whānau are able to meaningfully engage with Māori culture and Māori institutions	Whānau can access and express their culture and identity in ways which are meaningful to them
Social capability (trust, volunteering, connectedness)	Whānau are connected and safe	Whānau care for themselves and for others	Whānau exercise leadership in Te Ao Whānui	Whānau are able to access and trust institutions	Whānau are able to express and embrace spiritually
Human resource potential (health, education, quality of life)	Whānau wellbeing is enhanced	Whānau support each other to succeed	Whānau are able to live well	Whānau are able to achieve their aspirational goals	Whānau are resilient and able to overcome adversity
Economic (employment, wealth, housing)	Whānau can manage and leverage collective resources	Whānau are able to support each other financially and to accumulate financial reserves	Whānau enjoy economic security	Whānau can navigate barriers to success	Whānau can access their material and non-material resources

1.2_ Our ongoing work programme

The Families and Whānau research programme has three key focus areas:

- framework development
- growing our research and evidence base
- application of the frameworks and research during policy and programme implementation.

Further developing our family and whānau wellbeing frameworks

The families and whānau frameworks are iterative and the work is ongoing. Future development of the Family Wellbeing Framework will focus on updating the indicators used to monitor family wellbeing. This framework can help broader discussions about wellbeing which are already underway in the social sector.

Having applied the Whānau Rangatiratanga Frameworks to both research and data, we are now better placed to review the capabilities and principles while also exploring further whānau wellbeing indicators. This includes working with other Māori measurement frameworks within the state sector in order to grow a more comprehensive understanding about measuring Māori and whānau wellbeing.

Growing the evidence base

The transfer of Superu to the Ministry of Social Development (MSD) provides an opportunity to broaden the whānau wellbeing evidence base.

From 2018, the Families work stream will focus on improving the quality and availability of wellbeing data at the individual and family level. This includes both administrative and survey data, particularly where these two are linked. We believe this linked data offers great promise to family wellbeing researchers. But is still some way from reaching its full potential.

MSD plans to begin research in the Families work stream to investigate several areas of interest. These are:

- social connectedness and its role in wellbeing
- the effect of multiple disadvantage on subjective wellbeing
- how a life course approach can help consider policy responses to large-scale changes in family formation and composition as our population ages.

MSD will continue to present quantitative analyses from Te Kupenga.[3] At the same time, they will look for further opportunities to apply insights from the whānau wellbeing frameworks and our wellbeing research to policy and programme

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3   'Te Kupenga gives a picture of the social, cultural, and economic well-being of Māori in New Zealand, including information from a Māori cultural perspective.' Statistics New Zealand, accessed 25 May 2018.

development. Furthermore, as earlier reports have highlighted, the applicability of existing data to measures of whānau wellbeing continues to be a challenge across the social sector. Therefore, MSD looks to engage with agencies that have developed Māori measurement frameworks to identify key priorities in the development of whānau wellbeing data and measures.

From evidence to action

The first five years of the Families and Whānau Wellbeing research programme developed a growing evidence base about families and whānau. However, a key function of the research is to show how evidence can support the development of policies and programmes that focus on the wellbeing of families and whānau.

This is the first time we have applied the Whānau Rangatiratanga Framework to explore how it could inform an evaluation of an existing programme. The insights gained through the work with E Tū Whānau will continue to inform the ongoing evaluation over the coming year. We will also draw on these findings to explore further application of the Whānau Rangatiratanga Framework to policies and programmes.

1.3_ Key advances in our work programme presented in this report

Family wellbeing

We analysed the New Zealand Health Survey (NZHS) data to explore varying health challenges and outcomes across family type, and key areas of policy focus that rise from the results. This is the first time these data have been explored by family type and it will become an ongoing feature of the Health Survey in the future.

We extended Superu's multiple disadvantage work with a review of how multiple disadvantage differed across the regions and with ethnic grouping. We also used newly released General Social Survey (GSS) data that has been linked to the Integrated Data Infrastructure (IDI) to explore how government spending matches to need, particularly for those with multiple disadvantage.

We did a deep dive[4] looking at different groups of sole parents. The goal was to understand which groups are more or less likely to experience multiple disadvantage and the types of disadvantage they face.

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4   A deep dive is a comprehensive review of a topic.

Whānau wellbeing

Drawing on contextual evidence, we present an overview of Māori housing and wellbeing. This chapter drew on historical and contemporary events to advocate for a re-framing of Māori housing policies. They should be much more inclusive of the overall concept of kāinga. This overview is a background to the following chapter.

We identified the associations between self-assessed Māori housing quality and whānau wellbeing for the first time. Pervasive housing quality issues were presented alongside associations between perceived housing quality and subjective individual and whānau wellbeing. Key factors likely to increase the risk of housing quality issues are also discussed. This work provides a platform for a more in-depth study once new data from Census 2018 and Te Kupenga are available. The conclusions arising from this chapter also include broadening the concept of housing to include culturally informed definitions and measures.

We also explored, for the first time, how the Whānau Rangatiratanga Framework can frame qualitative Kaupapa Māori narratives to inform programme evaluation. In mapping the E Tū Whānau outcomes to the Whānau Rangatiratanga Framework we identified the importance of capabilities in the achievement of E Tū Whānau outcomes. This process enabled us to develop potential indicator areas sourced directly from within the whānau narratives.

1.4_ Structure of the report

This year's report presents both a families section and a whānau section to reflect our dual work streams. The family work stream presents three chapters that investigate new areas of family wellbeing. In this way we increase our understanding of disadvantage and how it may impact on different family types, for example sole parents.

The whānau wellbeing work stream also presents three chapters. These draw from contextual, statistical and experiential evidence sources to provide a more holistic picture of whānau wellbeing than previously presented in our reports.

The report concludes with a high-level discussion around key themes from both work streams. This includes an overview of both work streams, and a discussion of commonalities arising from both the families and whānau research.

References

Arago-Kemp, V. and Hong, B (2018). *Bridging Cultural Perspectives*, Superu. Wellington.

Baker, K. (2016) *The Whānau Rangatiratanga Frameworks: Approaching whānau wellbeing from within Te Ao Māori*. Superu Wellington.

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02

Families

2.1_ Introduction to the Families research

Families are the cornerstone of individual development and wellbeing, serving many functions to assist people through life. As the demographic makeup of New Zealand changes and our population increases, family becomes more important in providing care and support to those family members who are less able to tackle life challenges alone.

New Zealand's increasing diversity means it also becomes more important that our view of family and its relationship to wellbeing remains flexible enough to capture the variety of forms that families might take. These changes to the picture of New Zealand society mean that we need to understand the function, structure and wellbeing of New Zealand families more than ever before.

Setting a foundation for measuring family wellbeing

Over the five previous Families and Whānau Status Reports, the Families research stream has focused on conducting the foundational work required to understand and assess the function, structure and wellbeing of New Zealand families. In the 2014 Families and Whānau Status Report, we introduced a conceptual framework for family wellbeing that identified the four core family functions: care, nurture and support; managing resources; providing socialisation and guidance; and providing identity and sense of belonging. These core family functions were then used to identify the six key factor areas that affect a family's capacity to function well: health; relationships and connections; economic security and housing; safety and environment; skills, learning and employment; and, identity and sense of belonging.

The development of this family wellbeing framework was instrumental in paving the way for the measurement of family wellbeing. In both the 2015 and 2016 Families and Whānau Status Reports, a picture of how a range of New Zealand families were faring was presented using wellbeing indicators that had been developed from the conceptual groundwork laid by the family wellbeing framework. This research highlighted the diversity of New Zealand families, the complex environments in which they live, and the unique challenges that different families are navigating.

Expanding our understanding of family wellbeing

The initial assessment of the wellbeing of New Zealand families highlighted the significant proportion who were experiencing disadvantage in areas that are important for wellbeing.

We know that facing many different challenges at once has large implications for family wellbeing; however, it was not clear from the initial research whether a small number of families were facing a large number of disadvantages, or whether a large number of families were facing individual disadvantages.

The need for a better understanding of the co-incidence of disadvantage and its impact on wellbeing led to the development of our multiple disadvantage measure, introduced in the 2017 Families and Whānau Status Report.

Because of the nature of the data that is currently available, this measure focuses more on identifying those families who are facing challenges in a number of areas and who are therefore likely to be experiencing negative impacts on overall family wellbeing. That said, being able to identify families facing higher levels of disadvantage than others is necessary to help understand how some families are able to remain resilient in the face of numerous challenges.

As an acknowledgement of the importance of this work in understanding family wellbeing, the Treasury intends to use this multiple disadvantage measure and related research to assess the potential impact and trade-offs of Budget decisions on the wellbeing of New Zealand families.

The current research

The previous research has set the foundation for further, more targeted research that seeks to fill knowledge gaps and expand our understanding of family wellbeing. This research is based on three key goals for the research programme: guiding new thinking; filling knowledge gaps; and highlighting areas for further development. By producing research that fulfills these goals we hope to develop more detailed work that comprehensively explores the complex and multi-dimensional nature of family wellbeing.

The research presented in this report extends that presented in previous reports by focusing on specific areas of family wellbeing, and on the wellbeing of specific types of families.

Section 2.2 presents findings on the health of both adults and children in New Zealand from different family types by applying Superu's family typology to data obtained from the New Zealand Health Survey for the first time.

Section 2.3 assesses the government's financial support of disadvantaged families, including an exploration of the opportunities and limitations of existing information, and continues our research into the co-incidence of disadvantage for New Zealand families by looking at rates of multiple disadvantage by ethnicity and region.

Finally, Section 2.4 looks more closely at the wellbeing of sole parent families in New Zealand by assessing differences in the level and type of multiple disadvantage faced by different types of sole parents and their children.

Together, this research aims to continue to support the broader goals of the family research stream by investigating new areas of family wellbeing (for example, the health of families); furthering our understanding of how New Zealand families are faring (for example, the level and types of disadvantage faced by sole parent families); and highlighting areas in which data and information need to be further developed (for example, how government spending correlates with the identified level of need for families).

The key themes and knowledge from this research are discussed following the presentation of findings from each of the research projects.

2.2 Health and New Zealand Families – a first look at family level data from the New Zealand Health Survey

Our health, and that of our family members, is one of the aspects of life people cherish most. Health status has consistently been found to have one of the largest impacts on how people rate the quality of their lives.[5] This is perhaps unsurprising considering that in addition to its direct impact on wellbeing, illness can affect our ability to work and earn a living, to socialise with others, or to attend school and higher education.

Within a family, these impacts go beyond the member with the illness, since the family group has to manage not only the financial costs and logistics of health care, but also the emotional stress an illness can bring, particularly in the case of the unexpected onset of chronic conditions or disability.

Given its importance to individual and family wellbeing, health is included as a domain in Superu's Family Wellbeing Framework.[6] The Health domain in this framework relies on indicators obtained from three Stats NZ surveys[7] that include measures of: the self-assessed physical and mental health of adults living within different types of families, disability status, and smoking.

While these indicators give us some idea of how families are faring in the area of health, they are unable to shed any light on what factors may be causing poor health outcomes. For example, there is no information about long-term health conditions (such as diabetes), other lifestyle risk factors (such as obesity), or difficulties in accessing health services. Also, there is no information about the health outcomes of children in different family types.

Filling this gap in information, the New Zealand Health Survey (NZHS) is a comprehensive assessment of the health status, health issues, lifestyle risk factors, and access to health services for adults and children living in New Zealand. The NZHS is a rich resource for understanding what might be affecting health and wellbeing across New Zealand families.

To date, the NZHS has not been used for monitoring the health outcomes of families because its data have only been available at the individual level. However, the NZHS does collect information about the composition of respondents' households and the

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5   Jia, K., & Smith, C. (2016). Subjective wellbeing in New Zealand: Some recent evidence. Wellington: NZ Productivity Research Note. Retrieved September 7, 2016 from: http://www.productivity.govt.nz/working-paper/subjective-wellbeing-in-new-zealandsome-recent-evidence

6   More information on our Family Wellbeing Framework can be found at www.superu.govt.nz/current-projects/families-and-wh nau-wellbeing-research-programme

7   The Census, General Social Survey, and the Disability Survey.

relationships between the survey respondents and other people in their household, which is needed to classify different family types.

Over the past year, Superu has collaborated with the Ministry of Health and Stats NZ to successfully add family type classification to the individual records of the NZHS for the first time. Soon, family type will be an ongoing feature of the NZHS data, allowing for new research to be undertaken on health and family wellbeing.

The code that was created for this project will also be made available to researchers in the Stats NZ datalab so they can apply family type to other surveys that have the relationship data to use it.

With family type successfully applied to the 2015/16 NZHS results, we have had a first look at differences across family type in health conditions, health behaviours/risk factors, and access to health services. With this work, we aim to answer three research questions:

1. Are there differences in the prevalence of long-term health conditions across family types for adults and children?

2. Are there differences in the prevalence of lifestyle and behavioural risk factors, associated with poor health outcomes, across family types for adults and children?

3. Are there differences in access to health services across family types for adults and children?

The section begins with a discussion of the family typology used by Superu for this analysis followed by a presentation of our findings for adults and children from the 2015/16 NZHS.

Family typology for this analysis

For our analysis of the 2015/16 NZHS, we began by applying family type to the NZHS data using specialised computer code created by Stats NZ. As there is no space here for a detailed discussion of that process, we have included a brief description of our approach in Appendix 1. What follows is a short review of the family typology used for this analysis and some facts about the NZHS to serve as a background for the findings thereafter.

Superu's family typology is a modification of the typology used by Stats NZ in their official statistics. The modifications are designed to capture the most common forms families take over the course of people's lives. While not everyone will choose to partner up or have children, it is useful to have families broken down by age and the presence of children since the needs and priorities of families differ depending on their age and composition.

The main Superu family types are:

• couple, both under 50 years old

• couple, one or both 50 years or older

• two parents with at least one child under 18 years

• one parent with at least one child under 18 years

• two parents with all children 18 years and older

• one parent with all children 18 years and older.

These do not include individuals living on their own or groups living together with no couple relationship or a child since they are not technically considered by Stats NZ as being in a family nucleus. Since these groups amount to nearly 20 percent of the adult population and their health outcomes are of interest for this work, in our analysis for this chapter we have included three additional family types:

• individual living alone, 50 years or older

• individual living alone, less than 50 years old

• group not in a family nucleus (residual grouping).

Given the connection between age and many health conditions, the results tables in this section list the family types of the average age of the adult respondents in that family type from youngest to oldest.

BOX 1: THE NEW ZEALAND HEALTH SURVEY

• Over 13,000 adults and the parents or primary caregivers of over 4,000 children take part in the survey each year.

• It is a household survey,[8] with one adult and one child (where applicable) chosen at random from within each selected household to complete the adult or child questionnaire (child questionnaires are completed by a parent/guardian).

• Survey topics include population health, health risk and protective factors, and health service use.

• NZHS data support the ongoing development of health services, policy, and strategy.

• Survey data is collected continuously with findings reported annually.

• There is more information on the NZHS on the Ministry of Health website www.health.govt.nz

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8   Some people living in residential facilities are included.

Long-term health conditions across family types

The New Zealand Health Survey (NZHS) asks adults and the caregivers of children about any long-term physical and mental health conditions they may have or have had.

For the purposes of the NZHS, the Ministry of Health defines a long-term health condition as "one that has lasted, or is expected to last, for more than six months and is based on a respondent's self-report of what a doctor told them".

For this chapter, we examined the prevalence of eight major long-term health conditions for adults and four for children to determine if there were differences in prevalence across family type (see Table 1).

TABLE

01

Long-term health conditions examined

Adult	Child
Ischaemic heart disease	Asthma
Stroke	Eczema
Diabetes	Autism
Arthritis	Having one of three diagnosed mental health conditions
Chronic pain	Includes an anxiety disorder, attention deficit disorder (ADD or ADHD), or depression
Having a diagnosed mental health condition Includes anxiety or mood disorders, bipolar disorder, or depression	
High psychological distress As determined by the Kessler Psychological Distress Scale (also known as the K10)	
Asthma	

Table 2 shows the proportion of adults in each family type experiencing the major long-term health conditions we examined[9] with colour to highlight cases where the rate for a family type was significantly higher or lower than that for all adults at the 95% confidence level.

Results for children can be seen in Table 3. In all the results tables for this chapter, family types are listed in ascending order from left to right by the mean age of the adults (those family types with younger adults, on average, are to the left and those family types with older adults are to the right).

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9   See Content Guide 2015/16: New Zealand Health Survey found at https://www.health.govt.nz/publication/content-guide-2015-16-new-zealand-health-survey

TABLE
02

Adults long term
health conditions
by family type, % of
group (statistically
significant
differences
highlighted)

Source: 2015/16 New Zealand
Health Survey

Condition	Total	Couple, both aged < 50 years	Not in family nucleus, (e.g. flatting)	Sole-parent, at least one child <18	Couple, at least one child <18	Lives alone, aged < 50	Couple, all children 18 or older	Sole-parent, all children 18 or older	Couple, one/ both aged 50+	Lives alone, aged 50+
Ischaemic heart disease (diagnosed)	4.6	1.1	2.1	1.3	1.2	S.	2.9	3.8	10.2	14.8
Stroke (diagnosed)	1.5	0.4	0.7	S.	0.4	S.	2.2	1.6	2.6	5.3
Diabetes (diagnosed)	5.8	1.3	3.1	2.7	3	3.3	7.5	10.8	9.8	11.6
Arthritis	16.7	3.7	9.3	5.6	7.1	9.7	15.8	16.1	32	45.4
Chronic pain	20.8	14.2	14.2	17.1	14.7	22.7	21.7	23.3	29.2	36.4
Mental health	18.8	17.9	17	27.7	15.6	30.3	17	19.3	18.4	24.4
Psychological distress (high K10 score)	6.8	8	10	11	5.9	12.4	8.9	9.1	3.4	6.3
Asthma	19.3	21.8	22.9	27.4	19.2	24.1	16.5	21.4	14.7	17.5
Mean age of respondent		31	33	34	36	37	44	46	65	70
Proportion of total adult population living in the family type		8.1	9.4	7.1	30.3	2.6	8	3.6	20.8	8.6

indicates rate is not statistically different from the rate for all adults at the 95% confidence level

indicates rate is 50% or less than that for all adults

indicates rate is significantly less than, but greater than 50% of, the rate for all adults

indicates rate is twice the rate for all adults

indicates rate is significantly higher than, but less than twice that, the rate for all adults

S.   indicates where a value has been suppressed due to Statistics New Zealand confidentiality rules

TABLE

03

Child long-term health conditions, % of group

Source: 2015/16 New Zealand Health Survey

Age of child	Long-term health condition	Total	Couple parents	Sole parents	Significant difference
2-14 years	Asthma	23.2	21.2	29.1	Y
0-14 years	Eczema	25.5	24.8	27.8	
2-14 years	Autism	1.4	1	2.5	
2-14 years	Diagnosed mental health condition (Depression, anxiety, or ADHD)	4.3	3.5	6.9	

Family types that had, on average, older adult family members, showed higher rates for many long-term health conditions

As might be expected, family types that had, on average, older adult family members, showed higher rates for many long-term health conditions than the population as a whole, while those that, on average, had younger members showed lower rates. Health conditions where this pattern was strongest include heart disease, stroke, diabetes, arthritis, and chronic pain.

Mental health is a particular concern for sole parents with young children and people living on their own, less so for older couples and couples with young children

For health issues such as asthma, high psychological distress, or a diagnosed mental health condition, the pattern was more varied across family type. Most family types had rates similar to those for the total adult population. However, families with young children, those living alone, and older couples showed significant differences in the prevalence of these conditions.

Of particular concern are sole parents with young children and younger people living alone who had higher rates for all three conditions. Older people living alone were also more likely to suffer from a mental health condition.

In contrast to the experience of sole parents with young children and those living alone, couples with young children were less likely to report having a mental health condition and older couples were both less likely to have asthma and less than half as likely as all adults to experience high psychological distress.

Rates of almost all long-term health conditions for children were similar across family type except asthma which was more common for both children and adults in sole parent families

For three of the four long-term conditions we looked at for children, we could find only one statistically significant difference between people in different family types. This was asthma which was more common among children in sole parent families, corresponding to the higher rates of asthma seen among adults in these families as well.

Sole parents, as we discuss in detail in Section 2.4 of this report, are disproportionately affected by multiple disadvantage and in particular housing disadvantage which may help to explain the heightened rates of asthma for adults and children in this family type.

Lifestyle and behavioural risk factors across family types

The NZHS asked respondents several questions about their health behaviours, in particular those known to increase the risk of acquiring a number of health conditions. Question topics included people's physical activity levels; fruit and vegetable intake; alcoholic drinking habits; and whether they smoked and, if they did, how often.

Height and weight measurements were taken for the adults and children surveyed allowing their Body Mass Index to be calculated and identify those who were overweight or obese. Additionally, caregivers of children were asked about their child's fast food and fizzy drink intake; TV watching behaviour; whether they had been physically punished over the last month; and if the child had breakfast at home every day in the previous week. The results for adult respondents are shown in Table 4 with child responses shown in Table 5.

Sole parents, younger people living alone, and those not in a family grouping (for example, flatting) had higher rates of adult behaviours/risk factors associated with poor health, while older couples had lower rates

Overall, sole parents, young people living alone, and those not living in a family group showed higher rates of the risky health behaviours examined than the total adult population.

While the exact combination of behaviours differed slightly for each family type, all shared heightened rates of smoking, with between a quarter and a third of adults in these family types identified as smokers.

Particularly pronounced were rates of daily smoking among sole parents with young children who had more than double the rate of all adults who were daily smokers.

The finding for sole parents matches up with the results from the previous section showing that adults in these families, along with young people living alone, have higher rates for psychological distress and a diagnosed mental health condition – both commonly associated with greater likelihood of smoking.

Rates of most health behaviours/risk factors for children were similar across family type save obesity, fizzy drink consumption, and having breakfast at home every day

For most of the child health behaviours and risk factors we examined (including fast food and vegetable/fruit consumption; physical punishment; TV watching; and active travel to and from school) there was no statistically significant difference between the rates for children living in couple families and those in sole parent families.[10]

The three exceptions to this were children in sole parent families who were less likely to have had breakfast at home every day, and were more likely to be obese and have had a fizzy drink three or more times in the preceding week. These results connect to our findings from the food security module of NZHS where one in five sole parents reported they sometimes or never can afford to "eat properly" by their own assessment of what that means.

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10 At the 95% confidence level.

TABLE 04

Adult lifestyle and behavioural risk factors by family type, % of group (statistically significant differences highlighted)

Source: 2015/16 New Zealand Health Survey

Behaviour/risk factor	Total	Couple, both aged <50 years	Not in family nucleus, (e.g. flatting)	Sole-parent, at least one child <18	Couple, at least one child <18	Lives alone, aged <50	Couple, all children 18 or older	Sole-parent, all children 18 or older	Couple, one/both aged 50+	Lives alone, aged 50+
Sedentary <30min physical activity in week	15.4	10.7	13	14.6	13.3	12.8	16.1	22.7	15.2	27.9
Current smoker	16.3	17.1	28	31.7	13.5	29.7	12.3	23.9	9	14.1
Daily smoker	14.2	14.3	22.4	29.5	11.4	26.5	10.6	22.9	8.3	13
Hazardous drinking (standard drinks)	19.3	27.0	37.4	23.3	18	35.8	14.6	18.9	12.1	10
Less than three veg/day	37.5	40.7	45.4	40.8	38.8	52.4	38.2	49.8	24.3	39.6
Less than 2+ fruit/day	44.2	45.9	52.3	50	45.4	51.6	42.7	45.9	37.3	39.1
Less than recommended fruit/veg	59.9	63.1	65.9	65.7	62.3	71.1	59.3	68.4	49	56.9
Obese	31.6	25.2	22.8	36.6	30.6	35.3	32.5	35.9	34.4	36.7
Mean age of respondent		31	33	34	36	37	44	46	65	70
Proportion of total adult population living in the family type		8.1	9.4	7.1	30.3	2.6	8	3.6	20.8	8.6

indicates rate is not statistically different from the rate for all adults at the 95% confidence level

indicates rate is 50% or less than that for all adults

indicates rate is significantly less than, but greater than 50% of, the rate for all adults

indicates rate is twice the rate for all adults

indicates rate is significantly higher than, but less than twice that, the rate for all adults

TABLE
05

Child health
behaviours/risk
factors, % of group

Source: 2015/16 New Zealand
Health Survey

Age of child	Behaviour/risk factor	Total	Couple parents	Sole parents	Significant difference*
2-14 years	Had breakfast every day last week	85.2	88	77.4	Y
2-14 years	Fizzy drink 3+ times last week	17.4	15.1	23.9	Y
2-14 years	Fast food 3+ times last week	7.6	7.1	8.9	
2-14 years	3+ servings of veg per day	42.5	43.2	40.1	
2-14 years	2+ servings of fruit per day	73.6	75.1	69.1	
5-14 years	Active travel to and from school	45.9	45.8	45.9	
2-14 years	Watching TV 2+ hours a day	44.8	44.4	46	
2-14 years	Obese (all obesity levels)	10.7	9.3	14.5	Y
0-14 years	Physical punishment in past 4 weeks	5.7	5.4	6.3	

* At the 95% confidence level

Access to health services across family types

The NZHS asks respondents about their use of the health system and the barriers they may face to accessing health care. For this chapter, we examined questions about unmet need for primary health care, dentistry, and prescription medicine.

In the case of unmet need for primary health care, adult respondents are asked to reflect on the last 12 months and identify if they:

- wanted to see a GP, nurse, or other health care worker at their usual medical centre within the next 24 hours, but were unable to do so
- had a medical problem but did not visit the GP because of cost
- had a medical problem but did not visit a GP because they had no transport to get there
- had a medical problem outside regular office hours but did not visit an after-hours medical centre because of cost
- had a medical problem outside regular office hours but did not visit an after-hours medical centre because they had no transport to get there.

If a respondent had experienced any of these situations in the last 12 months they were flagged by the survey as having unmet need for primary health care.

Caregivers were asked to respond to the same questions but to instead reflect on those cases when the child respondent required care. They were also asked a question about whether there was a time the child respondent had a medical problem in the last 12 months but the caregiver did not visit a GP because they could not arrange childcare for other children.

Both the adult and child caregiver respondents were also asked if there had been a situation in the last 12 months when they had been given a prescription but had not collected that item(s) from the pharmacy because of cost, or had need for a dental health care worker but were unable to see one.

Rates of unmet need for primary health care, dental care, and prescription medicine were significantly higher for adults in sole parent families with young children

Sole parents with young children had the highest rates of unmet need for every measure we considered. In the previous 12 months, almost half had experienced unmet need for primary health care, with nearly one in three not visiting the GP and one in six not visiting after-hours when they had a medical problem because of cost.

Over a third had unmet need for a dentist and one in six had foregone filling a prescription because of cost, even with the subsidies available.

The other family types to have higher rates for unmet need than the total adult population were those living on their own. Older people living on their own were less likely to have seen a GP because of cost. Younger people living on their own were also more likely not to have seen a GP or fill a prescription because of cost, and had unmet need for a dentist.

Older couples and older people living on their own were less likely to have unmet need for primary health care or a dentist

In contrast to the experience of sole parents with young children, older couples had lower rates of unmet health care need for every measure we considered except seeing a GP within 24 hours. Older people living on their own were also less likely to face barriers, with lower rates for unmet primary health care and dentistry.

Children in sole parent families have higher rates of unmet need for primary health care and not filling a prescription because of cost

As with adults in sole parent families, children in sole parent families tend to have higher rates of unmet primary health care and prescription medicine, although the rates of unmet need for children of sole parents are far lower than those for the adults. For example, just 7.5 percent of children in sole parent families were unable to see a GP in the last 12 months because of cost compared with 32 percent of adults.

TABLE 06

Adult unmet need for health services, % of group (statistically significant differences highlighted)

Source: 2015/16 New Zealand Health Survey

Condition	Total	Couple, both aged < 50 years	Not in family nucleus (e.g. flatting)	Sole-parent, at least one child <18	Couple, at least one child <18	Lives alone, aged < 50	Couple, all children 18 or older	Sole-parent, all children 18 or older	Couple, one/both aged 50+	Lives alone, aged 50+
Unmet need for primary health care	28.8	32.2	30.5	47.3	28.4	33.2	30.8	28.2	21.6	25.3
Unable to see GP within 24 hours in last year	17.8	20.6	19.2	23	17.7	19.4	19.5	15.8	15.9	15.5
Didn't see GP because of cost	14.3	17	18.5	31.8	14.3	19.2	12.6	16.5	6.5	10.8
Didn't see GP because lack transport	3.2	3.2	4.2	7.8	2.1	4.3	2.9	5.4	1.5	5.3
Didn't go to after-hours because cost	6.9	10.1	8.9	16.8	6.1	8.1	7	10.2	3.2	4.3
Didn't go to after-hours because lack transport	1.3	1.9	1.7	4.9	0.7	1.7	0.7	2.2	0.4	2.1
Didn't fill a prescription because cost	6.3	6	7.7	16.8	5.8	11	4.4	8.5	2.8	6.2
Unmet need for a dentist	22.9	27.5	22.8	37.3	24.8	32.1	24.9	27.8	13.2	16.3
Mean age of respondent		31	33	34	36	37	44	46	65	70
Proportion of total adult population living in the family type		8.1	9.4	7.1	30.3	2.6	8	3.6	20.8	8.6

□ indicates rate is not statistically different from the rate for all adults at the 95% confidence level

indicates rate is 50% or less than that for all adults

indicates rate is significantly less than, but greater than 50% of, the rate for all adults

indicates rate is twice the rate for all adults

indicates rate is significantly higher than, but less than twice that, the rate for all adults

TABLE 07

Child unmet need for health care, % of group

Source: 2015/16 New Zealand Health Survey

Age of child	Unmet need for health care	Total	Couple parents	Sole parents	Significant difference*
0-14 years	Unmet need for primary health care (Had one or more of the five situations listed below in past 12 months)	23.9	22	30	Y
	Unable to see GP in 24hrs	17.6	16.8	20.3	
	Unable to see GP because of cost	4.5	3.5	7.5	Y
	Unable to see GP because lacking transport	2.8	1.8	5.8	Y
	Unable to see GP because lacking childcare	2.9	2.4	4.5	
	Unable to visit after-hours because of cost	4	3.5	5.3	
	Unable to visit after-hours because lacking transport	1.3	0.7	3.2	Y
0-14 years	Unfilled prescription due to cost	3.8	2.4	7.7	Y
0-14 years	Unmet need for a dentist	4	3.4	5.7	
0-14 years	Definite confidence in GP	79.9	81.9	73.9	

* At the 95% confidence level

Food security

As well as the usual core questions, an eight-item food security module was added to the 2015/16 NZHS.

The questions were originally developed by Winsome Parnell from the Department of Human Nutrition at the University of Otago and measure the extent that New Zealand households have access to nutritionally adequate and safe foods. The results by family type can be seen in Table 8.

Overall, more than 20 percent of adults in families with young children reported not being able to always "eat properly" by their own assessment of what that means.

Sole parents are disproportionately affected in this statistic with 40 percent reporting not being able to afford to eat properly compared with just 16 percent of couple families. This trend is apparent in all the food security questions asked, with individuals in sole parent families two to five times more likely than couple parents to report some kind of food insecurity.

As a result, over a quarter of sole parents rely on others or food banks to provide food when they don't have enough money to meet their needs. Food is clearly a contributor to the high levels of stress and anxiety reported by sole parents. Forty percent of them report being stressed[11] from not having enough money to buy food and 30 percent from not being able to provide the food they want for special occasions.

11   The combination of those feeling 'often' and 'sometimes' stressed.

TABLE
08

**Food security
questions and
responses, % of
all caregivers and
those in couple and
sole parent families**

Statement and responses		Total	Couple parents	Sole parents	Significant difference*
Can afford to eat properly	Always	77.8	83.6	60.1	Y
	Sometimes	18.4	12.9	35.2	Y
	Never	3.8	3.4	4.8	
Food runs out in our household due to lack of money	Often	4.1	2.5	9	Y
	Sometimes	17.8	13	32.3	Y
	Never	78.1	84.5	58.6	Y
We eat less because of lack of money	Often	2.8	1.4	6.8	Y
	Sometimes	16.6	12.2	30.1	Y
	Never	80.7	86.4	63.1	Y
The variety of foods we are able to eat is limited by a lack of money	Often	7.3	4.7	15.2	Y
	Sometimes	23.1	19.3	34.7	Y
	Never	69.6	76	50.1	Y
We rely on others to provide food and/or money for food, for our household, when we don't have enough money	Often	2.1	1.2	4.8	Y
	Sometimes	10.3	6.8	21.3	Y
	Never	87.7	92.1	73.9	Y
We make use of special food grants or food banks when we do not have enough money for food	Often	1.2	0.7	2.6	Y
	Sometimes	9.3	4.5	23.7	Y
	Never	89.6	94.8	73.8	Y
I feel stressed because of not having enough money for food	Often	5.2	2.8	12.2	Y
	Sometimes	16.7	13.1	28	Y
	Never	78.2	84.2	59.8	Y
I feel stressed because I can't provide the food I want for social occasions	Often	2.8	1.4	6.9	Y
	Sometimes	14.7	11.9	23.6	Y
	Never	82.5	86.7	69.5	Y

* At the 95% confidence level

Parental stress

The 2015/16 NZHS also included five questions asking the parent or caregiver how they felt while caring for their child and whether they have access to day-to-day emotional support for raising children.[12] The results by family type can be seen in Table 9.

Overall, parents in both couple and sole parent families reported coping well with the stress of parenthood with only a small minority showing high signs of stress. However, sole parents were far more likely to report lacking someone to offer them emotional support with more than one in seven sole parents lacking support, compared with one in 30 coupled parents.

12   See *Content Guide 2016/16: New Zealand Health Survey* found at www.health.govt.nz/publication/content-guide-2015-16-new-zealand-health-survey

TABLE
09

Parental stress responses, % of all caregivers and those in couple and sole parent families

Source: 2015/16 New Zealand Health Survey

Parental stress question	Total	Couple parents	Sole parents	Significant difference*
Coping 'not very well' or 'not very well at all'	1.1	1	1.5	
'Usually' or 'Always' found kid hard in last month	3.4	3.2	3.9	
'Usually' or 'Always' kid did things that bothered in last month	3.9	3.6	4.6	
'Usually' or 'Always' felt angry with kid in last month	2.2	2.2	2.4	
Doesn't have someone to offer day-to-day emotional support	6.4	3.4	15.5	Y

* At the 95% confidence level

Implications

We are happy to report that with the completion of this project, the New Zealand Health Survey can now be analysed by family type and that this will become an ongoing feature of the survey. We hope this inspires other researchers to use the NZHS for family research in the future and to use the code developed in this work on other surveys of interest.

Our review of differences in health conditions, behaviours/lifestyle factors, and access to health services across family type has revealed several key findings.

- Sole parents with young children continue to be a group of interest with a collection of concerning results for health policy-makers.

- Sole parents with young children have higher rates of mental health conditions and psychological distress than the total adult population and, along with their children, have higher rates of asthma.

- Sole parents with young children also show higher rates of health lifestyle factors such as obesity and smoking. Their rate of daily smoking is more than double the rate of all adults who are daily smokers.

- Unmet need for primary health care is common for this family type with cost being the main barrier to services. Almost half of sole parents with young children reported unmet need for themselves in the previous 12 months, and almost a third reported unmet need for their children.

- Food security is also a common issue for this family type. Sole parents were two to five times more likely than couple parents to report some food insecurity with 40 percent saying they couldn't always "eat properly." As a result, over a quarter of sole parents rely on others or food banks to provide food when they don't have enough money to meet their needs.

- Poor mental health is more prevalent for families with one adult than for coupled families. We found a quarter of older people living alone and nearly a third of younger people living alone had been diagnosed with a mental health condition. Additionally, young people living alone had high rates of psychological distress – nearly double that of all adults.

- Unhealthy behaviours/risk factors are highest among sole parents, young people living alone, and those not in a family nucleus (for example, flatting).

- Of all the family types considered, sole parents had the highest rates of smoking and obesity while young people living alone and those not in a family nucleus had the highest rates of hazardous drinking and below the recommended levels of fruit and vegetable consumption.

2.3_ Multiple disadvantage research programme

To better understand multiple disadvantage and its effects on New Zealand families, Superu began a multi-year research programme into the subject in 2016. The primary aim of this work was to develop a measure of multiple disadvantage and use it to explore the prevalence of multiple disadvantage across New Zealand families, the types and combinations of disadvantage most commonly experienced, and the disadvantages with the greatest impact on family wellbeing.

The 2017 Families and Whānau Status Report presented our (and New Zealand's) first measure of multiple disadvantage, and the findings from our analysis of the 2014 General Social Survey (GSS).[13] This original measure uses 17 indicators from the GSS to assess whether someone is experiencing disadvantage in any of eight life domains: Income, Material Wellbeing, Employment, Education, Health, Housing, Safety, and Connectedness.[14]

We describe someone as experiencing multiple disadvantage if they have three or more life domains in disadvantage.

Some key findings from our work in 2016/17 include:

- more than one in six, or 17.6 percent, of New Zealand adults face multiple disadvantage (three or more life domains in disadvantage)

- of all the disadvantage observed, half takes the form of multiple disadvantage (co-occurring with disadvantage in two or more other life domains)

- the rate of multiple disadvantage varies greatly across family type, from 8 percent of young couples without children to 50 percent of sole parents with young children

- for those experiencing multiple disadvantage, the types faced vary across family type – housing and income disadvantages were most common for families with young children and young couples, while education and health were most common for older couples without children.

This year, we report the results of two projects that build upon the foundational work presented in the 2017 Status Report. The first uses combined data from the 2014 and 2016 General Social Surveys to examine whether there are differences in the rate and type of multiple disadvantage faced by families across region and ethnic grouping. The second uses the recent addition of 2014 GSS data to the Integrated Data Infrastructure (IDI). This is a large database of linked government administrative data which researchers can use to explore how government expenditure maps to individuals with different levels of disadvantage.

In the coming year, the Ministry of Social Development plans to investigate the impact that multiple disadvantage has on how people rate the quality of their lives, also known as subjective wellbeing, and identify if and how disadvantages combine to have an effect greater than the sum of their parts.

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13 Copies of the 2017 Families and Whānau Status Report and our stand-alone research report on multiple disadvantage can be found at www.superu.govt.nz/current-projects/families-and-wh-nau-wellbeing-research-programme
14 Further information on the development of the multiple disadvantage measure can be found in pages 10-15 of Superu's (2017) research report.

2.3.1 _ Differences in multiple disadvantage across region and ethnic group

Since the publication of our multiple disadvantage research in 2017, there has been significant interest in understanding how the patterns of multiple disadvantage we found nationally are reflected across region and ethnic group.

The sample of families obtained from the 2014 GSS was insufficient for us to undertake this analysis in 2017, but new data from the latest General Social Survey (GSS 2016) allowed us to create a combined dataset large enough to investigate these patterns.

This section builds on Superu's previous research on family wellbeing by region and ethnicity using indicators from our family wellbeing framework.[15] That research found some modest variation in average family wellbeing across different regions and ethnic groups.

Our previous research also found that family wellbeing indicators for Māori and Pacific families tended to be somewhat lower than those for European and Asian families; however, Māori and Pacific families tended to have higher wellbeing scores for indicators in the 'Relationships and connections' theme.

This section investigates these two questions:

- Does the rate and type of multiple disadvantage faced by families differ across regions?
- Does the rate and type of multiple disadvantage faced differ by the ethnicity of the family?

Our approach

Modifying our original multiple disadvantage measure

To have a sample large enough to undertake our analysis we combined data from the 2014 and 2016 General Social Surveys.

Since the indicators for Connectedness in the 2016 GSS differed from those in the 2014 GSS, we needed to select alternative indicators present in both surveys to identify Connectedness disadvantage for the combined sample.

As a result, the multiple disadvantage measure for the combined sample retains the original eight life domains and has similar proportions of disadvantage in each domain, but with slightly different results for disadvantage in the Connectedness domain and for multiple disadvantage as a whole. A discussion of the changes between the original measure and the one used for this analysis, along with the disadvantage results by indicator and domain, can be found in Appendix 3.

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15   See pps 27-50 in the 2016 Families and Whānau Status Report online at www.superu.govt.nz/publication/families_whanau_report_2016

Unit of analysis

Although the family unit is the key focus of our research, the GSS mostly captures information (and weights the results) at the individual or household level. The indicators of disadvantage used in this report therefore relate to the family or household where possible, and to the individual respondent where this was not possible. Our findings therefore present information on the number or proportion of individuals living within families, rather than the number or proportion of families themselves.

Measurement of family ethnicity

Family ethnicity was determined using the self-identified ethnic grouping of all family members rather than just the ethnic grouping of the respondent. For example, if one family member identified as Asian and another as Pacific, then the respondent would be included in the results for both Asian and Pacific families.

This approach has been used in previous Superu research assessing wellbeing by family ethnicity. It was also recommended as the best way of measuring family ethnicity by previous research and sector consultation conducted in New Zealand (Callister, Didham, Newell, & Potter, 2007; Superu, 2016).

There is currently no standardised way in which to measure family ethnicity, in part because ethnicity is often considered a primarily personal attribute that cannot easily be assigned to a group of people (Callister et al., 2007). There are therefore multiple different ways in which family ethnicity could have been defined, including using the ethnicities of certain family members (for example, the parents or the children) as representative of the whole family.

Alternative ways of measuring family ethnicity, however, have their own associated issues. For example, the high number of families of mixed ethnicities in New Zealand means that it is unreliable to use the ethnicity of an individual family member to represent the family as a whole.

Recent research conducted using data from the *Growing Up in New Zealand* study found that approximately half of Māori mothers and one in five Pacific and Asian mothers were partnered with someone who did not identify with the same ethnic grouping (Carr, 2018). Furthermore, when the parents or children in a family identify as more than one ethnicity, it becomes difficult to determine how these combinations of ethnic groupings should be represented.

We therefore decided to retain the method of determining family ethnicity used in previous Superu research (that is, using the ethnicity of all family members). This allowed us to be consistent and make comparisons between the two as well as acknowledge the complex ethnic makeup of many New Zealand families.

The decision to use Level 1 ethnic groupings (that is, Māori, Pacific, Asian, and European) and the total response method of determining family ethnicity (that is, including respondents in each of the ethnic groupings identified by family members) was also an area where other options were possible.

Previous research has investigated the use of combined ethnic groupings as well as single ethnic groupings to more accurately represent the specific ethnic makeup of families (Callister et al., 2007; Didham, 2018). For example, a Māori/European grouping could be used for families with members who identify as both Māori and European, or where one family member identifies as Māori and another as European.

Many factors, however, can influence differences in outcomes for Māori families compared with Māori/European families, including whether family members were born in New Zealand, the age of family members, and the number of children (Callister et al., 2007).

A complex method of determining family ethnicity may therefore provide information about the association between family ethnicity and outcomes that is less clear than more simple classifications (Callister et al., 2007). Also, the relatively small size of our sample meant that a detailed analysis of differences at this more complex level was not possible. Given the six different Level 1 ethnic groupings (including MELAA[16] and Other), there are 64 possible combinations of family ethnicity (Didham, 2018).

It is important to note that our choice of defining family ethnicity may introduce specific biases and limitations into our results. For example, including the same family in multiple different ethnic groupings may limit our ability to identify the size of differences in outcomes between each of the ethnic groupings, and can hide diversity within a particular ethnic grouping (Callister et al., 2007).

It is also important to acknowledge that the GSS captures the ethnicity of all family members based on the report of a single family member, and therefore the reported ethnicity may not be an accurate reflection of how each family member personally identifies.

There are also a number of different factors that influence how an individual responds to questions about their ethnic identification, including historical and social factors, what the data is being collected for, and how the data is being collected (Callister et al., 2007; Carr, 2018; Didham, 2018).

Previous research has also found that the way in which parents report their child's ethnicity differs depending on the gender of the parent and their own ethnic identification (a bias has been found for emphasising Māori ethnicity in children, particularly for Māori mothers; Carr et al., 2018).

The complexities involved in measuring ethnicity means that the results from the current study should be interpreted with caution and should be viewed as areas for future, more in-depth research. Also, results presented in the current study reflect associations between family ethnicity and particular outcomes, and therefore do not represent evidence for family ethnicity being the cause of any of these outcomes.

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16   Middle Eastern, Latin American, or African.

Findings

There are small differences in the prevalence of disadvantage across regions

As Figure 4 below demonstrates, there is variation in the rate of disadvantage by region, however, most differences are relatively slight. At a national level, the prevalence of multiple disadvantage is 16.9 percent of adults, with this figure ranging from 14.1 percent (for Wellington) to 26.2 percent (for Northland) across the various regions.

Overall, the Northland and Manawatu-Wanganui regions have rates of multiple disadvantage that are significantly higher than the national prevalence, whereas the major cities (Auckland, Wellington and Canterbury) all have significantly lower rates than the national prevalence.

For most regions, adults are most likely to have 1-2 domains in disadvantage, followed by 0 domains and then 3+ domains. There was not a significant difference in the proportions of adults with 0 or 1-2 disadvantages in Gisborne, however, this region had a relatively small sample size.

Figure 4 _ Proportion of adults with different levels of disadvantage, by region

Number of domains in disadvantage
— 0 domains   ⬛ 1-2 domains   — 3+ domains
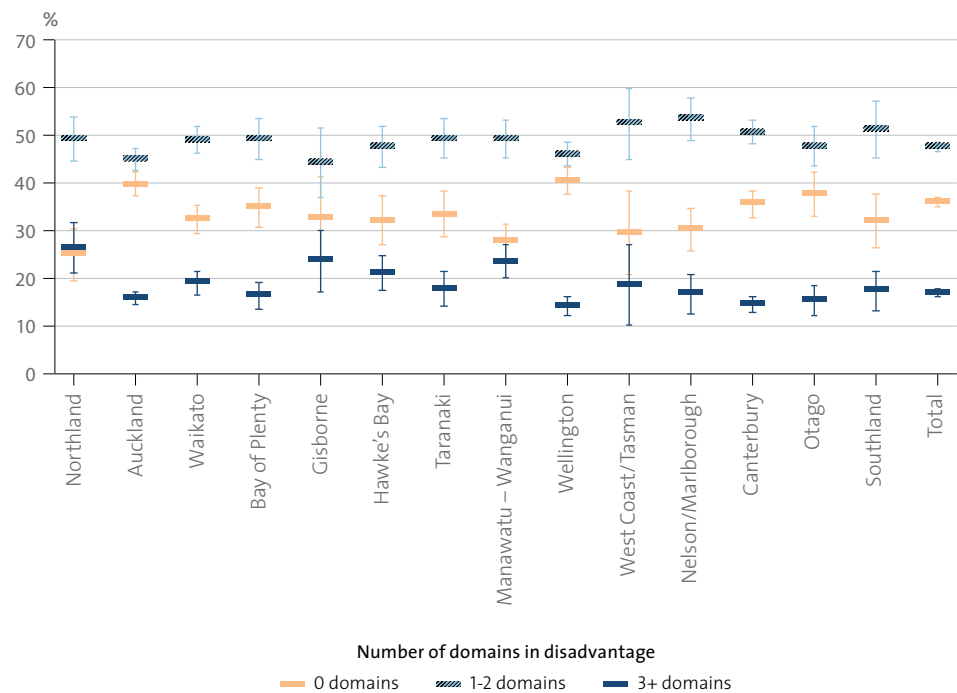
There is a difference in the proportion of the population affected by each domain in each region. However, as shown by the proportions in Table 10, the types of disadvantage faced by adults in different regions are broadly similar.

Education and Health are generally the two areas where disadvantage affects the highest proportion of adults in each region. The exception is Otago (Income is the largest issue followed by Education) and Auckland (Housing is the second-largest issue behind Health).

Conversely, Employment and Safety are generally the two domains affecting the smallest proportion of each regional population. Connections and Employment affect the smallest proportion of adults in Northland, Hawke's Bay, and Manawatu-Wanganui. Figures showing rates of disadvantage for each life domain by region have been provided as Appendix 2.

Overall, the findings suggest that there are differences in the prevalence of multiple disadvantage across regions, but there is not a large difference in the types of disadvantage experienced. This means that similar types of support will be required to address multiple disadvantage across regions, but there will need to be more (or more intensive) provision of this support in some regions.

TABLE 10

Proportion (%) and standard error (SE) of adults with specific life domains in disadvantage, by region

Region	Income		Material wellbeing		Employment		Education		Health		Housing		Safety		Connections	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Northland	26.1	4.8	16.4	3.9	14.6	3.8	34.6	6.9	32.9	5.4	25.3	3.9	15.6	4.1	15.2	4
Auckland	17.5	1.6	11.7	1.3	6.1	0.8	16.1	1.4	23.1	1.6	22.8	1.7	7.5	1.1	13.4	1.5
Waikato	21.6	3.0	11.4	2.2	7.4	1.4	29.2	2.9	28	2.9	20.1	2.8	9.5	1.7	12.9	2.1
Bay of Plenty	22.6	3.1	9.9	2	7	1.7	27.1	3.6	25.5	3.1	19.4	2.4	8.8	2	11.9	2.4
Gisborne	19.5	7.5	13.9	5.7	5.7	2.7	30.6	6.5	30.8	6.8	25.3	6.3	9.5	3.8	11.8	3.9
Hawke's Bay	22.5	4.2	13.8	2.9	5.2	1.9	31.9	5.2	29.6	4.3	20.4	4	14.9	4.1	9.1	2.8
Taranaki	19.0	4.6	9.8	3.2	6.1	2.3	34.4	5.3	30.8	4.2	19.4	4.6	5.5	2.7	12.5	4.2
Manawatu – Wanganui	27.1	3.4	14	3	8.5	2.1	35.2	4.5	29.4	3.7	23.6	3.4	11.7	2.4	10.6	2.1
Wellington	15.4	1.8	10.3	1.6	5.3	1	20.1	2.2	25.9	2.2	20.1	2.6	7.5	1.4	11.1	1.7
West Coast/Tasman	19.1	5.4	13.7	8.7	5.1	2.5	44.1	10.9	27.6	8	21.2	6.2	3.9	3.2	14.6	8.3
Nelson/Marlborough	21.9	4.3	9.3	3	4.4	1.9	36.9	6.4	28.7	3.9	16.9	4.3	7.7	2.7	11.2	2.9
Canterbury	17.5	2.1	7.4	1.3	5.5	1.1	25.9	2.1	24.8	2.3	20.2	2.3	8.6	1.8	11.4	1.6
Otago	25.0	4.3	10.5	2.9	6.6	2.2	24.3	3.9	21.5	3.3	16.6	3.1	5.8	1.8	11.2	3.3
Southland	21.3	3.7	9.8	3.5	6.6	3.4	41.9	5.8	27.4	4.9	11.2	3.3	6.6	2.4	12.3	3
National total	**19.5**	**0.9**	**11.1**	**0.6**	**6.5**	**0.4**	**24.4**	**0.8**	**25.6**	**0.8**	**21**	**0.8**	**8.5**	**0.6**	**12.3**	**0.7**

The prevalence and type of multiple disadvantage differs across ethnicity

In the current sample, 19.2 percent of adults identified as living in Māori families, 8.6 percent in Pacific families, 15.2 percent in Asian families, and 81.2 percent in European families.

As Figure 5 below demonstrates, the prevalence of multiple disadvantage was found to differ by ethnicity. Overall, higher proportions of those in Māori (27.7 percent) and Pacific (31.6 percent) families face multiple disadvantage compared with Asian (13.7 percent) and European (14.4 percent) families. This trend is also apparent among families facing "deep" disadvantage (that is, four or more life domains in disadvantage).

The opposite trend is seen for adults in families facing no life domains in disadvantage. In this case, adults in Asian families (38.4 percent) and European families (38.0 percent) are more likely to be facing no domains in disadvantage compared with those in Māori (25.1 percent) and Pacific (21.1 percent) families.

Figure 5 _ Proportion of adults with specific numbers of life domains in disadvantage by ethnicity
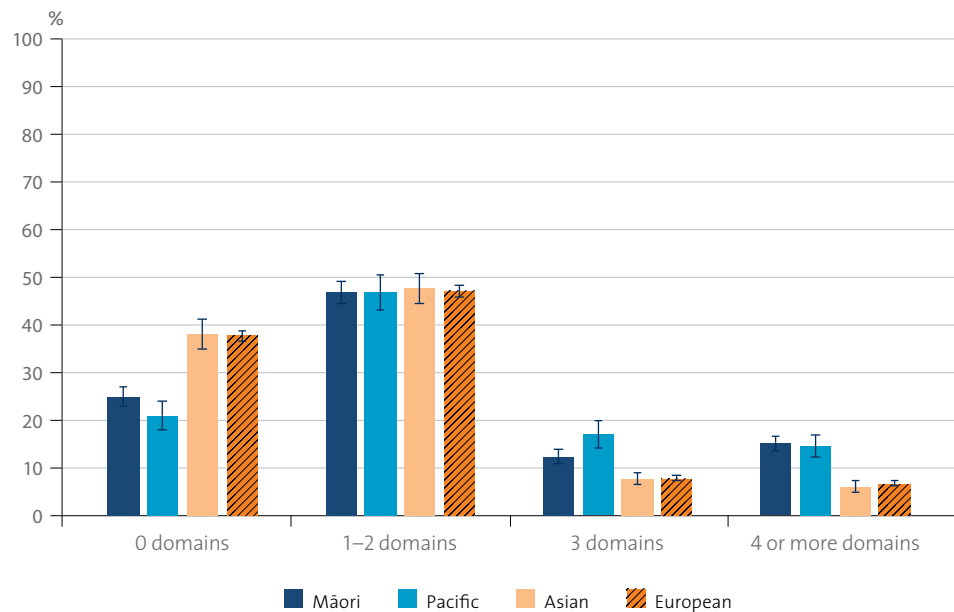
Not only did we find differences in the prevalence of multiple disadvantage by ethnicity, but as shown in Figure 6, variation was also found in the types of disadvantage experienced. Disadvantage in Housing was most prevalent for those in Māori, Pacific and Asian families; however, it was only the fourth most prevalent for those in European families.

Further analysis showed that for adults in Māori, Asian, and European families, disadvantage in Housing was largely driven by poor housing conditions, whereas for those in Pacific families, overcrowding was a more prevalent issue than poor housing conditions. Health was the most common disadvantage for those in European families, with this largely being driven by poor physical and mental health, rather than self-rated general health.

Disadvantage in Education was second-most prevalent for Māori and European families. Material Wellbeing was the second-highest for Pacific families and Health for Asian families (with poor mental health being the most common driver of disadvantage in this domain).

Employment and Safety were the two least-prevalent disadvantage areas across all ethnicities; experiencing problems with burglary or assaults in the neighbourhood in the last 12 months was the most common Safety disadvantage across all ethnicities.

Figure 6 _ Proportion of adults disadvantaged in specific domains, by ethnicity

Legend: Māori, Pacific, Asian, European
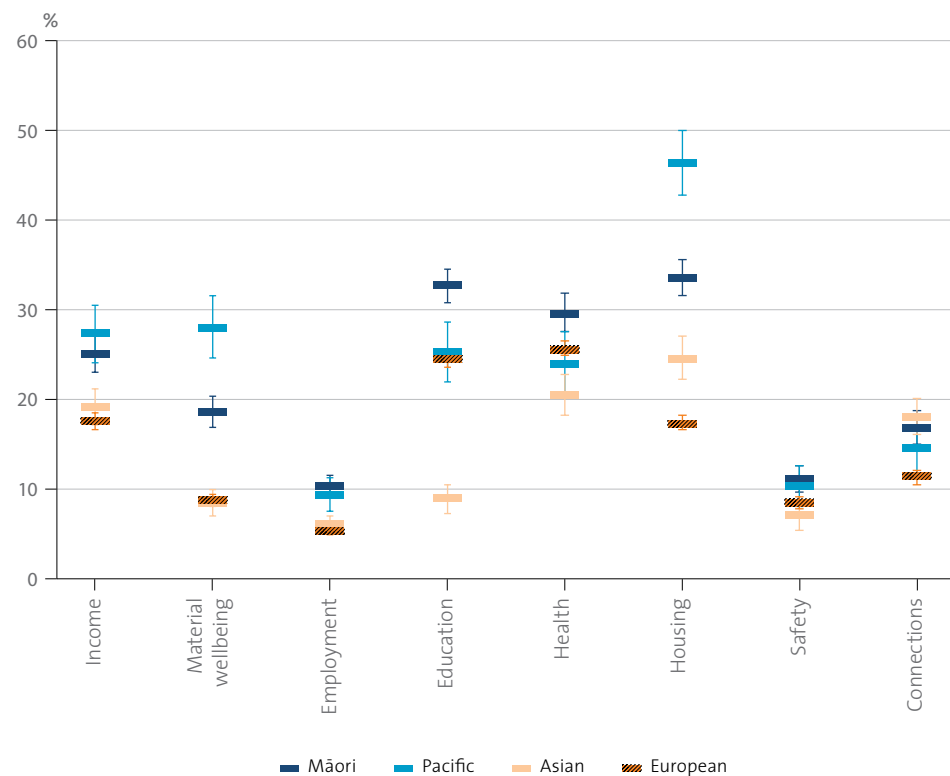
Conclusions

Although there was only a small variation in the prevalence of multiple disadvantage faced by New Zealand families across regions, there were significant differences faced in both the prevalence and types of disadvantage for families of different ethnicities.

There were higher rates of multiple disadvantage for Māori and Pacific families who were most likely to be disadvantaged in Housing, followed by Education (for Māori families) or Material Wellbeing (for Pacific families). Conversely, European families were most likely to be disadvantaged in Health followed by Education, and Asian families in Housing followed by Health.

These differences are important as they indicate that the types of support that are required for families to move out of multiple disadvantage and towards greater wellbeing – or to prevent falling into multiple disadvantage in the first place – may be different depending on their ethnicity. This speaks to the need for individualised support for New Zealand families, based on their unique circumstances and needs.

Given these differences in the experience of disadvantage across families, we would welcome future research that investigates whether there are different factors that are causing this disadvantage across families.

The causes of multiple disadvantage are not yet clearly understood, but this knowledge is vital for efforts to prevent multiple disadvantage and to develop effective supports for families already facing disadvantages. A greater understanding of factors contributing to resilience in families facing disadvantage would also provide useful information for prevention and intervention.

2.3.2 _ Exploratory look at multiple disadvantage and government spending

The multiple disadvantage research completed thus far has allowed us to identify the size of the population experiencing multiple disadvantage, the kinds of disadvantages they face, and how these differ by family type, ethnicity, and region.

Armed with these insights, we set out to extend them with some exploratory research using newly released datasets. Shortly following the publication of our first multiple disadvantage findings in June 2017, we learned that Stats NZ would be linking the 2014 General Social Survey (GSS) data to the Integrated Data Infrastructure (IDI) later that year.

This is an exciting development for this research as it opens several new avenues of inquiry that were previously impossible using either dataset in isolation. Of special interest is the possibility of examining how the disadvantage we identify from the GSS matches the government expenditure on services aimed at addressing those needs.

This section presents the results of a project we undertook with this new data. Our main aim was to answer the following research question: how well does the linked GSS-IDI data support an analysis of governmental spending for those at different levels of need? Since the first round of GSS-IDI data-linking only linked GSS respondents to the IDI and not their family members, our focus is on the spend associated with just GSS respondents.

We begin with a short discussion of the datasets and our approach to the work, followed by some preliminary findings. We conclude with a discussion of where we hope to develop the work in the future and some ideas for improving the linked data.

Datasets

The GSS and IDI are rich data sources but contain quite different types of information (see Boxes 1 and 2 for facts on the GSS and IDI). The GSS collects information about a person's wellbeing across many areas of their life and asks the respondent to rate their life satisfaction and how well things are going for their family. As a result, it reveals the areas of life that are going well for that person (and to some extent their family) and those areas where support may be needed.

BOX 2: FACTS ABOUT THE GENERAL SOCIAL SURVEY (GSS)

- The GSS is a household survey that has been undertaken by Stats NZ every two years since 2008.
- It is designed to be representative of the total adult population of New Zealand with around 8,000 adults completing the survey each time it is run.
- An adult of 15 years or older is selected at random from within chosen households to answer two questionnaires: a short set of questions about their household members and a longer set about themselves
- Respondents are asked to give a personal assessment about different aspects of their lives such as health, housing, human rights, and relationships as well as their overall life satisfaction.

In contrast, the IDI is a compilation of data that governmental agencies collect as they gather revenue, purchase and administer services, and maintain legal registers.

The IDI captures whether a service event occurred (for example, a hospital admission) and the amount the agency spent to provide that service to an individual (to the extent spend can be attributed to that person).

BOX 3: FACTS ABOUT THE INTEGRATED DATA INFRASTRUCTURE (IDI)

- The IDI is a large research database containing microdata about businesses, people, and households from government agencies, non-governmental organisations (NGOs), and Stats NZ surveys.
- Most of the IDI's records are from government agency databases which collect and create administrative data used to provide governmental services and ensure legislative compliance.
- In recent years, data have been added from NGOs and Stats NZ surveys, such as the Census and the General Social Survey.
- Stats NZ manages the linking of all the component datasets and restricts access to the anonymised data so it can be safely used for research purposes.
- IDI outputs are always aggregated and Stats NZ checks all IDI output to ensure confidentiality is maintained.
- IDI data is updated regularly by the source agencies, usually quarterly.

Linking the two makes it possible to match the service need of an individual in the GSS to the services provided (or at least money spent) by the government on their behalf over a length of time. We can then try to identify where spending is taking place to address this need and where there are groups experiencing disadvantage but don't seem to be receiving much in the way of government assistance.

General approach

To undertake an analysis of government spending for those with different levels of disadvantage, we first prepared a dataset with all the GSS records that had been successfully linked to the IDI. This set is smaller than the one we used for our previous multiple disadvantage research[17] since only 77 percent of the 8,795 responses from the 2014 GSS could be connected to the IDI.

After satisfying ourselves that the linking process[18] did not result in perceivable bias, we used the methodology described in Superu (2017) to replicate the multiple disadvantage results from our previous research using the new linked dataset.

Once we had identified the number of domains in disadvantage for those in the research dataset, we calculated the governmental expenditure on services for these respondents using a data tool created by the Social Investment Agency called the Social Investment Data Foundation (SIDF).[19]

The SIDF is a set of computer codes (called macros) that compile all the information available in the IDI on service events for selected individuals (for example, a spell on a benefit or in hospital) and the costs recorded for delivering those services from the relevant government agencies.

Researchers using the SIDF submit a list of individuals, along with a date and the time period of interest. The SIDF then generates the service event and spend data for those individuals for a set period before and after the input date. In our case, we used the SIDF to compile the service event and spend data that had occurred in the year prior and year following the date the respondent filled out the GSS.

Table 11 shows the different types of government expenditure compiled by the SIDF broken down by government agency and spending type. Note that the SIDF only captures spending that can be attributed to a specific individual and generally not spending on agency overheads, or on public goods which accrue to everyone (for example, national security).

We are also unable, in most cases, to look in greater detail at the services received. For example, we can observe if someone had a hospital admission in the year following the survey and the associated cost, but have no knowledge of the circumstances of the admission or type of care received.

17 See Superu (2017), *Patterns of multiple disadvantage across New Zealand families*, available online at www.superu. govt.nz/publication/patterns-multiple-disadvantage-across-new-zealand-families

18 A comparison of the characteristics of those successfully linked to the IDI and those left out showed no evidence of systematic bias in the linking.

19 Information about the SIDF, including links to the source code, can be found at www.sia.govt.nz/tools-and-guides/ social-investment-data-foundation-sidf/

TABLE
11

Government expenditure data used in our analysis by area and spend type

Area	Spend type	Notes
Income support	Main benefits (tier 1 benefits)	Examples include: Jobseeker support, Supported Living Payment, Youth Payment. Eligibility is based on family status, so if one person is working the other adult is usually not entitled to receive a main benefit.
	Supplementary benefits (tier 2 benefits)	Examples include: Accommodation Supplement, Disability Allowance. Eligibility is based on family status.
	Ad hoc/hardship assistance (tier 3 benefits)	Irregular payments to cover unexpected or infrequent costs (E.g. funeral grant)
	Income support for loss of work from accident	Loss of income payments cover through New Zealand's public accident insurance system (Accident Compensation Corporation)
Pension	Superannuation income	All New Zealand residents who have been in New Zealand for at least 10 years over the age of 20 (5 of which need to be while over the age of 50) receive a state pension at 65 years.
Public Health Care	Public funded hospital discharges [20]	Includes Ministry of Health and DHB funded events as well as publicly funded hospital services provided in private hospitals
	General medical subsidy	Fee-for-service payments made to doctors for patient visits
	Laboratory tests	
	National non-admitted patient [21]	Payments related to outpatient and emergency department activities
	Pharmaceutical dispensing reimbursement payments	Pharmaceutical reimbursement payments
	Programme for Integration of Mental Health Data,	Mental health or addiction services (contact, bednight, leave or seclusion)
	ACC injury claim (medical cost)	Medical costs covered through New Zealand's public accident insurance system (Accident Compensation Corporation)
Formal education and training (excluding ECE)	Industry training enrolments	
	Primary and secondary education	
	Tertiary education (excluding industry training)	Spend associated with a spell enrolled in a tertiary education organisation, per qualification, per enrolment. Cost derived from EFTS
	Student support allowances	
Justice	Corrections costs	
	Court costs [22]	

20 Note that public funded hospital discharges and national non-admitted patient costs are not directly available in the IDI. The SIDF uses costs obtained from the Ministry of Health at the purchase unit level on a yearly basis and attributes it to the individual based on purchase unit consumed by the individual. Therefore, the costs attributed to the individual are indirectly derived from, rather than directly supplied by, the Ministry of Health.

21 See footnote 20.

22 Court costs are an approximation based upon the average costs associated with different types of offences and other factors.

Findings

Average government expenditure increases with the number of domains in disadvantage

To get a sense of how governmental spend matches the number of disadvantages faced for the adult population overall, we calculated the average government expenditure for respondents to the 2014 GSS in the year after the date they took the survey.

The results, by number of domains in disadvantage, are shown in Figure 7 below. Average government expenditure ranges from around $3,000 for those with no domains in disadvantage to around $15,000 for those with five or more.

Expenditure increases in an almost linear fashion from zero to four domains with a larger jump in spend from four to five disadvantages. Spend plateaus between $14,000 and $16,000 for those with disadvantage in five, six, or seven domains with no statistical difference in the results for those three groups.

Figure 7 _ Average government expenditure for respondents to the 2014 General Social Survey in the 12 months after the survey, by number domains in disadvantage
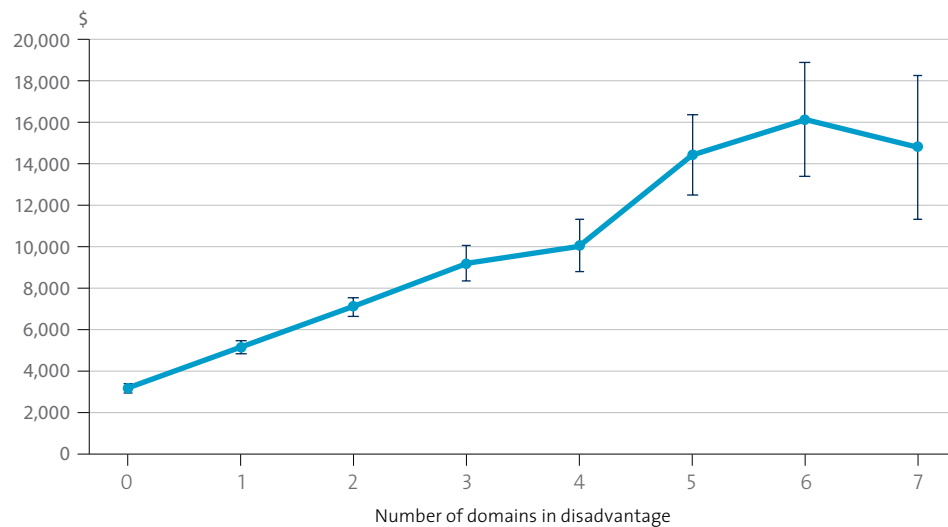
Source: 2014 General Social Survey linked to the Integrated Data Infrastructure
Note: the black bars show the 95% confidence interval.

Superannuation makes up most of the spending for those with fewer domains in disadvantage and income support spending for those with many

To understand which areas of spending might be driving the overall results seen in Figure 7, we calculated the same average expenditure figures by government agency (See Figure 8 on next page).[23] The shape of overall spending is driven mostly by superannuation and benefit payments which together make up between 58 and 76 percent of all spending depending on the level of disadvantage.

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23 Superannuation payments have been separated out from other income support spending for easier interpretation.

Superannuation payments tend to account for a greater proportion of spending for those with fewer disadvantages, making up around half of all spending for adults with two or fewer domains in disadvantage.

In contrast, income support spending forms a greater proportion for groups with higher levels of disadvantage, accounting for two-thirds or more of all spending for those with five or more domains in disadvantage. Average income support spend more than doubles between those with four and five disadvantages, accounting for the vast majority of the jump in total spend between these groups observed in Figure 7.

The average spending for the remaining areas was roughly similar across disadvantage levels except for Public Health Care spending which showed a slight increasing trend with the number of domains in disadvantage.

Figure 8 _ Average government expenditure by area for respondents to the 2014 General Social Survey in the 12 months after the survey, by number domains in disadvantage
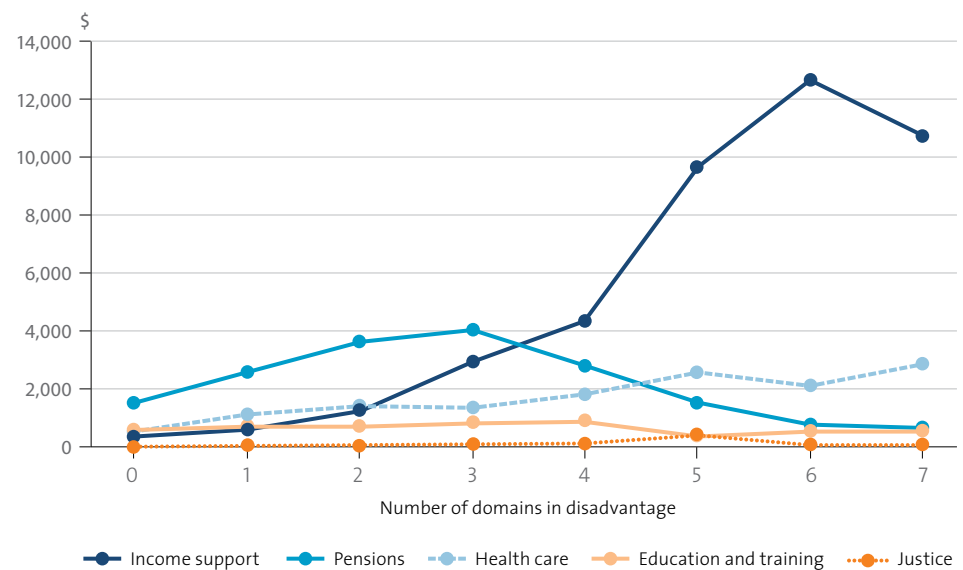
While data issues hamper detailed analysis, a significant minority of those with multiple disadvantage appear to receive low levels of government spending

One of the more promising research possibilities from linking the GSS to the IDI is the opportunity to identify cases where individuals and families face clear disadvantage but are not, for one reason or another, receiving much in the way of government support. To investigate this, we examined the levels of spend for individuals with three or more, four or more, and five or more domains in disadvantage.

Our previous work has defined those experiencing multiple disadvantage as having three or more domains in disadvantage so the other two groups will contain those with more extreme levels of disadvantage.

Table 12 shows the proportion of each multiple disadvantage group with different levels of government spending.[24]

While it is hard to say what the expected level of expenditure might be for people facing multiple disadvantage, we can see from these data that a majority of those with multiple disadvantage are receiving levels of spending that suggest some amount of action is being taken by the government to address their disadvantages. For example, more than half of those with three or more disadvantages and more than two-thirds of those with five or more had spending over $10,000 in the year following the GSS.

TABLE
12

Government expenditure in the year after taking the GSS for individuals with different levels of multiple disadvantage, percent of group

Source: 2014 General Social Survey linked to the Integrated Data Infrastructure

Spend level	Domains in disadvantage		
	3+	4+	5+
$0	10%	9%	5%
$1 - $3,000	21%	16%	11%
$3,001 - $6,000	9%	8%	8%
$6,001 - $10,000	8%	8%	7%
$10,001 - $15,000	22%	25%	28%
$15,001 - $20,000	15%	15%	14%
$20,001 +	15%	19%	27%
Total	**100%**	**100%**	**100%**

However, we find that a significant minority in each of these multiple disadvantage groups has either no spending attributable to them, or spending of $3,000 or less – $3,000 being the average level of spend for someone with no domains in disadvantage. This is concerning as it suggests agency spending may not be reaching many of those it is intended to help.

Before we make too much of this finding, however, it is important to point out that there are several other reasons why someone might appear in the IDI not to have any government spending attributed to them individually.

- They are being supported privately (for example, by other family members).

- Their income or family income makes them ineligible for income support assistance.

- They are receiving government-funded support services but the spend cannot be attributed to them. For example, they receive services from an NGO that is funded by a block grant and researchers cannot calculate the expenditure for specific individuals. Or the NGO has these data but does not report them to the funding agency.

- They are linked to the IDI spine but are affected by data quality issues of certain source datasets.

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24 Note that this only includes spending that can be attributable to individuals and excludes spending on public goods or administrative overheads.

Additionally, for the first round of GSS-IDI data linking, only the data of the adult respondent were linked and not that of other members of their family or household so we were unable to consider in our analysis the spending attributable to other family members. This limited the analysis we could do for this report and may account for the low spend for some respondents since the value of many benefit payments are shared between partners or family members.

As there are reasons which could account for the low spend we find for those with multiple disadvantage, we wish to be cautious in interpreting this finding. However, while data issues may account for some of this low spend, it is unlikely to explain all of it and we are eager to revisit this work as more records are added.

Conclusion

While we believe the linked GSS/IDI data holds much promise, there is still a long way to go before it can live up to its potential.

We have attempted to explore some of the questions that can be answered with these data, in particular how government spending matches to multiple disadvantage need. Happily, we find that government spending increases with the number of disadvantages people face and that it ramps up considerably for those facing five or more domains in disadvantage.

However, there appears to be a significant minority of people facing multiple disadvantage who are receiving relatively low levels of government spending. While our analysis is confounded by data issues, we hope that we will be able to revisit and expand this exploratory work once household members are added and the results of the 2016 GSS are linked in, hopefully later in 2018.

We also believe there is scope to expand and improve the linked GSS-IDI data in the future. While a sizeable majority of respondents to the 2014 iteration of the GSS could be linked to the IDI (77 percent), it might be possible to link an even greater proportion in the future by prioritising the collection of data to facilitate linking during survey collection.

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2.4_ Wellbeing of sole parents in New Zealand

In 2016, Superu began research to develop a measure of multiple disadvantage for New Zealand.[25]

Our research found considerable variability in the prevalence of multiple disadvantage across different family types, with sole parents being disproportionately affected. This result is particularly concerning when one considers that sole parent families account for nearly a quarter of New Zealand families with dependent children.[26]

That said, we know that not all of these families face disadvantage, and that many children raised by sole parents will not be adversely affected in terms of their outcomes and wellbeing (Chapple, 2009). We therefore require a greater understanding of which sole parents tend to face multiple disadvantage more often and whether certain types of disadvantage are more commonly experienced than others.

This section extends Superu's previous multiple disadvantage research to look more closely at sole parents and address the following two research questions:

1. Are some groups of sole parents more likely to experience multiple disadvantage than others?

2. Do the types of disadvantage faced vary across different groups of sole parents?

We begin with a short review of what we already know about sole parents from the literature, and what sole parent families look like within the New Zealand context. We then describe the data sources and methodology used to answer the questions posed above, before presenting some key findings from our research. A full report has been published separately by Superu.[27]

Background

What we know about sole parents in New Zealand

Sole parent families represent a significant proportion of families with children. New Zealand has one of the highest rates of sole parenthood among developed countries (Stewart-Withers, Scheyvens, & Fairbairn-Dunlop, 2010).

In 2006, New Zealand (26 percent) ranked second only to the United States (28 percent) for the proportion of children under 18 living in sole parent families (Ministry of Social Development, 2008). As such, sole parent families represent a significant proportion of families with children in New Zealand; the 2013 Census found that 27 percent of families with dependent children were headed by a sole parent.

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25 See Superu (2017) for a more detailed description of how our measure of multiple disadvantage was created.

26 As at September 2017. Data sourced from custom output from the Household Labour Force Survey.

27 Krassoi Peach, E. and J. Cording, (2018), *Multiple disadvantage among sole parents in New Zealand*, Social Policy Evaluation and Research Unit, Wellington.

Sole parents are a particularly vulnerable population

In line with the Superu (2017) findings, previous New Zealand and international literature have found that sole parent families face disproportionate levels of disadvantage across several life domains, including: employment, physical and mental health, education, income, home ownership, and housing affordability (Centre for Social Research and Evaluation/Te Pokapū Rangahau Arotake Hapori, 2010a; Collings, Jenkin, Carter, & Signal, 2014; Crothers, von Randow, & Cotterell, 2013; Families Commission, 2010; Perry, 2017; Tobias, Kokaua, Gerritsen, & Templeton, 2010).

Sole parents, for example, tend to have lower rates of employment than coupled parents. For those sole parents who are employed, their income is lower on average than two-parent families who have one parent working (Families Commission, 2010; Whiteford & Adema, 2007).

Sole parenthood has been associated with poor child outcomes, but a causal relationship is not clear

Parental separation or sole parenthood has been commonly associated in the literature with poor outcomes for children, with detrimental effects in a wide range of areas apparent both during childhood and into adulthood. Indeed, a higher level of disadvantage for children in sole parent families was identified in the health outcomes study presented in section 2.2 on page 33. This research found higher rates of asthma and obesity, higher levels of unmet primary healthcare needs, and higher rates of food insecurity for children in sole parent families compared with children in two-parent families.

Although previous findings on outcomes for children of sole parent families are concerning, it is important to note that this list of issues conceals a more complicated picture about the impact of sole parenthood on the outcomes of children.

There is currently no consensus on the causal role that sole parenthood plays in the negative outcomes that have been identified in previous literature. It is possible that the disadvantages faced by sole parents and their children are due to factors or conditions present prior to the biological parents splitting (and which potentially contributed to the split, for example, genetics, financial stress, mental or physical health issues; Chapple, 2009).

Additionally, factors such as the level of parental involvement from the non-custodial parent and the level of parental conflict have been found to influence outcomes for children post-separation (Amato, Loomis, & Booth, 1995; Simons, Lin, Gordon, Conger, & Lorenz, 1999).

Therefore, although children in sole parent families are generally considered to be a vulnerable group due to adverse outcomes identified in prior research, it is vital that these children are recognised as a heterogeneous population displaying wide variation in outcomes. Because of this, it is important that we develop a deep and nuanced view of the specific challenges faced by this population that reflects the complexity of the relationships between family structure, multiple disadvantage, and child wellbeing.

Pathways into sole parenthood, and therefore living circumstances, vary

Sole parents in New Zealand have a diverse demographic make-up, in part because of the variety of pathways into sole parenthood. These range from beginning parenthood as a sole parent, through to transitioning to sole parenthood following separation or divorce; bereavement; imprisonment of a partner; or moving to a long-distance relationship.

Also, sole parenthood is not a fixed state, but is often a situation that parents move in and out of dependent on life circumstances (Hutt, 2012); previous research has found that approximately half of mothers will have experienced sole parenthood at some point before the age of 50 (Centre for Social Research and Evaluation/Te Pokapū Rangahau Arotake Hapori, 2010a).

The degree to which sole parents are parenting "on their own" also varies, in that the amount and nature of the involvement by the children's other parent or their wider family differs between families.

The diversity of pathways into sole parenthood mean that sole-parent families differ in the levels of personal, financial, and social resources they can draw on to overcome disadvantage. For example, sole parenthood may be less challenging for individuals who make the transition later in life, once they have had the chance to build a strong foundation of education and work experience that will allow for greater economic independence and employment opportunities.

Sole parents represent a wide cross-section of the New Zealand population

Sole parents are also a heterogenous population in their demographics, representing a broad cross-section of the New Zealand population. In our sample, there was notable variation in most of the characteristics that we assessed, including a broad spread of parental and child ages, ethnicity of family members, and number of children in the family.

This diversity among the population makes it difficult (and perhaps unhelpful) to design supports and policies around an "average" sole parent, as the characteristics of the "average" sole parent are likely to exclude a large proportion of sole parents who do not fit into those boundaries. Instead, it is important that we understand the unique challenges and circumstances faced by different kinds of sole parents so that we can best understand the types of support they may require, and how these supports are best delivered.

Data sources

General Social Survey

The analyses presented below use data sourced from the 2014 and 2016 General Social Surveys (GSS). The GSS is currently the only official data source that captures people's social connections outside of the household[28] and is also useful for the breadth of life domains captured.

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28 Unfortunately, this does not extend to capturing child care and/or custody arrangements across households. This is a major limitation of using the GSS (and all other existing Stats NZ surveys) in research focused on sole parents.

While the GSS is the most appropriate source of data for this report, it does have some limitations. Perhaps the most important of these is that the GSS is a cross-sectional survey, which therefore limits our ability to identify the causes of multiple disadvantage (an association with multiple disadvantage is not an indication of causality) or to assess differences in the amount or number of times families face certain disadvantages.

Integrated Data Infrastructure

The information obtained from the GSS was complemented with data from the Integrated Data Infrastructure (IDI). The IDI is a large research database that contains information sourced from a range of government agencies. This information is linked at the individual and/or household level and then anonymised, allowing researchers to access rich data that can be used to answer complex questions about the relationships between different life domains and factors.

For this research, we used the IDI to obtain parental age at first birth for the sole parents in our sample. This data was only available for respondents to the 2014 GSS (because the 2016 survey has yet to be added to the IDI).

Age at first birth could not be obtained for approximately 34 percent of sole parents from our 2014 GSS sample, mainly because most birth certificates issued before 1990 are missing the mother's date of birth, meaning that their age at birth cannot be calculated. We are also missing age at first birth details for those whose children were not born in New Zealand, or whose births were not registered.

Measuring multiple disadvantage

This paper builds upon previous work conducted by Superu (2017), which defined multiple disadvantage as "experiencing multiple difficulties or challenges that negatively impact family functioning".

In this previous research, multiple disadvantage was measured using 17 indicators that corresponded to eight life domains: Income, Material Wellbeing, Employment, Education, Health, Housing, Safety, and Connectedness.

Multiple disadvantage was defined as being disadvantaged in three or more life domains.[29] This chapter uses the original measure of multiple disadvantage, however changes in survey content between the GSS 2014 and 2016 meant that modifications had to be made to the indicators included in the Connectedness domain. Further information on the modifications made to the measure is provided in Appendix 3.

Unit of analysis

The 2015 Families and Whānau Status Report (Superu, 2015) introduced a six-class family type framework that could be used for defining different kinds of family structure. This family type framework includes two sole parent family types: sole parents with at least one child under the age of 18, and sole parents with all children 18 or older. In the present study, we have focused on sole parents with children under the age of 18.

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29 For further information on the development of this measure, see Superu (2017), pages 10-15.

The GSS does not provide information on multi-household and within-household parenting and caregiving arrangements, such as shared custody. The sole parents in our sample are therefore likely to be a mix of parents who care for their children on their own full-time, and parents who share custody with other parents or caregivers living in other households, and parents who share caregiving with other members of their own household.

Measuring family ethnicity

Family ethnicity was determined using the self-identified ethnic grouping of all family members rather than just the ethnic grouping of the respondent. For example, if one family member identified as Asian and another as Pacific, then the respondent would be included in the results for both Asian and Pacific families.

This approach has been used in previous Superu research assessing wellbeing by family ethnicity (Superu, 2016). See Section 2.3.1 for a full discussion of the measurement of family ethnicity, however it is important to note that measuring family ethnicity is complex and results should therefore be interpreted with caution.

Results

Some groups of sole parents are more likely to experience multiple disadvantage than others

To answer whether certain groups of sole parents were more likely to be disadvantaged than others, we began by examining the characteristics of sole parents who faced disadvantages in multiple life domains. The characteristics we assessed included:

• current age of sole parent

• gender of sole parent

• family ethnicity

• number of children in the family

• age of the youngest child in the family.

Age of the parent is a key factor associated with experiencing multiple disadvantage

One of the measures we used to identify groups of sole parents that were disproportionately disadvantaged was the ratio of disadvantage rates (RR).

The RR value compares the proportion of sole parents facing multiple disadvantage in a sub-group (for example, sole parents under the age of 30), with the proportion facing multiple disadvantage in a reference group (for example, sole parents aged 40-49). This tells you whether experiencing multiple disadvantage is more or less likely in the first sub-group compared with the reference group. The RR can be interpreted as follows:

• An RR of 1 means that there is no difference in the prevalence of multiple disadvantage in a given sub-group of sole parents compared with the reference group.

• An RR lower than 1 indicates that multiple disadvantage is less prevalent in a given sole parent sub-group than in the reference group (that is, that the sub-group has a lower likelihood of facing disadvantage).

• An RR greater than 1 indicates that multiple disadvantage is more prevalent in a given sole parent sub-group than in the reference group (that is, that the sub-group has a greater likelihood of facing disadvantage).

Table 13 shows the proportion of each sub-group in the total sole parent population, the proportion of each sub-group experiencing multiple disadvantage, and the RR values for each sub-group. The reference group for the RR values is the sub-group with the lowest prevalence of multiple disadvantage within each characteristic assessed.

The figures in Table 13 tell us that certain groups of sole parents are more likely to face multiple disadvantage. Namely, sole parents who are younger, have young children, belong to a Māori or Pacific family, are female, or have more than three children, are more likely to experience multiple disadvantage.[30]

Additionally, the RR values tell us how large these differences in likelihood are. We can see that RR values are largest for sub-groups based on sole parent age and child age. For example, sole parents under the age of 30 have an RR of 1.83, which can be interpreted as meaning that sole parents under the age of 30 are 83 percent more likely to experience multiple disadvantage than sole parents aged between 40 and 49. This indicates that age is associated with the greatest changes in likelihood of facing multiple disadvantage, more so than family ethnicity, parent gender, and number of children.

TABLE
13

Proportion and likelihood of sole parents facing multiple disadvantage

Source: Combined 2014 and 2016 General Social Survey iterations

Characteristics		Total	Facing multiple disadvantage		
		Percent	*Percent*	*95% CI*[31]	*RR*
Total sole parents		100	46.7	42.8-50.6	
Age of sole parent	Under 30	17.9	69.6	60.9-78.3	1.90
	30 – 39	26.5	51.2	45.3-57.1	1.40
	40 – 49 (reference group)	34.3	36.6	30.4-42.8	**1.00**
	50 and over	21.3	38.0	29.8-46.0	1.04
Age of youngest child	0 to 4 years	26.1	62.8	56.3-69.3	2.00
	5 to 12 years	42.4	49.0	42.6-55.4	1.56
	13 to 17 years (reference group)	31.4	31.4	25.5-37.3	**1.00**
Ethnicity*	Māori	43.3	54.9	49.7-60.1	1.30
	Pacific	16.6	60.2	51.0-69.4	1.43
	Asian	8.2	43.3	32.0-54.6	1.03
	European (reference group)	72.2	42.2	37.5-46.9	**1.00**
Gender of sole parent	Male (reference group)	14.0	35.5	25.9-45.1	**1.00**
	Female	86.0	48.5	44.2-52.8	1.36
Number of children	One child (reference group)	38.1	42.3	35.6-49.0	**1.00**
	Two children	34.4	46.8	40.9-52.7	1.11
	Three or more children	27.5	52.6	44.5-60.7	1.24

*Note: Proportions may add to more than 100 because families can identify with multiple ethnicities

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30 Note that the differences in proportions experiencing multiple disadvantage based on family ethnicity, gender or number of children are mostly not statistically significant, although this could be because of small sample size.

31 The 95 percent confidence interval (CI) means that we can be 95 percent certain that the true proportion of sole parents experiencing multiple disadvantage falls between the two values shown. This is used to account for the fact that our sample might not be representative of all sole parents in New Zealand. Where the CIs overlap for two different groups, this means that the differences in proportions experiencing disadvantage are not statistically significant between those two groups at the $p<.05$ level.

Having children at a younger age is associated with higher likelihood of experiencing multiple disadvantage

Previous literature has found that women who have their first child when they are young have significantly poorer socioeconomic outcomes than women who have their children later in life (Boden, Fergusson, & John Horwood, 2008; Bradbury, 2006; Budig & Hodges, 2010; Gibb, Fergusson, Horwood, & Boden, 2015).

There are several reasons why having a first child at a younger age may increase risk of facing disadvantages later in life, including negative impacts on the ability of parents to gain education and employment (Flynn & Harris, 2015; OECD, 2011). It is therefore possible that the higher rates of disadvantage found for younger sole parents in our study is partially related to the age at which they first gave birth, rather than their current age.

To identify whether the age at first birth is an important factor in rates of multiple disadvantage, we looked at whether rates of disadvantage were higher for sole parents who had their first child younger. Results from this analysis are shown in Table 14.

TABLE

14

Proportion of sole parents facing multiple disadvantage, by age at the birth of first child

Source: General Social Survey 2014 linked to the Integrated Data Infrastructure

		All sole parents	Facing multiple disadvantage		
		Percent	*Percent*	*95% CI*	*RR*
All sole parents		100	46.7	42.8-50.6	
Age at birth of first child	Under 20	20.7	84.0	74.1-93.9	2.30
	20-24	32.1	68.8	59.1-78.5	1.88
	25-35 (reference group)	37.3	36.6	25.4-47.8	**1.00**
	35 and over	9.9	44.2	20.9-67.6	1.21

Our results show that the likelihood of experiencing multiple disadvantage increases significantly for sole parents who were below 25 years old when they had their first child.

Sole parents who had their first child at the age of 20 were nearly two and a half times as likely to experience disadvantage than sole parents who had their first child aged 25 to 35. The size of this effect is notable, with one in five sole parents having their children under the age of 20, and 84 percent of those parents experiencing multiple disadvantage.

Higher rates of disadvantage were also found for sole parents who had their first child aged 35 and above, however these results are difficult to interpret given the small sample size.

This pattern has also been found in the *Growing Up in New Zealand* (GUINZ) cohort, the Christchurch Health and Development cohort, and other New Zealand-based research (Boden et al., 2008; Centre for Social Research and Evaluation/Te Pokapū Rangahau Arotake Hapori, 2010b; Morton et al., 2014, 2015).

Also, results from the GUINZ study have shown that risk factors and disadvantages often do not occur in isolation for teenage mothers, with disadvantages instead tending to cluster together (Morton et al., 2015). This suggests that extra support and resources need to be provided for young parents so that they can build resilience against the difficulties they may face during parenthood.

In particular, the GUINZ researchers note that this support needs to address multiple disadvantages at once (that is, "wrap-around" support), rather than just targeting individual risk factors or disadvantages (Morton et al., 2015). This addresses the complexity and number of disadvantages often faced by younger parents.

Do the types of disadvantage faced vary across different groups of sole parents?

To answer the question whether the types of disadvantage faced by sole parents vary across sub-groups, we looked at the proportion of sole parents facing disadvantage in each of the eight life domains covered in the multiple disadvantage measure.

Figure 9 shows the proportion of sole parents facing multiple disadvantage in each domain by age group. Each row of bubbles represents a different age group (with total sole parents represented in the top row), and each column of bubbles refers to a life domain, from Income on the left to Safety on the right. The size and colour of the bubbles reflect the proportion of sole parents within that age group who were disadvantaged in that particular domain; the larger and darker the bubble, the greater the proportion of sole parents who are facing disadvantage in that age group and domain.

Figure 9 _ Proportion of sole parents facing multiple disadvantage that are disadvantaged in particular domains, by age

	Income	Housing	Material wellbeing	Health	Education	Employment	Connections	Safety
Total	77	65	58	57	52	47	37	27
Under 30	70	62	70	51	51	54	44	28
30 to 39	86	60	60	53	47	42	39	29
40 to 49	72	70	51	66	50	41	35	25
50+	83	68	45	60	64	52	28	26
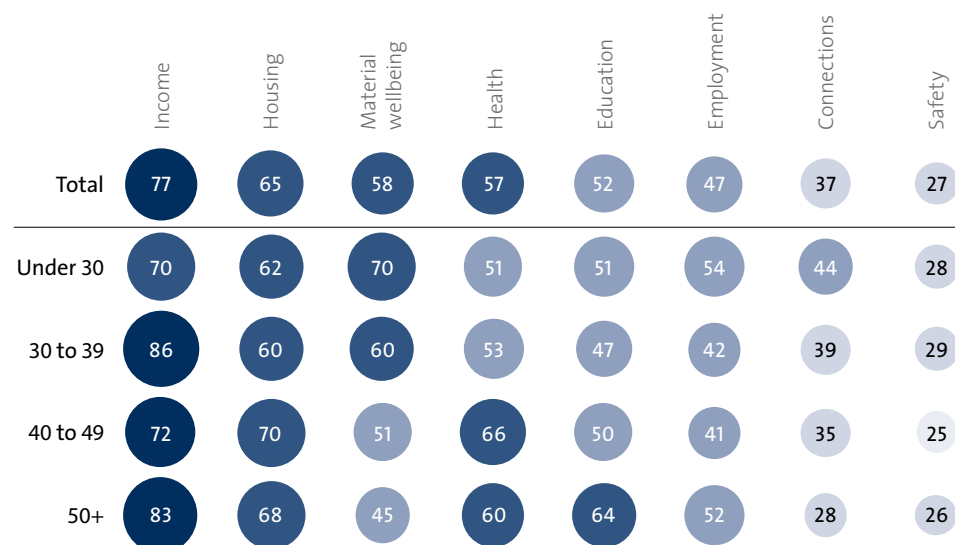
Source: Combined 2014 and 2016 General Social Survey iterations

Overall, the common types of disadvantage faced by sole parents followed similar patterns. Low income was the most common disadvantage for sole parents, followed by disadvantage in Housing. Nearly four out of five sole parents facing multiple disadvantage had a low income, and nearly two-thirds were facing problems with their housing condition and/or overcrowding. Disadvantages in Connectedness and Safety were the least common issues for sole parents.

Looking down the columns of bubbles we can see that there are some differences in the prevalence of different types of disadvantage for different groups of sole parents. Notably, sole parents aged under 40 had higher rates of disadvantage in Material Wellbeing than sole parents over the age of 40. This indicates that older sole parents may have additional resources they are able to draw upon to lessen the effect of low income on their standard of living.

Additionally, sole parents under the age of 30 had higher rates of disadvantage in Connectedness than other sole parents. This means that young sole parents are more likely to lack supportive social networks that can help them when they are facing challenges. This is perhaps reflective of a stigma towards young sole mothers that has been identified in previous New Zealand research (Collins, 2010).

Future research directions

These results further our understanding of the kinds of disadvantage faced by sole parents and their children, and the characteristics of sole parent families that are indicative of higher rates of disadvantage.

These findings provide valuable direction for further work on providing support to one of the most vulnerable populations in New Zealand and in understanding the complex relationship between family structure and disadvantage.

Further investigation into age at first birth

The current research suggests that the parent's age at first birth may be a key factor in determining levels of disadvantage among sole parent families. Further studies are needed to confirm this, and to provide a deeper understanding of the mechanisms sitting behind this relationship.

Transience and/or fluctuations in disadvantage

Some types of disadvantage are often transient, with families shifting in and out of disadvantage because of changes in personal circumstances (for example, separation or losing a job) or because of environmental changes, such as shifts in government policies.

Conversely, other kinds of disadvantage are more stable over time, such as having no qualifications or being unemployed. The current research relies on cross-sectional survey data, so we are unable to shed light on how consistent disadvantage over an extended period of time (or fluctuations in and out of disadvantage) impacts on the wellbeing of families.

It is important that future research investigates this temporal aspect of multiple disadvantage so that we can most effectively support chronically disadvantaged families. Longitudinal sources of information (for example, panel surveys or cohort studies) are required for this research to be conducted.

Assessing protective factors

The current research has largely focused on identifying the most vulnerable groups of sole parent families so that we might better our understanding of the kinds of families requiring external support. However, it is equally important to understand how resilience can be developed among these populations, that is, bettering our understanding of families who have good outcomes despite facing multiple disadvantages.

Understanding how these families flourish despite their vulnerability could provide useful insights into how all sole parent families are best supported.

Identifying causal links between family structure and multiple disadvantage

It is not clear which (if any) factors related to family structure are causally related to multiple disadvantage.

The current research provides a picture only of associations between various characteristics and factors to multiple disadvantage, however it is possible that there are separate factors altogether that are causing both the sole parenthood and the poor outcomes for families (called confounding variables).

Developing a clear understanding of the relationship between sole parenthood and multiple disadvantage would also provide a clearer picture of where we are best able to provide support to prevent adverse outcomes later in life. Again, longitudinal data is required to draw reliable inferences about the causes of multiple disadvantage.

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03

Whānau

3.1 Introduction: Growing the evidence base for whānau wellbeing

At the outset of the Families and Whānau work programme in 2013, we found there was a lack of quantitative whānau wellbeing data. The first five Families and Whānau Status Reports each presented new quantitative analyses on whānau wellbeing, drawn from Te Kupenga.

This year, we present three whānau wellbeing sections. The first two explore housing from a Māori perspective through two quite distinct evidence bases. The first section draws on **contextual evidence** to provide an overview of the housing history and circumstances for whānau. The second section provides **statistical evidence** about Māori views of their housing circumstances, and its relevance to whānau wellbeing.

The third section draws on **experiential evidence** presented in the formative evaluation of E Tū Whānau. This section maps the E Tū Whānau outcomes to the Whānau Rangatiratanga Framework to better explore the interplay between whānau capabilities and outcomes for those whānau engaged with E Tū Whānau.

Defining 'whānau'

The term 'whānau' has been the focus of many research reports and social commentaries. The traditional meaning of the word is 'to give birth'. Durie (1994) described many dimensions of whānau that include not only whānau as kin, but also as friends, neighbours, and whānau as shareholders-in-common. This was not to diminish the traditional meaning of whānau. His aim was to illustrate the significance of the concept that transcended policies designed to break down traditional Māori society, by transplanting it into the 'new role' in which modern whānau lived.

Lawson-Te Aho (2010) noted that the literature identifies 'two pre-eminent models of whānau'. These are whakapapa (kinship) and kaupapa (purpose driven) whānau. She said that whakapapa whānau are the more permanent and culturally authentic form of whānau. Both models contribute to building and strengthening bonds of kinship and give effect to the collective practices of whanaungatanga (whānau support).

Statistics New Zealand developed Te Kupenga to provide statistical information about whānau size, identity and wellbeing (Tibble and Ussher, 2013). Te Kupenga is the only dataset to provide nationally representative subjective and objective measures on whānau wellbeing. Since 2015, the Families and Whānau Status Report series has presented analysis of this data.

Last year, Superu and Te Puni Kōkiri partnered to host the two-day research forum *Te Ritorito 2017, Towards whānau, hapū and iwi wellbeing*. A recurring theme of the forum was that work on whānau, hapū, iwi and Māori wellbeing is grounded in an intergenerational legacy of seminal Kaupapa Māori research and development (Superu, 2017).

The whānau wellbeing work programme draws on this work as a platform to understand and contextualise current and existing trends, create new opportunities and map future journeys in whānau, hapū, iwi and Māori research. The purpose of this is to identify evidence and statistics about whānau that Māori say matters, interpret statistics from a Māori perspective, and to show the need for change in statistics about Māori.

3.2_ Ka mua, ka muri: 'Walking backwards into the future' – An overview of Māori housing and wellbeing

This whakataukī speaks to moving forward, by never losing sight of the lessons of the past. While the future is as yet unseen, the past provides insights, signposts and experiences that inform our future direction.

This section presents an overview of the context and experiences of housing for Māori as part of significant social, cultural, economic and political changes. These led to shifts in research and policies about Māori housing and wellbeing. The overview explores key drivers for change from the 1970s to the 1990s. We also look at the shift from the earlier 'Closing the Gaps/Reducing Inequalities' approach to one of whānau wellbeing now. This new discourse challenges research and policy development to be more relevant to Māori aspirations.

Three broad areas frame Māori housing in this overview:

- Te Tiriti o Waitangi and the significance of kāinga within te ao Māori
- The historical impacts of the New Zealand Wars followed by the use of housing as a means to assimilate Māori into European life
- Whanaungatanga, whānau wellbeing and the 'kāinga home-space'.

> The kāinga was of such significance in Māori society, that it was specifically identified as a taonga to be protected under Article II of Te Tiriti o Waitangi.

The kāinga[32] was of such significance in Māori society, that it was specifically identified as a taonga to be protected under Article II of Te Tiriti o Waitangi. Traditionally, the places where whānau kept alive the ancestral fires of occupation that signify hapū and tribal territories, the existence of kāinga is inextricably interwoven with whakapapa, identity and land.

Just as 'whānau' is not the same as 'family'; 'kāinga' cannot be fully realised through the concept of 'housing'. Therefore policies that focus on 'Māori housing' need to be re-framed, to incorporate the many 'diverse Māori realities' (Durie, 1995) of whānau and of kāinga in today's world.

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32 Home, village.

Historical approaches and responses to Māori 'Housing'

Te Tiriti o Waitangi recognises the significance of kāinga within te ao Māori

In 1930 shortly before her death, a remarkable author by the name of Makeriti finished writing 'Makeriti' The Old-Time Māori'. The manuscript, which was to be presented for a degree at Oxford University, was posthumously published in 1938. It is known as 'the first comprehensive account of Māori life by a Māori scholar' (Te Awekotuku, 1986). Known also as Guide Rangi Papakura, Makeriti was born in 1872 in the last days of the New Zealand Wars, her life spanning a tumultuous and fast-moving period in Māori society.

Of the kāinga, Makeriti wrote:

The word kāinga means literally village, but to the Māori it means home and that is the English word that best describes it for me' (Makereti, 1986, p.35).

> In the days that are gone, the Māori built his kāinga on high land, for a good look out and for protection. He chose a place where there was a spring, either in or near by the place, or a stream or river. Such a choice of site made the Māori a healthy people, for the air was pure and the kāinga easy to keep clean...Captain Cook was greatly surprised at their progress and speaks of it in his journal, to the detriment of the European cities of that period (p.284).

> Each group had its own area which would be fenced off, containing their houses 'two three or more. These houses would be used for sleeping and would be anywhere from 12 ft long by 6-7ft wide, to 20-35 ft long by 10-2 ft wide. All houses would face the rising sun and the marae'. (p.285).

Makeriti stated that a kāinga would be occupied by a hapū made up of several family groups. A whānau also had two to three or more kāinga and would move between them:

> The Māori did not live in one kāinga all the year round, if nothing of importance was taking place, many whānau would leave the kāinga and go several miles away to another kāinga which belonged to them...the Māori had many kāinga a few miles apart which he occupied at different times, but he would have had one special kāinga where he had well-built houses. At these other kāinga, he might have had rougher houses. My old Koroua Maihi te Kakauparoaoa, had a whare where he lived at Whakarewarewa in the thermal district, and six miles away at Parekarangi he had another whare and ten or twelve miles away at Motutawa Island in Rotokakahi Lake he had another kāinga, with temporary whare in other parts.

One often reads in European books that a kāinga was found deserted. The writers did not realise that the Māori moves about from kāinga to kāinga and probably what they came upon was one of these kāinga ... (Makereti, 1986, p.287).

Kāinga had a unique role in how whānau and hapū collaborated to harvest and prepare kai. In traditional society, the hapū and iwi that held authority over the food source also held significant political and economic control. Consequently, the relationship of the kāinga to the food source was very much about supporting the political and economic authority of the hapū and iwi in their territories.

Kāinga ultimately supported a way of life that was based primarily on whakapapa, whanaungatanga, and kin-based relationships. Whakapapa identifies a whānau, hapū or iwi as tangata whenua tūturu of a rohe, of waahi tapu, mana whenua and mana moana.

Mead (2003) in discussing 'attributes of identity' states that whakapapa provides identity as Māori, noting that whakapapa is "affected by the ahi kaa principle, namely that 'one has to be located in the right place' and be seen to enjoy the full benefits of whakapapa …'" (Mead, 2003, pps.42-43).

Identity therefore is not a personal and individual concept. It is significantly anchored through whakapapa to the whenua, the tribal rohe, and it encompasses the relationships of the wider whānau, hapū and iwi.

> *Whakapapa is the genealogical descent of all living things from the gods to the present time. The meaning of whakapapa is 'to lay one thing upon another' as for example, to lay one generation upon another. Everything has a whakapapa: birds, fish, animals, trees, and every other living thing: soil, rocks and mountains also have a whakapapa (Barlow, 1996 p. 173).*

> *It is through genealogy that kinship and economic ties are cemented and that the mana or power of a chief is inherited… Whakapapa is one of the most prized forms of knowledge and great efforts are made to preserve it (Mead, 2003 p.174).*

In 1840, kāinga were recognised as so significant to the Māori Treaty partner that they were protected under the Treaty of Waitangi. Article II in Te Tiriti o Waitangi (the te reo Māori version) guarantees *tino rangatiratanga o o ratou wenua o ratou kainga me o ratou taonga katoa*.[33] In other words, lands, villages, homes, and treasures, both physical and non-physical, were to be actively protected. Unfortunately history shows that this was far from the case.

"An enormous crime" – land confiscation

While kāinga was the reality for early Māori, what followed as a result of the New Zealand Wars was large-scale confiscation of land, and therefore the destruction of kāinga. This was highlighted by James Fitzgerald, who was a member of the New Zealand Parliament at various times from 1853 to 1867. He spoke out against the New Zealand Wars, calling the confiscation of Māori land an "enormous crime". He also argued that the Settlements Act 1863 was contrary to the Treaty of Waitangi "which distinctly guaranteed and pledged the faith of the Crown that the lands of the natives shall not be taken from them except by the ordinary process of law – that is, taken within the meaning of the Treaty." By 1869, Donald McLean stated that "Members of Cabinet are agreed that the confiscation policy as a whole has been an expensive mistake" (Boast R. In Boast and Hill, 2009). The government then set up the Native Land Court which was to remove still more land from Māori.

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33   Tino rangatiratanga over lands, villages or homes and treasures both physical and non-physical.

The Native Land Court becomes 'Te Kooti Tango Whenua – The Land-Taking Court'

The Native Land Court was called by Māori of the day 'Te Kooti Tango Whenua – The Land Taking Court' (Williams, 1999). Established only a year after the passing of the 1863 New Zealand Settlements Act, it tended to encourage Māori land sales. Whānau often had to travel hundreds of miles from their papakāinga to larger towns and cities and would wait for weeks or months for a court hearing in often unhealthy and impoverished conditions. Often a hapū had to choose between going to court to retain their ancestral land, or to plant food crops, while running the risk of near-starvation.

> *In 1909 the vast majority of Māori people were utterly marginalised. Most were restricted to trying to eke out a subsistence living on the tiny remnant of non-leased native freehold land which was not designated as 'available for settlement'…the cultural asset of land, as a taonga tuku iho of special significance to every hapū and whānau, had been almost completely stripped away in just forty-five years of Native Land Court activities (Williams, 1999, p. 60).*

Parliament's responsibility was 'to smooth the pillow of a dying race'

In the 1860s, it was believed that the Māori race would become extinct. This position, combined with a rapid decline in the Māori population as well as early census records that were at best a mere estimate of the Māori population, created powerful drivers that established the assimilation policy rationale. These were to have far-reaching effects for the next century (Royal Commission on Social Policy, Vol II 1988).

Māori land is integral to Māori wellbeing, identity and survival

Mauri Ora, a highly significant contribution towards understanding Māori mental health by eminent Māori scholar and health researcher Mason Durie (2001), described the significance of Māori land to Māori wellbeing, identity and survival. He noted that the rapid decline in Māori ownership was only matched by the rapid decline in the Māori population, to less than 42,000 in 1896 (Durie, 2001, p.51).

He also said that the 'greatest blow to the organisation of Māori knowledge and understanding' occurred when the Tohunga Suppression Act was passed in 1907. The government did not want the continual development, practice and transmission of Māori knowledge and expertise from a 'dying' Māori world view that was deemed inferior to Western knowledge. The Act was not repealed until 1962 by the Māori Community Development Act.

'Māori will have their own doctors, lawyers, and clergymen'

At Te Aute College, the Anglican Māori boys' church boarding school, the principal John Thornton challenged education policy for Māori, by providing his students with the same curriculum as that of an English grammar school.

From Te Aute College a generation of young Māori leaders evolved. The Young Māori Party was formed in 1897 by Māori who had been educated at Te Aute College. They included Sir Apirana Ngata, Rev Reweti Kohere and Tutere Wi Repa of Ngāti Porou; Sir Te Rangi Hiroa (Peter Buck) of Taranaki; Sir Maui Pomare of Te Āti Awa; and Edward Ellison of Ngāi Tahu. All these men became prominent politically, and in their professions (Barrington & Beaglehole, 1974).

Maui Pomare, fresh from medical training in America, returned to New Zealand in 1900. He found Māori living conditions dire. An outbreak of the bubonic plague in Australia had led Joseph Ward as Minister of Public Health to pass the Bubonic Plague Prevention Act 1900. This was followed by the Public Health Act. Pomare, as the Māori Health Officer in the Department of Health, was therefore very concerned with the housing conditions he saw in Auckland, Wellington, Christchurch and in many Māori villages. This led to the demolishing of over 1,300 deserted whare. He was supported in this by a number of Māori leaders (Butterworth, 1996).

Regeneration of the Māori population

The Census of 1896 showed the Māori population at its lowest ebb of 39,854. This period followed the land wars, raupatu, and long exposure to European diseases. The period from the early 1900s to World War II was described by Pool (2013) as 'recuperation in isolation' where for forty odd years, Māori lived in the rural north and north-east of the North Island and some isolated pockets elsewhere, such as the Whanganui River (Pool, 2013 p.105).

The Māori contribution to two world wars significantly affected population revival. For example, 15,700 Māori men volunteered for World War II from a population of under 100,000. The 28th Māori Battalion casualties alone were 2,628 out of 3,600 members, almost 50 percent more than the New Zealand average.[34] But even these losses did not stop the population revival.

Census information shows how much the Māori population has grown in the past century. Table 15 shows how the Māori population has increased since 1901.

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34   https://teara.govt.nz/en/nga-pakanga-ki-tawahi-maori-and-overseas-wars/page-5

TABLE
15

Māori population:
censuses
1901 – 2013

Census	Māori population	Increase on previous Census
1901	45,549	3,435
1906	50,310	4,761
1911	52,722	2,412
1916	52,998	276
1921	56,988	3,990
1926	69,780	*not applicable*
1936	94,053	24,273
1945	115,647	21,594
1951	134,097	18,450
1956	162,258	28,161
1961	201,159	38,901
1966	249,237	48,078
1971	289,887	40,650
1976	356,574	66,687
1981	385,224	28,650
1986	405,309	20,085
1991	435,618	30,309
1996	524,034	88,416
2001	527,067	3,033
2006	566,496	39,429
2013	599,862	33,366

Adapted from Total and Māori Populations, Table 1, Statistics New Zealand [Statistics New Zealand: http://archive.stats.govt.nz/Census/2013-census/profile-and-summary-reports/century-censuses-population.aspx. Retrieved 15 April 2018].

The turnaround in early population estimates and census data was neither anticipated nor planned for. So, despite the continuing growth of the Māori population, the policy of assimilation remained until the 1970s.

Assimilation is promoted through land legislation and housing policies

Throughout the nineteenth and twentieth centuries, the government's policies, practices and legislation for Māori housing were shaped by powerful demographic, cultural, social, economic and political drivers. Collectively these played a formative role in shaping the social, cultural and economic lives of whānau. Their impact can still be seen today:

> In today's circumstances, a weakness of whānau support is the result of the failure of generations of inappropriate mono-cultural-based housing and town-community planning policies, implementation and evaluation programmes. Such programmes do not allow for the traditional structure of whānau and whare, i.e. household support, and the kāinga, within which reside households ... Today's Māori households are without the institution of kāinga (Henare, 2014, pps 44-46).

From the New Zealand Wars, the 1863 New Zealand Settlements Act, the Native Townships Act 1895, the Public Works Acts to the 1953 Town and Country Planning Act, Māori communities were consistently uprooted and squeezed into urban and semi-rural areas. There was less and less land available for Māori communities to be sustainable.

The 1895 Native Townships Act enabled the Crown to acquire extensive tracts of Māori land across the North Island, using the native forests for the building of state housing. However, 'Māori were obstructed from accessing similar materials to build their own Māori-led settlements' (Palmer, 2016 p. 37).

From the 1920s, entire new villages were created for hydro schemes and forestry through acquisition of Māori land. Yet in many cases, the owners of the lands were pushed to the side and barred from using the pristine facilities of these new villages. In other cases they were not permitted to use the front doors of the village shops. Māori were also obstructed from occupying state houses by officials "on the grounds that their presence would allegedly lower the tone of state housing communities and because few could afford the rent" (Palmer, 2016 p. 38).

Early policy responses tended to give very mixed messages and lacked overall focus and cohesion to support housing outcomes for Māori. However, there is evidence that in 1929, as part of Apirana Ngata's Land Development Scheme, the government recognised the importance of housing on Māori land to support and sustain Māori development aspirations.

This scheme showed foresight. It linked Māori housing to economic and social development opportunities on Māori land for the wellbeing of whānau, hapū, marae, iwi and Māori communities. However, following the loss of Ngata as Native Minister, the alienation of Māori from their land continued. There was no consolidated response to address the significant impact of alienation of land from whānau and Māori communities as a whole.

> *Ngata, in fact, was not so much interested in land as in community development ...Land development and Māoritanga were inseparably linked in Ngata's mind (Butterworth, 1972, p.176).*

The 1935 Native Housing Act provided for building, purchasing and repairs of housing for Māori. Under this Act, the Department of Māori Affairs supported many whānau to access Māori Affairs loans to build on Māori land. In 1936, around 71 percent of Māori houses were 'shacks or overcrowded'. By 1951, this had fallen to 32 percent of Māori houses' (Butterworth, 1972, p.181).

It was not until 1948 that Māori were brought into the state housing system. This occurred largely because of migration to urban areas. However there was minimal take up of applications for state houses. The following year saw the Department of Māori Affairs promote home ownership (Williams, 2015).

The Māori population had been moving to urban areas long before the 1960s

The advent of World War II brought greater opportunities for Māori in employment, much of it industrialised. In 1945, 26 percent of the Māori population lived in the towns and cities. By 1956 this had increased to 35 percent. Mass migration continued into the early 1960s. The urban population grew to 62 percent in 1966, and reached nearly 80 percent by 1986, leaving many rural villages depopulated.

The shift to urban areas, coupled with the realisation of the accuracy of Sir Apirana Ngata's prediction that there is not enough Māori land to sustain Māori, meant urbanisation of the Māori population was going to increase substantially. This also meant a change in policy focus for Māori, as previous governments had focused on land and rural policies.

Princess Te Puea and the Māori Women's Welfare League highlighted Māori housing

The plight of Māori housing was of great concern to Princess Te Puea. In both her roles with the Kingitanga and as the first patron of the Māori Women's Welfare League, Te Puea highlighted the plight of Māori housing for whānau. In this quest she was joined by League President, Whina Cooper. Formed in 1951, the League was concerned with increased social problems.

> As the urbanisation process increased, Māori faced a number of social problems adapting to their new lifestyle. There were no structures in place to advise and assist those whānau who had moved away from their papakāinga (homelands). Their challenges included finding suitable housing, adapting to a cash economy, coping with poor health and racism (Māori Women's Welfare League, 2017).

The Māori Women's Welfare League conducted the first survey of Māori housing in Auckland. The League found 551 households required re-housing, with 368 classed as urgent and 32 family units living in condemned houses. Most participants had not previously applied for state housing because of their concerns about living in all-Pākehā communities (Te Ao Hou, 1952 pps.53-54).

The impact of the survey led the Auckland City Council and the Department of Māori Affairs and Housing to increase the building of state housing for Māori. At the same time, Māori were restricted from building on their own land through the 1953 Town and Country Planning Act. This Act only granted permission if the applicant was a rural worker or had enough land to be self-sufficient (that is, 5–10 acres). This Act was described as 'the tipping point' that further denied Māori their tūrangawaewae, breaking down traditional whānau relationships and making many homeless (Brown, in Peters et al 2016 p.347). With the erosion of Māori land ownership and the economic base of kāinga, Māori moved to the cities.

Another factor in the urbanisation of Māori was not migration, but that ancestral lands all over New Zealand were engulfed by the growth of towns and cities. One example is Te Aro Pā in central Wellington. Its people were displaced in the nineteenth century and its many kāinga and acres of gardens now lie beneath asphalt and buildings. The effect of this displacement was as destructive as the pressures that led to urban migration.

In 1961, the controversial Hunn Report was released by the Department of Māori Affairs

The terms of reference of the Hunn Report were to 'take a new look at Māori affairs policy at every angle and to report on the pace and nature of what is being done for Māori (Hunn, 1961, p 78). The report published available data on Māori rural and urban housing, focusing on overcrowding and sub-standard houses. It was estimated that 30 percent of the Māori people lived in grossly over-crowded conditions mainly in Northland, Waikato, Bay of Plenty and East Coast, and urban Auckland.

The report advocated assimilation, thinly disguised as integration. The Hunn report promoted pepper-potting and advocated the values of the 'modern house' to Māori because it 'is the quickest and shortest way of integrating the two species of New Zealander' (Hunn, 1961, p. 14).

Housing for Māori was 'peppered' throughout Pākehā communities

Following World War II, home ownership was rapidly promoted as the basis of citizenship to both Māori and Pākehā. Throughout the 1950s, the housing policy for the Department of Māori Affairs was to 'pepper' Māori families throughout Pākehā neighbourhoods. By 1957, this became officially termed the 'pepper-potting policy'. This policy had devastating effects on entire Māori communities (Williams, 2015, p.94).

The 'pepper-potting policy' and its impacts are illustrated in this story:

At Tuwai lived a Ngāti Ruapani ki Waikaremoana land owner who was one of the biggest shareholders at Lake Waikaremoana. His elders had willed him their land shares to hold on behalf of the whānau. Back then, the size of interests did not mean much to him – he was just content to live on his land, grow kai, and return home after a long day's work. He and his wife had 14 children, and he held many different leadership roles at Waikaremoana.

When the whare burnt down, he asked the Department of Māori Affairs for a loan to rebuild the whānau home. However, he was shocked to discover the Department refused the loan on the grounds he was living at Tuwai. Furthermore in spite of the fact he was rebuilding an existing dwelling on ancestral lands, the Wairoa District Council suddenly had all these planning regulations to prevent his building there.

He had to leave Tuwai in order to get a Māori Affairs loan, which he secured over a house in Gisborne. This meant uprooting the 14 children, and leaving behind the rest of the whānau and the small community of Tuwai. In doing so, both his whānau and the community suffered a significant loss. He never really settled after that. He kept moving around and died when he was relatively young.

In death, he finally returned to his land – we made sure of it.[35]

This story was repeated all over New Zealand. It became the unseen cost to whānau and Māori communities and they carry the social, economic, cultural, health and spiritual impacts to this day.

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35 Ngāti Ruapani oral history preparation, Waitangi Tribunal Te Urewera Inquiry: unpublished source.

Despite the pepper-potting policy, large numbers of Māori did end up living next to each other, regardless of different tribal affiliations. Common bonds grew, owing to a 'common language, shared cultural beliefs and practices, similar tastes in food and humour, and often the same socio-economic hardships' (Durie, 2001). Despite the rapidly changing circumstances impacting Māori society, the concept of whānau, while still firmly rooted in whakapapa as the source of Māori life and communities, grew, adapted and continued.

The Hon Justice Joe Williams gave the keynote address to Te Ritorito 2017 (Superu, 2017), the forum that focused on whānau hapū and iwi wellbeing. He spoke of the ongoing resilience of whānau and their determination to 'live whanaungatanga lives' despite the rapid cultural, social and political changes that undermined the significance of whanaungatanga.

Yet despite the removal of the political and legal and economic utility of whanaungatanga, whanaungatanga still lives. That's the extraordinary thing.

> *Yet despite the removal of the political and legal and economic utility of whanaungatanga, whanaungatanga still lives. That's the extraordinary thing. After all of that, yet whanaungatanga still lives, when it is legally, economically and politically redundant and it has been for more than a hundred years… whanaungatanga still lives and has found voice in what I call the third law of Aotearoa New Zealand after 1975 and the passing of the Treaty of Waitangi Act … Whanaungatanga is the great challenge of the post-settlement era.*

Significant change characterised two decades: 1970s-1990s

The earlier assumption that Māori were best served by assimilation was increasingly challenged from the 1970s to the 1990s by a new generation of Māori leadership. They had the benefit of both traditional rural and urban life. In this they were supported by leading Pākehā academics. Writers such as Ritchie, (1963) Firth (1973) and Metge (1978, 1984) provided an intellectual, social and cultural commentary that supported Māori world views. In doing so, they helped to grow an awareness amongst the wider Pākehā community about Māori grievances.

'Not one more acre' – Treaty of Waitangi challenges to Māori land legislation

In the 1970s, key cultural, social, political, economic, environmental and demographic drivers came together creating rapid change that was unique to New Zealand. In September 1975 the Māori Land March, organised by Te Rōpū O Te Matakite and led by Whina Cooper, left Te Hāpua in the Far North, swelling to 5,000 marchers on arrival at Parliament (Ministry for Culture and Heritage, 2018).

Three days before the Māori Land March arrived, the government passed the Treaty of Waitangi Act that established the Waitangi Tribunal. The Act was introduced by Matiu Rata and was to begin 'immediately'. On arrival, the marchers presented the government with a petition. It called for an end to mono-cultural land laws which excluded Māori cultural values and asked for the ability to establish legitimate communal ownership of land within iwi.

This was followed two years later by the 506-day occupation at Takaparawhau (Bastion Point) by Ngāti Whātua. They were protesting the sale of ancestral land to developers for high-cost housing.

The 506-day Occupation at Takaparawhau [Bastion Point]

On January 5, 1977, a small group of Māori pitched tents on top of a hill. It was the first day of what would become the 506-day occupation of Bastion Point. Their message was simple: "Bastion Point is Māori land". Under the leadership of brothers Joe and Grant Hawke and Jack and Roger Rameka, Ngāti Whātua o Ōrākei set about to stop Auckland's Bastion Point (Takaparawhau) from being used for a housing subdivision (Martin, 2017).

Bastion Point became military property, but when the army relinquished it in 1941, the Crown gave it to the council for use as a reserve. In the 1940s a sewer was built in front of the village, pumping sewerage into the sea near the iwi's mahinga kai. Ngāti Whātua were not permitted to connect to the sewer and were denied construction permits to improve their housing.

In 1952 the seeds for the Bastion Point protest were sown when the council used Queen Elizabeth II's visit to destroy the settlement – the people were evicted and the marae and houses were burnt. Only the chapel and cemetery remained. About 27 years later, the Ngāti Whātua people learnt the council planned on building luxury houses on the ancestral land at Bastion Point. Fed up, Hawke and his group moved in.

I was 10 years of age when the government burnt our marae down. I saw 30 homes being fire bombed by flame throwers, he said in 2011. *I saw my people running into the burning villages, their burning homes, to retrieve their personal items.* Mr Hawke said the proposed land sale was seen as a threat by many. *They were going to do the same thing they did in the 1950s.*

"That's the reason we had to make a stand" (Jackman, 2016).

The impetus for change from the 1970s continued into the 1980s. The first Kōhanga Reo opened in 1982. The Hui Taumata was held in 1984, with Māori leadership developing plans for a Decade of Māori Economic Development.

In 1982, Kara Puketapu, as Secretary of Māori Affairs, released Tu Tangata/Reform from Within. The report challenged government decision-making processes and delivery to Māori. It called for government departments to change in order to support the culture and lifestyle of their client community and to shift decision-making within the community itself (Puketapu, 1982).

The 1980s were characterised by another very different type of change. Rapid economic changes led to low economic growth, rising oil prices, high inflation and rising unemployment. Domestic subsidies and price controls were removed, and there was significant state sector restructuring (Reddell and Sleeman, 2008). The cumulative effect of these was that the Māori unemployment rate peaked at 26 percent in 1991-92 (Department of Labour, 2004, p.11).

In 1988, while very much consumed with economic restructuring, there was a significant focus by the government on the Māori Treaty partner. For example four key reports were released that year:

- Te Urupare Rangapu. This proposed the restructure of the Department of Māori Affairs.

- The Review of Ethnic Statistics. This included an overhaul of ethnic classifications.

- The Royal Commission Report on Social Policy [Vol II] and the Treaty of Waitangi.

- Pūāo-te-ata-tū, the Report of the Ministerial Advisory Committee on a Māori perspective for the Department of Social Welfare. The report recommended a bicultural and partnership approach to working with Māori, sharing responsibility decision-making with Māori, and that there be greater accountability to Māori for meeting these goals.

Collectively these reports framed the government's response to the Māori Treaty partner. Māori became a significant focus of public policy as a raft of reports struggled to come to terms with decades of injustice for Māori; now exacerbated by economic reforms.

Māori rights under the Treaty of Waitangi continued to gain momentum. Proposals to sell state-owned assets before settling Treaty of Waitangi claims became a key focus in the Treaty partnership. The New Zealand Māori Council held that this action would undermine significant national Treaty claims on behalf of all Māori, yet to be settled. The Council also argued that the proposal breached the Treaty clause in the State-Owned Enterprises Act 1986. The Court of Appeal agreed. In 1988, the Government again proposed the sale of state-owned forestry assets. The Court of Appeal recommended negotiations to resolve the dispute. As a consequence, Treaty of Waitangi principles now entered this rapidly changing landscape.

> *Often historians do not draw together these dots about land, culture and protest. It was always about the land. In the rural areas it was about land, while in the cities it was the loss of te reo Māori as people were separated from their kaumātua.*

> ***It is particularly in the home, the whānau, where the language is nurtured. This can only grow with the wider community and whānau all speaking the language; this was not happening in the cities.***

> *When Ngā Tamatoa started it was about the land – land protests started in cities as it was becoming clear to these bright young people that the so called panacea of moving to the cities did not hold what was promised. Already we were seeing rising crime statistics and family dysfunction growing in the cities. What is often missed is that the young leaders of Ngā Tamatoa had grown up around the marae if not the rural areas (Wereta, 2015).*

From Closing the Gaps to Whānau Wellbeing

The decades of change highlighted Māori socio-economic circumstances. In 1998, Te Puni Kōkiri produced the first Closing the Gaps report. The report demonstrated that there were significant Māori and non-Māori disparities across the social sectors. Critics observed that, while Closing the Gaps/Reducing Inequalities was important, it brought about negative impacts on Māori in that the norm to 'measure up to' was Pākehā while Māori remained 'the other' (Mahukia, 2011).

Closing the Gaps/Reducing Inequalities was strongly contrasted by the later move to policies which focused on 'whānau wellbeing'. Whānau wellbeing puts the focus on 'whānau', and on Māori values and aspirations for wellbeing and development as the desired outcomes and goals. Durie said, 'It will be apparent that the usual indicators of socio-economic status such as sickness, school failure, low incomes or deprivation scores are inadequate measures of whānau outcomes' (2006 p. 5).

'It will be apparent that the usual indicators of socio-economic status such as sickness, school failure, low incomes or deprivation scores are inadequate measures of whānau outcomes'

These changes were based on Māori models of health and wellbeing. Models such as Te Wheke (Pere, 1984), Whare Tapa Whā (Durie, 1994), and Ngā Pou Mana (Durie, 1994) emerged, grounded in the significance of whakapapa, whanaungatanga and themes of relationship. At the same time, Kaupapa Māori research frameworks emerged. These grew a new generation of Māori academics (see Pihama, L., Smith, K., Taki, M., & Lee, P. 2004). who championed Kaupapa Māori research and development.

Kaupapa Māori research is:

Research in which the philosophy and practice of being Māori is the norm. Such a position accepts the validity of Māori concepts, values and practices and positions them as central to the whole research enterprise. Taken together Māori epistemology (Māori cultural theory), Māori ontology (Māori cultural practices) and Māori methodology (Māori methods) comprise the Māori worldview (Irwin & Workman, in Tawhai et al 2011, p. 11).

The Taskforce for whānau-centred initiatives

In 2009, the Hon Tariana Turia, Minister for Voluntary and Community Services, set up the Taskforce for Whānau-Centred Initiatives. She established the taskforce 'to develop an evidence-based framework that will lead to strengthened whānau capabilities, an integrated approach to whānau wellbeing with collaboration between state agencies in relation to whānau services' (Taskforce on Whānau-Centred Initiatives, 2010).

The Whānau Ora outcomes framework identifies housing goals

In 2015, the Whānau Ora Outcomes Framework was finalised (Te Puni Kōkiri, 2016). This framework builds on the work of the Taskforce and focuses on short, medium and long-term outcomes required for whānau to achieve their goals. Through the Whānau Ora lens, housing is so much more than provision of a physical dwelling. Housing is now expressed as enabling whānau choice about how they wish to live; cultural, physical and spiritual wellness; and sustainable management of the natural environment.

The framework includes the overall outcome goal: 'Whānau and families are responsible stewards of their living and natural environments'. The Whānau Ora Outcomes Framework positions housing **within this goal**:

TABLE
16

Whānau Ora Outcome Framework Goal: Whānau and families are responsible stewards of their living and natural environments

Short term (1-4 years)	Medium term (5-10 years)	Long-term (11-25 years)
Increased number of whānau accessing services to improve the health of their homes	Whānau access a range of housing options and the support required to pursue those options	Whānau have choices about their living arrangements and in all cases, their living environment is safe, warm and dry
	Whānau are increasingly satisfied with their housing situation	Whānau cultural, physical and spiritual wellness is nurtured by their access to, and engagement with their natural environment
	Whānau increase the use of their land to provide housing sustenance and food for themselves	Whānau lead sustainable management of their natural environment
		Whānau exercise mana whakahaere (authority & control) and mana kaitiaki over their natural environment.

Supporting papakāinga and Māori housing aspirations

The desire to build on whānau or Māori land, reconnecting with tribal lands and whānau ties, is a constant theme running through most Māori housing developments on whānau or Māori land. This is despite the actions of 'Te Kooti Tango Whenua' in the nineteenth and early twentieth centuries, and the ongoing legal, economic and technical difficulties for whānau wanting to live on their lands.

> As a model, papakāinga has extraordinary yet largely unrealised potential for the social, cultural, economic and environmental regeneration of Māori communities (Heke, 2017).

The Auditor General's reports into policies to support building on Māori land

In 2011, the Auditor General released a report about the policies which had been designed to support housing on Māori land over an 80-year period. In 2014, the Office released an update on the findings of the 2011 report.

The 2011 report showed that 'despite good intentions', policies designed to support Māori into housing on Māori land were limited in reach. The report concluded that there was a need for a different way of doing things. This would be characterised by:

• a more comprehensive, streamlined and strategic approach to housing on Māori land

• increasing state sector capability

• improved relationship engagement and management with Māori (Office of the Auditor-General, 2011).

The 2014 report described the actions taken in response to the earlier recommendations. It noted that, while the responses were not as fast as many Māori wished, the actions did require that many parties at governmental and local levels work better together. The Ngā Pōtiki story (below) was identified in the 2014 Auditor-General's report as an example of building on relationships. (Further updates of this development can be found in the proceedings of the national Māori Housing Conference 2016.)

It is evident the development of papakāinga housing is a significant aspiration and theme running through this report. A number of whānau, hapū, iwi and/or trusts have developed papakāinga housing. The following two examples of papakāinga development highlight both challenges and opportunities.

Ngā Pōtiki a Tamapahore Trust

Ngā Pōtiki is working on a 50-acre mixed housing development in Papamoa. The project will include 240 house sites. Of this, the Trust will set aside 30 percent for Ngā Pōtiki members. The area has been designated as a Special Housing Area.

Ngā Pōtiki are planning to provide quality, affordable housing for Ngā Pōtiki while also providing for a commercial return on the remaining sites, for release to the general public. They aim to have a tenure mix of affordable rentals, license to occupy and affordable house and land packages.

Ngā Pōtiki has been able to reduce delays and costs and streamline processes for building on Māori land because it has invested resources in building and consolidating relationships with both land trusts and with local authorities through the Western Bay of Plenty Joint Agency Group. This has assisted with amendments to district and regional planning rules to open access to a range of housing development options on Māori land suited to the achievement of local Māori aspirations for social and affordable housing.

Patuone Hoskins Whānau Trust Papakāinga

Located on the Whāngaruru Harbour in Northland, there is no road access and no council provided infrastructure services in terms of sewerage, storm water systems, water reticulation, power supply, and telephone/data. There is also no rubbish collection with all recycling and refuse having to be boated out to Ōhāwini, which is the nearest accessible settlement'.

The block, which is 167ha block, holds a large wetland, regenerating and virgin bush as well as coastal margins. The papakāinga will source water from a spring, supplemented by rainwater tanks. In 2014, there were three existing homes with another ten planned.

Like other papakāinga, this Trust held a very deep connection to the whenua and a strong desire to establish a papakāinga for the growing whānau of 5 children and 11 grandchildren. The whānau drew on mātauranga Māori in their development, not clearing large trees and ensuring designs and materials complimented the natural environment.

The challenges the whānau identified included local government staff being unaware of what a papakāinga was. Furthermore, 'the Coastal Countryside zoning at the time was designed around pastoral farming and allowed for two dwellings per land block (i.e. a farmer and sharemilker) with traditional Māori living patterns not reflected in the district plan in any way.' The development of this papakāinga has become 'an exemplar for building on remote and unserviced sites with few Northland Māori land blocks facing such challenges' (Hoskins, 2016).

Whanaungatanga and the creation of 'kāinga space' for homeless Māori men

While papakāinga housing developments continue to grow, so too does homelessness amongst Māori (Amore, 2016). In conceptualising Māori homelessness, King, Hodgetts, Rua and Te Whetu (2016) note that marae stand as symbols of Indigenous identity and rights, where being Māori is the norm.

Homelessness constitutes much more than the presence or absence of particular forms of shelter, or personal economic hardship. Particularly for Indigenous people, homelessness involves issues of colonialism, culture, spirituality, dislocation, socio-economic relations, belonging, and place. It denotes spiritual disruptions to ancestral affiliations to geo-cultural landscapes, knowledge, tradition and kinship (Shiloh and Groot, 2016, p.368).

Describing the significance of Ōrākei Marae in the lives of older homeless Māori men, the authors describe how Ōrākei Marae has created a garden project for homeless Māori men.

The men work at the Ōrākei Marae garden on Tuesdays and Thursdays. They are not from Ōrākei, but the marae provides the Māori space where the participants can be Māori. Ōrākei saw their involvement in the gardening project with the homeless as a way of respecting their tīpuna by carrying on aroha and manaakitanga for those in need.

Labelled as 'homeless' by a wider, urban mainstream culture, with all the prejudices that accompany being homeless, three of the men were considered to be kaumātua by Ngāti Whātua. This means that the status and roles of these men within te ao Māori automatically took precedence over the deficit labelling of people who do not, for a variety of reasons, live in a physical house.

The authors noted that Ōrākei Marae 're-engaged the Streeties in Māori ways of being that are difficult to re-enact in a settler society'. Noticeably, the Streeties themselves naturally transitioned from being homeless on the streets to being within a culturally authentic space, as they engaged back and forth, in 'border crossing'[36] between two worlds.

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36 A term coined by Henry Giroux to describe crossing between cultures and identities.

The need for a 'Māori space' was poignantly expressed through the language. The spoken language on the street was English. When the men got into the van to go to the garden, they began to speak te reo Māori, but when they got to the garden, they immersed themselves in te reo Māori. This, more than anything, speaks to the significance of the marae as a uniquely Māori space. There the men could connect with their identity as Māori. The marae provided connections to the whenua, to Papatūānuku and to the concept of kāinga, of 'home' in a traditional and cultural sense. This story shows that responses to Māori homelessness need to draw on Māori cultural concepts and practices. These also build and engage whanaungatanga, which is fundamental to tikanga Māori.

'Not a housing crisis but a whānau wellbeing crisis'

'We do not have a housing crisis, we have a whānau wellbeing crisis'

Drawing on the experiences of homeless whānau at Te Puea Marae in 2016, George et al (2017) say that 'We do not have a housing crisis, we have a whānau wellbeing crisis'. They argue that there needs to be less of a focus on the physical and financial aspects of 'housing', and more of an approach that acknowledges and seeks to answer the larger problems of deprivation, marginalisation and inequality'. In particular they note that the centrality of tūrangawaewae is the foundation for whānau life:

> It is the space that gives us the best opportunity and environment from which to learn, grow and contribute. It is essential for the wellbeing of our tamariki (children), whānau (family) and ngā uri whakatipu (future generations). Tūrangawaewae creates accountability for ensuring resilience and living sustainably in balance with the world and others. At present our tūrangawaewae is under threat, whether it be from child poverty, homelessness, climate change or the ongoing marginalisation of our reo (language) and mana Māori motuhake (George et al, 2017).

The authors state that the whānau at Te Puea needed significant help to navigate the social service delivery systems as much as, or if not more than, they needed housing. These concerns were also highlighted in the report for the Auckland City Mission on the 100 Families Project. The statement 'This is not my home it's just a house' (2014, p.8) clearly describes the difficulties the whānau in the project had in terms of meeting their housing needs and dealing with service agencies.

Those requiring social housing often have complex needs

A telling comment was made in the Productivity Commission's report into affordable housing in relation to social housing. The report noted that social housing for Māori 'is best thought of as a contribution to a complex set of social needs that typically occur in clusters' (Productivity Commission, 2012, p. 16). These comments are significant for three reasons:

- They are in effect articulating the consequences of the contextual and experiential narratives in this report, where the historical antecedents that led to the over-representation of whānau with complex needs in social housing can be clearly seen.

- They reinforce that for Māori, housing is about provision of the 'kainga home space' that nurtures a range of cultural, physical, and spiritual health and wellbeing needs of whānau.

- As those with complex needs often find services hard to access, this creates additional stress on whānau who already are under stress.

A report compiled by Superu into multiple and complex needs showed that responding to the complex needs of Indigenous Peoples effectively required new ways of thinking. These included recognition of Indigenous culture and knowledge as a source of strength as well as understanding the continuing impact of colonisation on Indigenous communities (Superu, 2015). They note that 'it is only when survival needs are met that additional support services can be effective'.

Māori wellbeing measurement frameworks and Māori housing goals

The goals and objectives of Māori development are, as yet, encapsulated in few official statistics, none of which embrace definitions of Māori wellbeing and spirituality that are distinct to Māori. No official statistics yet acknowledge iwi, hapū or whānau as separate statistical entities (Royal Commission on Social Policy, 1988 Vol II p. 873).

The Māori Statistics Framework

Statistics New Zealand took up the challenge of developing measures of Māori wellbeing. In doing so they brought together a group of eminent Māori advisors to guide the agency on how it could best respond. Statistics New Zealand then developed the Māori Statistics Framework from the advice and guidance of the Māori Statistics Forum.[37]

In 2002, Wereta and Bishop first published the paper Towards a Māori Statistics Framework. The framework drew on the capabilities approach to wellbeing. The capabilities approach is based on Sen (2001) and the right of people to identified human freedoms to achieve what is important in their lives.

> *Capabilities are a means to an end. They reflect opportunities, access and informed choices or in other words, the freedoms to function effectively.... Consistent with this approach, Māori well-being is viewed as a function of the capability of Māori individuals and collectives to live the kind of life that they want to live (Wereta and Bishop, 2002, p.5).*

Statistics New Zealand considered the Sen approach to be extremely relevant to the situation in which many Indigenous Peoples are in. That is, they do not have the freedom to choose and attain the life they wish to live as a consequence of significant historic and institutional injustices, prejudices and inequalities. Of significance to the framework's development is that the capabilities approach is rights-based rather than needs-based, although it does not discount the fact that needs have to be satisfied.

In the Māori Statistics Framework, Housing for Māori was recognised as contributing to the Economic Self-Sufficiency goal, and the Empowerment and Enablement goal. Many indicators, such as home ownership and housing on papakāinga, contribute to these goals, where housing is seen as supporting the wellbeing of whānau, hapū, iwi, marae and Māori communities.

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37 The Māori Statistics Forum was chaired by Bishop Manu Bennett, and consisted of the following members: Dr Paparangi Reid, Tuwhakairiora Williams, Dr Maarire Goodhall, Ted Douglas, Professor Mason Durie, Dan Te Kanawa, Joe Malcolm, Hekia Parata, Whetu Wereta and Rev Tom Whittaker. The was also representation from Te Puni Kōkiri, Te Taura Whiri I Te Reo Māori and Te Ohu Whakatupu (Ministry of Women's Affairs).

Strengthening the data narratives on whānau wellbeing

For the Families and Whānau Status Reports 2015, 2016 and 2017, Kukutai, Sporle and Roskruge conducted an analysis of whānau wellbeing. The 2015 report was an in-depth analysis of whānau wellbeing from the Te Kupenga dataset as well as some census data. Table 2 presents the housing results by whānau type.

TABLE
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2015 Housing data: Economic capability and the Rangatiratanga principle

Capability	Whānau Type	Principle: Rangatiratanga
Economic	Couple, both under 50 years of age	32% homeowners 71% no major housing problem 92% have at least one adult in employment*
	Couple, one or both 50 years of age or over	63% are homeowners 84% no major housing problem 77% have at least one adult in employment*
	Two parents with at least one child under 18 years of age	45% are homeowners 75% no major housing problem 91% have at least one adult in employment*
	Two parents with all children 18 years of age and over	63% are homeowners 83% no major housing problem 93% have at least one adult in employment*
	One parent with at least one child under 18 years of age	22% are homeowners 58% no major housing problem 45% have at least one adult in employment*
	One parent with all children 18 years of age and over	41% are homeowners 69% no major housing problem 74% have at least one adult in employment*
	Multi-whānau households	39% are homeowners 65% no major housing problem at least one adult in employment [data unavailable]

* Source – Census 2013

The table shows that sole parent whānau with at least one child under 18 years of age faced significant disadvantage. They had the lowest home ownership rates, the most housing problems amongst all the whānau types, and the lowest labour market participation rate.

2016 Te Kupenga research highlighted whānau relationships

The 2016 report explored how respondents in Te Kupenga described their whānau. The findings showed that 99 percent think of their whānau in whakapapa terms, however this varied greatly. Further, those who were more likely to include non-kin as whānau had visited their tūpuna marae and knew at least one of their hapū. They participated in Māori-medium education, placed a high degree of importance on Māori culture, and lived in a home where te reo Māori was spoken.

2017 Families and Whānau report reaffirmed the significance of whakapapa and whanaungatanga

In the 2017 report, we explored how well Māori think their whānau were doing, and what were the critical factors associated with whānau doing well. Two measures stood out as most significant for whānau wellbeing:

- the quality of interpersonal relationships (that is, individuals' perceptions of how well their whānau get along and the level of whānau support).
- individual life satisfaction and feelings of loneliness.

Māori who thought that their whānau got on very well were about six times more likely to report a very high level of whānau wellbeing (36.5 percent) than those who felt that their whānau got on badly or very badly (5.5 percent). Nearly one-third (31.1 percent) of the latter assessed their whānau wellbeing as being very low. The authors conclude that:

> The perception of insufficient income to meet every day needs is connected with low levels of perceived wellbeing, **but it pales by comparison with other measures examined here**. A key finding of this study is that the quality of whānau relationships is extremely important for whānau to thrive. Māori who feel that their whānau get along very well are much more likely to rate their whānau wellbeing very positively, whether they are rangatahi or kaumātua (Kukutai et al, 2017, p.61).

Discussion: high-level issues for research and policy

> ... the vision of the Treaty of Waitangi has yet to be fully realised. Our history is as replete with broken promises as any other. The Treaty partners have challenged, contested, negotiated, mediated and settled their way into the third millennium. We have not always got it right in this country. But history will show that there have been major investments in an upward trajectory of social change (Irwin, 2009, p.2.).

Key drivers shaping the journey towards measures in whānau wellbeing

From the mid nineteenth century to the early 1900s significant political, cultural, economic and social drivers impacted so significantly on Māori, the belief was that the Māori race was dying out. Despite evidence of population renewal, the main policy for Māori was one of assimilation into Pākehā culture and institutions. This continued until the 1970s until challenged by the Māori Treaty partner.

In this report further challenges are raised. Unlike previous challenges, these arise from within the official statistics system, through the challenges and opportunities brought about by the Integrated Data Infrastructure, Indigenous Data Sovereignty and the growing data needs arising from Treaty settlements.

Data to inform Māori research and evidence needs lag behind Māori aspirations

The lack of data that is required to measure policies of relevance to whānau creates significant challenges for both Treaty partners, as they try to find ways to meet and deliver on those needs while 'lessening the barometric pressure' in the interim. However, part of the pressure is due to the fact that developments are taking place without necessarily factoring in challenges and opportunities for the Māori Treaty partner, who are in the process of meeting their own data and information needs.

Currently there is no national-level longitudinal data that include variables on whānau wellbeing. Filling this gap would not only enhance our understanding of one of the foundations of contemporary Māori society, it would also inform policies and programmes that enhance Māori wellbeing (Kukutai, et al, 2017, p.54).

Research and policy on Māori housing serves a dual purpose

As part of the upward trajectory for social change mapped throughout this section, Māori housing has been identified as both a mechanism for Māori assimilation in the past, and as a key enabler for whānau wellbeing now. However in modern terms, what this really means today is that there are two research and policy purposes framing Māori housing. These are to make progress on:

1. issues that whānau hapū, iwi and Māori have identified as priorities

2. research and policy to inform both Treaty partners how Māori are faring.

To progress issues that whānau hapū, iwi and Māori have identified as priorities

Work on this includes focusing on goals and/or outcomes that have been developed by Māori and growing the data and evidence base Māori require to support their development. The increasing demand by Māori for more responsive data and evidence challenges us to look for new ways of accessing, using and analysing data.

To progress research and policy to inform both Treaty partners how Māori are faring

In the past, this information has been the sole focus of the Crown. While this type of reporting still has a function, it needs to be part of a much larger evidence base about Māori housing and wellbeing.

Conclusion

Papakāinga living nurtures whakapapa, identity, whanaungatanga, and ahi kaa roa

Papakāinga living ensures there is always a new generation of whānau to keep alight the ancestral fires of occupation. This includes carrying on marae traditions and daily life around the marae, upon which the ancestral house of the whānau and/or hapū stands – a constant reminder of whānau, hapū and tribal identity. The desire for whānau to move back to their ancestral homes is growing. Furthermore, the papakāinga is a model for the development of culturally responsive housing for whānau wherever they live.

Māori housing is about kāinga in all its richest and most diverse realities

Māori 'Housing' is about the provision of cultural spaces for transmission of tikanga Māori to whānau and hapū. It is also about the spaces and places through which traditional and contemporary relationships are developed and sustained, where the people are woven together, past, present and future.

Re-framing Māori housing: kāinga as whānau wellbeing

Re-framing 'housing' as 'kāinga', requires tikanga-based definitions and measures of housing to support kāinga, which is such a key enabler of whānau wellbeing. Māori housing policies and evaluation would be strengthened by including the concept of kāinga and what it means to whānau as an enabler of wellbeing.

The role of kāinga needs to be central to all social policy for Māori wellbeing

As a consequence, 'Māori Housing' can no longer be considered to lie generally in the domain of 'Housing', but as a key plank of whānau-centred programmes that underpin whānau rangatiratanga. In fact 'how whānau conceive of 'home' is so fundamental to Māori wellbeing and development, that whānau-centred housing research, policies and programmes need to be central to all social policies that focus on Māori health and wellbeing.

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3.3_ Housing quality, health and whānau wellbeing

Shelter is a basic human need (Maslow 1943) and access to housing is a fundamental human right.[38] A house is more than a physical dwelling that offers shelter; for many, it is a space that provides structure and meaning, and relates to feelings, emotions, memories and experiences, whether raising a whānau or discovering newfound independence.

For Māori, the multi-layered concept of kāinga is broader still. Literally meaning 'village', kāinga is a home space where identity, whakapapa and whenua come together (Henare 2014). Kāinga is where individuals and whānau can sustain and care for themselves and others through practices of whanaungatanga (connecting with kin) and manaakitanga (acts of reciprocal caring).

Kāinga is also closely related to the concept of tūrangawaewae, denoting a sense of physical and spiritual belonging or attachment to a place. Kāinga and tūrangawaewae thus share similarities with the meaning of home but mean much more than simply 'being housed' (Brown 2017).

While housing and housing quality form only part of what it means to be 'at home', access to a warm, dry, safe, secure and watertight house is a basic right for all whānau and tamariki.[39]

In this section, we focus on the relationships between housing quality, health and wellbeing to better understand the extent of housing quality issues that whānau Māori face, and how housing quality, in turn, affects health and wellbeing. To our knowledge, this is the first nationally representative study that focuses specifically on Māori assessments of housing quality. It does so using data from the Māori Social Survey Te Kupenga.[40]

In Aotearoa New Zealand, as well as in the US, UK and Europe, housing quality is recognised as both a key determinant of health (Bonnefoy 2007; Commission on Social Determinants of Health 2008) and a major public health issue.

As whānau, particularly children and older people, spend more time at home than in any other setting (Baker et al. 2007), the quality of the home environment, including the quality of the physical dwelling, can substantially affect their health and wellbeing.

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38 The right to housing is recognised in the Universal Declaration of Human Rights (Article 25) and the International Covenant on Economic, Social and Cultural Rights (Article 11 (1)).

39 The Whānau Ora Outcomes Framework identifies living in a safe, warm and dry environment as one of its long-term goals for all whānau. https://www.tpk.govt.nz/docs/tpk-wo-outcomesframework-aug2016.pdf

40 Access to the data used in this study was provided by Statistics New Zealand under conditions designed to give effect to the security and confidentiality provisions of the Statistics Act 1975. The results presented in this study are the work of the authors, not Statistics NZ.

The OECD (2011) and Commission on the Social Determinants of Health (2008) have highlighted the importance of how housing quality affects physical and mental health. Low quality housing has been implicated in Aotearoa New Zealand's position near the bottom of the OECD for its health and safety rating for children (Howden-Chapman, Baker & Bierre 2013).

To date, the primary focus of housing quality research has been on identifying and addressing inadequate insulation, heating and ventilation, and associated issues of dampness, mould and cold.

Numerous studies have linked poor housing quality to increased health risks including respiratory disease and infections and home-based injuries (Howden-Chapman, Baker & Bierre 2013; Howden-Chapman, Bennet & Siebers 2010). Housing quality also significantly contributes to other social and economic outcomes such as education, paid work, safety and security (Statistics NZ 2009).

Concerns over the state of housing quality for whānau Māori need to be seen in the context of:

- historically low rates of home ownership (Johnson, Howden-Chapman & Eaqub 2018)
- declining housing affordability (New Zealand Productivity Commission 2012)
- increasing concern over child poverty (Expert Advisory Group on Solutions to Child Poverty 2012; Fletcher & Dwyer 2008)
- homelessness (Hodgetts et al. 2007)
- ethnic health inequities (Marriott & Sim 2014)
- rising rates of infectious disease (Baker, Telfar-Barnard & Howden-Chapman 2012).

There is evidence that Māori and Pacific peoples (Cheer, Kearns & Murphy 2002) and low-income households are systematically disadvantaged in these areas.

The contribution of this section is twofold. First, it identifies the key factors associated with self-reported housing quality for Māori centring on five features: dampness, cold, repairs, pests, and respondents' perceptions of whether their house is too small. It then distinguishes the possible effects of demographic, economic and housing-related factors.

The second contribution provides insights into the relationship of perceived housing quality to individual self-rated health, recent experiences of depression and whānau wellbeing.

Numerous studies have concentrated on the relationship between housing quality and specific physical health conditions, notably respiratory disease. While these studies have been timely and extremely valuable, far less attention has been given to understanding how housing quality potentially impacts other parts of Māori lives.

This study takes advantage of the multiple indicators of wellbeing in Te Kupenga to create a fuller picture of how housing quality is linked to different aspects of individual health and whānau wellbeing. This more holistic approach is consistent with the Whānau Rangatiratanga Framework (WRF) which has been used for previous chapters of the *Families and Whānau Status Report* (Kukutai, Sporle & Roskruge 2015, 2016).

The WRF reflects a strengths-based approach that is founded on Māori values and an holistic understanding of wellbeing that has been well articulated in the literature (Durie 1994; Panelli & Tipa 2007).

The underlying premise of this study is that Māori housing should not be an add-on to mainstream housing policy approaches, but rather the foundation for whānau-centred programmes that seek to support whānau empowerment and autonomy.

There are five parts to this section. The first part identifies key themes in the literature on housing quality and its relationship to health and wellbeing, with a focus on Aotearoa New Zealand and Māori. The second part describes the housing quality measures available within the Te Kupenga survey. The third part looks at how respondents within Te Kupenga rated the quality of their housing and associations between these ratings and demographic, economic, social and cultural factors. We distinguish between minor and major housing problems, and the specific type of issue. The fourth part uses regression analysis to identify the factors most strongly associated with housing problems before considering how housing quality, in turn, is associated with self-rated health, depression and subjectively assessed whānau wellbeing.

The fifth part is a concluding section that reflects on how the findings contribute to the broader body of evidence on housing quality, health and wellbeing for Māori, and how aspirations for whānau rangatiratanga might be better supported.

Part 1: Housing quality, health and wellbeing

Defining and measuring housing quality

Housing quality has many elements and can be defined and measured in a variety of ways (Keall, Baker & Howden-Chapman, Cunningham & Ormandy 2010).

The most widely used approach focuses exclusively on the physical qualities of a dwelling with separate measures to assess internal structure (for example, sewage disposal, electrical wiring), external structure (for example, structural soundness; insulation) and aspects of the internal environment (for example, adequate ventilation, dampness). By this definition, housing quality excludes the interaction of occupants within the dwelling (Keall et al. 2010) captured in measures such as overcrowding and fuel poverty (Howden-Chapman et al. 2012).

Broader definitions of housing quality incorporate these sorts of housing conditions as well as features of the neighbourhood (for example, street lighting; access to green spaces) and concepts such as environmental sustainability (Statistics NZ 2015a).

This part of the report focuses primarily on the physical aspects of whānau dwellings but also includes, in the descriptive analyses, a measure of household crowding derived from the 2013 Census. This enables comparisons between the subjective housing quality measures from Te Kupenga and this commonly used measure of housing adequacy (Ministry of Social Development 2016).

Another reason for including the crowding measure is that Stats NZ is planning to drop the subjective housing size question from 2018 (Stats NZ 2018).

Measures of housing quality are usually derived from subjective evaluations of housing issues reported in surveys and/or independent assessments based on physical inspection (Statistics NZ 2015a). Both approaches have been widely used in Aotearoa New Zealand.

The 2018 New Zealand Census included, for the first time on the dwellings form, self-assessed questions on heating type, dampness and mould.[41] Self-reports of housing quality problems have also been included in recent national surveys such as the New Zealand General Social Survey (NZGSS 2010, 2012, 2014, 2016), and will be expanded to include multiple dimensions in the 2018 NZGSS housing and physical environment supplement.[42]

In contrast to occupants' subjective assessments of the state of their housing, physical inspection offers an objective evaluation based on a set of independent criteria.

Keall et al. (2010) identify 13 dimensions of housing quality such as structural soundness, dryness and energy efficiency that can be measured through physical inspection. Each dimension includes a range of related measures. Notable examples of this approach in Aotearoa New Zealand include the Rental Warrant of Fitness, a housing quality assessment tool developed by the He Kāinga Oranga Housing and Health research programme, and the Healthy Housing Index co-developed with BRANZ (Building Research Association of New Zealand) and based on the British Housing Health and Safety Rating system. Both tools comprise a broad set of measures and require physical inspection of the dwelling undertaken by a qualified assessor.[43]

Each approach to measuring housing quality has strengths and weaknesses. The collection of perceived housing quality data from surveys such as the NZGSS and Te Kupenga is a cost-effective way to gather information and enables individuals to express how they feel about their homes. The data are also nationally representative. The main drawback is the poor correlation between subjective and objective assessments.

Tenants and home owners tend to underestimate their housing problems, perhaps because they lack adequate knowledge about their house or what they should expect from a good quality dwelling (Statistics NZ 2015a). This disconnect was starkly illustrated in the 2010 Housing Conditions survey in which 80 percent of rental property tenants considered their property to be in good condition compared to 22 percent in an independent BRANZ assessment (Buckett, Jones & Marston 2012).

For owner occupiers, the difference was lower but still significant; over 70 percent believed that their home was in good or excellent condition compared to 42 percent of BRANZ assessors.

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41 www.englishlanguage.org.nz/sites/englishlanguage/files/kcfinder/images/2018/2018percent20Censuspercent-20Dwellingpercent20Form.pdf

42 www.archive.stats.govt.nz/browse_for_stats/people_and_communities/Well-being/nzgss18-obj-housing-phys-environ.aspx

43 See, for example, the rental Housing WoF checklist: http://www.healthyhousing.org.nz/wp-content/uploads/2016/09/Checklistfinal-August-2016.pdf

Large differences between subjective and objective assessments were also observed in the 2015 Housing Conditions survey (White, Jones, Cown & Chun 2017).

While independent professional assessments of housing quality are more detailed and accurate, they are also more expensive to undertake and are typically restricted to much smaller (and potentially unrepresentative) samples that may not be disaggregated by ethnicity. The OECD (2011) recommends, wherever possible, to measure housing quality using both self-assessed and objective approaches.

Context

Before reviewing the literature on housing quality, health and wellbeing, it is important to place the contemporary housing situation of whānau Māori within a broader historical context (for a fuller discussion, see section 3.2 on page 77).

The history of kāinga and, more specifically, Māori housing, is intertwined with histories of land alienation and separation from tribal homelands (Belich 1996; Henare 2014); government policies of assimilation (Wanhalla 2006); discrimination in the housing market (Houkamau & Sibley 2015), and persistent intergenerational inequalities. All these factors have profoundly shaped historical and contemporary Māori housing experiences.

The alienation of Māori land through direct purchase by the Crown, outright confiscation, and the dubious workings of the Native Land Court irrevocably transformed Māori relationships to kāinga.

In 1860, Māori held about 80 percent of the land in the North Island; by 1910 this had dwindled to around 27 percent, dropping to just 9 percent by 1939.[44] Many hapū were left virtually landless. The speed and scale of land alienation disrupted political, social and economic organisation, and fundamentally undermined hapū and iwi capabilities to be self-sustaining (Belich 1996).

In the absence of legal segregation, a pattern of ethnic residential segregation prevailed. Māori and the Pākehā settler population occupied different spaces, and had access to different quality amenities (Pool 1991).

In Auckland in 1916, for example, three-quarters of the non-Māori (mostly Pākehā) population lived in Auckland city and the more densely concentrated boroughs. By contrast, almost the entire Auckland Māori population lived in rural and semi-rural county areas.

By 1945, the non-Māori share had increased slightly to 80 percent while the Māori share living in urbanised areas had risen substantially to 40 percent; still, most Māori were living in rural and semi-rural areas.[45]

44 For land alienation between 1860-2000, see the interactive maps on the NZ History website (www.nzhistory.govt.nz).
45 These figures were collated by one of the authors and her colleagues as part of an unpublished commissioned report on the changing demography of Māori in Auckland from 1840 to 2013. All the data are drawn from published data in hard copies of the NZ Census reports.

While Māori concentration in counties had limited access to amenities such as piped water and a flushing toilet (both basic indicators of development), even within counties there were systematic differences in Māori and Pākehā access to amenities.

To illustrate, in Manukau County in 1956, 61 percent of Māori dwellings had no flush toilet compared with just 25 percent of non-Māori dwellings in the same county. The share with no 'laid' water was 33 percent for Māori and 25 percent for non-Māori. Māori dwellings were also far more likely to be temporary in nature (for example, huts, whare, tents).

Ethnic inequalities were replicated across most, if not all, counties, varying only in size. These findings are a potent reminder that housing quality issues for Māori are not a recent development; they are the continuation of more than a century of substandard conditions and unmet housing needs.

Prior to World War II, Māori were excluded from mainstream state housing and were reliant on loans from rural development funds. Interestingly, Māori home ownership rates were higher than for non-Māori in the early part of the 20th century but declined once Māori urbanised (Goodyear 2017).

The 1936 Census recorded that 71 percent of Māori dwellings were owned by occupants, compared with just over half of non-Māori dwellings.

While home ownership rates for Māori were higher before the mass migration of Māori to urban areas after World War II, there were still major issues with housing quality.

By 1961, Māori home ownership was less than half, and Thorns (1995) has argued that by the 1970s, home ownership was ethnically segregated. A 1986 report to the Board of Māori Affairs noted that the home ownership gap between Māori and non-Māori had been widening since 1971 (Douglas 1986).

From the early 20th century on it was recognised that improved housing and sanitation would improve Māori health and mortality (Dow 1999; Pool 1991; Wanhalla 2006).

Following the devastating impacts of the 1918/1919 influenza epidemic (Rice 2005), the Government took a strong interest in housing, undertaking a major nationwide housing survey from the mid-late 1930s that focused on housing quality and crowding, and with a specific focus on Māori. Medical Officer Harold Turbott's study of tuberculosis in East Coast Māori communities in the 1930s identified high levels of malnutrition and poverty, and systemic issues with poor housing quality. Improvements to housing and sanitation were noted as a key solution (Turbott 1935).

Government Māori housing policies were based on the normative assumption that the path to improvement lay firmly in the adoption of Pākehā lifestyles, family structure, worldviews and preferences. As Wanhalla (2006, p.100) notes, 'health improvement through housing … required that Māori society, particularly family structures and gender relations, undergo transformation'.

Studies of housing quality in Aotearoa New Zealand

The last decade has seen the development of a substantial evidence base documenting the state of housing quality in Aotearoa New Zealand, and the relationship to child and adult health.

The NZGSS has provided the main source of data on self-assessed housing quality for the Aotearoa New Zealand population including Māori. In 2016, the most recent NZGSS, the most frequently reported housing quality issues were repairs/maintenance, dampness and cold.

One-fifth (21 percent) of all respondents felt their homes were often or always cold; 64 percent felt they need some repairs and maintenance on their homes; and 32 percent felt they had a problem with damp/mould (of which 5 percent perceived it to be a major problem).

In a 2002 national random telephone study (613 households) more than one-third (35 percent) of respondents also reported mould in one or more rooms (Howden-Chapman et al. 2002).

In the *Growing up in New Zealand* longitudinal study of children, one in five parents reported that their babies were living in homes that were 'quite often' or 'always or almost always' damp (Morton et al. 2012).

Major housing problems in the NZGSS were more likely to be reported by renters, Pacific peoples and Māori, and people living in one-parent families. In the 2016 NZGSS, 76 percent of Māori respondents reported needing repairs or maintenance work done; nearly half (46 percent) had problems with dampness or mould; and one-third (33 percent) felt their homes were often or always cold (62 percent if including sometimes cold, Statistics NZ 2017).

The 2014 and 2010 NZGSS showed similar patterns. In the 2010 NZGSS housing quality module nearly half (46 percent) of Māori reported at least one major housing quality problem compared with 36 percent of all respondents. The most commonly occurring major problems for Māori were cold (21 percent); damp (17 percent) and the house being too small (17 percent, Statistics NZ 2013).

To our knowledge no study has yet used the NZGSS to model the factors most closely associated with housing quality for Māori but the literature suggests that strong associations are likely to be found with housing tenure, area level deprivation, household type and income.

The most recent BRANZ House Condition survey, which included objective independent assessments of housing quality, indicated about half of the 560 houses in the sample lacked adequate insulation (47 percent), and a similar proportion showed visible signs of mould (49 percent, see White & Jones 2017). Insulation is important because poor insulation makes houses cold, less energy efficient and costlier to heat, which can adversely affect the occupants' health.

The situation was markedly worse in rented housing; a trend that has been observed in most versions of the same survey (Buckett et al. 2012), as well as separate studies.

The He Kāinga Oranga research programme has had the quality of several thousand houses assessed by trained building assessors using the Healthy Housing Index. Their investigations have found a consistent pattern with private rental housing being on average of poorer quality than state housing, which on average is of poorer quality than owner occupied houses.

While this substantial literature on housing quality uses theories and indicators grounded in the international literature (and then sometimes compares them by the ethnic identification of the occupants), there remains a significant gap in the housing quality literature that provides a distinctively Māori lens on Māori housing.

As Waldegrave et al. noted in their 2006 study of Māori housing experiences, 'in comparison to whenua (land) and the importance of tūrangawaewae, there has been relatively little discussion about the importance of buildings that stand on the land' (p.23). Their view was that mainstream models of housing choice were ill-equipped to realise Māori housing aspirations. These may include living on or near ancestral whenua and having flexibly designed spaces to manaaki and accommodate whānau as and when needed (pp. 97-105). Unfortunately, Te Kupenga does not include questions which capture these more culturally oriented dimensions of housing.[46]

The links between housing quality, health and wellbeing

The primary motivation for research and policy interest in housing quality is the impacts on health and wellbeing. Numerous empirical studies, from overseas and Aotearoa New Zealand, have linked poor housing quality with the physical health of individuals.

Cold and damp houses (and associated problems with mould) have been linked to asthma and other respiratory diseases (Byrnes & Trenholme 2010; Fisk, Eliseeva & Mendel 2010), and preventable hospitalisations, especially in winter when hospitalisations and mortality in Aotearoa New Zealand increase. Problems with maintenance repairs and defective work have been linked with injuries and accidents (Keall et al. 2010).

Although our analysis is restricted to adults, the implications extend to co-resident children. There is substantial evidence that housing conditions affects children's wellbeing. A study of 58,000 children in various countries showed indoor mould exposure was consistently associated with adverse respiratory health outcomes in children (Antova et al 2008).

Recent research funded by the MacArthur Foundation in the United States examined the effects of five housing characteristics (quality, stability, affordability, ownership, receiving a house subsidy) and found housing quality to be the most consistent and strongest predictor of emotional and behavioural problems affecting children from under-served, low-income communities (Coley, Leventhal, Lynch & Kull 2013).

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46 The questions that come closest to a culturally grounded concept of Māori housing asks whether respondents live (or have ever lived) within 30 minutes of their ancestral marae.

The authors identified 'parental stress' as one of the mechanisms through which poor quality and unstable housing affected children's well-being. A major British cohort study has also shown that the effects of 'housing histories' are cumulative over the life course (Vanhoutte, Wahrendorf & Nazroo 2017).

In Aotearoa New Zealand, studies show links between poor housing quality and children's health. Paediatric studies of deprivation and overcrowding have been associated with bronchiolitis, pneumonia and bronchiectasis, and tuberculosis (Byrnes & Trenholme 2010). Using their Respiratory Hazard Index, Keall et al. (2012) estimated that, for each unit increase in the index, there was a corresponding rise in the experience of wheezing or asthma.

One study of children admissions to an Auckland Hospital in 2012 for severe acute respiratory infection found that 14 percent of children were living in severely crowded houses. In 59 percent of cases, parents reported that they were usually cold inside their home, and 47 percent were reported living in damp, musty or mouldy conditions. Only a minority of the hospitalised children were living in owner-occupied dwellings (Howden-Chapman, Baker & Bierre 2013). The children affected were disproportionately Māori and Pacific.

A 2012 Wellington study also showed high rates of respiratory admissions in Māori and Pacific children and a strong association with poor housing conditions.

Asthma rates in Aotearoa New Zealand are among the highest in the world. More than one-quarter of children and one in six adults suffer from asthma (Gillespie-Bennett, Howden-Chapman & Baker 2013). Taken together, these studies 'starkly highlighted the strong association between poor housing standards and poor child health, a problem which is compounded by overcrowding' (Howden-Chapman, Baker & Bierre 2013, p. 36).

Although Te Kupenga lacks direct measures of specific health conditions, we can explore the relationship between perceived housing quality and self-assessed health status. We also explore associations of housing quality with self-reported depression and whānau wellbeing. Compared with the substantial literature linking housing issues and physical health, the evidence on how housing quality impacts these other dimensions is less clear.

Researchers have found it challenging to establish strong causal links between housing quality and mental health. According to Evans et al. (2000), most studies suffer from various conceptual and measurement weaknesses. These include:

- poorly specified conceptual models
- not identifying tools that connect environmental qualities to mental health conditions
- an over reliance on subjectively assessed measures of housing quality and mental health
- the use of cross-sectional design precluding causal analysis.

Using independent assessments of housing quality applied to both cross-sectional and longitudinal data, they found that, after controlling for income, better quality housing was significantly related to lower levels of psychological distress.

Te Kupenga has several of these limitations in that it relies on cross-sectional self-assessed measures, and does not include indicators that would enable us to test hypothesis on specific psychosocial processes. Noting this, our goal is not to identify how housing quality affects mental health for Māori. It is, as a first step, to identify – after controlling for important confounding factors – whether a relationship exists between perceived housing quality and recent feelings of depression.

Finally, while the qualitative literature suggests that whānau wellbeing and housing quality are connected (Waldegrave et al. 2006), no report has yet explored these associations in a statistical sense.

A previous Te Kupenga report on whānau wellbeing found that the two factors most strongly related to positive whānau wellbeing were the quality of their relationships and individual life satisfaction (Kukutai, Sporle & Roskruge 2017). The analysis found a moderate positive relationship with home ownership but did not include measures of housing quality which we include here.

We also note that a previous study of the factors affecting self-rated life satisfaction in Te Kupenga found a strong relationship with housing quality (specifically several housing problems, Statistics NZ 2015b), so we do not repeat the analysis here. In regression models, the association of housing quality with life satisfaction was superseded in size only by recent feelings of loneliness, self-rated health status and perceived income adequacy. A moderate relationship was also found between housing and life satisfaction in the 2010/11 NZGSS (Statistics NZ 2013).

> A previous Te Kupenga report on whānau wellbeing found that the two factors most strongly related to positive whānau wellbeing were the quality of their relationships and individual life satisfaction.

Evidence on housing quality interventions

There is evidence in Aotearoa New Zealand that addressing issues relating to housing quality and conditions such as overcrowding lead to improvements in health.

The He Kāinga Ora programme has shown that intervention (insulation, ventilation, heating and crowding reduction) results in health improvements (Howden-Chapman et al. 2013).

Other studies have shown the benefits of home insulation and home heating on health (Howden-Chapman et al. 2007; Howden-Chapman, et al. 2008), and a moderate but significant effect on school attendance (Free et al. 2010).

The evaluation of the *Warm up New Zealand: Heat Smart* programme found that retrofitting homes with insulation produced health-related savings/benefits including reductions in GP visits, time off work and school, and household level hospitalisation costs (Grimes et al. 2011).

A 2011 systematic review of interventions that aimed to improve health via improved housing quality found 'compelling evidence' for warmth and energy efficiency interventions targeted at vulnerable individuals (Gibson et al. 2011).

In Aotearoa New Zealand, various policies have been developed with the aim of improving housing quality, affordability and access, with concomitant pressure on government and private landlords to improve the quality of homes.

In 2012, the Children's Commissioner and the Expert Advisory Group on Solutions to Children's Poverty recommended that a housing quality standard for social and private rental properties be developed, including minimum health and safety standards. The rental housing Warrant of Fitness, (which is based on the larger housing quality assessment tool) is an evidence-based housing quality checklist, which several local authorities have implemented.

Other policy and research initiatives include:

- Warm up New Zealand: Healthy Homes – offers grants for insulation retrofits to make homes warmer and drier, targeted at low-income owner-occupiers and landlords with low-income tenants

- Whānau Ora – identifies housing as a main contributor to whānau wellbeing, and has a range of short-, medium – and long-term goals for helping whānau to be responsible stewards of their natural and living environments. This includes having healthy homes that are safe, warm and dry

- Te Puni Kōkiri Māori Housing Network – provides practical advice, information and funding to support whānau, hapū and iwi to achieve their housing aspirations, including the development of papakāinga infrastructure for housing

- BRANZ – an independent research, testing and consulting organisation that works with sector stakeholders to influence them to provide better buildings for New Zealanders

- He Kāinga Ora: Healthy Housing – is a dedicated research programme that examines and clarifies the links between housing and health

- National Science Challenge: Building better homes, towns and cities. The kāinga tahi kāinga rua strategic research area is focused on solutions on how to collaboratively finance, design and build affordable, healthy housing that meet the needs of Māori and their communities.

Whānau Rangatiratanga Framework

The Whānau Rangatiratanga Framework (WRF) was developed to measure whānau wellbeing, based on the capabilities approach (Superu 2014, 2015, 2016). It was first published in the Families and Whānau Status Report 2014, then used again in the following year's report (Superu 2014, 2015). The framework uses four capability dimensions (sustainability of te ao Māori; social capability; human resource potential, and economic wellbeing) and five whānau rangatiratanga principles:

1. whakapapa/thriving relationships

2. manaakitanga/reciprocity and support

3. rangatiratanga/empowerment, leadership and participation

4. kotahitanga/collective unity

5. wairuatanga/spiritual and cultural strength.

An in-depth discussion of the Whānau Rangatiratanga Framework is contained in previous work by the authors (for example, Kukutai, Sporle & Roskruge 2017).

The WRF identifies housing quality within the capability dimension of economic self-determination as expressed through rangatiratanga. Our review of the literature suggests that the factors most likely to influence Māori experiences of housing quality are income adequacy and whether an individual is renting or living in an owner-occupied dwelling (see Table 18).

In section four, we use multiple regression analysis to model the associations between these factors and self-assessed housing quality while controlling for the confounding influences of socio-demographic characteristics and area deprivation level. We then model the effects of self-assessed housing quality on three subjective measures of health and wellbeing: self-rated health, depression, and whānau wellbeing.

First, we provide a brief description of Te Kupenga and undertake descriptive analysis of the housing quality and health and wellbeing variables.

TABLE
18

Whānau Rangatiratanga factors most likely to influence housing quality

Capability dimension	Principle	Outcome goals	Indicator
Economic	Manaakitanga	Whānau are able to support each other financially and to accumulate financial reserves	How well household income meets everyday needs
	Rangatiratanga	Whānau enjoy economic security	Tenure (home ownership)

Part 2: Perceptions of housing quality in Te Kupenga

Te Kupenga

Te Kupenga is the first nationally representative survey of Māori wellbeing. It was done by Statistics New Zealand following the 2013 Census, with support from Te Puni Kōkiri and other key Māori stakeholders and communities.

Te Kupenga gives an overall picture of the social, cultural and economic wellbeing of Māori, and includes information about the health and culture of te reo Māori. As an official survey, it is unprecedented in the breadth and depth of topics covered and, more importantly, in its relevance for Māori.

Te Kupenga involved interviews with a sample of the usually resident Māori population, defined on either ethnicity or ancestry, who were 15 years or older at the time of the census. This creates a nationally representative a sample of 5,549 individual survey participants representing a population of 529,750 Māori.

As with any representative sample survey of a population, analysing the survey data produces estimates rather than counts, with confidence intervals for those estimates determined by a combination of sample size, study design, and response rate.

Weighting

Te Kupenga was a sample survey with a complex sample design, which meant a difference in the probability of participants being included in the sample selected from the census population. Including a measure of that probability (called a 'weight') in the analysis enables results of Te Kupenga data analysis to be generalised to the entire Māori population 15 years old and over. The survey weights enable the Te Kupenga data to produce estimates for the total Māori population.

The sample design for Te Kupenga was a complex four-stage one to ensure a nationally representative sample of the Māori population aged 15 years and over. This complex survey design also needs to be considered when using the Te Kupenga data, in addition to the weights mentioned above.

Statistics NZ's approach to including these design effects in the Te Kupenga dataset involved creating sets of 100 replicate weights, which are used in calculating the standard errors and confidence intervals. Statistics NZ calculated the replicate weights for Te Kupenga using the Kott's delete-a-group Jackknife method (Statistics NZ 2014; Kott 2001). This process embeds the survey design effects into the range of replicate weight values, which are then used in the analysis.

There are some issues in using replicate weights for this analysis, as their applicability is dependent on the structure of the data and the capabilities of the analytic software available in the Stats NZ datalab.

Our analysis has encountered some of those issues, and we have discussed these with Stats NZ and leading biostatistics experts. This consultation confirmed that our approach is the most valid possible given the current data access restrictions and software limitations.

The analysis for this report used STATA 14 (svyset function) for data management and regression analysis and R Studio (survey package) for the descriptive analysis.

All analysis used the full Te Kupenga dataset as supplied by Stats NZ within the secure Stats NZ datalab environment. The estimated counts are rounded to the nearest 500 before release from the datalab as part of the process of ensuring the security and confidentiality of the data about individual survey respondents. Percentages are calculated from the unrounded estimates within the datalab, and then rounded to one decimal place.

Measuring housing quality

In defining housing quality, the approach taken in Te Kupenga was to ask for individuals' subjective self-assessments of their housing quality.

Survey participants were asked whether a range of potential housing issues were a problem for them at the time of the survey. These issues included the property needing repairs; having pests; being too small; being damp; and being hard to keep warm. The participants were asked if each of these were not a problem, a small problem or a big problem. These are all self-reported measures, with the distinction between small and big issues left to the respondent to determine.

The wording of the questions about housing conditions is replicated in Figure 10.

Figure 10 _ Housing quality question from Te Kupenga

Introduction

I am now going to read out problems that some people have with their house or flat [cycle through each item]

List of housing problems:

- the house/flat needs repairs
- there are pests in the house/flat such as mice or insects
- the house/flat is too small
- the house/flat is damp
- the house/flat is hard to keep warm

Please tell me if the things I read out are not a problem, a small problem, or a big problem in the house/flat that you live in:

- not a problem
- a small problem
- a big problem
- don't know
- refused to answer

The Te Kupenga questions on housing quality differ in scope and format to those used in the NZGSS.

The 2012 NZGSS housing section included a question about eight potential housing problems, including being too small; in a poor condition; damp; cold/hard to heat; and having pests. Although these five topics are similar to those in Te Kupenga, the design of the two surveys is not consistent as the NZGSS only asked about major problems and the question wording differed.

The 2014 and 2016 NZGSS have questions on the extent of any maintenance required, minor/major problems with damp or mould, and frequency of coldness in winter. These differences in question coverage, content and format mean that the Te Kupenga results on housing quality are likely to differ from those from the NZGSS.

Unfortunately, the 2018 Te Kupenga survey will not contain any questions on housing quality, with information on damp, mould and an objective crowding measure (see below) being sourced from the 2018 Census dwelling form (Stats NZ 2018).

As well as these subjective questions, the Te Kupenga dataset includes an objective measure of household crowding derived from the 2013 Census.

Although crowding is not a feature of the physical dwelling, it is a measure widely used in Aotearoa New Zealand research and policy and offers a useful objective assessment against which to compare subjective assessments of whether the house is too small. This measure incorporates information about the number of bedrooms in a house, and the number, age and sex of the usual occupants.

The measure also indicates whether the household requires one or more bedrooms, or has spare rooms based on the definitions within the Canadian National Occupancy Standard (CNOS) (Canada Mortgage and Housing Corporation 2012).

These definitions are commonly used in Commonwealth countries as well as within other Stats NZ surveys such as the NZ General Social Survey (NZGSS). The Canadian National Occupancy Standard (CNOS) determines the bedroom requirements of a household based on these criteria.

- There should be no more than two persons per bedroom.
- Children less than five years old of different sexes may reasonably share a bedroom.
- Children five years or older of opposite sex should have separate bedrooms.
- Children less than 18 years old and of the same sex may reasonably share a bedroom.
- Single household members 18 years or older should have a separate bedroom, as should parents or couples.

Using this measure, households that require at least one additional bedroom are considered to experience some degree of overcrowding. In Te Kupenga, households are described as needing more, or having spare bedrooms.

Health and Wellbeing Measures in Te Kupenga

Te Kupenga includes a range of subjective measures of individual-level and whānau wellbeing based upon assessment of the survey respondent. These measures included reporting levels of self-assessed overall health, physical health, and mental health status. There were also questions about the extent and frequency of impacts of their health status on their activities and relationships.

In this section of the report, we discuss the association of the housing quality measures outlined above with three well-being measures: self-rated health, feeling depressed and whānau wellbeing.

The Appendices include tables outlining the relationship between housing quality measures and a more comprehensive range of well-being measures from Te Kupenga.

Self-rated health

The first question in the health section of Te Kupenga asked respondents to rate the current state of their health, without specifying what type of health, on a five-point scale, from excellent to poor. The wording of the question is shown in Figure 11.

Figure 11 _ Self-rated health status question from Te Kupenga

Introduction

The following group of questions is about your health. This first question is about your health now.

State of your health

In general, would you say your health is excellent, very good, good, fair, or poor?

- excellent
- very good
- good
- fair
- poor
- don't know
- refused

Depression

The question in Te Kupenga about depression asks the respondent about how they have felt over the last four weeks, rather than just at the time of the interview. The wording of the depression variable is shown in Figure 12.

Figure 12 _ Recent feelings of depression question from Te Kupenga

Health: Recent feelings

The next few questions are about how you feel and how things have been with you during the past four weeks.

As I read each question, please give me the one answer that comes closest to the way you have been feeling. How much of the time during the past four weeks. [cycle through each item]

List of feelings:

- have you felt calm and peaceful?
- did you have a lot of energy?
- have you felt downhearted and depressed?

  - all of the time
  - most of the time
  - some of the time
  - a little of the time
  - none of the time
  - don't know
  - refused

Whānau wellbeing

One of the innovative characteristics of Te Kupenga is that it is the first official survey in New Zealand to ask questions about whānau. Te Kupenga includes a section specifically about whānau wellbeing, social connectedness with whānau and defining whānau.

The first question in this section involves a subjective assessment by the respondent on how well their whānau is currently doing. The responses are on an 11-point scale, ranging from extremely badly to extremely well (Tibble & Ussher 2012). This indicator should not be seen as an objective measure of whānau wellbeing, but rather as an indicator of a respondent's perception of whānau wellbeing.

We do not know how closely a respondent's assessment of his or her whānau wellbeing reflects the perceptions of other whānau members. This question allows the respondent to answer how they define their whānau. Defining the meaning of whānau is the subject of later questions in that section of the survey.

This report includes these responses in the full 11-point scale, as well as the four categories used in previous whānau wellbeing reports and by Tibble and Ussher (2012). The full text of the question about whānau wellbeing is provided in Figure 13.

Figure 13 _ Subjective whānau wellbeing question from Te Kupenga

How's your whānau doing?

First of all I'd like you to think in general about how your whānau is doing.

Where zero means extremely badly and ten means extremely well, how would you rate how your whānau is doing these days?

[Note: Interviewers can use the following prompts:]

• Include all areas of life for your whānau.
• Your 'whānau' is the group of people that you think of as your whānau.

0	1	2	3	4	5	6	7	8	9	10
Extremely badly	·	·	·	·	·	·	·	·	·	Extremely well

Part 3: Descriptive findings of housing quality and health

This part of the report describes how key variables measured within Te Kupenga are associated with housing quality. We look at the distribution of housing outcomes by demographic, economic, and household factors, then examine how the same household outcomes are associated with individual and whānau well-being measures.

The full distributions for each cross-tabulation can be found in Appendix 4, Tables 27 and 28. Selective results are shown in graphical form.

Housing quality

Prevalence of housing quality problem

As Te Kupenga is a nationally-representative survey of the usual resident Māori population aged over 15 years, it can be used to estimate the number and percentage of Māori adults that have housing quality issues. The following distributions are presented as percentages (and estimates in brackets) of those who answered the question. More details of the range of responses are in the Appendices.

Figure 14 confirms that problems with housing issues are commonplace for Māori. Over two-thirds (68 percent) reported at least one problem (minor or major), with nearly half reporting two or more problems with housing quality (47 percent).

More than a quarter of all Māori adults report having at least one major housing quality issue (28 percent, 147,500) and, of those, about half (14 percent overall) have two or more major housing quality issues. This is sobering given the evidence that both owners and renters tend to underestimate the true extent of problems with their physical dwelling.

Figure 14 _ Estimated number of Māori adults 15 years + with multiple and major housing quality problems
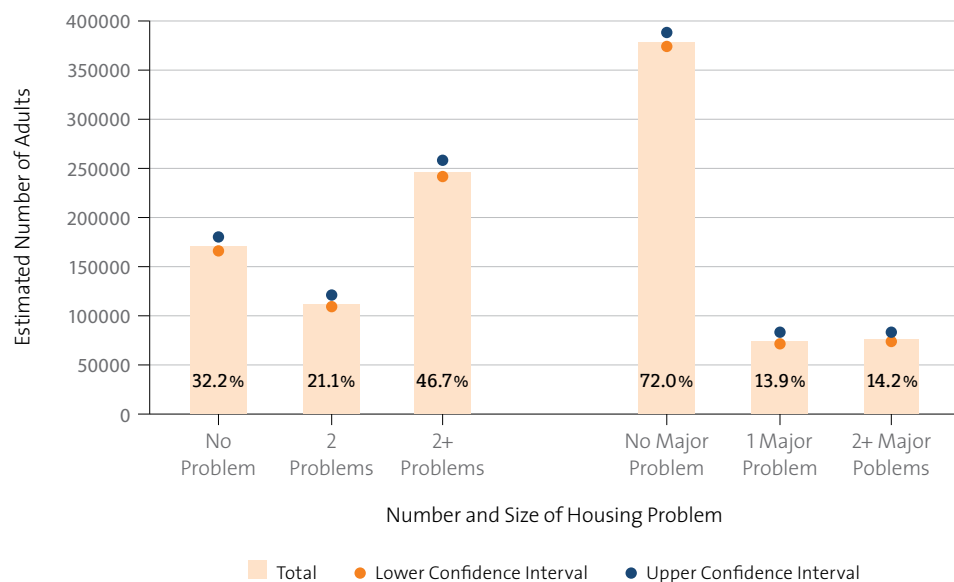
Figure 15 shows the specific housing quality issues encountered by whānau Māori. Repairs were the most commonly reported problem (44 percent), affecting some 233,500 Māori adults. The percentage with repairs-related issues was significantly lower than the share of Māori in the 2016 NZGSS who reported living in homes with repairs or maintenance issues (76 percent). In Te Kupenga, 14 percent of Māori reported having a major problem with repairs.

The next most commonly reported problem was having a house that was hard to keep warm (40 percent), with about one in six Māori (16.6 percent representing 87,500 individuals) perceiving it to be a major problem. This was much lower than the share of NZGSS Māori respondents reporting that their house was sometimes, often or always cold (62 percent).

One-third (33 percent) of Māori reported some sort of problem with dampness (171,500) and for just over one in ten Māori (11 percent) their housing dampness issue was major. The extent of dampness issues reported in Te Kupenga was lower than that reported for Māori in the 2016 NZGSS (46 percent), but the prevalence of dampness as a major issue was comparable with the NZGSS (11 percent).

The presence of pests such as mice or insects was a problem for just over a quarter of Māori (27 percent or 141,500), with a relatively small share (5.8 percent) perceiving pests to be a major problem. Finally, one fifth (20 percent or 106,000) felt that their house was too small, with five percent describing it as a major problem.

Figure 15 _ Estimated number of Māori adults 15 years and over with housing issues by issue, type, and size
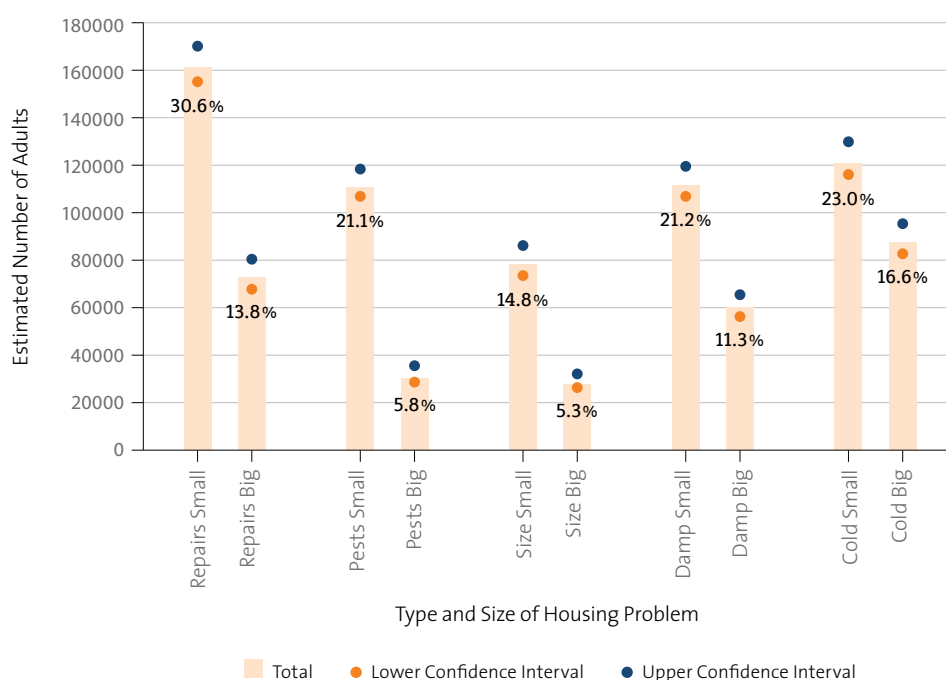
Although the extent of housing quality problems experienced by Māori is high, **these figures are likely to under-estimate the true extent of housing problems** as the literature suggests that subjective assessments of housing quality problems tend to be significantly lower than their objective measurement.

The Te Kupenga interview does not provide prompts or guidance as to what constitutes a problem, nor the relative size of that problem. The extent to which something is considered a problem may be influenced by normative expectations and the extent to which the issue impacts on one's quality of life (for example, there could be pests in the house but they haven't yet created a major issue worth bothering with or the occupant may have learnt to cope with the problem).

Attribution of relative size to a problem will depend on the interpretation of the respondent, their self-assessed ability to cope or deal with the problem or even the scope of other issues in their lives at the time. More generally, the under-reporting of outcomes perceived to be socially undesirable is an acknowledged source of survey error, especially with in-person surveys (Fuchs 2008).

The differences in the housing quality results between Te Kupenga and the NZGSS are likely due to a combination of differing questions and sample size effects. Te Kupenga frames these issues on the size of the problem, whereas the NZGSS asks about the need/extent of maintenance, minor/major problems with mould or damp and frequency of being colder in winter than the respondent would like.

Both the question wording and concepts are not the same in both surveys so it is unsurprising that the responses differ. These differences are compounded by differences in the precision of the estimates for Māori.

The NZGSS is a general population survey with a sample that is 'broadly representative' of ethnic subpopulations, meaning that there should be approximately 1000 Māori individuals within the 8000 survey participants. Te Kupenga has a sample size more than five times that of the Māori sub-sample within the NZGSS. Consequently, the estimates produced by the NZGSS will be less precise and have much wider confidence intervals than those produced from Te Kupenga.

As well as the housing quality indicators, the Te Kupenga dataset also includes an objective measure of household crowding, created by Stats NZ, and based on information from the census and the Canadian National Occupancy Standard for housing adequacy. This crowding measure produces an indicator for needing more bedrooms based upon the number, age and sex of the usual occupants.

Figure 16 _ Estimated number of Māori adults 15 years and over by Household Crowding Index (Canadian National Occupancy Standard)
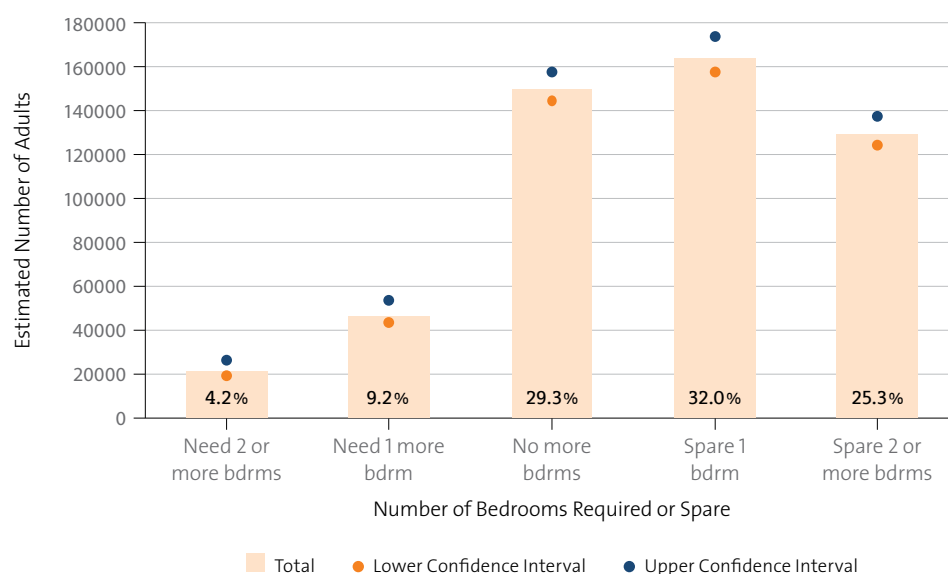
Using this measure, 13 percent (67,500) of Māori live in households which need at least one additional bedroom; of that, 4 percent require two or more bedrooms to meet the Canadian occupancy standard. This is somewhat lower than the one in five Māori in Te Kupenga who perceived their house to be too small.

The differences between these objective and self-assessed measures are likely to be due to conceptual and measurement differences, and the following limitations of the Canadian standard:

• a focus on bedroom number rather than overall household size, or size of other key spaces

• inclusion only of usual residents and thus exclusion of frequent visitors such as whānau members

• the privileging of Western cultural norms that don't include the impact of house or specific space size on whānau functioning such as manaakitanga and the frequent provision of kai or accommodation for whānau beyond those usually resident in the household.

Although this occupancy measure is used in other national and overseas official surveys, these limitations mean that its applicability to whānau functioning and wellbeing may be limited. Unfortunately, the removal of the question on self-reported house size adequacy from the next Te Kupenga survey (Stats NZ 2018) will not only make the Canadian index the sole measure of housing adequacy, but will also remove the potential to compare changes over time in how whānau Māori assess the quality of their homes.
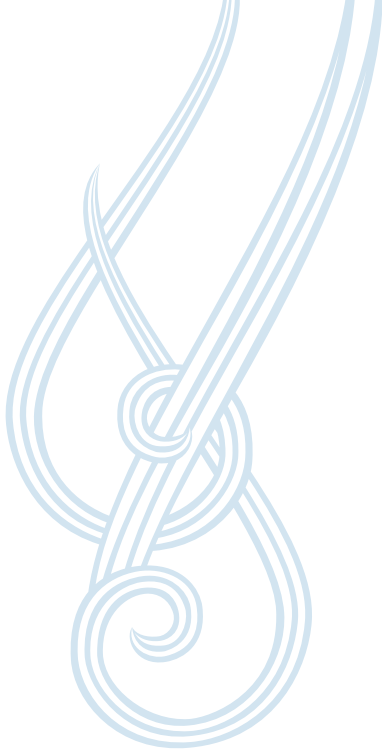
How household quality varies by key social and economic factors

We next describe how key variables within Te Kupenga are associated with self-assessed housing quality and the measure of household crowding. Tables presenting the data distributions for the analyses (below) are in the Appendices. Unless otherwise stated, all differences identified here were of statistical significance.

Demographic factors

This section looks at how the reporting of household quality issues in Te Kupenga varies by the key demographic factors of age; sex; geographic region; and family type.

Age

Reported housing quality varies significantly by respondent age, but with different age-related patterns for each type of housing quality measure.

For our analyses, we grouped respondents into five categories: 15-24 years, 25-34 years, 35-44 years, 45-54 years and 55 years old and over. These categories are consistent with previous reports.

Overall, Māori in the oldest age band were the least likely to report having housing quality issues. Around one-quarter (24 percent) of older Māori reported at least one major housing quality problem, with 41 percent reporting two or more issues of any size. The rates were substantially higher for the 25-34 year-old group, at 34 percent and 58 percent respectively.

For specific housing problems, Māori in the youngest (15-14 years) and oldest (55 + years) categories were the least likely to live in housing that needed repairs (about 39 percent).

Respondents in the middle three age bands all reported similar levels of repair issues, with around 50 percent reporting a repair problem of any size and about 15 percent reporting a major repairs problem.

All age groups had a similar prevalence (25-30 percent) of pests being a problem; they were perceived as a major issue for between 4-7 percent of respondents in each age category.

Age-related variation in housing quality problems was most evident with dampness. Māori aged 25-34 years were the most likely to perceive a problem with dampness at 41 percent. Of those, just under one sixth (15 percent) saw dampness as a big problem. Older Māori were the least likely to report dampness issues, with 24 percent having any sort of problem and 8 percent reporting it as a major problem.

The association of age with housing quality may be partially confounded by its relationship with other factors that influence housing quality, such as tenure and income.

Sex

Māori women are more likely to experience housing quality problems than Māori men, but the extent of the difference varies by the specific problem. In Te Kupenga, women were more likely than men to report that they had a major housing problem (32 percent compared with 24 percent for men), or at least two problems of any magnitude (52 percent compared with 46 percent for men).

Gender differences were most apparent with damp homes. Over a third (36 percent) of women reported having a damp house compared with 29 percent of men. Māori women were also more likely to perceive their damp home as a major problem (13 percent compared with 9 percent for men).

For the other four housing quality variables, there were only minor gender differences for overall problems but when it came to big problems, Māori women consistently had a higher prevalence rate. There were no significant gender differences in household crowding.

Region

Te Kupenga contains information about region of residence which enables comparisons of perceived housing quality between Māori living in urban and rural areas (main urban, secondary urban, minor urban, or rural area), as well as on a regional basis. While this provides insights about the extent of geographic differences in outcomes, the small populations of some regions result in high error margins for the smaller regions.

We note that Te Kupenga was not designed to produce regionally representative samples so the results for individual regions should be regarded as broadly indicative only.

There were no statistically significant differences in the number of reported housing issues or the number of major housing issues by urban/rural area. For specific housing quality problems, Māori living in secondary urban areas were slightly more likely than Māori living in other areas to report having a major problem.

Not surprisingly, pests were a problem reported most commonly in rural areas, but only as a small problem. There were no rural urban differences between region types for reporting pests as a major problem.

The region-specific results point to some regions having consistently poorer housing outcomes for Māori across multiple housing outcome measures. The five regions with the highest percentage of respondents reporting two or more problems of any magnitude, or at least one big problem, were Northland, Gisborne, Tasman, Nelson, and Marlborough.

Living in a house that was cold/hard to heat was most common in Tasman, Nelson, Gisborne, Northland and Wellington, while damp was most commonly reported in Nelson, Gisborne, Northland, Marlborough, and Wellington.

Needing repairs and having pests were most commonly reported in four of the five regions: Nelson, Marlborough, Bay of Plenty, Northland and Gisborne. The crowding measure was unable to be applied to the regional data due to the small numbers in some regions.

These results highlight the extent and diversity of housing issues faced by Māori in specific regions, especially those that are disproportionately rural. The 2018 Census will provide more robust regional statistics, albeit on a smaller range of measures, when that data becomes available later in 2018.

Household-based family type

Here, we look at the range of housing quality outcomes reported by Māori in different types of household-based living arrangements, using the same categories as the previous whānau wellbeing reports. They are:

- couple under 50 years without children
- couple over 50 years without children
- two parent family
- one parent family
- multiple family household
- individual living alone
- multiple individual household.

For whānau Māori, the experience of housing quality varies greatly by household living arrangements. Māori who headed single-parent households or who were part of multiple-whānau households were the most likely to report two or more housing problems of any magnitude, or at least one major problem. Couples over 50 years without children were, by far, the least likely to report two or more housing problems (31 percent) or at least one major problem (15 percent).

For specific housing quality measures, the overall pattern was that older (50 years plus) couple only households had the lowest prevalence of housing problems, and single parent and multiple-whānau households had the highest prevalence. The housing problems most strongly associated with different family types were being hard to keep warm, being too small and dampness.

A house that was hard to heat was a common issue. More than half of multiple-whānau households had this problem, with 25 percent reporting it as major. A cold home was a major problem for nearly one in four Māori (23.9 percent) living in sole-parent families, compared with 14 percent of two parent households and 7 percent of couples over 50 households.

Dampness was also a very common problem, with 40 percent of Māori living in sole-parent and multiple-whānau households reporting problems with damp. It was a major issue for 17 percent of one-parent households but only 5 percent for couples aged over 50 years.

A house that was too small for their needs was identified by a quarter of multiple family households, with 9 percent reporting this as a major problem. For both two and one-parent households, it was slightly less (23 percent) common. The situation was markedly different for older couples, only 5 percent of whom reported that housing size was a problem.

The crowding measure showed a similar pattern, but with more extreme differences. Nearly half (46 percent) of multiple-whānau households were defined as crowded by the Canadian standard. This compares with 21 percent of one-parent families, 10 percent of two-parent families and 9 percent of multiple-whānau households. These results reflect the realities of multiple-whānau households who are often sharing because of financial necessity or caring for whānau members

Previous analyses of Te Kupenga (Superu 2015) have highlighted that Māori living in multi-whānau households experience high levels of economic insecurity. Fewer than half (45 percent) of these whānau think they have enough income to meet their everyday needs.

The overall pattern of lower reporting of problems by couples without children aged over 50 will be related to a combination of other factors that are also associated with household type including income, demands on that income and the number of people resident in the house. This age group tends to be more financially secure – particularly with no dependents living with them.

Economic factors

Income adequacy

Te Kupenga includes a question on self-assessed income adequacy that asks, "How well does your total income (or your and your partner's income combined) meet your everyday needs?". Four possible response options are provided (Not enough, Only Just Enough, Enough and More than Enough).

Income adequacy was strongly associated with having any housing quality problem and having at least one major problem. Over two-thirds (68 percent) of Māori who perceived their income as being insufficient also reported two or more housing problems, compared with only 31 percent of Māori with more than enough income.

A similar difference is seen for reporting of at least one major issue. which was reported by nearly half (47 percent) of those with insufficient income and 13 percent of those with more than enough income.

The three individual housing issues most strongly correlated with income adequacy were hard to heat, needing repairs and damp.

Having a house that was hard to heat was a common problem for Māori with insufficient income. Over half (57 percent) had a problem with heating their home and nearly one-third (32 percent) saw it as a major problem. Even for those who perceived their income to be more than enough, over one-fifth (22 percent) lived in houses that were hard to heat.

More than half (58 percent) of those with insufficient income indicated that their house needed repairs, with 25 percent saying that this was a big problem. Of those who reported surplus income, 27 percent reported that repairs were a problem, but only 6 percent said this was a big problem.

Damp housing was identified by around half of those with insufficient income, with 21 percent reporting that dampness was a big problem. There is a clear association between reported income adequacy and housing problems. While insufficient income may restrict housing choices, these results show that it also overexposes Māori with limited means to poor quality housing, especially cold and damp housing. This, in turn, is likely to have negative health consequences.

Relative deprivation

The Te Kupenga dataset includes a measure of relative deprivation based on Census 2013 information about the small geographic area in which each house is located. This commonly used measure combines census data for each meshblock (containing 60-110 individuals) on:

- income
- home ownership
- employment
- qualifications
- family structure
- housing
- access to transport and
- communications.

NZDep 2013 estimates the relative socio-economic deprivation of an area and does not directly relate to socio-economic status of individuals (Atkinson, Salmond, & Crampton 2014).

For our analyses, we used NZDep13 quintiles to describe the relative area-level socioeconomic deprivation of each household location. Quintile 1 refers to the housing located in areas with the lowest levels of deprivation while quintile five has the highest deprivation.

Geographic deprivation is strongly associated with the number and size of housing problems. Nearly two-thirds (62 percent) of Māori living in areas of highest deprivation reported two or more housing problems, compared with just a quarter (26 percent) of those living in the least deprived areas. The percentage reporting one or more major problems were 40 percent and 14 percent respectively.

Area-level deprivation was most strongly associated with problems of repairs, damp and cold. One-third of those from quintile 1 areas indicated that repairs were an issue for them, with 21 percent saying this was a big problem.

Dampness was a problem for 43 percent of Māori living in quintile 5 areas, but only 14 percent of those in quintile 1 areas. This is consistent with evidence from the Growing Up in New Zealand study showing that the percentage of mothers (all ethnicities) who reported that their baby's room was damp or had heavy condensation or mould increased with increasing area level deprivation (Morton et al. 2012).

In the most deprived areas, 30 percent of mothers reported household dampness 'quite often' 'always or almost always' compared with just 10 percent of mothers in the least deprived areas.

Again, living in a house that is hard to heat was common, with half of Māori living in the most deprived areas reporting this as a problem and a quarter assessing it as a major problem. Even for Māori living in the least deprived areas, problems with a cold house were relatively high at 24 percent.

Crowding is one of the contributory variables to the NZDep13 index so it does not make sense to examine associations between them. The recently-developed New Zealand Index of Multiple Deprivation (Exeter et al. 2017) could be used but unfortunately was not available in the Te Kupenga dataset at the time of this analysis.

Education level

The Te Kupenga dataset contains census sourced information about the highest qualification achieved by respondents. As with previous whānau wellbeing reports, we have aggregated the range of qualification levels into four categories (No Qualifications, School Qualifications, Post-School Qualifications and Degree level qualifications).

Educational qualifications were associated with housing quality, but not as strongly as other socio-economic indicators. Forty-three per cent of respondents with degree qualifications reported having two or more housing problems of any magnitude, compared with 53 percent of those with no qualifications. A similar educational gradient was evident for those with one or more major housing problems. Thirty-three percent of those with no qualifications and 22 percent of those with degree qualifications indicated they had at least one big housing quality problem.

Of all the housing quality measures, educational qualifications were most strongly associated with the household crowding measure. Nineteen per cent of respondents with no qualifications lived in houses that were rated as needing more bedrooms, compared with just 5 percent of those with degree level qualifications.

The relatively weak association of educational qualification with housing quality is likely to reflect two things. One, the education measure used here only accounts for the highest qualification of the individual respondent. There may be other household members with higher or lower qualifications in the household, meaning this individual's level of qualification may not be representative of the entire household.

Second, educational qualifications are highly age dependent, with younger respondents possibly yet to complete their education. At the other end of the age spectrum, older Māori, who we have shown have fewer housing issues, are much less likely to have post-school qualifications, as older cohorts in general are less likely to have post-school education.

Household income

Te Kupenga contains information on both individual and total household income, with both measures sourced from the Census.

Household income was used for this project as it was more representative of the income resources available to the household and this project is focused on household rather than individual-level outcomes. The income levels were aggregated into 11 categories for this descriptive analysis – from 'Zero or Loss' to '$150,001 or more'.

Household income level was associated with the number of housing issues. Those in the lowest income band had more than twice the percentage (69 percent) reporting two or more problems than the percentage for the highest income band (31 percent). The differences by household income were even larger for major housing quality issues, which were recorded by 14 percent of the highest income band but 62 percent of the lowest income band.

Differences between the income bands were apparent for individual housing quality measures as well. Having a house that was hard to heat was a big problem for over half (52 percent) of the lowest income households but just 7.5 percent of the highest income households. There was no similar pattern for heating being a small problem. Damp was a big problem for one-third of lowest income households but only 4 percent of the highest income band.

There was no discernible pattern in household crowding measure by household income. This may be due to some small numbers in some of the categories, but also due to the low incomes of older Māori couple households, who are also less likely to need additional bedrooms.

Also, the adequacy of household income is dependent on the number of individuals in the household. Ideally, equivalised household income would be used as this accounts for the size of the household as well as the amount of income (OECD 2013). Unfortunately, the dataset as provided did not include either a measure of equivalised income, or the number of individuals in the household – which would have enabled us to calculate equivalised income.

Household context

Tenure

The Te Kupenga dataset contains information from the 2013 Census on the tenure holder, which describes whether a person owns or partly owns the dwelling they usually live in. Respondents are described as either a homeowner or not.

There were strong associations between household tenure and all housing quality measures with the exception of the need for repairs. Over half of non-owners (53 percent) reported having two or more issues compared with 40 percent of homeowners. Likewise, non-owners were also far more likely to report having at least one major housing quality problem (32 percent and 19 percent respectively).

Problems of cold and damp housing were common for both owners and for non-owners, pointing to a generic problem of housing quality for Māori. However, the issues were much more prevalent for non-owners. Damp was a problem for 38 percent of non-owners and 21 percent for owners. A hard to heat house was a problem for 45 percent of non-owners but 29 percent of owners.

Landlord type

Given the significant differences in housing quality measures between owners and non-owners, it is worth exploring if there are differences within the non-owner category.

Te Kupenga includes information from the census on landlord type which can be used to examine differences in outcomes for those respondents who rent their homes. Landlord type is classified into private sector, local government, central government and other. In the data set as provided to the researchers, the 'other' category included non-renters.

Our bivariate analysis showed that more than half of all Māori who rent experienced two or more housing issues, with central government tenants reporting the highest rate at almost 70 percent. Central government tenants also had the highest proportion with at least one major issue at 47 percent, compared with 40 percent of those with a local government landlord and 33 percent for private sector rentals.

Problems with cold and damp were reported by at least 40 percent of tenants where the landlord type was known. The prevalence of these and all other housing issues were more common amongst central government tenants compared with other landlord types. This is interesting in that much of the housing quality research focused on the general Aotearoa New Zealand population has found poorer housing quality conditions in private rentals.

These results could be a result of central government serving a different sector of the rental market (lower cost, higher need, larger houses), local government being more focused on housing the elderly (who have better housing outcomes generally), or indicative of the different standards of the housing stock provided to Māori tenants from each sector of the rental market.

Further, when we controlled for socio-demographic factors there was virtually no difference.

Investigating this further requires access to information on rental costs and household size, neither of which are available within the current Te Kupenga dataset. The recent addition of this dataset into the IDI will make it possible for future research to link to information from other sources such as the questions in the census dwelling questionnaires.

Housing quality and wellbeing

Whānau wellbeing

We have explored the demographic and socio-economic correlates of housing quality for Māori. We now consider the associations between housing quality and health and wellbeing.

This analysis addresses a gap in the statistical evidence about the impact of housing quality on whānau at a national level. In doing so, it draws on the respondents' own views of both housing adequacy and their whānau rather than relying on secondary reports or administrative data.

For this descriptive work, we have aggregated the 11 point whānau wellbeing scale to the same four categories used in previous whānau wellbeing reports. These categories are Badly, Moderately Well, Well and Extremely Well. This not only creates consistency across reports but avoids small counts in specific categories which create issues of high error levels and confidentiality risk.

The number and size of housing problems is strongly associated with reported whānau wellbeing. Māori with two or more housing problems were more than twice as likely to report their whānau were doing badly (8.8 percent) compared to those with fewer than two issues (3.9 percent). Those with multiple housing issues were much less likely to think their whānau were doing extremely well (17.9 percent), in contrast to 30.3 percent of those with fewer than two issues.

Figure 17 _ Whānau wellbeing rating by number of housing problems reported
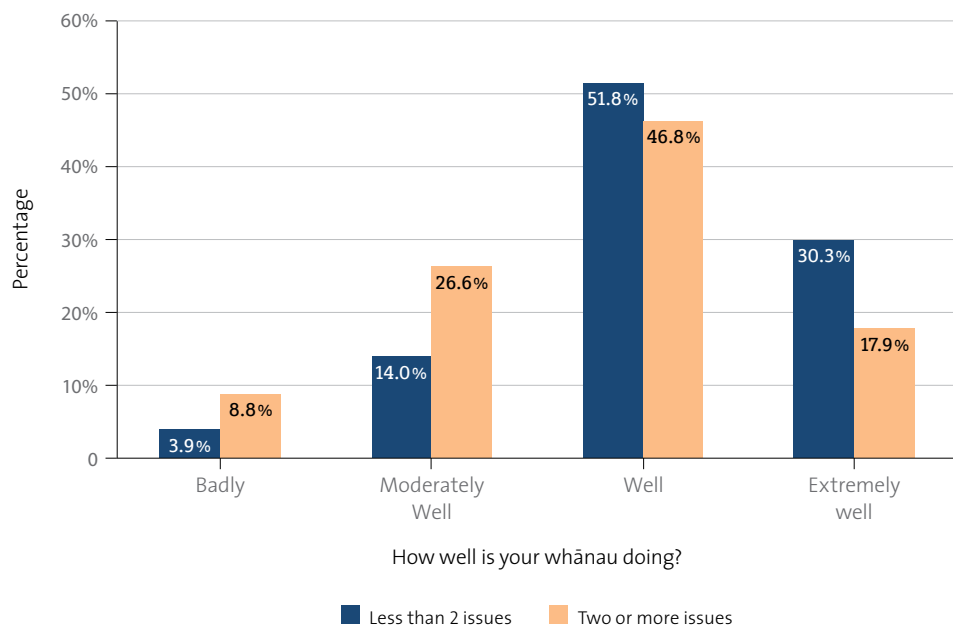
There was also a large difference in the reported level of whānau wellbeing for those with a major housing issue compared with those without a major issue. A perception that the whānau was doing badly was over two and a half times more common in respondents with a major housing issue. They were significantly less likely than those with no major housing issues to report that their whānau were doing well or extremely well.

Figure 18 _ Whānau wellbeing rating by size of housing problems reported
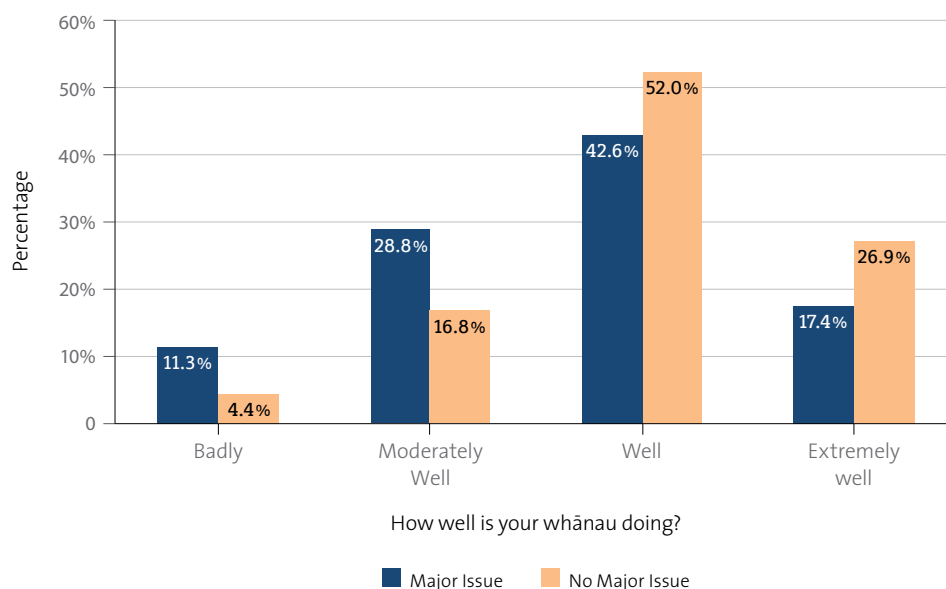
The housing quality measures that were most strongly associated with whānau wellbeing were hard to heat, needing repairs and damp.

Having a house that was hard to heat was a problem for 58 percent of those who felt their whānau was doing badly and 51 percent in the moderately well group, with heating a big problem in one-third and one-quarter of those groups respectively.

Repairs were an issue for 59 percent of those who felt their whānau was doing badly compared with just one-third (34 percent) of those whose whānau were perceived as 'extremely well'. There was also considerable variation in dampness issues. Almost half (48 percent) of those with whānau who were doing badly reported that they had a damp house compared to one-quarter (25 percent) of those who thought their whānau was doing extremely well.

While the objective crowding measure was not strongly associated with reported levels of whānau wellbeing, there was an association with self-assessed size adequacy (too small). Just over 38 percent of those whose whānau were doing badly indicated that their house was too small, with 12 percent stating it was a big problem. This compares with 14 percent and 3 percent of those who thought their whānau were doing extremely well.

These results demonstrate that housing quality measures are associated with reported whānau wellbeing, but only for the subjective measures. The relatively low association for the objective crowding measure may be related to its limitations as a measure of housing functionality for Māori.

There may also be issues of construct reliability and validity that we have noted in an earlier report on self-assessed whānau wellbeing (Kukutai, Sporle & Roskruge 2017).

Measures of individual wellbeing

Te Kupenga contains multiple measures of individual wellbeing, including individual questions and multiple question wellbeing measures across different sections of the survey. For this report we have looked at the association between housing quality measures and self-rated health, overall life satisfaction and frequency of feeling depressed.

Self-rated health

All but two housing quality measures were strongly associated with self-rated health. Crowding, damp and needing repairs were the measures most strongly associated with self-rated health, with household crowding having the weakest association. Experiencing major or multiple housing problems were more strongly correlated with self-rated health than any individual housing quality measure.

Depression

Self-reported recent experiences of depression are also associated with housing quality. Māori who have no major housing quality issues are significantly less likely to report experiencing feelings of depression than those who have at least one major housing problem.

Nearly one-third (32 percent) of Māori with at least one major housing issue reported feeling depressed at least some of the time, compared to 13 percent of those with no major housing issue. The specific housing problems most strongly associated with depression are dampness and having a house that is hard to heat. The relationship between self-reported depression, crowding and the perceived size inadequacy of the respondent's house (too small) was much weaker.

Part 4: Regression analysis of housing quality, health and wellbeing

How socio-demographic factors relate to housing quality when examined together

The analysis in Part 3 identified a range of demographic and socio-economic factors associated with self-assessed housing quality for Māori. As expected, housing tenure, self-assessed income adequacy and (to a lesser extent) area-level deprivation were strongly associated with housing quality.

Māori who were home owners, who had at least an adequate income, and lived in areas of low socio-economic deprivation were far less likely to report having housing issues than Māori lacking these buffers.

Here, we carry out more complex analyses using multiple variables simultaneously. More specifically, through regression analysis, we quantify the strength of the association between housing quality and specific variables, while statistically controlling for the associations between housing quality and other variables.

Rather than run separate regressions for the different types of housing quality problems (repairs, pests, too small, damp, cold), we employ a measure of the overall number of major housing issues reported (none, one, two or more) across the housing quality domains. This is consistent with the approach used by Stats NZ and the NZGSS and enables us to home in on the presence of major housing quality problems, regardless of the specific type of problem.

The variables used in our model are shown in Table 19 below, with variables of interest highlighted in bold. These variables are of interest both because of their importance in the wider housing quality literature described in Part 1 of this section, and because of their statistical significance in the descriptive analysis.

The inclusion of core demographic characteristics in the analysis enables us to explore the potential influence of age, sex, and household living arrangements on housing quality,[47] along with area level deprivation and landlord type.

TABLE
19

Ordinal regression predicting number of major housing quality issues

	Independent variables		Dependent variable
Demographic factors	Socio-economic factors	Housing type	Housing quality
Age	Deprivation	**Tenure**	Number of major issues
Sex	**Income adequacy**	Landlord type	
Family type			

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47   As region of residence was found not to be associated with housing issues in Part 3, we have excluded region of residence from the analysis here.

In following sections, we describe the key findings of the ordered logistic regression analysis, before turning to analyses of associations between housing quality and wellbeing. The full regression model can be found in Table 29, [Appendix 5], with marginal effects in Table 33.

We stress that the models only tell us about associations, not causality. Making claims about causality from observational data usually requires longitudinal data for the same individuals over several time points and the use of more advanced statistical analytic methods (Davis 2013).

The inability to distinguish causal relationships means we cannot be sure about the directionality of a relationship, or, more specifically, which factor is logically prior; we have therefore been cautious in interpreting the results below.

Demographic characteristics

Age

Once socio-demographic factors and housing type were factored in, associations between age and housing quality were only weakly evident. Those aged 25-34 years (p < .01), 35-44 years (p < .05), and 45-54 years (p < .05) were more likely to report major housing issues than the base category (those aged 15-24 years). No significant difference between those aged 55 years and over and the base category was found.

Sex

Women were marginally more likely to report major housing issues than men (p < .001). All things being equal, women were two percent more likely than men to report a major housing quality issue, and three percent more likely to report two or more major housing issues (see Appendix 5, Table 33 for table of marginal effects).

Despite the association between household-based family structure and housing quality indicators found in the bivariate analyses, once we controlled for the association between major housing issues and other variables in the regression analysis, there was no association between family structure and number of major housing issues. It is likely that income adequacy, which is also associated with household structure, dampens down the association between family structure and issues.

Socio-economic indicators

Deprivation

Those living in the two most deprived quintiles were more likely to report major housing issues than those in the least deprived quintile (p < .01). In fact, those in the most deprived quintile were 10 percent more likely to report two or more major housing issues than those in the least deprived quintile (see Appendix 5 for average marginal effects).

Income adequacy

After controlling for demographic characteristics and area level deprivation, **self-assessed income adequacy was the variable most strongly associated with housing quality**. Those who reported having 'not enough' or 'just enough' income were more likely to have major housing issues than those who reported having 'enough' income ($p < .001$).

In fact, all things being equal, those with 'just enough' income were 9 percent more likely than those with 'enough' income to have two or more housing problems, while those with 'not enough' income were 14 percent more likely to have two or more housing problems (see table of marginal effects, Appendix 5, Table 33).

The overlapping confidence intervals in Table 29 (Appendix 5) indicate that 'not enough' and 'just enough' were not significantly different from each other for housing quality.

Housing type

Tenure

Non-home owners were more likely than home owners to report major housing issues ($p<.01$). The size of this difference, however, was surprisingly small given the emphasis on home ownership in the literature.

Māori who did not own their home were 2 percent more likely to report one major housing issue, and 3 percent more likely to report two or more major issues than home owners (see table of marginal effects Appendix 5 Table 33).

Bivariate analyses revealed that home owners were more likely than non-home owners to report issues with repairs. This may be due to repairs tending to be the responsibility of home owners as opposed to those renting properties.

It is possible that the inclusion of repairs in the equation used to generate the number of major housing issues variable has masked the size of the difference between owners and non-owners across the other housing quality indicators.

Landlord type

Despite the association between landlord type and housing issues present in the bivariate analyses, after accounting for socio-demographic factors, there were no differences in the number of major housing issues between those in private rentals and those in either local government or central government rentals.

Those in private rentals were more likely to report major housing issues than those in the 'other/unknown' landlord category (which included home-owners, $p < .05$). The inclusion of home owners in the 'other' category is likely to have reduced the association between tenure and housing outcomes, making the tenure variable less informative in explaining housing outcomes than indicated from the bivariate analysis.

Summary

Our regression analysis provides a more focused exploration of the factors associated with housing quality issues for Māori, going beyond the descriptive analysis in Part 3 which considered each variable independently.

After controlling for the effect of other variables in the analysis, women were still significantly more likely than men to report a major housing issue, while Māori in the youngest and oldest age categories reported fewer major housing issues than others.

Interestingly, household-based whānau structure was insignificant for explaining variation in major housing problems. By contrast, the strongest predictors of major housing quality problems for Māori were subjective income adequacy and area level deprivation. These findings are consistent with the broader housing quality literature that emphasises the importance of material resources and deprivation.

While no differences were found in the number of housing issues between those in private rentals and those in state housing, there was a significant association between housing tenure and number of housing issues, with home owners reporting fewer major housing quality issues than non-home owners.

How housing quality and socio-demographic factors relate to wellbeing when examined together

The descriptive analysis in Part 3 showed significant associations between housing quality and indicators of individual and whānau wellbeing. Here, we explore if these associations remain once we control for the effects of other socio-demographic factors.

Once again, we include the demographic characteristics age, sex, and family type, along with socio-economic indicators of level of deprivation and subjective income adequacy.

The number of major household issues is used as an indicator of housing quality, and wellbeing is measured across three domains: self-rated physical health, recent feelings of depression and subjective whānau wellbeing.

The variables used in our model are shown in Table 20, with the variable of particular interest (major housing quality problems) highlighted in bold.

TABLE

20

Ordinal regression assessing the effect of self-assessed housing quality on indicators of individual health and whānau wellbeing

	Independent variables		Dependent variable
Demographic factors	Socio-economic factors	Housing quality	Wellbeing
Age	Deprivation	**Number of major issues**	Health
Sex	Income adequacy		Life satisfaction
Family type			Depressed
			Whānau wellbeing

We also describe the key findings of the ordered logistic regression analysis. Additional statistical details are presented in the Appendices. Once again, we stress that regression models reveal associations, not causality. We have therefore been cautious in interpreting the following results.

We acknowledge that these three aspects of health and wellbeing are multidimensional and would ideally be captured using multiple indicators, rather than a single measure as we have used here. Nevertheless, the selected measures are ones that have been used elsewhere and are useful starting points towards a deeper understanding of the housing quality, health and wellbeing nexus for whānau Māori. The self-rated health variable is reverse coded, thus higher values denote poorer self-rated health.

We begin with self-assessed housing quality as our key variable of interest.

Number of major housing quality issues

Having major housing issues was associated with all the indicators of wellbeing included in our analysis. As expected, a significant relationship was found between housing quality and self-rated health.

Māori with two or more major housing issues had much higher odds of reporting poor health than those with no such issues (the base) as well as those with only one issue (indicated by the non-overlapping confidence intervals).

Of all the variables we examined, housing quality was most strongly associated with self-rated health, as the odds ratio for housing quality exceeded all other indicator variables, including age.

Those with major housing issues were also more likely to have experienced recent feelings of depression compared with those with no housing issues. However, the effects were of a lesser magnitude than those relating to age, family type and perceived income adequacy.[48]

Finally, having major housing issues was also negatively associated with subjective whānau wellbeing.[49] Respondents with two or more major issues were significantly less likely than those with no such issues to perceive the wellbeing of their whānau positively (p<.001). They were also less likely than those with only one major issue to report a high level of whānau wellbeing.

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48 We also ran a more extensive model that included loneliness and self-rated health as additional predictors. Housing quality remained weakly significant.

49 We also ran a more extensive model that included quality of whānau relationships and individual life-satisfaction as additional predictors. These factors were found to be strongly correlated with self-assessed whānau wellbeing in an earlier report (Kukutai, Sporle & Roskruge 2017). Housing quality remained moderately significant.

Demographic characteristics

Age

Unsurprisingly, age was significantly associated with all three measures of health and wellbeing. Older people tended to report poorer physical health than the 15-24-years-old base category.

The proportion of those aged 15-24 years who reported having excellent health (24 percent) was twice that of those aged 55 years and over (12 percent). In addition, the proportion of those aged 55 years who reported poor health (5 percent) was more than twice that of those aged 15-24 years (2 percent).

Older Māori were more likely to report recent experiences with depression than the 15-24 – years-old base category.

Māori aged 25-34 and 45-54 years reported lower whānau wellbeing than those in the base category (p<.001), while there was no difference in subjective whānau wellbeing between Māori 55 years and over and those in the youngest age groups. This confirms the u-shaped relationship between age and subjective whānau wellbeing in an earlier report (Kukutai, Sporle & Roskruge 2017).

Sex

Gender was associated with all the measures of wellbeing except self-rated health. Men were more likely to report recent feelings of depression and lower whānau wellbeing than women.

Household-based family structure

Associations between household-based family structure and wellbeing indicators were found. Poorer self-rated health was reported by those who were single or in a couple with unknown child dependency status (p<.01), and those who did not reside in a family nucleus (p<.01), when compared with the base category (couple with no dependent children).

Those in a couple with one or more children were more likely to report having experienced recent feelings of depression (p<.001) than the base category. Those in a couple with one or more children, along with those not in a family nucleus also reported higher levels of subjective whānau wellbeing than the base category (couple with no dependent children).

Socio-economic indicators

Deprivation

Relative deprivation was associated with self-rated health status. Māori in the most deprived quintile reported poorer self-rated health than those in the least deprived quintile (p<.001; higher values denote poorer health).

The overlapping confidence intervals with all other levels of deprivation indicate that the negative effect of high deprivation on self-rated health is only significant when making comparisons with Māori living in the least deprived areas.

The link with recent feelings of depression and deprivation appears relatively weak. Māori living in the least deprived areas (quintile 1) reported less depressed mood than those in quintile 4 areas but only at the five percent level of significance. Deprivation had a similarly weak relationship with subjective whānau wellbeing, with the only significant difference being between Māori living in quintile 1 and quintile 4 deprivation areas (p<.05).

Income adequacy

Self-reported income adequacy was associated with all the indicators of health and wellbeing we assessed. Those who reported having enough income tended to have better health than those with not enough income (p<.001), and those with just enough income (p<.001), but poorer health than those who reported having more than enough income (p<.01).

Those with enough income were less likely to report depressed mood, than those with not enough income (p<.001) as well as those with just enough income (p<.001), while there was no difference in depressed mood between those with enough income and those with more than enough income.

Income adequacy was also associated with whānau wellbeing. Those with enough income reported higher whānau wellbeing than those with not enough income (p<.001), and those with just enough income (p<.001). There was no difference in whānau wellbeing between those with enough income and those with more than enough income.

Summary

The regression analysis strongly suggests that housing quality does matter for individual and whānau wellbeing, even once socio-demographic factors are controlled for. In fact, housing quality was the variable in our analysis most strongly associated with self-rated health, accounting for more of the variability in physical health, even more than age. This is not unexpected given the substantial literature showing the impact of housing quality on specific dimensions of physical health.

The relationship of housing quality issues with feelings of depression was less compelling, with a significant but relatively weak association. The lack of clear evidence linking housing quality issues such as dampness and cold to depression or anxiety makes it difficult to gauge what this result might mean substantively.

Finally, while the finding that major housing problems are negatively associated with whānau wellbeing may come as no surprise to those working in housing and whānau advocacy, this is the first study to identify this association in a nationally representative survey.

There are several possible ways in which housing quality issues might affect whānau wellbeing. Where whānau are co-residing in a single household, the housing problems experienced by one whānau member will be shared by others. However, only 40 percent of respondents in Te Kupenga thought of their whānau in a narrow sense of a nuclear family (parents, partner, siblings, children).

Where whānau members are not all co-residing there may be other cultural, social or economic mechanisms operating beyond the level of a single household. Te Kupenga provides useful information about the variety of whānau structures but there is no quantifiable information about the cultural, social or economic functioning of whānau. These operational foundations of whānau are beyond both the scope of this report and the content of existing official surveys.

Part 5: Concluding comments

The goals of this section were to provide a fuller account of self-assessed Māori housing quality than has been previously done; to identify key factors likely to increase the risk of housing quality issues; and to explore the relationship of perceived housing quality to subjective individual and whānau wellbeing.

Key findings

Our findings confirm that there are pervasive problems with housing quality, as assessed by Māori occupants themselves. Over two-thirds (68 percent) reported at least one housing problem of any size and nearly half reported two or more housing quality problems (47 percent).

Our findings confirm that there are pervasive problems with housing quality, as assessed by Māori occupants themselves.

If we focus on serious housing issues, we find that more than one in four Māori adults live with at least one major housing quality problem (28 percent), and nearly one in six (14 percent) live with at least two major housing problems.

Although outstanding house repairs was the most common problem overall, the housing aspect most likely to constitute a major problem was having a house that was hard to heat. While Te Kupenga did not include a question on insulation, previous studies have shown that many houses in Aotearoa New Zealand have inadequate insulation.

What is most disturbing is that our results are likely to underestimate the full extent of Māori housing issues, given the existing evidence that both owners and renters tend to understate the true extent of problems with their physical dwelling.

To be properly appreciated these issues ought to be placed within the broader arc of more than a century of substandard conditions and unmet housing needs for Māori, and the disproportionate burden that Māori (and Pacific peoples) continue to bear with related issues of deepening child poverty, housing unaffordability and entrenched health inequities.

After controlling for demographic characteristics and area level deprivation, self-assessed income adequacy was the factor most closely connected to a major housing problem. All things being equal, those with 'just enough' income were 9 percent more likely than those with 'enough' income to have two or more housing problems, while those with 'not enough' income were 14 percent more likely to have two or more housing problems.

Ideally, we would use equivalised household income as it provides a better account of the adequacy of a household's income given the number of people in the household that income supports. Such a measure is not available in the Te Kupenga dataset. We did, however, look at independent associations between housing quality and both individual income and (non-equivalised) household income.

We found significant associations with housing quality (at least one major issue; two or more issues of any magnitude) and particularly problems with coldness/hard to heat and dampness. The direction reflected self-perceived income adequacy whereby Māori with higher incomes were far less likely to experience housing problems than Māori individuals and whānau on lower incomes.

While income adequacy emerged as having a strong association with housing quality in our regression analysis, household type and landlord type were not found to be associated with housing quality, and very little difference in housing quality was found between home owners and non-owners. This suggests that it is not the family type or the housing type that is of most significance when assessing risk of poor housing so much as it is the material circumstances of the individuals.

Findings from our second regression model also reveal associations between housing quality and subjective individual and whānau wellbeing.

After controlling for socio-demographic indicators, Māori individuals who reported having a major housing issue were more likely than those without housing issues to report poor health, depression and poor whānau wellbeing. The association was particularly strong between housing quality and physical health, as having a major housing issue was more strongly associated with physical health than any other indicator variable in our model (including age, area level deprivation, and income adequacy).

The associations between housing quality and both whānau wellbeing and experiences of depression were more tenuous, and further modelling is required to control for the effects of possible covariates.

Implications of these findings

Māori are disproportionately affected by food, fuel, and housing poverty.

The findings presented in this section point to the complexity of the broader domain of housing quality and conditions, and how these conditions occur in the lives of individuals and whānau with experiences of material deprivation and wellbeing outcomes.

Māori are disproportionately affected by food, fuel and housing poverty. These multiple and intersecting issues, many of which are influenced by underlying structural determinants, constrain choices and the capacity of Māori to freely exercise whānau rangatiratanga, to the detriment of individual and whānau wellbeing.

Limitations

Our findings may be limited by using major housing issues as an indicator of housing quality. This measure combines responses on whether houses are perceived as requiring repairs, having pests, being too small, being damp and being cold/hard to heat. It is possible that socio-demographic and wellbeing variables might be correlated with each of these types of housing issues to different extents, or even in opposite directions, which could therefore obscure associations between variables.

In addition, as this is the first exploration of associations between housing quality and subjective individual and whānau wellbeing, more modelling involving a broader range of wellbeing indicators is required.

Future directions

The underlying premise of this study is that Māori housing should not be an add-on to mainstream housing policy approaches…

Our underlying premise is that Māori housing should not be an add-on to mainstream housing policy approaches, but rather the foundation for whānau-centred programmes that seek to support whānau empowerment and autonomy.

This section has revealed associations between socio-demographic variables, housing quality, and self-rated individual and whānau wellbeing.

There is scope for future analysis of how housing quality intersects with cultural factors. This might include an exploration of the extent and nature of housing problems affecting Māori who are hau kāinga (those living within 30 minutes of their ancestral marae) versus those living more distant from their marae. This may elucidate links between housing quality, proximity to ancestral homelands, and indicators of cultural participation – for example, whether poor housing quality is associated with lower levels of manaakitanga or marae engagement.

While longitudinal data on the pathways to, and consequences of, poor housing quality for whānau Māori would be valuable, perhaps the more pressing issue is to expand the somewhat narrow interpretation of housing quality as defined by features of the physical dwelling, to incorporate measures animated by Māori cultural values of what 'tika homes' might mean.

Addressing the dominance of Eurocentric norms of housing quality should involve developing culturally informed measures of housing adequacy that account for housing characteristics that support whānau wellbeing and whānau function (BBHTC 2018).

As well as including indicators of cultural access (for example, distance to ancestral homelands, distance to Māori medium education, share of the area population who are Māori, share of population who speak Māori, and so on), an indicator of 'tika homes' could incorporate geographic threats to health and wellbeing that may be disproportionately experienced by Māori (for example noise and air pollution; lack of access to greenspaces, public transport, and hospitals; as well as proximity to liquor stores and fast food retailers).

This need not diminish the significance of housing quality but rather open broader possibilities for mitigating the effects of material circumstance and promoting wellbeing through tika housing and communities. This is important given the long and, at times, overtly discriminatory history of government policy which actively promoted assimilation and the adoption of Pākehā lifestyles as necessary for health improvement.

It is important to avoid unintentionally embedding Eurocentric norms about Māori housing priorities by ignoring aspects of housing that whānau Māori consider important to their wellbeing.

> In addition to housing research specific to Māori, research focusing on tamariki is crucial to understanding the impact of housing on Whānau Ora...

In addition to housing research specific to Māori, research focusing on tamariki is crucial to understanding the impact of housing on Whānau Ora given the absence of children (those under 15 years) in the Te Kupenga dataset, and the well-established links between housing quality and children's health outcomes.

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3.4_ Use of the Whānau Rangatiratanga Framework to inform an evaluation of E Tū Whānau

In this section we assessed how the Whānau Rangatiratanga Framework can be used to evaluate the E Tū Whānau initiative. We wanted to understand the utility of the framework to inform evaluations of a broader suite of Ministry of Social Development kaupapa Māori programmes. We explored how a capability-based measurement framework, that is sourced in te ao Māori, is aspirational and enduring, can support and strengthen our understanding of E Tū Whānau outcomes. We also wanted to understand how the Whānau Rangatiratanga Framework could be used to explore the E Tū Whānau narratives

Firstly, we mapped the Whānau Rangatiratanga capability dimensions and principles to the intended E Tū Whānau outcomes. We then further mapped the outcomes as directly expressed in the whānau narratives to the Whānau Rangatiratanga Framework. Applying the Whānau Rangatiratanga Framework to the E Tū Whānau narratives provided a significant platform to identify potential indicators of whānau wellbeing.

This is the first time that the Whānau Rangatiratanga Framework:

- has been applied to a programme evaluation
- has been used to develop whānau-level measures sourced from whānau narratives.

There is a strong synergy between the values and outcomes of E Tū Whānau and those of the Whānau Rangatiratanga Framework, which makes exploring the utility of the framework for the initiative particularly applicable. Collectively, the significance of these conceptual and measurement frameworks is that they draw from within te ao Māori to understand what evidence and priorities Māori say are important.

A formative evaluation of E Tū Whānau was completed in 2017. At the end of the formative evaluation, the E Tū Whānau Reference Group asked the question 'Where is a framework that can help us evaluate a Kaupapa Māori programme?'. This chapter is an exploration of the application of the Whānau Rangatiratanga Framework to E Tū Whānau as a means to respond to that question.

Background

Whānau Rangatiratanga Framework

The strength of the Whānau Rangatiratanga Framework is that it provides a platform and a guide – from within a Māori world view – for collecting, analysing and using data about whānau wellbeing. (Baker, K. 2016). To date, the framework has predominantly been used to measure and report on whānau wellbeing using large datasets such as administrative data, census data, General Social Survey data and Te Kupenga data. The framework has been used to guide a Kaupapa Māori evaluation, and to guide qualitative analysis of our evaluative data. It also holds potential as a tool to overlay evaluations of kaupapa Māori projects in and out of government.

E Tū Whānau

> E Tū Whānau is an innovative kaupapa Māori approach that seeks to eliminate all forms of violence in the home, especially against Māori women and children and in refugee and migrant communities.

E Tū Whānau is an innovative kaupapa Māori approach that seeks to eliminate all forms of violence in the home, especially against Māori women and children and in refugee and migrant communities. Funded by the Ministry of Social Development, E Tū Whānau is broadly a family violence prevention initiative but is more directly focused on supporting communities to identify and respond to their own priorities. What differentiates E Tū Whānau from other family violence prevention approaches is that it is strengths-based, grounded in te ao Māori (Māori philosophy and practices) and leadership (Kahukura) development.

E Tū Whānau focuses on strengthening cultural connections using the E Tū Whānau values:

- Aroha – giving with no expectation of return
- Whanaungatanga – being connected
- Whakapapa – knowing who you are and where you belong
- Manaaki – building the mana of others through nurturing, growing and challenging
- Kōrero awhi – positive communication and actions
- Tikanga – doing things the right way, according to your values.

The vision for E Tū Whānau is: Whānau are strong, safe, prosperous and loving with a clear sense of identity and cultural integrity and with control over their destiny.

The intended high-level outcomes of E Tū Whānau are:

- growth in the number of community leaders who inspire change and act to prevent family violence within their communities
- a shift in attitudes and behaviours within communities/whānau so that:
  - whānau are strengthened
  - whānau are safe and have access to spaces where they are strengthened and nurtured
  - family violence is eliminated
- over time, a reduction in incidence of family violence.

The theory of change and logic underpinning the E Tū Whānau approach is that in changing behaviours through an innovative kaupapa Māori approach, violence within these communities will be reduced (Figure 19). Mobilising communities to change attitudes and behaviours towards family violence has been proven to be one of the most effective mechanisms of preventing family violence (Abramsky et al, 2016).

The programme did not have any indicators associated with these outcomes at the stage of the formative evaluation.

Figure 19 _ Overview of E Tū Whānau theory of change

Intended societal outcome	Whānau are strong, safe and prosperous with a clear sense of identity and cultural integrity and with control over their destiny – Te Mana Kaha o Te Whānau			
Intended outcomes	Growth in community leaders who inspire change and act to prevent family violence within their communities	A shift in attitudes and behaviours within communities/whānau	Reduction in family violence	
Action areas	Leadership	Changing attitudes and behaviour	Ensuring safety and accountability	Effective support services and resources · Understanding and developing best practice

Values	Aroha Whanaungatanga Whakapapa Manaaki Kōrero awhi Tikanga	Design features	• mobilising whānau and communities so that they are positioned to act to prevent violence • acknowledging the strengths inherent in whānau and how these can be further developed to reduce family violence • engaging with whānau and communities in a way that is culturally appropriate • allowing whānau and communities to initiate engagement with E Tū Whānau • empowering and building the capacity of whānau/communities to take the lead on reducing family violence.

Te mana kaha o te whānau

Since 2009, E Tū Whānau has funded over 100 providers throughout Aotearoa for all of its components of the programme – including capability building, communications and resources, and community engagement, action and partnerships. A variety of providers were involved in E Tū Whānau including Māori and non-Māori providers, Whānau Ora providers, and non-governmental organisations.

The original investment approach of E Tū Whānau was to test and support a wide range of communities, and assess which of these investments could be sustained.

- **Capability Building** (Phase 1) – began in 2009 and focused on capability building through funding Mauri Ora training delivered by Te Korowai Aroha, to work with whānau communities and practitioners to identify/meet their capability needs.

- **Campaign** – communications and resources (Phase 2) – began in 2012 and involved a branding and communications campaign containing key messages based on a Māori world view of family violence and producing a set of resources (based on the key messages) designed to encourage discussion and support change in attitudes and behaviours.

- **Community engagement, action and partnerships** (Phase 3) – Alongside the communications and resources, E Tū Whānau staff and Kahukura (people who inspire change in whānau and communities, including iwi leaders, rangatahi, strong wahine and many others) were funded in 2013 to engage with stakeholders and mobilise those whose work aligns with the values of E Tū Whānau, including: community organisations (such as iwi, hapū, marae, sports, churches, schools); government and non-government agencies. From this, a number of community action initiatives have evolved that either directly or indirectly tackle family violence. These initiatives vary in focus but generally take a community development approach, identifying community and whānau priorities and goals, and moving towards sustained action.

The campaign funding was appropriated specifically for communications and resource development and is ongoing. Conversely, the community engagement funding was to focus on one-off grants to mobilise communities because the funding was not secured. Given this, the E Tū Whānau team did not want to build community expectations only to potentially let them down if ongoing funding could not be secured. As the project has progressed, 15 key communities from this first wave were identified as ready for sustained investment. In 2018, this number was refined and a smaller cohort of communities was selected for targeted and sustained investment and support.

A formative evaluation of E Tū Whānau was conducted by Grootveld, Widmer, McIntosh and Nakhid (2017) with the following objectives:

- to identify the range of preliminary outcomes that whānau and communities have experienced as a result of engaging with E Tū Whānau

- to gather information that will inform the evolution of the E Tū Whānau theory of change model and evaluation of future impact

- to explore the views of whānau and communities about the design and approach of E Tū Whānau (that is, culturally appropriate, strengths-based, community initiated and driven)

- to identify the strengths and challenges of the current delivery model to inform how the delivery of E Tū Whānau can be enhanced in the future.

The evaluation was based on a case study approach focused on four community types:

- Māori Collective (Whānau involved in gangs in Wellington)
- Māori Organisation (Mangakino and Wairarapa communities supported by Ngāti Kahungunu ki Wairarapa and Masterton and Featherston schools supported by Kahukura)
- Māori Community (Whakatōhea cross-community engagement in Ōpōtiki)
- Migrant Community (Auckland and Hamilton refugee and migrant communities supported by two NGOs).

Qualitative and quantitative information was used to inform the four case studies. The methods used were:

- semi-structured interviews with 60 key informants
- analysis of E Tū Whānau monitoring and reporting data
- review of relevant family violence literature and research.

The narratives presented in this paper are sourced from case study participants across the four 'community types'.

The depth and breadth of the E Tū Whānau work programme meant it was difficult to quantify the number of whānau and Māori involved – improved monitoring and reporting was identified as one area for improvement. However, the evaluative data indicates that E Tū Whānau has touched the lives of thousands of whānau Māori and hundreds of communities throughout Aotearoa. Overall, the evaluation found E Tū Whānau is making a positive difference across diverse communities who are overwhelmingly positive about the way in which E Tū Whānau enables and supports them to achieve their own aspirations. More importantly, E Tū Whānau has had a positive impact in communities, particularly for whānau involved in gangs and small (predominantly Māori) rural communities that have historically been marginalised and disenfranchised by the State.

As a result of the E Tū Whānau approach, a range of outcomes is being achieved by communities, with demonstrated progress towards the intended outcomes of growth in community leadership, and a shift in attitudes and behaviours around family violence.

Other commonly shared outcomes are:

- strengthened cohesion
- cultural connection
- rangatahi engagement
- increased confidence and agency for change
- greater awareness of violence-related issues.

Analysis

The Whānau Rangatiratanga Framework enables us to explore how the lived experiences of whānau engaged with E Tū Whānau might be framed within the framework to demonstrate, articulate and potentially measure shifts in whānau wellbeing, and to better understand the actual outcomes achieved.

In our analysis of the E Tū Whānau narratives several key themes were identified. Some of the themes included increased commitment to positive behaviour and ownership of personal behaviour, building connections with marae, whenua, whakapapa and tikanga etc. The E Tū Whānau narrative themes were then categorised under the E Tū Whānau outcomes (see Table 21 below) to demonstrate which outcomes whānau are achieving.

TABLE 21

E Tū Whānau narratives mapped against the E Tū Whānau Outcomes

Whānau are safe	Whānau are strengthened	Growth in community leaders	Whānau have access to spaces where they are strengthened and nurtured
Increased commitment to positive behaviour and ownership of personal behaviour	Building connections with marae, whenua, whakapapa, tikanga	Increased self-confidence and leadership within community	Increased participation in educational opportunities including wānanga, and universities.
Increased awareness and knowledge of E Tū Whānau	Increased understanding of Māori culture and society	Increased personal agency and critical awareness	Increased access to employment opportunities – in some instances after long period of unemployment
Some communities embodying E Tū Whānau principles	Improved socio-economic outcomes (e.g. education, employment, reduction of vandalism)	Building leadership skills, participation and engagement with rangatahi	Increased participation in sport and physical activity

Strengthening our understanding of E Tū Whānau outcomes using the capabilities in the Whānau Rangatiratanga Measurement Framework

To expand our understanding of the E Tū Whānau outcomes and how the outcomes are contributing to whānau wellbeing, we mapped the intended outcomes against the Whānau Rangatiratanga Framework. Table 22 shows how the intended E Tū Whānau programme outcomes (bold) mapped onto the Whānau Rangatiratanga framework.

TABLE 22

Intended E Tū Whānau outcomes (*in bold italic*) mapped against the Whānau Rangatiratanga Framework

	Whakapapa *Thriving relationships*	Manaakitanga *Reciprocity and Support*	Rangatiratanga *Leadership and participation*	Kotahitanga *Collective unity*	Wairuatanga *Spiritual and cultural strength*
Sustainability of te ao Māori (language, identity, culture, institutions)	Whānau have a positive relationship with te ao Māori	Whānau are able to foster and develop connections to te ao Māori ***Whānau are strengthened***	Whānau exercise leadership in te ao Māori ***Growth in community leaders***	Whānau are able to meaningfully engage with Māori culture and Māori institutions	Whānau can express their culture and identity in ways that are meaningful to them
Social capability (trust, volunteering, connectedness)	Whānau are connected and safe ***Whānau are safe***	Whānau care for themselves and others ***Whānau are strengthened*** ***Family violence is eliminated***	Whānau exercise leadership in te ao whānui ***Growth in community leaders***	Whānau are able to access and trust institutions Whānau have access to spaces where they are strengthened and nurtured	Whānau are able to express and embrace spirituality
Human resource potential (health, education, quality of life)	Whānau wellbeing is enhanced	Whānau support each other to succeed ***Whānau are strengthened***	Whānau are able to live well	Whānau are able to achieve their aspirational goals	Whānau are resilient and able to overcome adversity
Economic (employment, wealth and housing)	Whānau can manage and leverage collective resources	Whānau are able to support each other financially and to accumulate financial reserves	Whānau enjoy economic security	Whānau can navigate barriers to success	Whānau can access their material and non-material resources

Key findings from mapping E Tū Whānau programme outcomes to the Whānau Rangatiratanga Framework:

- There is an underlying key outcome for whānau identified as 'whānau are strengthened' that pulls from several capabilities.
- Our intended programme outcomes are grounded in Māori realities that speak to the capabilities required to meet outcome.
- E Tū Whānau programme is supporting whānau to build in some important areas of capability.

We then looked at the evidence from the whānau voice in relation to outcomes and in relation to the Whānau Rangatiratanga Framework to think about what the main findings are from the evaluation.

For each of the E Tū Whānau outcomes we have attempted to do the following:

1. describe where the intended outcome sits in the Whānau Rangatiratanga framework.

2. look at the whānau voice in relation to this outcome and think about what the main findings are from the evaluation – eg, for the outcome, whānau are strengthened, what evidence was there that whānau are strengthened? What did this look like in the whānau voice?

3. discuss these findings against the framework – eg, for whānau are strengthened, which parts of the framework did the whānau voice seem to most relate to?

4. reflect on these findings in relation to whānau wellbeing and utility for future evaluation work.

Gaining deeper insight into E Tū Whānau outcomes using capabilities and principles

> The Whānau Rangatiratanga Framework shines a light on wellbeing and enables us to interpret and understand E Tū Whānau data from a holistic whānau wellbeing lens.

When we look at the whānau experience of E Tū Whānau against the Whānau Rangatiratanga Framework, we glean a deeper insight into which capabilities have helped progress outcomes, and the role of E Tū Whānau in supporting these capabilities. The Whānau Rangatiratanga Framework shines a light on wellbeing and enables us to interpret and understand E Tū Whānau data from a holistic whānau wellbeing lens.

Whānau are strengthened

"Whānau are strengthened" is a key finding that emerged from mapping to the Whānau Rangatiratanga Framework. This outcome is an overarching outcome, which links to the other intended programme outcomes already described. The intended outcome, whānau are strengthened, mapped to the dimensions of *Sustainability of te ao Māori: Manaakitanga and Social Capability: Manaakitanga* – with whānau connecting to te ao Māori and caring for each other. When exploring the whānau voice in relation to this outcome, evidence of a strengthened whānau spanned across a range of areas related to te ao Māori, social capability and human resource potential:

Sustainability of te ao Māori:

• *Whakapapa* (positive relationships with te ao Māori creating opportunities for whānau connection)

• *Kotahitanga* (collective engagement in te ao Māori),

Social capability:

• *Rangatiratanga* (whānau leadership paving the way for improvements),

Human resource potential:

• *Manaakitanga* (whānau supporting each to succeed),

• *Kotahitanga* (goal achievement leading to whānau improvements),

• *Wairuatanga* (whānau overcoming adversity to generate changes).

Evidence of this outcome across the capability dimensions is not a surprise given the broadness of both this outcome, and the E Tū Whānau approach, which built on whānau and community-driven priorities. While ultimately aiming to reduce family violence, the programme recognised that this could only occur by supporting whānau to reconnect with te ao Māori and respond to the specific realities they were encountering. As a result, the change in attitude, behaviour and capacity experienced through the initiative took a number of different expressions.

Sustainability of te ao Māori: Whakapapa

The shift to whānau having a positive relationship with te ao Māori was an important element of a strengthened whānau. Whānau voices point to the ways in which whānau identity and aspirations opened up as a result of being given the space and opportunity to connect to te ao Māori.

This occurred through visits to ancestral marae. For example, in Mangakino, 25 whānau gathered at Pouakani marae to discuss and develop a vision for their community. The vision built on the work carried out by local leaders and focused on supporting local rangatahi to connect to their identity, build confidence and skills to pursue employment and educational opportunities. As a result of the hui, Te Korowai Aroha was invited to facilitate a second community hui focused on decolonisation. In addition, community leaders built on the momentum and held a series of rangatahi-focused wānanga, which included a trip to the Wairarapa to connect rangatahi to their hau kāinga, marae and mana whenua.

> We had our first hui and it was awesome. We signed the charter at the first hui. Then we took our rangatahi back to the Wairarapa and to different marae where we have connections. That was powerful for everyone involved, for these kids to see the places that they are connected to, places that are part of who they are.
>
> What I'm trying to do is build rangatahi capacity by strengthening who they are, giving them their identity or helping them find their identity, going back to their tūrangawaewae, reconnecting. Because it's all about connections to being Māori, and how we succeed is because we're connected, and if you're not connected it's so difficult. [Narrative 16]

It also occurred through whānau visits to non-ancestral marae and participation in marae-based wānanga.

> I went [to the hui] because my whānau were going. I didn't know what it was all about, but it was the first time for me to be on a marae. And it was mean. We were treated like real people, like we were important and we matter. That felt good yeah. Being on a marae was strange and new, but I learnt that this is all part of me, and who I am. [Narrative 17]

Sustainability of te ao Māori: Kotahitanga

Collective engagement with Māori culture was another important avenue for strengthening whānau. This is something that was particularly marked among whānau involved in gangs, where the collective identity was quite strong but disconnected from te ao Māori. It was demonstrated through their collective participation in Māori cultural activities. Women involved in gangs spoke to how E Tū Whānau enabled the initial connection to te ao Māori, and how they were now building and strengthening this connection and manaakitanga, as a source of wellbeing.

It was about connections: Healthy orientations and being culturally engaged. It was about self-reliance. More self-reliance, an expression of tino rangatiratanga. Self-independence, marae style living. [Narrative 18]

Opening our mind to other possibilities: we started talking about kapa haka we started doing kapa haka, and te reo here and there. Wheels were set in motion to start doing Mauri Ora and that is when Te Korowai Aroha o Aotearoa got us in to all that. Then all the sisters got in. The ripple effect. [Narrative 19]

Social capability: Rangatiratanga

Whānau leadership was also an exhibit of whānau strengthening, which arose through whānau developing a shared vision, leaders supporting wider whānau, and whānau members developing leadership skills. In Ōpōtiki, iwi leaders talked about how they used E Tū Whānau (kaupapa and values) as a vehicle to bring the iwi, hapū and community together:

We looked at how bringing our hapū together would benefit our community, restore iwitanga, Whakatōheatanga, so that's what we got excited about. It happened over a three-day period. It was an aspiration, and we thought, 'no let's do this'. It was all of our kaupapa, all drug free, alcohol free, smoke free, and so that was a huge statement during that time because it was new here. We made a huge statement though the actions of relationships and bringing hapū together, and we did it in a way that wasn't about alcohol or drugs. It was about whakapapa, it was about celebration. Biggest learning was developing our ways of engaging, with hapū, our kaumātua, our young people, the wider community and trying to get our own to understand the value for our iwi. [Narrative 20]

What this iwi leader demonstrated was the power of whakapapa and whanaungatanga (relationships) to bring whānau together under the umbrella of hapūtanga and iwitanga. This encouraged whānau to celebrate their identity and shared values as hapū and iwi, as a source of strength.

Human resource potential: Manaakitanga

Role models and mentors within whānau enabled whānau to make gains. Maia, mother to six children, talked about how the E Tū Whānau values have supported her to parent and communicate to her children in a different way, leading to less conflict and more respect within her whānau.

Getting through to my kids. We have learnt to communicate with each other. We ask each day how the day has been. We are doing well. I go to work, the other kids go to school, and others go to course. No one stays home… We have committed to things… I have given responsibilities to my 13-year and 9-year-old to be committed to their rugby league. They must do all the things they have to do and I will support them… We talk a lot… Lots of sports and fitness. How could they contribute to the conversation we are having? We realise that we can contribute to a lot of things, we are healthy and fit… All on the same page, they are learning commitment and responsibility and communication. Two years I was not allowed on any one's [Facebook] page! …We now can talk about how the bigger ones can help the little ones, what advice we can give as a collective. E Tū Whānau values helped me… Teaching them to pay their way… Boys doing the veggies. None of the boys are dumb

so they need to contribute... Have found different ways to deal with conflict.... When there is a raruraru between them we have a meeting and they have to say five nice things about each other, put it in the bubble and throw it away. Strategies to deal with conflict. Skills to transition into the adult world. [Narrative 21]

Human resource potential: Kotahitanga

A key feature of the strengthening journey for many whānau through E Tū Whānau was the achievement of aspirational goals through a whānau planning process. For those whānau who engaged in planning, creating whānau plans was seen to be setting the game plan for the future for all whānau members. They wanted something that encompassed tamariki right through to the kaumātua and noted that drawing on E Tū Whānau values helps with the long-term planning. Their previous relationship with government agencies led to scepticism about the ability of E Tū Whānau to enable their own planning, but the trusting 'space' created through E Tū Whānau kaimahi led to whānau making improvements and celebrating successes.

Such was our experience with those agencies at the beginning, we said before anyone tells us what E Tū Whānau is we are going to design what it is. We were sceptical as. The first thing we did was create The Map. The title to our first map was: The plan of resistance to free us from oppressors!

We wanted to be sure that we were educated, healthy, own our houses, find good jobs. We spent a lot of time thinking about the education arena, it was the key to getting new opportunities for us and the whānau. We see the importance of self-reliance as a community. Education gives us the keys to the gate... Still a struggle we already have 100s of kids and now the mokos are starting to come. Four generations, we need money for the mokos, big demands for them, and the need to get food, gas, and the other essentials. [Narrative 22]

Human resource potential: Wairuatanga

Changes in whānau attitude and behaviour also led to whānau strengthening. One rangatahi spoke about his growing willingness to help others that occurred as a result of his participation at a week-long noho.

I got a good attitude out of the wānanga. Like if someone asks me to do something before I would have just been like nah sorry, but now I'm okay. Yep. Sure. Everyone around me helped I guess, yeah. Yeah, they just supported me and I don't know kept it fun and interesting. Meeting new people because yep we were all related. But I only knew one person and oh I didn't really want to go to the noho because I thought it was going to be boring but then when it finished I didn't even want to leave, yeah. Yeah because I made heaps of friends it was cool. [Narrative 23]

Other whānau demonstrated a growing resilience and overcoming of adversity over time. Previously described examples of whānau increasing their sense of agency and becoming independent from state dependence are examples of this shift.

Whānau have access to spaces where they are strengthened and nurtured

E Tū Whānau supported whānau to access safe spaces to enable their strengthening and nurturing, an intended outcome that mapped to the domain of social capability: kotahitanga – where whānau are able to access and trust institutions.

What 'access to space' looked like in the whānau narrative varied, and we can understand that the concept of space was adapted to the community. For most whānau, their trust and engagement with in E Tū Whānau kaimahi, as well as their reconnection with te ao Māori, created the intangible space needed for whānau strengthening and nurturing. This space was also demonstrated through the capability domains in the Whānau Rangatiratanga Framework of: *social capability: manaakitanga* (building on safe spaces where whānau care for each other), *sustainability of te ao Māori: manaakitanga* (space allowing for a connection to te ao Māori), *human resource potential: wairuatanga* (space to grow resilience), and *economic: rangatiratanga* (space to generate economic improvements).

Social capability: Manaakitanga

Many whānau involved in gangs described the social cohesion, reciprocity and support that they already had before E Tū Whānau through the gang space. Perceptions and assumptions about safety within a gang context were challenged by whānau involved in gangs, and one of the women commented on her "safe" upbringing within the gang:

> At the wānanga we were kept asking who are we, who had shaped us? Made me think about the Mongrel Mob being my family. All these questions of who shaped you, who made you what you are today. Well I can say my mum and dad but I had to be real to myself as I have lived with the Mongrel Mob my whole life. Every single day, in my house every day. Just because they are known to others as bad that is not the view I had and I was sheltered from a lot of the bad stuff. So I am going to say that Mongrel Mob shaped me. That is the truth, they are not just Mongrel Mob they are your family. Helping me be the person I am today. E Tū Whānau and Te Korowai Aroha are a part of that too. [Narrative 1]

It was accepted that her particular experience of growing up in a Mongrel Mob whānau was special. Her father was a senior member of Mongrel Mob and had protected the girls from a lot of what might be happening elsewhere in the broader gang collective and the neighbourhood more generally. Some of the other women spoke about going to their house as children and later in their lives to seek safety and just to enjoy the manaaki of that household. One of the women commented:

> There were safe places for me, aunty and uncle's house, safe as. It was out in the greater community that I suffered the greatest violence. It was a contradiction for me that the gangs were bad when I was safe in this house and not in others. I suffered all the violence I suffered outside of this [immediate] community. [Narrative 2]

Sustainability of te ao Māori: Manaakitanga

E Tū Whānau expanded this cohesion by offering a safe space within te ao Māori. One of the critical success factors demonstrated by E Tū Whānau was the positive way in which disenfranchised whānau and communities were nurtured through access and connection to te ao Māori. E Tū Whānau enabled and facilitated a positive connection and relationship with te ao Māori for many whānau and communities, including whānau involved in gangs, who had an intergenerational disconnect to "being Māori".

> All of our fathers were mobsters when we were born. They had already left Waikato to go to Wellington, the great migration to join the gang. I understand why they joined, it was easier to join the gang than it was to be Māori. We grew up in the gang, we weren't Māori because that was not cool. The gang was way cool. For me, my way of seeing the world as a child was that I thought every Māori man was in the gang and that we all lived like that. It was an adventure and it was safe in my household. No Māori spoken at all, not even kia ora, there was no Māori nothing so this was such an important part of this journey. For me tēnā koe is only two years old! And now I am so proud of being Māori. [Narrative 3]

This process of connecting with te ao Māori occurred through wānanga, often on a marae. Coming together on the marae was not an easy or straightforward process and both Kahukura (E Tū Whānau kaimahi) and whānau had to negotiate the values that shaped the wānanga and kaupapa. The E Tū Whānau values were used to do this, essentially creating the 'space' for whānau strengthening and nurturing. In the Wairarapa, a series of five wānanga were held with whānau involved in gangs, marking the start of whānau being able to meaningfully engage with Māori culture.

> The whānau [involved in gangs] absolutely had ownership of the wānanga. They said what it would look like, and we basically supported it. We gave them freedom to see what that would look like with a few boundaries of what it had to look like for us. So yeah, I think the thing about E Tū Whānau was that it let them have a blank piece of paper... for them it was their own, there's the big difference in your own doing it to your own and they understood each other. There were bits I couldn't understand about those lifestyles. So, for example, the cooks went out drinking and came back to the marae and I'm kind of like whoa, no. No that's not my understanding of E Tū Whānau and the value base. So, for me, we said to them, that can't happen again. And so that was a difference in values, that was one of our learnings and they were really passionate about what they wanted for their families. But until a set of values could come along that I guess could fit with everyone there was going to be a problem between what things would look like. The E Tū Whānau values helped bridge the gap, so in the next four wānanga we had no drinking or any of that behaviour on the marae. [Narrative 4]

Human resource potential: Wairuatanga

The previous narrative illustrated the importance of E Tū Whānau values for connecting with Māori culture. The values also created the space for positive changes in whānau resilience and attitude, as a result of having Te Korowai Aroha and Mauri Ora come into their lives.

Included in this is a change in whānau perspective on critical social issues through trusting engagement with E Tū Whānau. For the majority of whānau involved in gangs, their relationships with the state and Government agencies have been

marred by generations of negative, and in many instances, destructive interactions. Many of the female leaders were daughters and wives of gang members who were wards of the state, and they experienced systematic abuse while in state care. All of these women reported experiencing discrimination on a daily basis because of their gang associations.

Engagement with E Tū Whānau was facilitated by an invitation to have a kōrero by people they trusted, who they had longstanding, even familial relationships with. This was a key reason for their engagement. The opportunity to talk, to be heard and listen to others using the kaupapa of E Tū Whānau enabled whānau involved in gangs to talk about their dreams and aspirations and shift their perspectives.

> *They [E Tū Whānau kaimahi] were the guide between ourselves and the government. We had not had access to that before. We had just finished a five-year battle with those guys. Housing NZ, the whole government. Mean mauri shift to E Tū Whānau. We needed that at the time. We needed a shift in our wairua, we were still hurting. [Narrative 5]*

A shift in attitude was also demonstrated around how to work with other whānau who were suffering from addiction:

> *The biggest issues in our lives are ourselves and our families and the addictions. Addictions in the whānau. I used to have no sympathy for addicts. Just hated them. So I have been working on myself for three years to attack the addiction and not the person. Can't keep sweeping it down to the bottom of the steps. E Tū Whānau has allowed me to see different things in different lights. Support the kaupapa. Love the person and hate the problem. [Narrative 6]*

Economic capability: Rangatiratanga

This change in attitude for whānau subsequently paved the way for whānau to create the 'space' or conditions for other changes, such as education and employment. Whānau in the previous narratives developed a plan around accessing education and employment opportunities to help support and create a better future of their children and mokopuna. Change has taken time. These whānau have been on a three-year journey with E Tū Whānau.

Aroha, mother to seven children and kuia to five grandchildren spoke about the changes within the group and her own personal leadership journey towards employment after years of receiving a benefit. Her journey speaks to how E Tū Whānau enabled and supported her to build confidence and courage to seek employment, outside of her comfort zone and what she had known for the past 20 years.

The biggest change for me has been working. I had been on the benefit for 20 years. Walked in this gate [community centre] one day and there was a discussion about a job and by that afternoon I had a job and it really does whakapapa back to E Tū Whānau. The work that they were doing, the sense of change in our rōpū, set up the conditions for change. E Tū Whānau and Te Korowai Aroha taking those values and using that to connect me. [Narrative 7]

Growth in community leaders

The growth in community leadership was a critical intended outcome, which is being achieved through E Tū Whānau. This growth, combined with the access to space generated through E Tū Whānau, enabled the outcomes of whānau safety and whānau strengthening.

The intended outcome of leadership development mapped to the principle of *rangatiratanga, in the domains of te ao Māori and social capability* – whānau exercising leadership in te ao Māori and te ao whānui. The extent to which this leadership was demonstrated within te ao Māori varied across the communities. Growth in leadership was primarily demonstrated through *human resource potential: manaakitanga*, where leaders in whānau supported each other to succeed, and through *human resource potential: rangatiratanga*, where whānau leadership led to commitments to living well.

Human resource potential: Manaakitanga

For many whānau interviewed, their access to role models and mentors within the whānau helped grow whānau and community leadership. This was particularly important for rangatahi. In Ōpōtiki, E Tū Whānau focused on young leaders, Māhuri Tōtara and how leadership development was supported through wānanga at local marae. Rangatahi spoke to the impact the youth-focused wānanga and activities have had:

> I went to one of the noho last year [2016], a week-long noho and we learned a lot, like different values, history, ancestral history and how to be a young Māori leader. Everyone around me supported me, and it was fun and interesting, and not just lots of talking, we actually go to do stuff like visit waahi tapu. We had to do skits and plays too, it was really cool. We would meet after the wānanga too and have different get togethers, and we would speak for the rangatahi to teachers. It made me feel special and important. And our group is really tight. We are told that we are leaders. [Narrative 8]

Māori women involved in gangs also talked about how their leadership evolved through their engagement with E Tū Whānau. Leadership was instigated by one of their female leaders, who was the 'water tester'; if it felt right with her, if she could test it and felt that it could work for all of them, then she would promote it and expect the other women to come on board. This leadership was driven by a connection to te ao Māori.

> How does it [E Tū Whānau] fit with me? I am the water tester. Does it feel alright? If it feels good, I will make everyone do it. Get our voice out there and go as far as we can with a full puku. We have learnt together and we are still learning. [Narrative 9]

Human resource potential: Rangatiratanga

Leadership development within whānau and communities was also demonstrated by the valuing of 'endeavour' or commitments, both within te ao Māori and the wider community. One mother in Ōpōtiki described the changes in her daughter as a result of connecting to her whakapapa and extended whānau through rangatahi focused wānanga.

I did see her whole āhua change, her attitude was just really into it and I think that was because she had good role models all around her, encouraging her to be who she is and be proud. That is a very powerful thing and it continued after the wānanga with the ongoing meetings and leadership roles. She is now planning her future and studies at Waikato University. [Narrative 10]

Whānau commitments to improve the way they live was another demonstration of leadership. Many whānau recognised that E Tū Whānau allowed them the ability to see themselves as agents of change, allowing for ideas and a plan to move forward. Given that opportunity, they began planning for changes to the way they live, with a focus on creating changes for younger generations.

We started a big plan on what we thought E Tū Whānau was: we thought it was about being healthy, educated, owning our own things, about literacy and numeracy. We started to think how we could help our rangatahi and they were involved from the beginning as well. We had all our rangatahi coming around. We talked about kapa haka as an E Tū strategy. [Narrative 11]

Whānau are safe

Building whānau safety is a critical intended outcome of E Tū Whānau, as it paves the way for a reduction in domestic violence. This intended outcome mapped to the domain of *social capability: whakapapa*, but its achievement was demonstrated through the domain of *social capability: manaakitanga*, through whānau taking active steps to care for each other. As with the other outcomes, a connection to te ao Māori was the vehicle for bringing whānau together. It is noted that there is considerable overlap between the achievement of the other outcomes and this one.

Social capability: Manaakitanga

Whānau safety came about through whānau taking steps to care for each other. This is demonstrated by their access to, and reliance on, support from within the wider whānau, including role models and kaumātua. For example, rangatahi in Mangakino and Ōpōtiki were supported and nurtured through marae-based wānanga. Within this space, rangatahi were celebrated and the idea of success was normalised.

We use the E Tū Whānau values, we call them the tangas, we teach the rangatahi how to be role models to the younger rangatahi. We've seen a big improvement in them, they now look after the young ones, support them, and lead them. It was very different when we started, they didn't know how to be good role models and leaders. [Narrative 12]

Anaru (father, grandfather, great-grandfather) talked briefly about the changes made in his life and wanting to support and nurture his girls (granddaughters and great-granddaughters):

I have 12 children, 18 grandchildren, and 6 great-grandchildren, and I am 58. I left the Waikato as a young boy and was a patched member and father in my early teens. I love my girls and just get volunteered around. I have always been committed to everything the girls do... Their kaupapa is my kaupapa. I have made lots of changes,

in my life, and we change each other. I am here today to support them. They have dreams and plans for a better life, a safe life, an education. I am here to listen and support. Might not be much but I am here. [Narrative 13]

The shift to whānau safety is also evident through whānau starting to participate in community work, including provision of care and support for kaumatua. Whānau involved in gangs in the Hutt Valley talked about how they came together and used kaupapa Māori institutions, Māori language and culture to progress toward a shared vision:

Waka ama, te reo, working in the community, kaitiakitanga for our kaumātua. Cuzzies doing our thing. We did not have that before. We did not really think about this till E Tū Whānau came along. We have a vision – a shared vision.

E Tū Whānau kick-started us all off as a rōpū and on our individual journeys. [Narrative 14]

Safety was also demonstrated by access to and trust in mentors (including kaimahi and Kahukura), who help build the connection to whakapapa and values. This mentorship was expressed before E Tū Whānau, but the initiative strengthened the ability of whānau to recognise the value of that role.

E Tū Whānau means, stand up whānau, and that to me means that we have had enough of this shit. We know we come from a great line of chiefs and it is time for us to start living that and believing that. Believing that we are taonga, having prestige about ourselves.

We never gave a shit about being Māori, there was no talk about being Māori in the home growing up. There was this whānau [referencing another whānau] where the door was always open. Aroha, manaakitanga we did not know these words but I did see them being practised in that whānau. The values. [Narrative 15]

Mapping the narratives to the Whānau Rangatiratanga Framework: Exploring whānau level measures

The Whānau Rangatiratanga Framework was used to understand how the capabilities and principles that underpin the E Tū Whānau narratives related to the outcomes. From here, we then explored potential indicator areas using evidence from E Tū Whānau narratives. Table 23 illustrates possible areas for indicator development based on the whānau narratives.

TABLE 23

Possible areas for indicator development Based on E Tū Whānau narratives

Capability Dimension	Principle	Outcome	Areas for indicator development	Relevant narratives where sourced
Sustainability of Te Ao Māori	Whakapapa	Whānau are strengthened	Knowledge of/visits to ancestral marae Local marae visits – not ancestral Participation in marae-based wananga on whānau-relevant history and traditions	Narrative 16 Narrative 17 Narratives 4, 5, 8, 20
Sustainability of Te Ao Māori	Manaakitanga	Whānau have access to spaces where they are strengthened and nurtured	Positive attitude associated with identity as Māori Use of te ao Māori to strengthen whānau connections	Narrative 3 Narrative 4
Sustainability of Te Ao Māori	Kotahitanga	Whānau are strengthened	Collective and/or individual participation in Māori cultural activities	Narratives 7, 14, 19
Social Capability	Manaakitanga	Whānau are safe	Access to and reliance on support from within the wider whānau Participation in community work including provision of care and support for kaumatua Access to and trust in mentors to help with conflict resolution and connection/ reconnection	Narratives 5, 8, 10, 12, 13, 17, 19, 23 Narrative 14 Narratives 4, 9, 11, 14, 15, 20, 22
Social Capability	Rangatiratanga	Whānau are strengthened	Access to and acquisition of whānau leadership/agency skills Whānau leaders are supported by wider whānau and there is respect for the whānau values Whānau has a shared vision and plan	Narratives 5, 8, 10, 12, 16, 20, 21 Narratives 4, 9, 19 Narratives 7, 19
Social Capability	Manaakitanga	Whānau have access to spaces where they are strengthened and nurtured Growth in community leaders	Access to safe places in times of crisis or danger	Narratives 1, 2, 13, 15
Human Resource Potential	Rangatiratanga	Growth in community leaders	Education and good health are increasingly valued and nurtured among whānau members Endeavour is increasingly valued among whānau members	Narratives 1, 18, 22 Narrative 10
Human Resource Potential	Manaakitanga	Whānau are strengthened Growth in community leaders	Access to role models/mentors within the whānau	Narratives 2, 4, 8, 9, 19, 21
Human Resource Potential	Kotahitanga	Whānau are strengthened	Whānau successes are celebrated	Narrative 10
Human Resource Potential	Wairuatanga	Whānau are strengthened Whānau have access to spaces where they are strengthened and nurtured	Positive changes in whānau attitude and behavior Growth in whānau self-esteem, pride, identity and a sense of capability and capacity to achieve aspirations	Narratives 5, 6, 7, 10, 11, 12, 13, 14, 15, 16, 18, 19, 21, 22, 23,
Economic capability	Rangatiratanga	Whānau have access to spaces where they are strengthened and nurtured	Shift toward economic independence	Narrative 7

Applying the Whānau Rangatiratanga Measurement Framework to E Tū Whānau narratives: What we learned

Whānau narratives illustrated the tight interplay between the different capabilities in achieving the intended outcomes of E Tū Whānau. When the intended outcomes were mapped to the framework, they sat in just a few areas of the framework, but when we explored the whānau voice against the framework, it became clear that a wider range of capabilities were necessary to achieve these and other outcomes.

For example, we were able to understand that 'access to spaces' and 'whānau strengthening' – outcomes that sat in the capability dimension of social capability – were inextricably linked to te ao Māori, specifically developing a positive relationship to te ao Māori (whakapapa), fostering connections to te ao Māori (manaakitanga) and collective engagement with Māori culture (kotahitanga). This is not altogether surprising given that E Tū Whānau is a kaupapa Māori strengths-based approach and initiative.

We were also able to understand that the 'access to trusting spaces' generated through E Tū Whānau was both a tangible space (creating pathways to education and employment opportunities) and intangible space (opening up a connection to te ao Māori and a safe space for developing trusting relationships). Once these spaces were established, leadership development within te ao Māori and te ao whānui were essential to generating whānau safety and whānau strengthening.

Finally, we were able to understand that because E Tū Whānau adopted such a broad, community development approach, the outcome of 'whānau are strengthened' was demonstrated across domains of the framework, depending on whānau and community priorities. For some whānau, whānau came together and strengthened their connections through a relationship with te ao Māori, others built their leadership skills, and others made improvements to education and quality of life.

The only area where limited evidence featured was economic potential. This appears to be the case for two reasons. Firstly, E Tū Whānau is a social initiative grounded in a kaupapa Māori approach, so by definition the focus of it was on achievements related to te ao Māori, social capability and human resource potential. However it is also a community development initiative focused on supporting whānau and communities to identify and respond to their own priorities, including those related to economic potential. Secondly, given the relatively early stage of the initiative, these changes were not widely apparent, and in some instances, were not achievable because of larger socio-economic factors, such as limited employment opportunities in a community. Nevertheless, the whānau experience highlighted that developments in economic potential were important contributors to outcomes related to whānau safety and protection – reinforcing the interplay between the domains for whānau wellbeing.

Strengthening monitoring and implementation of E Tū Whānau

This analysis emphasises the importance of the initiative strengthening whānau capabilities identified through application of the Whānau Rangatiratanga Framework in order to progress towards E Tū Whānau outcomes. Findings from the formative evaluation highlighted the important role of Kahukura (E Tū Whānau kaimahi) in implicitly doing this, but these capabilities were not made explicit until the analysis against the Whānau Rangatiratanga Framework. Understanding these and other capabilities as an overt aspect of E Tū Whānau outcomes is important in order to ensure that they remain a consistent part of implementation.

Future implementation of E Tū Whānau could build these capabilities into monitoring and reporting systems, as a way to assess whether they are being progressed, what their role is in relation to broader outcomes, and to what extent these capabilities vary across E Tū Whānau communities. This approach to measuring whānau wellbeing would reinforce the measurement principles advocated by Sir Mason Durie at the 2017 Te Ritorito Forum and summarised in the 2017 Families and Whānau Report:

- the mana principle – measurements are derived from Māori hopes and aspirations and are owned by Māori

- the Māori principle – measurements are contextualised by te ao Māori

- the mātauranga principle – measurements are based on relevant and confirmed knowledge

- the mōkai principle – measurements are the 'servants', not the 'master'.

Implications for future direction of E Tū Whānau evaluation

A potential summative evaluation of E Tū Whānau could explore the capability dimensions of the Whānau Rangatiratanga Framework in more detail and test their relationship to the achievement of E Tū Whānau outcomes. Through implementation of the potential indicators in Table 23 future E Tū Whānau evaluations could more directly capture progress towards outcomes – whether through qualitative or quantitative means. A summative evaluation could explore to what extent the capabilities contributed to E Tū Whānau outcomes across all successful communities. Furthermore, which capabilities were absent in those communities that did not make progress. It would also be beneficial to better understand the role of Kahukura in supporting these capabilities, as a way to enhance the sustainability and replicability of the initiative. Drawing on the potential indicators in Table 23, a self-report survey could be developed to gather further research evidence.

Using the framework for evaluation in a non-Māori context

The distinct feature of E Tū Whānau is that while it is a kaupapa Māori initiative, it does not exclusively work with Māori communities. E Tū Whānau provided whānau in refugee and migrant communities with access to services and resources they would not otherwise have been able to access. This was driven by leadership within local NGOs and E Tū Whānau kaimahi that these communities had established relationships with. Within this space, E Tū Whānau African Muslim young women, Afghani Women, Columbian Women and African Muslin young men together and provided a vehicle for leadership within these communities to grow.

Examining narratives from refugee communities, it was apparent that the Whānau Rangatiratanga Framework was still applicable. The capabilities in the framework were demonstrated as important to the achievement of outcomes across families from different refugee backgrounds, but within a non-Māori context. These groups were supported by NGOs and E Tū Whānau kaimahi, and within each group leadership took flight, demonstrated by the action plans and strategies implemented and self-reported increases in self-confidence and personal and collective agency. This was an expression of social capability: self-determination and human resource potential: unity.

For example, Columbian women expressed frustrations about how the English language is a barrier for them but how coming together in a safe space helped to keep them positive and build their capabilities to achieve their goals and aspirations.

> *[Columbian women] E Tū Whānau helps a lot … most of us rely on the benefit, and the programme has allowed us to receive training but also some kind of financial resources, so it's been very helpful. The activity gives us an additional responsibility, encourages us to do something else. We have the opportunity to meet our responsibilities and do something else in benefit of that.*

> *[Columbian women] Most of us are skilled or have a profession and we are not able to do it because of the language. So, this is an opportunity. We live frustrated because we are not able to work in our profession or the profession we used to work on before we come.*

> *[Columbian women] Making us, keeping us active is the way which the programme has worked on us. Keeping us active, keeping us doing different activity with different goals that give us an alternative.*

Similarly, Afghani women were brought together to talk about how they wanted to be useful to society, independent, and utilise their professional skills. They had entrepreneurial ideas around the culinary industry and wanted some guidance and instructions in business enterprise. For these women, isolation and the lack of English language fluency had been significant barriers to achieving their goals.

> *[Afghani women] I don't want people to look to us we are refugees – hopeless. We need more support. We don't want to be neglected sitting. We want the government to pay more attention, extra resources to be more proactive and achieve our goal.*

> *[Afghani women] We want to be sustainable and more progressive. This programme to be continuous throughout the year, and we don't want just to talk about the programme, we want good outcomes to come out of it. Afghani, we are very good with food, we like the food but we want the food to go to the market like enterprises.*

One African Muslim young woman spoke to the self-empowerment and leadership journey she went through as a result of participating in an E Tū Whānau-funded youth initiative and coming together with other young women.

> *For me personally, before this [Youth initiative] there was nothing that I could spend time doing that was productive. I felt like it was a place where I could go and do these workshops and camps and fundraisers and make good use of my time growing up and spend it with people that I felt comfortable with and that I can learn stuff with. This is very corny but you start to love yourself, because you're sitting with people that look like you and have the same thoughts as you and go through the same problems as you. And through the discussions you realise you're not alone and then you're like, I could do this, we could go through this together. And you come up with solutions or alternative ways because we are Muslims, we are Hijabis, we are Africans and there's some things that were not made for us and there are certain things that our values don't correspond with, so we do our own thing and have our fun. We take the lead in our lives. We make it happen.*

Using the framework for other kaupapa Māori evaluations

The Whānau Rangatiratanga Framework has ability to support other kaupapa Māori evaluations. A kaupapa Māori evaluation shapes how an evaluation is theorised and contextualised, and also, at a practical level, how evaluative data is captured, analysed, interrogated and reported on. Seven kaupapa Māori practices guide Māori researchers, as identified by Smith (1999:120):

- Aroha ki te tangata (a respect for people)

- Kanohi e kitea (the seen face; that is, present yourself to people face-to-face)

- Titiro, whakarongo kōrero (look, listen, speak)

- Manaaki ki te tangata (share and host people, be generous)

- Kia tūpato (be cautious)

- Kaua e takahia te mana o te tangata (do not trample over the mana of the people)

- Kaua e mahaki (do not flaunt your knowledge).

In a qualitative evaluation like E Tū Whānau, kaupapa Māori approaches are especially integral in the **data collection phase** in order to *"listen to, and give voice to, the kaupapa, aspirations and day-to-day realities"* of participants (Pipi et al, 2004).

The Whānau Rangatiratanga framework augments this approach, providing the space for evaluators to explore the theory and practice behind these principles in relation to and within the context of whānau wellbeing. The integration of conceptual frameworks into evaluation is not uncommon for Māori evaluations (Walker, Eketone and Gibbs, 2005; Grootveld, 2013). Examples include Te Whare Tapa Whā, used by Hamerton et al (2012) and Te Tuhono Oranga, used by Boulton and Kingi (2012), both of which were used in evaluations of the Healthy Eating, Healthy Action programme.

The Whānau Rangatiratanga Framework has greatest value in the scoping, design, analysis and synthesis phases of a kaupapa Māori evaluation to enhance understanding of intended and actual outcomes.

- The **scoping phase** of an evaluation is important because it lays the groundwork for what the evaluation will explore and how it will go about this exploration. One important aspect of the scoping phase is clarifying the intended outcomes associated with a project, especially when one objective of the evaluation is to identify outcomes achieved. The Whānau Rangatiratanga Framework is useful in this stage of evaluation in understanding how intended outcomes (and indicators) map against the framework. This helps to determine which whānau capability domains and empowerment principles are the most relevant to the project being evaluated. In addition to the mapping, during this stage of the evaluation, the framework could be brought into the high-level evaluation questions.

- The **design phase** of an evaluation is when specific tools are developed to meet the evaluation objectives and questions. The framework can also be used as a conceptual guide to better understand what elements were necessary to the achievement of outcomes, as well as any barriers to achieving outcomes. This would occur by identifying specific questions for exploration during interviews. The benefit of integrating this sort of inquiry into the evaluation is that it teases out the relationship between the empowerment principles and capability domains to determine how these principles affected outcomes for whānau.

> The Whānau Rangatiratanga Framework has greatest value in the scoping, design, analysis and synthesis phases of a kaupapa Māori evaluation to enhance understanding of intended and actual outcomes.

- The **analysis and synthesis** stage of the evaluation firstly identifies the themes emerging from qualitative data and computes quantitative data. Secondly it interprets these against evaluation questions, objectives, indicators and, in this case, the framework. The framework offers considerable value during this stage in understanding the contributors to outcomes achieved, much like has occurred with this paper.

Conclusion

This analysis is important because it provides an example of the importance of connecting evidence to policy. As researchers and evaluators, we have found that analysis of whānau narratives against the framework leads to a nuanced understanding of whānau wellbeing and the interplay of capabilities contributing to wellbeing. While the framework helped to understand outcomes within a te ao Māori context, its unique strength is in two other areas.

1. Weaving in empowerment principles with domains enhances our understanding of the different dimensions and expressions of each domain, as well as our understanding of the importance of empowerment principles in realising outcomes within each domain.

2. In the case of this exercise, the framework has enhanced our understanding of what capabilities were required to achieve outcomes. From this, we can see that a capability in one part of the framework is actually necessary for achieving an outcome in a seemingly unrelated part of the framework.

> The framework has enhanced our understanding of what capabilities were required to achieve outcomes.

This understanding is important for monitoring and evaluation, pointing to the need for a broad suite of outcome indicators to be developed, which should be assessed and explored through a subsequent summative evaluation.

This understanding is equally important for programme implementation, as it reinforces the approach of E Tū Whānau. The breadth of gains being made by whānau suggests that the community development approach of E Tū Whānau has been effective. To take too much of a narrow focus on family violence would have meant that whānau capabilities sitting across the framework, which are necessary to addressing family violence, would not have been understood or addressed. We can understand the importance of improving whānau wellbeing and resilience as an avenue to addressing family violence, and of adopting a whānau-centred approach to a range of government policies and programmes.

> This analysis reinforces the importance of using this framework for evaluations of other kaupapa Māori programmes.

Finally, this analysis reinforces the importance of using this framework for evaluations of other kaupapa Māori programmes. It is a tool to better understand the pathways for building whānau capability and the added value of a kaupapa Māori approach to generating these pathways – adding to the evidence base of 'what works' to achieve whānau wellbeing.

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04

Strengthening the evidence base through looking across family and whānau research streams

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In the introduction to this report, we stated that the research model we adopted to frame the development of this work programme was *He Awa Whiria – Braided Rivers*. The strength of this model is that it acknowledges two quite different world views influencing the research and development of family and whānau wellbeing in Aotearoa New Zealand – that of Western science, and that of te ao Māori (Arago-Kemp and Hong, 2018). Secondly, the model recognises that family and whānau are not interchangeable terms and mean very different things especially when conceptualising and measuring wellbeing.

Families and whānau have travelled different pathways throughout our history and this requires both discrete and similar approaches to research, policies and programmes. For example, while all families and whānau require warm, healthy and affordable housing, the long-standing social and political impacts of colonisation on Māori housing require a responsive approach to research, measures, policies and programmes for Māori. While this approach has its challenges, these are outweighed by the development of new insights that can emerge while striving for greater understanding between both work streams.

This final chapter begins to explore how the development of both a family wellbeing work stream and a whānau wellbeing work stream can contribute towards increasing our overall knowledge and understanding of New Zealand wellbeing.

It is important to recognise at the outset that Māori are represented in both the whānau and family wellbeing work streams. In the whānau work stream, our research, analysis and overall interpretation of whānau data is framed by the Whānau Rangatiratanga Framework which is grounded within te ao Māori. As such, it speaks to Māori cultural imperatives and understandings about how whānau are to be defined, what is wellbeing, and how wellbeing should be measured.

The families work stream is informed by the Family Wellbeing Framework which is grounded in Western science and research. The framework identifies and measures factors and functions that contribute to family domains of wellbeing. This work stream reports on the wellbeing of Māori families alongside all New Zealand families and ethnicities, to complete the overall picture of wellbeing of New Zealand families. While we can learn about Māori family wellbeing by looking across all New Zealand families in the families stream, to fully understand whānau wellbeing as defined by Māori themselves we need to turn to the whānau work stream. By looking across both streams for insights we gain a fuller picture of family and whānau wellbeing in New Zealand.

Families and whānau have travelled different pathways throughout our history and this requires both discrete and similar approaches to research, policies and programmes.

Our previous research: family relationships, whanaungatanga and connectedness

While being presented as two distinct work streams, our previous research identifies complementary findings that contribute towards wellbeing. For example, our 2016 and 2017 reports emphasise the importance of relationships and connections to both families and whānau. In 2016, the Families research identified that while Māori and Pacific families tended to report lower wellbeing scores than those for European and Asian families, they tended to have higher wellbeing scores for indicators in the 'Relationships and connections' theme. In 2017, the Whānau research drew on Te Kupenga to explore subjective whānau wellbeing. A key finding was that the quality of whānau relationships is extremely important for whānau to thrive; and that Māori who feel that their whānau get along very well are much more likely to rate their whānau wellbeing very positively.

Complementary areas of research in this report

In this report three areas of commonality across the work streams emerge:

- multiple disadvantage domains and wellbeing
- sole parent families
- the need for improved data on family and whānau wellbeing.

Multiple disadvantage domains and wellbeing – housing

The Families work stream chapter on multiple disadvantage found that Māori families are facing particular challenges with housing conditions. Above all else, this was the most prevalent domain of disadvantage for Māori families in New Zealand. Housing conditions identified were a house that was cold, in need of immediate and extensive repairs, and had mould. We note similar findings reported by Māori themselves in the Te Kupenga survey in the whānau stream of work. In the whānau stream the three individual housing issues most strongly correlated with income adequacy were a house that was hard to heat, in need of repairs and damp. The whānau stream further explored the link between these descriptive findings about housing and whānau wellbeing. Māori respondents with two or more major housing issues were significantly less likely than those with only one major issue to report a high level of whānau wellbeing.

Sole parent families

We also see common research findings in our research into sole parent families. The families stream found that over half (55 percent) of Māori sole parent families faced multiple disadvantage. Income and housing were two of the most common types of disadvantage faced. Research from the whānau stream strengthened this finding. Our analysis of Te Kupenga showed that, among sole parent Māori households, the two major problems were having a house that was hard to heat (24 per cent) and having a house that was damp (17 percent). Previous analyses of Te Kupenga (Superu 2015) have also highlighted that Māori living in sole parent households with one or more children under 18 years have the lowest home ownership rates amongst all whānau types experience high levels of economic insecurity, with only 36 percent thinking they have enough income to meet their everyday needs.

In order to fully understand the significance of the above findings for whānau, they need to be set against the significant background of historic economic and social inequalities with entrenched Māori housing poverty and intergenerational disadvantage. When viewed through this lens, it is not surprising that Māori families are most likely to experience significant and multiple disadvantage. It is only by drawing on the contextual evidence from the whānau stream that we can explain key socio-political and economic drivers for the research findings from both the family and whānau streams.

Both work streams seek better research and data about family and whānau wellbeing

Our research programme seeks to extend the wellbeing research and the data available to support a stronger data narrative around family and whānau wellbeing. Our work using linked survey and administrative data shows the power of linked data and we support further development of these data resources to enable future family and whānau wellbeing research.

The Families work stream demonstrated the need for more and better quality data on families in New Zealand. There have been recent improvements in wellbeing data by family type. However, there is still much work to do to adequately capture the diverse structure of families and the wide range of factors that contribute to overall family wellbeing. This includes growing the development of longitudinal data and a more comprehensive source of family wellbeing information in official surveys and administrative data.

New data developments are not taking place on an even playing field. The whānau work stream has identified that currently Te Kupenga is the only nationally representative dataset that provides information on whānau wellbeing. Like the family stream, the whānau stream has a need for nationally representative longitudinal data on whānau wellbeing. However, it is particularly important that we expand the somewhat narrow interpretation of housing quality. It is important we develop culturally informed measures of housing adequacy that account for housing characteristics that support whānau wellbeing. For example, including indicators of cultural access to reflect key aspects of housing that whānau Māori consider important to their wellbeing.

In order for the official statistics system to generate more relevant whānau wellbeing data from within the Integrated Data Infrastructure (IDI), te ao Māori frameworks could well be employed to better frame our thinking about what data could be added to the IDI. The aim would be to provide for the growing demand for new and better whānau wellbeing research. Finally, both work streams are preparing for new data releases – the census, Te Kupenga and General Social Survey (GSS). These will be analysed in 2019 to contribute to the 2020 Families and Whānau Status Report.

> It is important we develop culturally informed measures of housing adequacy that account for housing characteristics that support whānau wellbeing.

Strengthening the contributions of our Family and Whānau work programme

An important function of this research programme is to support the development of policies and programmes that focus on the wellbeing of families and whānau. This work programme is now at the Ministry of Social Development (MSD), which will seek new opportunities to contribute towards policy and programme development and evaluation from a family and whānau wellbeing perspective. In doing so, wellbeing frameworks will be reviewed to strengthen their applicability, utility and to extend existing conceptual and measurement dimensions to further family and whānau wellbeing research.

MSD will also seek greater opportunities in intersectoral engagement, firstly amongst those agencies that have family and Māori/whānau wellbeing frameworks. For the Whānau Wellbeing strand, this will also include further collaboration with Māori wellbeing researchers and research institutions. It will work with Te Puni Kōkiri in preparation for Te Ritorito 2019 and explore how the work stream can further support the development and implementation of whānau-centred research, policies and programmes.

> **In drawing on He Awa Whiria as a metaphor for our families and whānau research, we grow our understanding that different world views do not have to exist in a state of tension.**

In drawing on He Awa Whiria as a metaphor for our families and whānau research, we grow our understanding that different world views do not have to exist in a state of tension. Ambiguity can be a productive source of innovation and negotiation between two different perspectives. As noted by the Bridging Cultural Perspectives Steering Group (Arago-Kemp and Hong, 2018):

> *... both streams start at the same place and run beside each other in equal strength. They come together on the riverbed and then they move away from one another. Each stream spends more time apart than together. In the model, when they do converge, the space created is one of learning, not assimilating. This project aims to increase the integrity of both streams in order to represent wellbeing for all people.*

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superu

Māori terms and meanings

Aroha	Love, respect
Aroha ki te tangata	A respect for people
E Tū Whānau	A family violence initiative
Hapū	Sub-tribe, to be pregnant
Haputanga	Hapū identity
He Awa Whiria	Braided Rivers, a research model that provides for two streams of thought – Western Science and te ao Māori. [developed by Angus Macfarlane]
He Kāinga Ora	The Healthy Housing programme
Iwi	Extended kinship group, tribe; bone/s
Iwitanga	Tribal identity
Ka mua, ka muri	'Walking backwards into the future', a proverb
Kahukura [E Tū Whānau kaimahi]	In the E Tū Whānau initiative, the Kahukura is the name given to people who inspire change in whānau and communities, including sub-tribe and tribal leaders, youth, women and many others
Kaimahi	Helper, worker
Kāinga	Home, village
Kanohi e kitea	The seen face, to present yourself to people face-to-face
Kapa haka	Māori cultural group, performers
Kaua e mahaki	Do not flaunt your knowledge [advice to researchers]
Kaua e takahia te mana o te tangata	Do not trample over the mana of the people [advice to researchers]
Kaupapa	Topic, policy, matter for discussion, plan or purpose
Kaupapa Māori	Māori ideology – a philosophical doctrine, incorporating the knowledge, skills, attitudes and values of Māori society
Kaumātua	Elder
Kia tūpato	Be cautious
Kōrero	Speak
Kōrero awhi	Positive communication and actions, an E Tū Whānau value

Kotahitanga	Unity, togetherness, collective action
Mana kaitiaki	Authority, control [over the natural environment]
Mana moana	Authority, control over the seas and large lakes within hapū, tribal territories
Mana whakahaere	Authority, governance
Mana whenua	Authority, control over the lands that fall within hapū, tribal territories
Manaakitanga	Generosity, care and respect of others, kindness
Manaaki ki te tangata	Share and host people, be generous
Marae	Traditional tribal and hapū meeting place or complex; also urban and some pan-Māori marae complexes
Mātauranga Māori	Māori philosophy, knowledge
Mauri Ora	'Mauri Ora – The dynamics of Māori health', a book on Māori health [Mason Durie]; also the name of a training programme
Mōkai	Slave; in this report the 'mōkai principle' refers to measurements as the 'servants' not the 'master'
Moko	Short for mokopuna – grandchild/ren
Ngā Tamatoa	The Young Warriors – a Māori activist movement that was developed in the 1970s
Ngā Pou Mana	A Māori health model that integrates the individual and whānau with the environment [Mason Durie]
Ngā uri whakatipu	Future generations
Noho [marae]	To stay at the marae
Papakāinga	Communal Māori land of a specific village; community
Papatūānuku	The Earth Mother
Pūao-te-ata-tū	The new dawn. The Report of the Ministerial Advisory Committee on a Māori perspective for the Department of Social Welfare
Rangatahi	Youth
Rangatiratanga	Right to exercise authority, Chiefly autonomy, leadership of social group
Rōpū	Group
Tamariki	Children
Tangata whenua tūturu	Those who hold the rightful authority over sub-tribal or tribal territory
Taonga	A treasure, something that is highly prized

Te ao Māori	The Māori world
Te Korowai Aroha o Aotearoa	A Māori Indigenous education and training provider
Te Kupenga	Net, fishing net; also the name given to Statistics NZ Māori Social Survey
Te Reo Māori	The Māori language
Te Tuhono Oranga	A report on the restructuring of the Department of Māori Affairs
Te Urupare Rangapu	A Tikanga Māori health model [Mason Durie]
Te Whare Tapa Whā	A Tikanga Māori health model [Rose Pere]
Te Wheke	A Māori evaluation framework used to evaluate healthy eating and healthy action
Tika [homes]	Correct, valid, appropriate [housing]
Tikanga	Norms of behaviour and practices, traditions and customs
Titiro	To look
Tōhunga	An expert
Tūrangawaewae	A place to stand; where there are rights of residence and belonging through kinship and whakapapa
Uri	Descendant, progeny, offspring
Waahi tapu	Sacred site
Wairuatanga	Spirituality
Wāhine	Women
Wānanga	Tertiary education institute, University
Whakatauki	Proverbial saying, adage
Whakapapa	Genealogy
Whakarongo	To listen
Whakatōheatanga	The identity of the Whakatōhea tribe
Whānau	To give birth, to be born, extended family, family group
Whānau Ora	A social service delivery initiative which uses providers and navigators working closely with families and whānau
Whanaungatanga	Relationship, kinship, sense of connection to family
Whare	House, dwelling
Whenua	Land
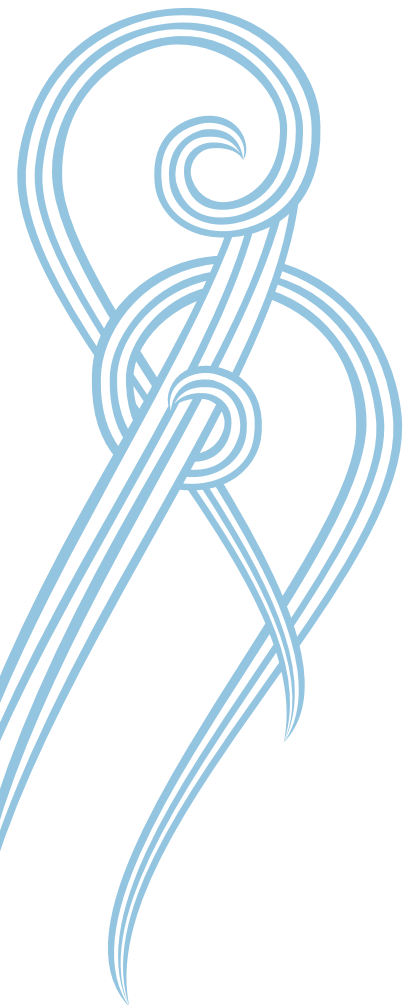
Appendix 1

Statistics New Zealand and Superu family typologies

Defining and classifying different family types is a challenging task. Individuals can be grouped into a family based on blood relations, cohabitation, choice, or by the roles they perform in each other's lives. For this reason, there is no one universally agreed definition of family and the concept is often described differently depending on the policy context or academic discipline.

Bogenschneider and Corbett (2010),[50] in their literature review of family policy, summarise existing definitions of family into two categories.[51]

1. Structural definitions, which "specify family membership according to certain characteristics such as blood relationship, legal ties, or residence".

2. Functional definitions, which "specify functions that family members perform, such as sharing economic resources and caring for the young, elderly, sick, or disabled".

For most of our research, Superu relies on data from Stats NZ which uses a structural definition of family based on the relationships of individuals living together. Stats NZ defines a family (or a family nucleus) as "a couple, with or without child(ren), or one parent and their child(ren), all of whom have usual residence together in the same household". This means that at the highest level of aggregation, there are three main Stats NZ family categories.

1. Couple without children.

2. Couple with child(ren).

3. One parent with child(ren).

Superu's family typology starts with these three high-level groupings and divides the couples without children group by their ages, and the two family types with children by the age of the youngest child. This results in the six main family types used by Superu.

1. Couple, both under 50 years.

2. Couple, one or both 50 years or older.

3. Two parents with at least one child under 18 years.

4. One parent with at least one child under 18 years.

5. Two parents with all children 18 years and older.

6. One parent with all children 18 years and older.

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50 Bogenschneider, K. & Corbett, T.J. (2010). Family Policy: Becoming a Field of Inquiry and Subfield of Social Policy. *Journal of Marriage and the Family, Vol. 72(3)*, 783-803.
51 As quoted in the 2014 Families and Whānau Status Report, p 37.

A close reader will note that in both family typologies, individuals living on their own or groups living together without either couple relationship or a child are not considered as a family nucleus. This is nearly 20 percent of the adult population. Since the health outcomes of people in these types of living arrangements are of interest for this work, we also include the following family types in our analysis for this chapter.

7. Individual living alone, 50 years or older.

8. Individual living alone, less than 50 years old.

9. Group not in a family nucleus (residual grouping).

Our approach to adding family type to the NZHS

When applying family type to their surveys, Statistics New Zealand use several in-house data programmes (known as macros) that take the raw survey data and create sets of derived variables for use in classification or analysis.

We discovered the macro that creates the Stats NZ family type could be modified to work outside of the Stats NZ data environment and, with the right relationship data, create family type for other surveys as well. With the help of staff at Stats NZ and the Ministry of Health, the project team recoded the original macro and tested it with NZHS data.

The new family type macro was tested in two stages. We first created test relationship data with known family types and ran the macro over this data to see if the new code assigned family type correctly.

Once we were satisfied the macro was working properly with our test data, we applied it to the NZHS relationship data from 2015/16. We then compared the proportion of adults in each family type for the NZHS with similar proportions from all five iterations of the General Social Survey.

Using the new macro, the family type proportions from the NZHS differed by less than five percentage points from those of the General Social Survey, showing the macro was working correctly and that we could proceed with our family type analysis.

TABLE
24

Statistics New Zealand family type classifications

Source: Statistics New Zealand
http://archive.stats.govt.nz/~/media/Statistics/surveys-and-methods/methods/class-stnd/household-composition/HHCOMP08-statistical-standard.pdf

Level 1	Level 2 (where different to level 1)	Level 3 (where different to level 2)
Couple without children		
Couple with child(ren)	• Couple with child(ren) not further defined • Couple with birth/biological, adopted children • Couple with grandchild(ren) • Couple with other child(ren) only • Step family	• Step family not further defined • Non-blended step-family • Blended step-family
One parent with child(ren)	• One parent with birth/biological, adopted child(ren) • One parent with grandchild(ren) • One parent with other children only	

TABLE

25

Superu family typology

Superu family type	Description
1. Couple, both under 50 years of age	• Two people who are married, in a civil union, or in a de facto relationship, and who usually live together in the same household • They are both aged under 50 • They either have no children or do not have their children living with them
2. Couple, one or both aged 50 years or older	• Two people who are married, in a civil union, or in a de facto relationship, and who usually live together in the same household • One or both of them are aged 50 or older • They either have no children or do not have their children living with them.
3. Two parents with at least one child under 18 years of age	• Two parents with one or more children, all of whom usually live together in the same household • At least one of the children is under 18.
4. One parent with at least one child under 18 years of age	• One parent with one or more children, all of whom usually live together in the same household • At least one of the children is under 18.
5. Two parents with all children 18 years of age and older	• Two parents with one or more children, all of whom usually live together in the same household • All the children are 18 or older.
6. One parent with all children 18 years of age and older	• One parent with one or more children, all of whom usually live together in the same household. • All the children are 18 or older.
Additional Superu family types for this analysis	**Description**
7. Individual living alone, aged 50 years or older	
8. Individual living along, aged less than 50 years	
9. Group not in a family nucleus (residual grouping)	• Includes related or unrelated individuals living together (e.g. cousins or friends flatting)

superu

Appendix 2

Proportion of families disadvantaged in specific domains, by region

Figure 20 _ Proportion of adults disadvantaged in the Income domain, by region
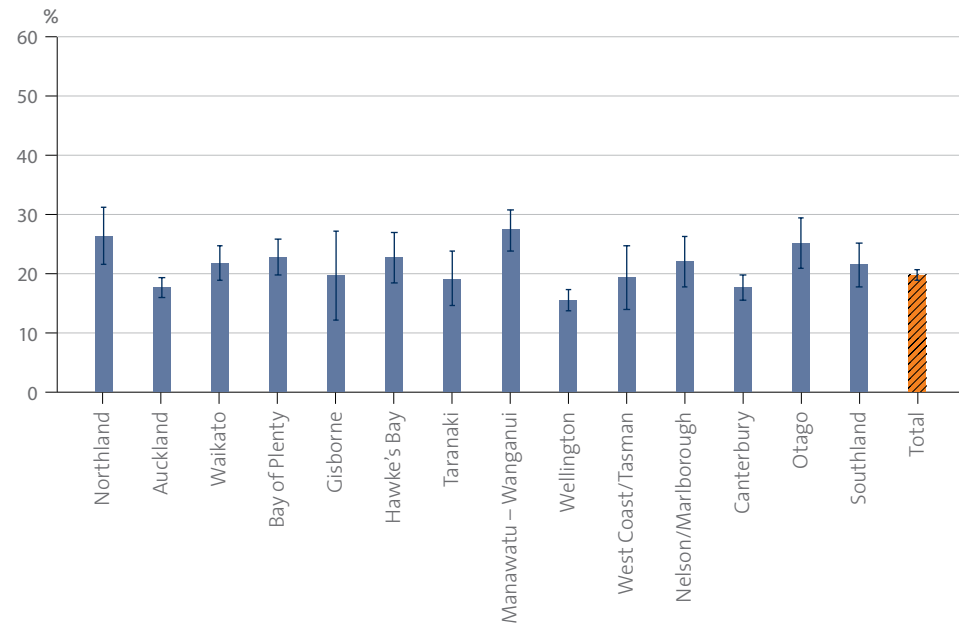
Source: Combined 2014 and 2016 General Social Survey iterations

Figure 21 _ Proportion of adults disadvantaged in the Material Wellbeing domain, by region
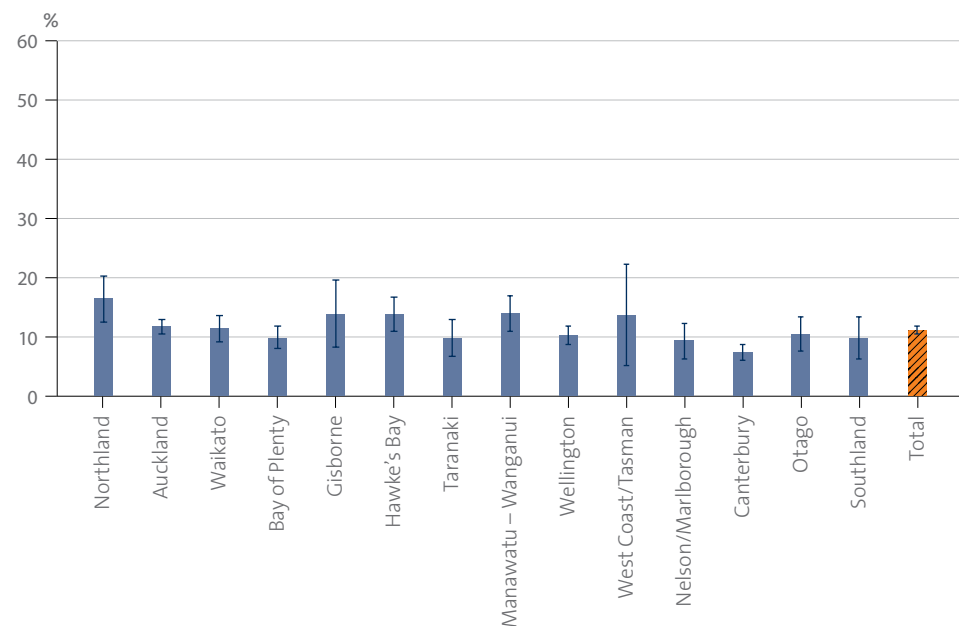
Source: Combined 2014 and 2016 General Social Survey iterations

Figure 22 _ Proportion of adults disadvantaged in the Employment domain, by region
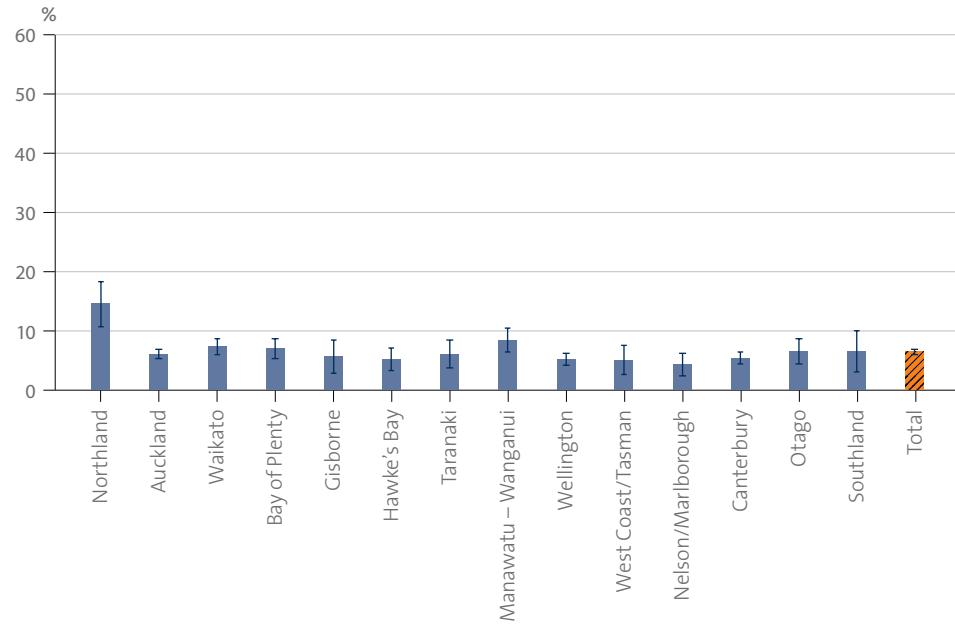
Source: Combined 2014 and 2016 General Social Survey iterations

Figure 23 _ Proportion of adults disadvantaged in the Education domain, by region
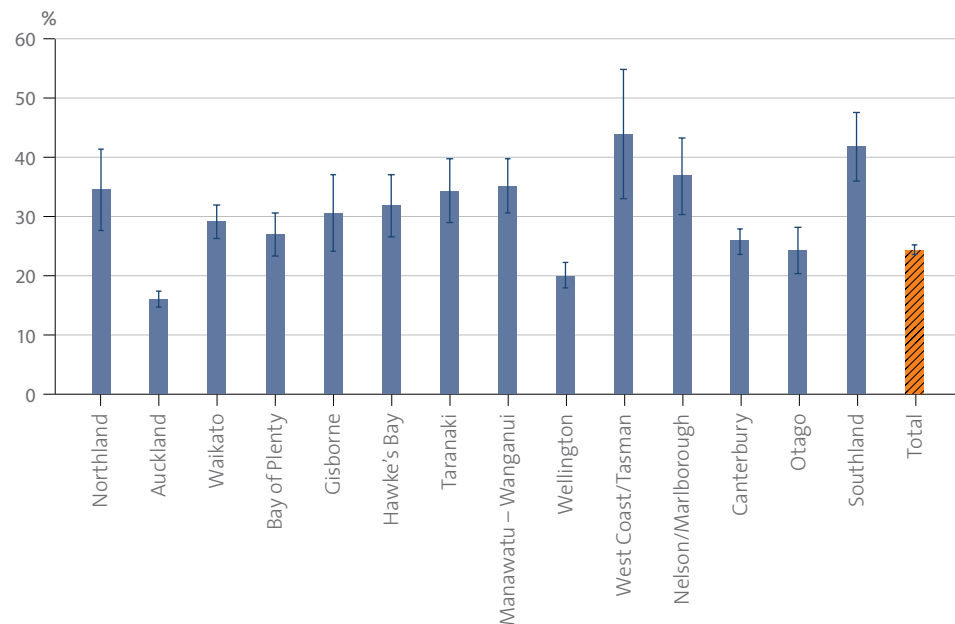
Source: Combined 2014 and 2016 General Social Survey iterations

Figure 24 _ Proportion of adults disadvantaged in the Health domain, by region
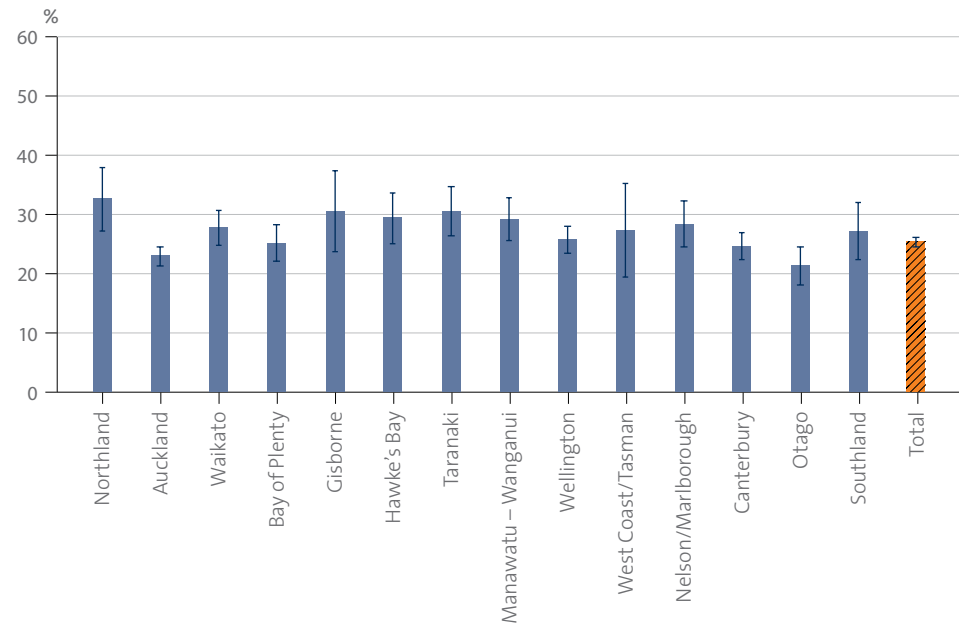
Source: Combined 2014 and 2016 General Social Survey iterations

Figure 25 _ Proportion of adults disadvantaged in the Housing domain, by region
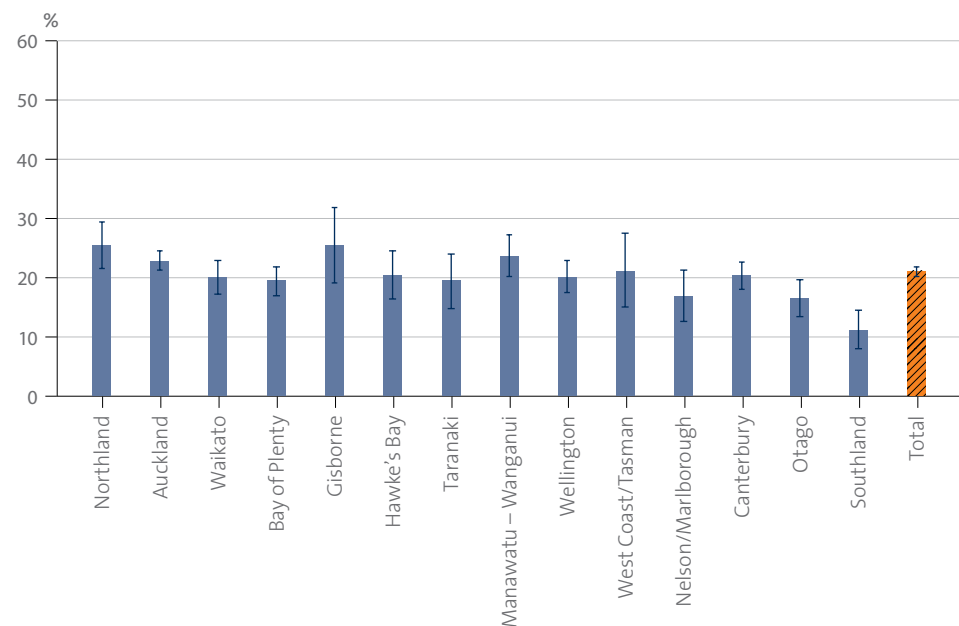
Source: Combined 2014 and 2016 General Social Survey iterations

Figure 26 _ Proportion of adults disadvantaged in the Safety domain, by region
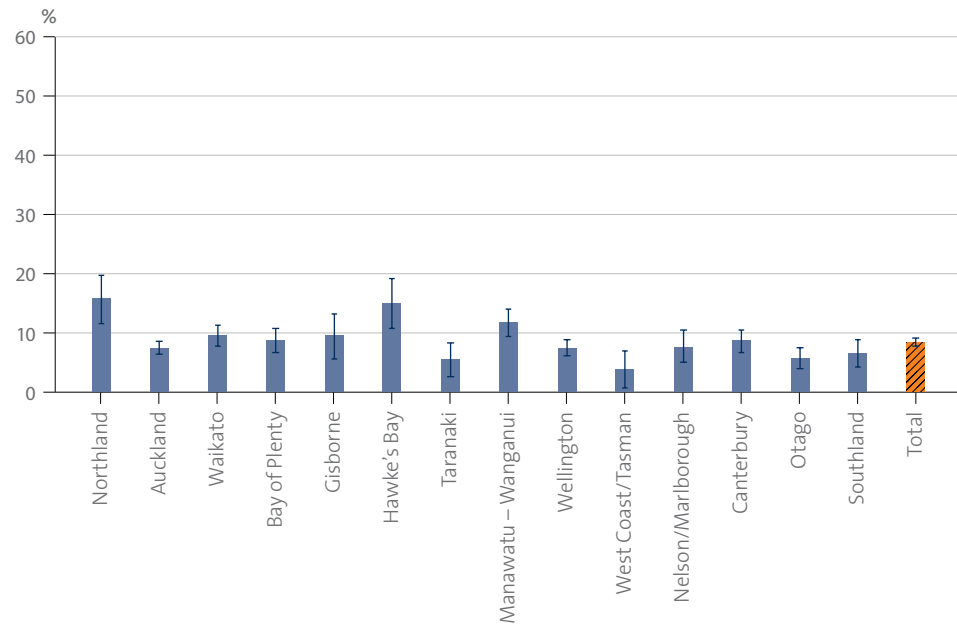
Source: Combined 2014 and 2016 General Social Survey iterations

Figure 27 _ Proportion of adults disadvantaged in the Connectedness domain, by region
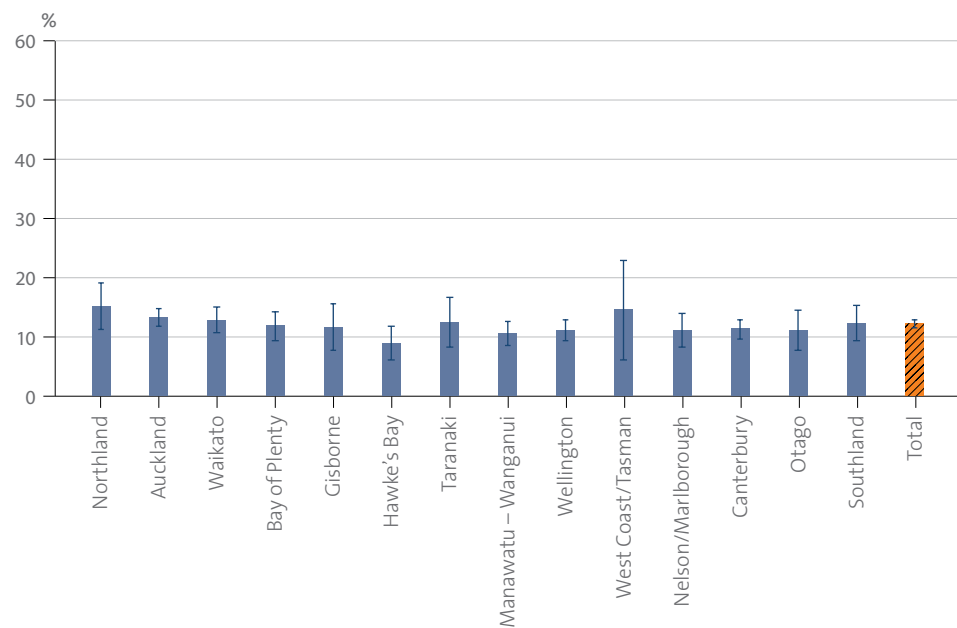
Source: Combined 2014 and 2016 General Social Survey iterations

Appendix 3

Description of changes to the multiple disadvantage measure

The multiple disadvantage measure created by Superu (2017) was developed using items from the 2014 General Social Survey (GSS). This current research, however, used a combined sample from both the 2014 and 2016 surveys. This meant that the indicators used in the measure needed to be present in both the 2014 and 2016 surveys so that the same measure could be applied to sole parents from both surveys.

Exact (or very similar items) could be identified in both the 2014 and 2016 GSS for all domains except for Connectedness. The following indicators from the original Connectedness domain were not present in the 2016 GSS:

- no family who could provide help or support
- no friends who could provide support.

This left three original indicators in the Connectedness domain:

- could not or would not talk about feeling depressed or down
- experiencing discrimination
- does not belong to any community groups, clubs or organisations.

We felt that these three indicators alone were not sufficient to capture the complexity of Connectedness. We therefore revisited the questionnaires for the two surveys to identify common items that could serve as robust indicators of Connectedness.

Potential combinations of variables that could be used to measure Connectedness were identified based on the extensive literature review conducted before the development of the original measure.

We also drew upon research investigating the nature and purpose of the social support networks of New Zealand families previously conducted by Superu (2017).

In particular, we wanted to ensure that the variables included in the Connectedness domain captured the multi-faceted role that social support networks play in contributing to the overall wellbeing of families. These contributions include giving emotional and material support, providing enjoyment or entertainment, and improving access to opportunities such as employment.

Through this process, four additional variables were identified that could potentially be incorporated into the Connectedness measure:

• feeling lonely

• having no contact with any friends or family

• having no contact with friends and family who live nearby

• not having a place to stay in an emergency.

Different ways in which these new variables could be combined with the remaining three original variables were identified and then tested to ascertain their impact on the proportion of the sample identified as being disadvantaged in Connectedness and as experiencing multiple disadvantage overall. The results of this testing are provided in Table 26.

Ideally, we wanted both versions of the multiple disadvantage measure to identify the same group of people as experiencing disadvantage both in the Connectedness domain and at the multiple disadvantage level. Table 26 therefore shows the proportion of the sample identified as being disadvantaged in the original Connectedness measure who were also identified as being disadvantaged using the new combination of variables.

The table also shows the differences in the overall proportions of the sample identified as being disadvantaged in Connectedness and experiencing multiple disadvantage, compared with the original measure.

TABLE
26

Variable combinations tested for Connectedness domain, including impact on measurement of disadvantage

Possible Connectedness variable combinations	% disadvantaged in Connectedness	Difference between % disadvantaged with original vs new measure	% disadvantaged who were also disadvantaged using original measure	% experiencing multiple disadvantage
Original Connectedness measure	**14.7**			**17.6**
Adding 'loneliness' and 'having a place to stay in an emergency'	11.6	3.1	76.2	16.8
Adding 'no contact with any friends and family'	35.9	21.2	40.9	20.1
Adding 'no contact with friends and family living nearby'	23.2	8.5	63.3	19.3
Adding 'loneliness'	9.7	4.9	86.7	16.5
Adding 'loneliness'; removing 'not belonging to community groups'	22.5	7.8	44.0	18.8
Adding 'loneliness' and 'not having a place to stay in an emergency'; removing 'not belonging to community groups'	25.1	10.5	40.4	19.2
Adding 'no contact with friends and family'; removing 'not belonging to community groups'	22.6	7.9	35.1	18.0
Adding 'no contact with friends and family living nearby'; removing 'belonging to community groups'	11.0	3.6	57.8	17.2
Retaining three original variables with no replacements	8.0	6.7	100.0	16.1

Shows option chosen

As well as identifying the effect on the identified rates of disadvantaged across the entire sample, we also wanted to understand whether there were any differences in the types of people who were identified as experiencing disadvantage using the new variable combinations.

To that end, we also assessed differences in the levels of Connectedness disadvantage and multiple disadvantage by age, ethnicity, gender, and family type between the original measure and the new combinations of variables.

Results from this search and testing identified the following two indicators as robust replacements in the revised Connectedness domain:

- could not or would not ask for a place to stay

- feeling lonely.

These variables were selected to be included in the Connectedness domain because of their ability to capture the disparate roles that social networks fulfil for families, and because of the similarity in the proportion and profile of families identified as disadvantaged using this combination of variables compared with the original Connectedness measure.

The final indicators included in the revised measure of multiple disadvantage are outlined in Figure 28; we have also provided the indicators used in the original multiple disadvantage measure in Figure 29, for comparison purposes.

Overall, the revised measure identified 16.8 percent of families as facing multiple disadvantage, compared with 17.6 percent identified using the original measure.

The new measure also indicated that 11.6 percent of families faced disadvantage in Connectedness, compared with 14.7 percent from the original measure. Overall, we believed that these proportions were similar enough to suggest that the new indicators were measuring similar constructs (and capturing the same types of families) as those that were replaced from the original measure.

Figure 28 _ Indicators and life domains used to identify multiple disadvantage (Combined 2014 and 2016 General Social Survey data)

Percentages show the proportion of the total population aged 15 and above

Indicators
All indicators sourced from combined 2014 and 2016 General Social Survey data

Domains

Indicator	%	Domain	%
Low household income Household income is less than 60% of median equivalised household income	19.5%	**Income**	19.5%
Lower levels of material wellbeing Scored 0-7 on the MWI-9	11.1%	**Material wellbeing**	11.1%
No working-aged adult (15-64 years) in household is employed No income from wages, salary or self-employment in the past 12 months	6.5%	**Employment**	6.5%
No secondary qualification Does not have at least NCEA Level 1 (or equivalent)	24.4%	**Education**	24.4%
Poor physical health Low physical health rating on the SF12 (score below 40)	14.2%		
Poor mental health Low mental health rating on the SF12 (score below 40)	14.9%	**Health**	25.5%
Poor general health Respondent rated their general health as "poor"	3.2%		

Disadvantage shown by meeting **one or more** of the indicators

Indicator	%	Domain	%
Household overcrowding Additional bedrooms required in household	7.1%	**Housing**	21.0%
Poor housing condition One or more of the following: house "always" cold, house has a "major" problem with mould, or house needs "immediate" or "immediate and extensive" repairs	16.1%		

Disadvantage shown by meeting **one or more** of the indicators

Indicator	%	Domain	%
Feeling unsafe at home by themselves at night Respondent feels "unsafe" or "very unsafe" at home by themselves at night	5.5%		
Experiencing victimisation Any experience of victimisation in the last 12 months	13.5%	**Safety**	8.5%
Problems with burglary or assaults in neighbourhood in last 12 months Respondent indicates a problem in their neighbourhood with burglary or assaults	21.2%		

Disadvantage shown by meeting **two or more** of the indicators

Indicator	%	Domain	%
Could not or would not ask anyone for a place to stay if they urgently needed one	4.1%		
Feel lonely most or all of the time	3.6%	**Connectedness**	12.2%
Could not or would not talk about feeling depressed/down Would not, or could not, talk to anyone	3.7%		
Experiencing discrimination Any reported discrimination in the past 12 months	17.0%		
Does not belong to any community groups, clubs, or organisations E.g. a church, community association, volunteer group, sports/hobby club	39.0%		

Disadvantage shown by meeting **two or more** of the indicators

Multiple disadvantage 16.8%

For this project we have defined multiple disadvantage as having disadvantage in three or more domains

Figure 29 _ Indicators and life domains used to identify multiple disadvantage (General Social Survey 2014)

Percentages show the proportion of the total population aged 15 and above

Indicators

All indicators sourced from the New Zealand
General Social Survey 2014

Domains

Low household income
Household income is less than 60% of median equivalised household income — **19.2%**

Lower levels of material wellbeing
Scored 0-7 on the MWI-9 — **11.6%**

No working-aged adult (15-64 years) in household is employed
No income from wages, salary or self-employment in the past 12 months — **6.8%**

No secondary qualification
Does not have at least NCEA Level 1 (or equivalent) — **25.3%**

Poor physical health
Low physical health rating on the SF12 (score below 40) — **14.4%**

Poor mental health
Low mental health rating on the SF12 (score below 40) — **14.6%**

Poor general health
Respondent rated their general health as "poor" — **3.4%**

Household overcrowding
Additional bedrooms required in household — **6.4%**

Poor housing condition
One or more of the following: house "always" cold, house has a "major" problem with mould, or house needs "immediate" or "immediate and extensive" repairs — **16.5%**

Feeling unsafe at home by themselves at night
Respondent feels "unsafe" or "very unsafe" at home by themselves at night — **5.3%**

Experiencing victimisation
Any experience of victimisation in the last 12 months — **13.7%**

Problems with burglary or assaults in neighbourhood in last 12 months
Respondent indicates a problem in their neighbourhood with burglary or assaults — **19.3%**

No family who could provide help or support
Would not, or could not, ask for help or support from family member — **3.3%**

No friends who could provide support
Would not, or could not, ask for support from a friend — **11.5%**

Could not or would not talk about feeling depressed/down
Would not, or could not, talk to anyone — **3.9%**

Experiencing discrimination
Any reported discrimination in the past 12 months — **17.1%**

Does not belong to any community groups, clubs, or organisations E.g. a church, community association, volunteer group, sports/hobby club — **36.2%**

Income — **19.2%**

Material wellbeing — **11.6%**

Employment — **6.8%**

Education — **25.3%**

Health — **25.4%**
Disadvantage shown by meeting **one or more** of the indicators

Housing — **20.8%**
Disadvantage shown by meeting **one or more** of the indicators

Safety — **8.0%**
Disadvantage shown by meeting **two or more** of the indicators

Connectedness — **14.7%**
Disadvantage shown by meeting **two or more** of the indicators

Multiple disadvantage 17.6%
For this project we have defined multiple disadvantage as having disadvantage in three or more domains

Appendix 4

Descriptive statistics: whānau wellbeing measures, tenure and housing quality[52]

TABLE

27

Descriptive
Statistics:
Landlord/
Tenure and
Housing
Quality

Landlord	*Needs Repairs*	No Problem	Small Problem	Big Problem
	Private	54.6% (50.8%, 58.5%)	31.5% (28.7%, 34.3%)	13.8% (12.1%, 15.6%)
	Local Govt	64.5% (25.3%, 103.6%)	31.6% (3.1%, 60%)	S* (S, S)
	Central Govt	43.7% (37.7%, 49.7%)	32.8% (26.8%, 38.8%)	23.5% (18.9%, 28.2%)
	Other/ Unknown	58.5% (55.8%, 61.1%)	29.3% (27.1%, 31.4%)	12.3% (10.9%, 13.6%)
	Pests	No Problem	Small Problem	Big Problem
	Private	71.5% (67.5%, 75.5%)	21.8% (19.7%, 23.9%)	6.7% (5.4%, 7.9%)
	Local Govt	64.7% (26.9%, 102.6%)	24.5% (0.8%, 48.2%)	S (S, S)
	Central Govt	60.4% (53.6%, 67.2%)	26.6% (21.3%, 31.8%)	13% (9.7%, 16.4%)
	Other/ Unknown	76.4% (73.5%, 79.3%)	19.6% (18%, 21.3%)	3.9% (3%, 4.9%)
	Too Small	No Problem	Small Problem	Big Problem
	Private	77.9% (74%, 81.7%)	16.3% (14.3%, 18.3%)	5.8% (4.6%, 7%)
	Local Govt	91.3% (40.9%, 141.6%)	S (S, S)	S (S, S)
	Central Govt	71% (63.5%, 78.5%)	17.9% (14%, 21.8%)	11.1% (7.3%, 15%)
	Other/ Unknown	82.8% (80.1%, 85.4%)	13.2% (11.6%, 14.8%)	4% (3.2%, 4.8%)
	Damp	No Problem	Small Problem	Big Problem
	Private	60.5% (56.4%, 64.5%)	24.5% (22.3%, 26.8%)	15% (13.4%, 16.6%)
	Local Govt	57.9% (17.1%, 98.8%)	19.4% (2.9%, 35.9%)	22.7% (-1.1%, 46.5%)
	Central Govt	52.8% (45.6%, 59.9%)	27.4% (22.3%, 32.5%)	19.8% (15.9%, 23.8%)
	Other/ Unknown	75.2% (72.5%, 77.9%)	17.5% (15.7%, 19.3%)	7.3% (6.2%, 8.3%)
	Cold	No Problem	Small Problem	Big Problem
	Private	54.6% (51.1%, 58%)	24.1% (21.8%, 26.5%)	21.3% (19.5%, 23.1%)
	Local Govt	47.5% (18.9%, 76.1%)	33.5% (6.2%, 60.9%)	19% (-2.9%, 40.9%)
	Central Govt	43.3% (36.9%, 49.6%)	27.4% (21.9%, 32.9%)	29.3% (24.6%, 34.1%)
	Other/ Unknown	67.5% (64.6%, 70.5%)	21.3% (19.4%, 23.1%)	11.2% (9.6%, 12.7%)

Landlord	Crowded	Need 2 or more bdrms	Need 1 more bdrms	No more bdrms	Spare 1 bdrm	Spare 2 or more bdrms
	Private	3.8% (2.8%, 4.8%)	11.4% (9.7%, 13.2%)	36.1% (33.1%, 39.1%)	33.6% (30.7%, 36.4%)	15.1% (13.1%, 17.2%)
	Local Govt	S (S, S)	S (S, S)	74% (28.7%, 119.4%)	S (S, S)	S (S, S)
	Central Govt	14.9% (10.7%, 19.1%)	22.1% (17.5%, 26.8%)	40.3% (34.7%, 45.8%)	17% (12.9%, 21.1%)	5.7% (3.6%, 7.8%)
	Other/ Unknown	2.8% (2.1%, 3.5%)	5.6% (4.6%, 6.6%)	22.4% (20.5%, 24.4%)	33.6% (30.9%, 36.2%)	35.6% (33.4%, 37.7%)

	Multiple Issues	Less Than Two Issues	Two or more Issues
	Private	44.8% (41%, 48.6%)	55.2% (51.9%, 58.5%)
	Local Govt	45.9% (10.4%, 81.4%)	54.1% (23%, 85.3%)
	Central Govt	30.7% (25.4%, 35.9%)	69.3% (61.7%, 77%)
	Other/ Unknown	59.3% (56.5%, 62%)	40.7% (38.3%, 43.2%)

	Major Issues	Major Issue	No Major Issue
	Private	32.6% (30.2%, 35.1%)	67.4% (63.3%, 71.4%)
	Local Govt	39.6% (11%, 68.2%)	60.4% (21.3%, 99.5%)
	Central Govt	46.7% (40.5%, 52.8%)	53.3% (46.5%, 60.1%)
	Other/ Unknown	21.6% (19.6%, 23.6%)	78.4% (75.5%, 81.4%)

Tenure	Needs Repairs	No Problem	Small Problem	Big Problem
	Homeowner	56.7% (53.2%, 60.3%)	30.8% (28.3%, 33.3%)	12.5% (10.7%, 14.2%)
	Non-owner	55.2% (52.9%, 57.5%)	30.6% (28.8%, 32.4%)	14.2% (12.8%, 15.7%)
	Unknown	50.6% (31.7%, 69.6%)	20.6% (8.9%, 32.3%)	28.8% (11.9%, 45.6%)

	Pests	No Problem	Small Problem	Big Problem
	Homeowner	77.6% (73.7%, 81.4%)	20.2% (18.3%, 22%)	2.3% (1.6%, 3%)
	Non-owner	70.9% (68.6%, 73.3%)	21.5% (20%, 23%)	7.6% (6.5%, 8.6%)
	Unknown	69.2% (44.8%, 93.6%)	24.5% (9.1%, 39.8%)	S (S, S)

Tenure	Too Small	No Problem	Small Problem	Big Problem		
	Homeowner	85.5% (82%, 88.9%)	12.1% (10.4%, 13.7%)	2.5% (1.7%, 3.3%)		
	Non-owner	77.1% (74.9%, 79.3%)	16.2% (14.7%, 17.7%)	6.7% (5.8%, 7.6%)		
	Unknown	85.9% (56.3%, 115.6%)	S (S, S)	S (S, S)		
	Damp	**No Problem**	**Small Problem**	**Big Problem**		
	Homeowner	78.6% (75%, 82.1%)	16.3% (14.3%, 18.3%)	5.1% (4.1%, 6.2%)		
	Non-owner	62% (59.7%, 64.3%)	23.6% (21.9%, 25.3%)	14.4% (13.3%, 15.5%)		
	Unknown	65% (41.8%, 88.1%)	24.3% (10%, 38.6%)	S (S, S)		
	Cold	**No Problem**	**Small Problem**	**Big Problem**		
	Homeowner	71% (67.4%, 74.7%)	20.8% (18.4%, 23.1%)	8.2% (6.7%, 9.7%)		
	Non-owner	55.2% (52.9%, 57.4%)	24.1% (22.2%, 26%)	20.7% (19.3%, 22.1%)		
	Unknown	55% (34.6%, 75.5%)	23.8% (6.7%, 40.8%)	21.2% (7.8%, 34.6%)		
	Crowded	**Need 2 or more bdrms**	**Need 1 more bdrms**	**No more bdrms**	**Spare 1 bdrm**	**Spare 2 or more bdrms**
	Homeowner	1.1% (0.5%, 1.7%)	3.7% (2.7%, 4.8%)	16.7% (14.6%, 18.8%)	32.3% (29.2%, 35.4%)	46.2% (43.4%, 49%)
	Non-owner	5.6% (4.7%, 6.6%)	11.9% (10.6%, 13.3%)	35.6% (33.7%, 37.5%)	32.1% (30.2%, 34%)	14.7% (13.2%, 16.2%)
	Unknown	S (S, S)	S (S, S)	38.1% (21.1%, 55.2%)	20.2% (6.5%, 33.8%)	24.1% (7.7%, 40.6%)
	Multiple Issues	**Less Than Two Issues**	**Two or more Issues**			
	Homeowner	60.4% (56.8%, 64.1%)	39.6% (36.7%, 42.5%)			
	Non-owner	46.6% (44.3%, 48.9%)	53.4% (51.3%, 55.5%)			
	Unknown	51.2% (33%, 69.4%)	48.8% (26.9%, 70.7%)			
	Major Issues	**Major Issue**	**No Major Issue**			
	Homeowner	19% (16.8%, 21.2%)	81% (77.2%, 84.8%)			
	Non-owner	32.4% (30.7%, 34.2%)	67.6% (65.2%, 69.9%)			
	Unknown	31.6% (13.4%, 49.7%)	68.4% (45.6%, 91.3%)			

(s) These estimates have been suppressed for confidentiality and quality reasons.

TABLE

28

Descriptive Statistics: Wellbeing measures and housing quality

Self Rated Health Status		Excellent	Very Good	Good	Fair	Poor
Needs Repairs		**Excellent**	**Very Good**	**Good**	**Fair**	**Poor**
	No Problem	22% (20.1%, 24%)	38.3% (36%, 40.6%)	26.8% (24.8%, 28.7%)	10.2% (8.8%, 11.6%)	2.7% (2.1%, 3.4%)
	Small Problem	15% (12.5%, 17.4%)	38.7% (35.3%, 42.1%)	30.5% (27.7%, 33.3%)	12.8% (11%, 14.6%)	3.1% (2.2%, 3.9%)
	Big Problem	8.2% (5.8%, 10.5%)	27.9% (22.5%, 33.4%)	31.7% (27.7%, 35.8%)	24% (19.9%, 28%)	8.2% (5.8%, 10.6%)
Pests		**Excellent**	**Very Good**	**Good**	**Fair**	**Poor**
	No Problem	20.5% (18.9%, 22.1%)	38% (36%, 40%)	27.3% (25.8%, 28.7%)	11.4% (10.3%, 12.5%)	2.8% (2.2%, 3.4%)
	Small Problem	12.5% (10.2%, 14.7%)	36.2% (32.4%, 40.1%)	31.1% (28.1%, 34%)	15.8% (13%, 18.6%)	4.4% (2.9%, 6%)
	Big Problem	6.7% (2.7%, 10.7%)	26.4% (18.8%, 34.1%)	35.5% (28.3%, 42.7%)	21.3% (16.2%, 26.5%)	10% (6.2%, 13.8%)
Too Small		**Excellent**	**Very Good**	**Good**	**Fair**	**Poor**
	No Problem	19.2% (17.7%, 20.6%)	37.4% (35.5%, 39.3%)	27.7% (26%, 29.3%)	12.3% (11.1%, 13.5%)	3.4% (2.8%, 4.1%)
	Small Problem	14.6% (11.5%, 17.7%)	38.7% (33.7%, 43.6%)	31.1% (26%, 36.2%)	12.6% (9.9%, 15.2%)	3.1% (1.6%, 4.5%)
	Big Problem	11% (6.3%, 15.7%)	24.6% (17.9%, 31.2%)	35% (27.9%, 42.1%)	22.2% (16.6%, 27.7%)	7.2% (4.3%, 10.2%)
Damp		**Excellent**	**Very Good**	**Good**	**Fair**	**Poor**
	No Problem	21.4% (19.7%, 23.1%)	38.3% (36.2%, 40.3%)	27.3% (25.6%, 29%)	10.5% (9.5%, 11.6%)	2.6% (1.9%, 3.2%)
	Small Problem	12.1% (9.9%, 14.3%)	37.1% (32.6%, 41.6%)	31.7% (28.3%, 35%)	16.2% (13.7%, 18.8%)	2.9% (1.9%, 3.9%)
	Big Problem	9.6% (6.3%, 12.8%)	28.7% (24.3%, 33.1%)	30.2% (25.4%, 34.9%)	20.6% (17.1%, 24.1%)	11% (8.2%, 13.8%)
Cold		**Excellent**	**Very Good**	**Good**	**Fair**	**Poor**
	No Problem	21.9% (20.1%, 23.6%)	39% (36.8%, 41.1%)	27.1% (25.2%, 29%)	9.7% (8.5%, 10.9%)	2.4% (1.8%, 3%)
	Small Problem	14.9% (12.1%, 17.7%)	37.7% (34%, 41.3%)	30.1% (26.6%, 33.6%)	14.6% (12.4%, 16.7%)	2.8% (1.9%, 3.7%)
	Big Problem	8.6% (6.5%, 10.7%)	28.6% (24.3%, 32.9%)	31.6% (27.7%, 35.6%)	22.3% (19.1%, 25.4%)	8.9% (6.7%, 11.2%)
Crowded		**Excellent**	**Very Good**	**Good**	**Fair**	**Poor**
	Need 2 or more bdrms	15% (9.4%, 20.6%)	26.7% (19.3%, 34.2%)	34.6% (24.9%, 44.4%)	15.5% (8.3%, 22.7%)	8.1% (4%, 12.3%)
	Need 1 more bdrms	14.3% (10.1%, 18.6%)	34.8% (28.8%, 40.8%)	32.4% (26.5%, 38.2%)	14.7% (11.1%, 18.3%)	3.8% (2.1%, 5.4%)
	No more bdrms	18.3% (15.6%, 20.9%)	35.6% (32.1%, 39.1%)	27.7% (24.7%, 30.6%)	14.6% (12.8%, 16.3%)	3.9% (2.6%, 5.1%)
	Spare 1 bdrm	19.5% (17.1%, 21.9%)	38% (34.9%, 41.1%)	27.4% (24.9%, 29.9%)	12% (10.1%, 13.9%)	3% (2.1%, 4%)
	Spare 2 or more bdrms	18.2% (15.6%, 20.7%)	40.9% (37.2%, 44.7%)	27.9% (25%, 30.7%)	10.2% (8.2%, 12.2%)	2.9% (1.8%, 3.9%)

Self Rated Health Status	*Multiple Issues*	**Excellent**	**Very Good**	**Good**	**Fair**	**Poor**
	Less than Two Issues	24% (22%, 26.1%)	39.8% (37.4%, 42.2%)	25.2% (23.1%, 27.2%)	8.8% (7.5%, 10.2%)	2.2% (1.5%, 2.8%)
	Two or more Issues	11.8% (10.1%, 13.5%)	34% (31.4%, 36.5%)	32.1% (30.1%, 34%)	17.1% (15.5%, 18.7%)	5.1% (4.1%, 6%)
	Major Issues	Excellent	Very Good	Good	Fair	Poor
	Major Issue	9.5% (7.6%, 11.3%)	30.8% (27.4%, 34.1%)	32.5% (29.5%, 35.4%)	20.1% (17.8%, 22.4%)	7.2% (5.7%, 8.8%)
	No Major Issue	21.4% (19.8%, 23%)	39.4% (37.5%, 41.3%)	27% (25.3%, 28.8%)	10.1% (9%, 11.1%)	2.2% (1.7%, 2.7%)

Feeling Depressed	*Needs Repairs*	**All**	**Most**	**Some**	**A Little**	**None**
	No Problem	0.9% (0.5%, 1.2%)	2.7% (2.1%, 3.4%)	10.5% (9.1%, 12%)	24% (22.1%, 25.9%)	61.9% (59.3%, 64.4%)
	Small Problem	0.9% (0.5%, 1.4%)	3.9% (2.9%, 5%)	12.7% (10.9%, 14.5%)	29.3% (26.6%, 32%)	53.2% (49.4%, 56.9%)
	Big Problem	1.7% (0.6%, 2.8%)	8.3% (6.1%, 10.5%)	26.3% (22.9%, 29.8%)	28.8% (24.3%, 33.3%)	34.8% (30.3%, 39.3%)
	Pests	**All**	**Most**	**Some**	**A Little**	**None**
	No Problem	0.7% (0.4%, 1%)	3.1% (2.5%, 3.7%)	11.4% (10.3%, 12.4%)	24.7% (23.1%, 26.3%)	60.1% (58%, 62.1%)
	Small Problem	1.5% (0.7%, 2.2%)	4.8% (3.1%, 6.4%)	17.2% (15.2%, 19.3%)	30.7% (27%, 34.5%)	45.8% (41.4%, 50.3%)
	Big Problem	2.5% (0.8%, 4.2%)	9.7% (6.2%, 13.2%)	23.8% (18.2%, 29.4%)	29.8% (23.8%, 35.9%)	34.2% (25%, 43.4%)
	Too Small	**All**	**Most**	**Some**	**A Little**	**None**
	No Problem	0.9% (0.6%, 1.2%)	3.6% (3%, 4.2%)	12.3% (11.3%, 13.3%)	25.2% (23.7%, 26.7%)	57.9% (56.1%, 59.8%)
	Small Problem	1% (0.3%, 1.8%)	3.9% (2.4%, 5.4%)	13.6% (10.7%, 16.4%)	30.2% (25.9%, 34.6%)	51.2% (45.3%, 57.1%)
	Big Problem	1.9% (0.3%, 3.5%)	7.2% (3.7%, 10.6%)	27.6% (21.9%, 33.3%)	31% (23.5%, 38.4%)	32.4% (24.7%, 40.1%)
	Damp	**All**	**Most**	**Some**	**A Little**	**None**
	No Problem	0.8% (0.4%, 1.1%)	2.5% (1.9%, 3.1%)	10.8% (9.7%, 11.9%)	23.9% (22.3%, 25.6%)	62% (59.7%, 64.4%)
	Small Problem	1.2% (0.6%, 1.8%)	4.9% (3.6%, 6.3%)	14.7% (12.6%, 16.9%)	31.8% (27.9%, 35.8%)	47.3% (43.1%, 51.6%)
	Big Problem	2.1% (0.9%, 3.3%)	9.9% (7.5%, 12.4%)	25.6% (21.8%, 29.4%)	29.5% (24.9%, 34%)	33% (27.5%, 38.4%)
	Cold	**All**	**Most**	**Some**	**A Little**	**None**
	No Problem	0.7% (0.4%, 1.1%)	2.2% (1.6%, 2.8%)	10.3% (9.1%, 11.5%)	23.2% (21.3%, 25.1%)	63.6% (61%, 66.2%)
	Small Problem	0.8% (0.4%, 1.3%)	4.5% (3.3%, 5.7%)	13.4% (11.3%, 15.5%)	31.3% (27.6%, 35.1%)	49.9% (45.5%, 54.4%)
	Big Problem	2.1% (1%, 3.2%)	9% (7.1%, 10.8%)	24.2% (21.1%, 27.4%)	30.6% (26.7%, 34.4%)	34.1% (29.6%, 38.7%)

Feeling Depressed	Crowded	All	Most	Some	A Little	None
	Need 2 or more bdrms	3% (0.6%, 5.4%)	5.4% (1.6%, 9.2%)	14.7% (9.9%, 19.6%)	31.1% (22.7%, 39.6%)	45.8% (34.9%, 56.6%)
	Need 1 more bdrms	S* (S, S)	6.1% (3.6%, 8.6%)	14.8% (10.6%, 19%)	26.8% (21.3%, 32.3%)	51.7% (43.9%, 59.5%)
	No more bdrms	0.8% (0.3%, 1.3%)	4% (3%, 5%)	14% (12%, 16.1%)	27.6% (24.6%, 30.5%)	53.6% (49.3%, 57.9%)
	Spare 1 bdrm	1.1% (0.6%, 1.7%)	3.5% (2.6%, 4.5%)	12.8% (11.1%, 14.6%)	25.3% (22.8%, 27.8%)	57.1% (53.5%, 60.7%)
	Spare 2 or more bdrms	0.7% (0.3%, 1.2%)	2.5% (1.6%, 3.4%)	11.7% (9.6%, 13.7%)	25% (22.3%, 27.7%)	60.1% (55.9%, 64.3%)
	Multiple Issues	**All**	**Most**	**Some**	**A Little**	**None**
	Less than Two Issues	0.7% (0.4%, 1.1%)	2% (1.4%, 2.5%)	9.3% (7.9%, 10.6%)	22.2% (20.2%, 24.3%)	65.8% (63%, 68.6%)
	Two or more Issues	1.3% (0.8%, 1.7%)	5.8% (4.9%, 6.8%)	17.5% (16.1%, 19%)	30.5% (28%, 32.9%)	44.9% (42.1%, 47.7%)
	Major Issue	**All**	**Most**	**Some**	**A Little**	**None**
	Major Issue	1.5% (0.8%, 2.2%)	7.6% (6.2%, 9.1%)	22.7% (20.5%, 24.8%)	30.4% (27.2%, 33.6%)	37.7% (34.3%, 41.2%)
	No Major Issue	0.8% (0.4%, 1.1%)	2.4% (1.9%, 2.9%)	9.7% (8.6%, 10.7%)	24.6% (23.1%, 26.2%)	62.5% (60.5%, 64.6%)
Lonely	**Needs Repairs**	**All**	**Most**	**Some**	**A Little**	**None**
	No Problem	0.6% (0.3%, 0.9%)	2.5% (1.9%, 3.1%)	9.8% (8.7%, 10.9%)	23.9% (21.8%, 26%)	63.1% (60.4%, 65.9%)
	Small Problem	0.9% (0.5%, 1.3%)	3.8% (2.8%, 4.8%)	12.4% (10.6%, 14.2%)	26.9% (24.1%, 29.6%)	55.9% (52.2%, 59.7%)
	Big Problem	2% (1%, 2.9%)	7.6% (5.8%, 9.4%)	20.7% (16.9%, 24.6%)	25.4% (21.3%, 29.4%)	44.3% (39%, 49.6%)
	Pests	**All**	**Most**	**Some**	**A Little**	**None**
	No Problem	0.7% (0.5%, 1%)	2.8% (2.2%, 3.3%)	10.8% (9.9%, 11.8%)	23.7% (22%, 25.5%)	61.9% (59.8%, 64.1%)
	Small Problem	1% (0.4%, 1.6%)	5.5% (4.1%, 6.9%)	14.3% (11.9%, 16.7%)	28.7% (25.5%, 31.9%)	50.6% (46.4%, 54.8%)
	Big Problem	2.3% (0.7%, 3.8%)	7.7% (4.8%, 10.6%)	20.5% (14%, 27%)	27.9% (21.5%, 34.3%)	41.7% (33%, 50.3%)
	Too Small	**All**	**Most**	**Some**	**A Little**	**None**
	No Problem	0.8% (0.6%, 1.1%)	3.3% (2.8%, 3.9%)	11.7% (10.7%, 12.6%)	23.9% (22.4%, 25.3%)	60.3% (58.5%, 62.2%)
	Small Problem	1.1% (0.5%, 1.8%)	3.6% (2.2%, 5%)	11.9% (9.2%, 14.6%)	30.2% (25.7%, 34.6%)	53.3% (47.4%, 59.1%)
	Big Problem	S (S, S)	8.1% (4.8%, 11.4%)	19.7% (13.8%, 25.6%)	27.4% (21%, 33.7%)	43.9% (35.2%, 52.6%)

	Damp	All	Most	Some	A Little	None
Lonely	No Problem	0.7% (0.4%, 0.9%)	2.4% (1.9%, 2.8%)	10.3% (9.3%, 11.2%)	23.6% (21.9%, 25.3%)	63.1% (60.7%, 65.4%)
	Small Problem	0.7% (0.3%, 1.1%)	5.6% (4.2%, 7.1%)	13.5% (10.8%, 16.2%)	25.9% (23.1%, 28.8%)	54.2% (49.6%, 58.8%)
	Big Problem	2.4% (1.3%, 3.6%)	7.3% (5.4%, 9.2%)	20.3% (16.4%, 24.1%)	31.6% (26.9%, 36.3%)	38.4% (33.5%, 43.3%)
	Cold	All	Most	Some	A Little	None
	No Problem	0.6% (0.3%, 0.9%)	2% (1.5%, 2.5%)	9.3% (8.3%, 10.3%)	22.6% (21%, 24.2%)	65.5% (63%, 68%)
	Small Problem	1% (0.5%, 1.6%)	4.6% (3.4%, 5.8%)	13% (10.8%, 15.2%)	30.1% (26.4%, 33.8%)	51.3% (46.9%, 55.8%)
	Big Problem	1.8% (0.9%, 2.6%)	8.4% (6.4%, 10.3%)	21% (17.7%, 24.2%)	26.7% (22.7%, 30.6%)	42.3% (37.5%, 47.1%)
	Crowded	All	Most	Some	A Little	None
	Need 2 or more bdrms	S (S, S)	6% (2.7%, 9.4%)	17% (10.1%, 23.8%)	27.1% (18.6%, 35.5%)	49.1% (38.5%, 59.7%)
	Need 1 more bdrms	S (S, S)	5.4% (2.8%, 8%)	14.5% (10.8%, 18.2%)	24.2% (19.1%, 29.4%)	55.6% (47.7%, 63.5%)
	No more bdrms	0.9% (0.4%, 1.4%)	3.5% (2.6%, 4.5%)	13.6% (11.8%, 15.5%)	26.7% (23.8%, 29.5%)	55.3% (51.4%, 59.1%)
	Spare 1 bdrm	1.4% (0.9%, 1.9%)	3.6% (2.8%, 4.5%)	10.3% (8.5%, 12.1%)	24.7% (22%, 27.3%)	60% (55.9%, 64.1%)
	Spare 2 or more bdrms	0.5% (0.2%, 0.9%)	2.1% (1.3%, 2.9%)	10.6% (9%, 12.3%)	23.1% (20.4%, 25.9%)	63.6% (59.5%, 67.7%)
	Multiple Issues	All	Most	Some	A Little	None
	Less than Two Issues	0.5% (0.2%, 0.7%)	1.9% (1.3%, 2.5%)	8.7% (7.6%, 9.8%)	22.5% (20.4%, 24.5%)	66.5% (63.6%, 69.5%)
	Two or more Issues	1.3% (0.9%, 1.8%)	5.4% (4.6%, 6.3%)	15.7% (14%, 17.3%)	27.7% (25.8%, 29.5%)	49.9% (46.9%, 52.9%)
	Major Issue	All	Most	Some	A Little	None
	Major Issue	1.5% (0.9%, 2%)	7.2% (5.9%, 8.6%)	18.7% (16.1%, 21.3%)	27.6% (24.9%, 30.4%)	44.9% (41.2%, 48.6%)
	No Major Issue	0.6% (0.4%, 0.9%)	2.2% (1.7%, 2.7%)	9.5% (8.6%, 10.5%)	24% (22.4%, 25.6%)	63.6% (61.5%, 65.8%)
How is your whānau doing?	*Repairs*	Badly	Moderately Well	Well	Extremely Well	
	No Problem	4.8% (4%, 5.6%)	16.5% (14.9%, 18.2%)	50.1% (47.4%, 52.7%)	28.6% (26.6%, 30.7%)	
	Small Problem	5.8% (4.6%, 6.9%)	23.1% (20.6%, 25.5%)	51.5% (47.7%, 55.3%)	19.7% (17.4%, 21.9%)	
	Big Problem	13.4% (10.9%, 15.9%)	28.4% (24.2%, 32.5%)	41.8% (36.9%, 46.8%)	16.4% (13.1%, 19.8%)	
	Pests	Badly	Moderately Well	Well	Extremely Well	
	No Problem	5.4% (4.7%, 6%)	19% (17.6%, 20.4%)	50.2% (48%, 52.5%)	25.4% (23.7%, 27.1%)	
	Small Problem	7.2% (5.4%, 9%)	22% (19.3%, 24.6%)	49.9% (45%, 54.9%)	20.9% (18.3%, 23.5%)	
	Big Problem	14.7% (10.3%, 19%)	27.4% (20.4%, 34.4%)	36.2% (28.5%, 43.9%)	21.7% (15.1%, 28.3%)	

How is your whānau doing?		Badly	Moderately Well	Well	Extremely Well
	Too Small	**Badly**	**Moderately Well**	**Well**	**Extremely Well**
	No Problem	5.7% (4.9%, 6.4%)	19.2% (17.8%, 20.7%)	49% (47%, 50.9%)	26.1% (24.6%, 27.6%)
	Small Problem	6.9% (4.8%, 8.9%)	22.1% (18.4%, 25.7%)	53.7% (47.8%, 59.6%)	17.3% (14.3%, 20.4%)
	Big Problem	14% (9.6%, 18.4%)	28.1% (21%, 35.2%)	42.5% (34.4%, 50.6%)	15.4% (10.8%, 20%)
	Damp	**Badly**	**Moderately Well**	**Well**	**Extremely Well**
	No Problem	4.9% (4.1%, 5.7%)	16.6% (15.1%, 18.1%)	51.5% (49.3%, 53.6%)	27% (25.2%, 28.8%)
	Small Problem	8% (6.2%, 9.8%)	26% (22.8%, 29.3%)	47.7% (43.5%, 51.9%)	18.3% (15.7%, 20.9%)
	Big Problem	11.5% (9.3%, 13.7%)	30.3% (25.3%, 35.3%)	39.6% (34.3%, 44.9%)	18.6% (15.2%, 22.1%)
	Cold	**Badly**	**Moderately Well**	**Well**	**Extremely Well**
	No Problem	4.4% (3.6%, 5.2%)	16.2% (14.7%, 17.7%)	51.4% (49%, 53.7%)	28.1% (26.3%, 29.9%)
	Small Problem	6.9% (5.3%, 8.4%)	24% (21.2%, 26.8%)	50.4% (46.6%, 54.3%)	18.7% (15.9%, 21.6%)
	Big Problem	12.6% (10.5%, 14.8%)	29.2% (25.1%, 33.2%)	40.4% (35.8%, 45%)	17.8% (14.7%, 20.8%)
	Crowded	**Badly**	**Moderately Well**	**Well**	**Extremely Well**
	Need 2 or more bdrms	12.4% (6.3%, 18.5%)	31.3% (23.1%, 39.5%)	33.9% (24.7%, 43.1%)	22.4% (15.6%, 29.2%)
	Need 1 more bdrms	7.5% (4.7%, 10.3%)	21.5% (17.1%, 26%)	48% (40%, 56%)	23% (18.3%, 27.7%)
	No more bdrms	6.5% (5.1%, 8%)	19.9% (17.3%, 22.5%)	50.7% (46.9%, 54.4%)	22.9% (20.6%, 25.3%)
	Spare 1 bdrm	5.8% (4.6%, 6.9%)	18.9% (16.7%, 21.2%)	51.1% (47.4%, 54.8%)	24.2% (21.2%, 27.2%)
	Spare 2 or more bdrms	4.8% (3.6%, 6%)	18.9% (16.3%, 21.5%)	49% (44.7%, 53.3%)	27.3% (24.1%, 30.5%)
	Multiple Issues	**Badly**	**Moderately Well**	**Well**	**Extremely Well**
	Less than Two Issues	3.9% (3.2%, 4.7%)	14% (12.4%, 15.6%)	51.8% (48.9%, 54.7%)	30.3% (28.2%, 32.5%)
	Two or more Issues	8.8% (7.7%, 9.9%)	26.6% (24.3%, 28.8%)	46.8% (44.1%, 49.5%)	17.9% (16%, 19.7%)
	Major Issue	**Badly**	**Moderately Well**	**Well**	**Extremely Well**
	Major Issue	11.3% (9.6%, 13%)	28.8% (25.4%, 32.1%)	42.6% (39%, 46.1%)	17.4% (15.1%, 19.6%)
	No Major Issue	4.4% (3.7%, 5%)	16.8% (15.3%, 18.3%)	52% (49.8%, 54.2%)	26.9% (25.1%, 28.7%)

(s) These estimates have been suppressed for confidentiality and quality reasons.

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Appendix 5

Regression models predicting major housing issues, self-rated health, depression and whānau wellbeing

TABLE
29

Final regression models predicting major housing issues (3-point scale) using ordinal logit. Significance levels: ***p<.001 **p<.01 *p<.05[53]

Variables	Raw	Odd Ratio
Sex (base female)		
Male	-.278*** -0.302	0.757*** [0.651-0.880]
Age (base 18-24 years)		
25-34 years	0.355** [0.098 - 0.613]	1.426** [1.103-1.845]
35-44 years	0.244* [0.004 - 0.484]	1.276* [1.004-1.623]
45-54 years	0.260* [0.013-0.508]	1.297* [1.013-1.661]
55 years and over	0.069 [-0.189-0.327]	1.072 [0.828-1.387]
Family Type (base couple without children)		
Couple with one or more dependent children	0.065 [-0.177-0.306]	1.067 [0.824-1.358]
Single parent with one or more dependent children	0.244 [-0.002-0.490]	1.276 [0.988-1.632]
Single parent or couple with unknown child dependency status	0.018 [-0.250-0.287]	1.018 [1.178-1.332]
Individual does not reside in a family nucleus	0.108 [-0.121-0.337]	1.114 [0.886-1.401]
Deprivation (base quintile 1)		
Q2	0.278 [-0.194-0.751]	1.321 [0.824-2.119]
Q3	0.34 [-0.012-0.692]	1.405 [0.988-1.998]
Q4	.504** [0.164-0.844]	1.655** [1.178-2.326]
Q5	0.933*** [0.601-1.265]	2.542*** [1.824-3.543]
Income adequacy (base enough)		
Not enough	1.155*** [0.957-1.352]	3.173*** [2.605-3.866]
Just enough	0.820*** [0.660-0.980]	2.270*** [1.934-2.663]
Surplus	-0.238 [-0.577-0.102]	0.788 [0.562-1.107]

(Row label rotated on left: Demographic)

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53 Access to the data used in this study was provided by Statistics NZ under conditions designed to give effect to the security and confidentiality provisions of the Statistics Act 1975. The results presented in this study are the work of the authors, not Statistics NZ.

	Variables	Raw	Odd Ratio
Housing Type	**Landlord (base private)**		
	Local Government	0.243 [-0.836-1.322]	1.275 [0.433-3.751]
	Central Government	0.146 [-0.100-0.392]	1.157 [0.905-1.480]
	Other/unknown	-0.218* [-0.400--0.035]	0.805* [0.670-0.965]
	Tenure (base home owner)		
	Non-owner	0.314** [0.102-0.525]	1.368** [1.108-1.690]
	Unknown	0.442 [-0.407-1.292]	1.556 [0.666-3.639]

TABLE

30

Final regression
models predicting
self-rated health
status (5-point
scale) using ordinal
logit. Significance
levels: ***p<.oo1
**p<.o1 *p<.o5

Variables	Raw	Odds Ratio
Sex (base female)		
Male	-0.093 [-0.203-0.017]	0.911 [0.817-1.017]
Age (base 18-24 years)		
25-34 years	0.303** [.0117-0.489]	1.354** [1.124-1.631]
35-44 years	0.364*** [0.199-0.529]	1.439*** [1.221-1.696]
45-54 years	0.793*** [0.603-0.984]	2.210*** [1.828-2.674]
55 years and over	0.893*** [0.725-1.062]	2.443*** [2.065-2.891]
Family Type (base couple without children)		
Couple with one or more dependent children	-0.025 [-0.201-0.152]	0.976 [0.818-1.164]
Single parent with one or more dependent children	0.063 [-0.143-0.270]	1.065 [0.867-1.310]
Single parent or couple with unknown child dependency status	0.311** [0.104-0.518]	1.365** [1.109-1.679]
Individual does not reside in a family nucleus	0.249** [0.063-0.435]	1.283** [1.065-1.545]
Deprivation (base quintile 1)		
Q2	0.074 [-0.167-0.315]	1.077 [0.846-1.371]
Q3	0.199 [-0.061-0.489]	1.22 [0.941-1.582]
Q4	0.233* [0.036-0.430]	1.262* [1.036-1.537]
Q5	0.425*** [0.219-0.631]	1.529*** [1.245-1.879]
Income adequacy (base enough)		
Not enough	0.565*** [0.382-0.748]	1.760*** [1.466-2.113]
Just enough	0.327*** [0.197-0.456]	1.387*** [1.218-1.578]
Surplus	-0.332** [-0.542--0.122]	0.717** [0.581-0.885]
Number of major housing issues (base none)		
One major issue	0.571*** [0.416-0.727]	1.771*** [1.515-2.069]
Two or more major issues	0.943*** [0.767-1.119]	2.567*** [2.153-3.061]

Demographic (vertical label)

Quality (vertical label)

TABLE

31

Final regression
models predicting
depression in
previous four weeks
(5-point scale)
using ordinal logit.
Significance levels:
***p<.001 **p<.01
*p<.05

|	Variables	Raw	Odds Ratio
Demographic	**Sex (base female)**		
	Male	0.324*** [0.201-0.446]	1.382*** [1.223-1.562]
	Age (base 18-24 years)		
	25-34 years	-0.337** [-0.540--0.135]	0.714** [0.583-0.874]
	35-44 years	-.371*** [-0.545--0.196]	0.690*** [0.580-0.822]
	45-54 years	-.446*** [-0.641--0.250]	0.640*** [0.527-0.779]
	55 years and over	-.239* [-0.438--0.041]	0.787* [0.646-0.960]
	Family Type (base couple without children)		
	Couple with one or more dependent children	0.353*** [0.164-0.543]	1.424*** [1.178-1.721]
	Single parent with one or more dependent children	-0.024 [-0.249-0.200]	0.976 [0.780-1.221]
	Single parent or couple with unknown child dependency status	-0.113 [-0.326-0.101]	0.893 [0.721-1.106]
	Individual does not reside in a family nucleus	-0.203 [-0.407-0.001]	0.816 [0.663-1.001]
	Deprivation (base quintile 1)		
	Q2	-0.285 [-0.582-0.012]	0.752 [0.559-1.012]
	Q3	-0.179 [-0.438-0.080]	0.836 [0.645-1.083]
	Q4	-0.293* [-0.542--0.044]	0.746* [0.581-0.957]
	Q5	-0.198 [-0.446-0.051]	0.821 [0.640-1.052]
	Income adequacy (base enough)		
	Not enough	-0.655*** [-0.843--0.468]	0.519*** [0.430-0.626]
	Just enough	-0.376*** [-0.523--0.230]	0.686*** [0.593-0.795]
	Surplus	0.191 [-0.010-0.393]	1.211 [0.989-1.481]
Quality	**Number of major housing issues (base none)**		
	One major issue	-0.605*** [-0.793--0.417]	0.546*** [0.452-0.659]
	Two or more major issues	-1.155*** [-1.318--0.991]	0.315*** [0.268-0.371]

TABLE
32

Final regression models predicting perceived whānau wellbeing (5-point scale) using ordinal logit. Significance levels: ***p<.001 **p<.01 *p<.05

	Variables	Raw	Odds Ratio
Demographic	**Sex (base female)**		
	Male	-0.158* [-0.281--0.034]	0.854* [0.755-0.966]
	Age (base 18-24 years)		
	25-34 years	-0.479*** [-0.650--0.308]	0.620*** [0.522-0.735]
	35-44 years	-0.556*** [-0.707--0.404]	0.574*** [0.493-0.668]
	45-54 years	-0.579*** [-0.775--0.383]	0.560*** [0.461-0.682]
	55 years and over	-0.103*** [-0.282-0.075]	0.902 [0.755-1.078]
	Family Type (base couple without children)		
	Couple with one or more dependent children	0.388*** [0.202-0.574]	1.474*** [1.224-1.775]
	Single parent with one or more dependent children	0.132 [-0.072-0.335]	1.141 [0.931-1.398]
	Single parent or couple with unknown child dependency status	0.182 [-0.012-0.376]	1.2 [0.988-1.456]
	Individual does not reside in a family nucleus	0.204* [0.036-0.373]	1.227* [1.036-1.452]
	Deprivation (base quintile 1)		
	Q2	-0.077 [-0.310-0.156]	0.926 [0.733-1.170]
	Q3	-0.019 [-0.262-0.223]	0.981 [0.770-1.250]
	Q4	-0.265* [-0.496--0.033]	0.768* [0.609-0.967]
	Q5	-0.157 [-0.380-0.066]	0.855 [0.684-1.068]
	Income adequacy (base enough)		
	Not enough	-0.610*** [-0.773--0.447]	0.543*** [0.462-0.640]
	Just enough	-0.415*** [-0.549--0.281]	0.661*** [0.578-0.755]
	Surplus	0.132 [-0.046-0.310]	1.141 [0.955-0.363]
Quality	**Number of major housing issues (base none)**		
	One major issue	-0.615*** [-0.786--0.443]	0.541*** [0.456-0.642]
	Two or more major issues	-0.620*** [-0.838--0.402]	0.538*** [0.433-0.670]

TABLE
33

Average Marginal
Effects at each
level of major
Housing issues

	dy/dx	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Age category (base 18-24 years)						
25-34 years						
None	-0.06	0.02	-2.74	0.01	-0.11	-0.02
One	0.02	0.01	2.71	0.01	0.01	0.04
Two or more	0.04	0.01	2.74	0.01	0.01	0.07
35-44 years						
None	-0.04	0.02	-2.03	0.04	-0.08	-0.00
One	0.02	0.01	2.01	0.04	0.00	0.03
Two or more	0.03	0.01	2.04	0.04	0.00	0.05
45-54 years						
None	-0.05	0.02	-2.10	0.04	-0.09	-0.00
One	0.02	0.01	2.12	0.03	0.00	0.03
Two or more	0.03	0.01	2.08	0.04	0.00	0.06
55 years and over						
None	-0.01	0.02	-0.53	0.59	-0.06	0.03
One	0.00	0.01	0.53	0.59	-0.01	0.02
Two or more	0.01	0.01	0.53	0.59	-0.02	0.03
Sex (base female)						
Male						
None	0.05	0.01	3.71	0.00	0.02	0.08
One	-0.02	0.00	-3.72	0.00	-0.03	-0.01
Two or more	-0.03	0.01	-3.68	0.00	-0.05	-0.01
Deprivation (base quintile 1)						
Quintile 2						
None	-0.04	0.04	-1.18	0.24	-0.11	0.03
One	0.02	0.02	1.17	0.24	-0.01	0.05
Two or more	0.02	0.02	1.18	0.24	-0.02	0.06
Quintile 3						
None	-0.05	0.03	-2.00	0.05	-0.10	-0.00
One	0.02	0.01	1.94	0.05	-0.00	0.05
Two or more	0.03	0.01	2.05	0.04	0.00	0.06
Quintile 4						
None	-0.08	0.03	-3.21	0.00	-0.13	-0.03
One	0.04	0.01	2.97	0.00	0.01	0.06
Two or more	0.05	0.01	3.39	0.00	0.02	0.07
Quintile 5						
None	-0.17	0.02	-6.65	0.00	-0.21	-0.12
One	0.07	0.01	5.48	0.00	0.04	0.09
Two or more	0.10	0.01	7.42	0.00	0.07	0.13
Family type (base couple without children)						
Couple with one or more dependent children						
None	-0.01	0.02	-0.53	0.60	-0.05	0.03
One	0.00	0.01	0.53	0.60	-0.01	0.02
Two or more	0.01	0.01	0.53	0.60	-0.02	0.03
Single parent with one or more dependent children						
None	-0.04	0.02	-1.96	0.05	-0.09	0.00
One	0.02	0.01	1.91	0.06	-0.00	0.03
Two or more	0.03	0.01	1.98	0.05	0.00	0.06

	dy/dx	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Single parent or couple with unknown child dependency status						
None	-0.00	0.02	-0.14	0.89	-0.05	0.04
One	0.00	0.01	0.14	0.89	-0.02	0.02
Two or more	0.00	0.01	0.14	0.89	-0.03	0.03
Individual does not reisde in a family nucleus						
None	-0.02	0.02	-0.94	0.35	-0.06	0.02
One	0.01	0.01	0.93	0.35	-0.01	0.02
Two or more	0.01	0.01	0.94	0.35	-0.01	0.04
Income adequacy (base enough)						
Not enough						
None	-0.23	0.02	-10.88	0.00	-0.27	-0.19
One	0.09	0.01	11.70	0.00	0.07	0.10
Two or more	0.14	0.01	9.65	0.00	0.11	0.17
Just enough						
None	-0.15	0.02	-9.94	0.00	-0.18	-0.12
One	0.06	0.01	9.78	0.00	0.05	0.08
Two or more	0.09	0.01	9.43	0.00	0.07	0.11
More than enough						
None	0.03	0.02	1.48	0.14	-0.01	0.08
One	-0.02	0.01	-1.44	0.15	-0.04	0.01
Two or more	-0.02	0.01	-1.52	0.13	-0.04	0.00
Landlord (base private)						
Local Government						
None	-0.05	0.11	-0.43	0.67	-0.26	0.17
One	0.02	0.03	0.46	0.64	-0.05	0.08
Two or more	0.03	0.07	0.42	0.68	-0.11	0.18
Central Government						
None	-0.03	0.02	-1.16	0.25	-0.07	0.02
One	0.01	0.01	1.18	0.24	-0.01	0.03
Two or more	0.02	0.02	1.14	0.25	-0.01	0.05
Other/unknown						
None	0.04	0.02	2.37	0.02	0.01	0.07
One	-0.01	0.01	-2.38	0.02	-0.03	-0.00
Two or more	-0.02	0.01	-2.36	0.02	-0.04	-0.00
Tenure (base home owner)						
Non-owner						
None	-0.06	0.02	-2.97	0.00	-0.09	-0.02
One	0.02	0.01	2.81	0.01	0.01	0.04
Two or more	0.03	0.01	3.06	0.00	0.01	0.06
Unknown						
None	-0.08	0.08	-0.97	0.33	-0.24	0.08
One	0.03	0.03	1.06	0.29	-0.03	0.09
Two or more	0.05	0.05	0.92	0.36	-0.06	0.16

**TABLE
34**

Average Marginal
Effects at each level
of Health

	dy/dx	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Age category (base 18-24 years)						
25-34 years						
Excellent	-0.05	0.02	-3.25	0.00	-0.08	-0.02
Very good	-0.02	0.01	-2.98	0.00	-0.03	-0.01
Good	0.03	0.01	3.32	0.00	0.01	0.05
Fair	0.02	0.01	3.17	0.00	0.01	0.04
Poor	0.01	0.00	2.94	0.00	0.00	0.01
35-44 years						
Excellent	-0.06	0.01	-4.33	0.00	-0.08	-0.03
Very good	-0.02	0.01	-4.02	0.00	-0.03	-0.01
Good	0.04	0.01	4.52	0.00	0.02	0.06
Fair	0.03	0.01	4.23	0.00	0.02	0.04
Poor	0.01	0.00	3.88	0.00	0.00	0.01
45-54 years						
Excellent	-0.11	0.01	-7.97	0.00	-0.14	-0.08
Very good	-0.07	0.01	-7.79	0.00	-0.08	-0.05
Good	0.08	0.01	8.94	0.00	0.06	0.10
Fair	0.07	0.01	7.64	0.00	0.06	0.09
Poor	0.03	0.00	6.49	0.00	0.02	0.03
55 years and over						
Excellent	-0.12	0.01	-9.45	0.00	-0.15	-0.10
Very good	-0.08	0.01	-10.53	0.00	-0.09	-0.06
Good	0.09	0.01	10.72	0.00	0.07	0.10
Fair	0.09	0.01	9.65	0.00	0.07	0.10
Poor	0.03	0.00	8.14	0.00	0.02	0.04
Sex (base female)						
Male						
Excellent	0.01	0.01	1.68	0.09	-0.00	0.03
Very good	0.01	0.00	1.67	0.10	-0.00	0.02
Good	-0.01	0.01	-1.67	0.09	-0.02	0.00
Fair	-0.01	0.01	-1.68	0.09	-0.02	0.00
Poor	-0.00	0.00	-1.63	0.10	-0.01	0.00
Deprivation (base quintile 1)						
Quintile 2						
Excellent	-0.01	0.02	-0.61	0.54	-0.05	0.03
Very good	-0.00	0.01	-0.61	0.54	-0.02	0.01
Good	0.01	0.01	0.61	0.54	-0.02	0.03
Fair	0.01	0.01	0.61	0.54	-0.01	0.03
Poor	0.00	0.00	0.61	0.54	-0.00	0.01

	dy/dx	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Quintile 3						
Excellent	-0.03	0.02	-1.50	0.13	-0.07	0.01
Very good	-0.01	0.01	-1.53	0.13	-0.03	0.00
Good	0.02	0.01	1.50	0.13	-0.01	0.05
Fair	0.02	0.01	1.53	0.13	-0.01	0.04
Poor	0.01	0.00	1.52	0.13	-0.00	0.01
Quintile 4						
Excellent	-0.03	0.02	-2.26	0.02	-0.06	-0.00
Very good	-0.02	0.01	-2.51	0.01	-0.03	-0.00
Good	0.02	0.01	2.28	0.02	0.00	0.05
Fair	0.02	0.01	2.43	0.02	0.00	0.04
Poor	0.01	0.00	2.36	0.02	0.00	0.01
Quintile 5						
Excellent	-0.06	0.02	-3.83	0.00	-0.09	-0.03
Very good	-0.04	0.01	-4.47	0.00	-0.05	-0.02
Good	0.04	0.01	3.84	0.00	0.02	0.06
Fair	0.04	0.01	4.22	0.00	0.02	0.06
Poor	0.01	0.00	4.27	0.00	0.01	0.02
Family type (base couple without children)						
Couple with one or more dependent children						
Excellent	0.00	0.01	0.28	0.78	-0.02	0.03
Very good	0.00	0.01	0.28	0.78	-0.01	0.02
Good	-0.00	0.01	-0.28	0.78	-0.02	0.02
Fair	-0.00	0.01	-0.28	0.78	-0.02	0.01
Poor	-0.00	0.00	-0.28	0.78	-0.01	0.00
Single parent with one or more dependent children						
Excellent	-0.01	0.01	-0.61	0.54	-0.04	0.02
Very good	-0.01	0.01	-0.60	0.55	-0.02	0.01
Good	0.01	0.01	0.61	0.54	-0.01	0.03
Fair	0.01	0.01	0.61	0.54	-0.01	0.02
Poor	0.00	0.00	0.61	0.54	-0.00	0.01
Single parent or couple with unknown child dependency status						
Excellent	-0.04	0.01	-3.12	0.00	-0.07	-0.02
Very good	-0.03	0.01	-2.70	0.01	-0.05	-0.01
Good	0.03	0.01	3.07	0.00	0.01	0.05
Fair	0.03	0.01	2.88	0.00	0.01	0.05
Poor	0.01	0.00	2.72	0.01	0.00	0.02

	dy/dx	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Individual does not reisde in a family nucleus						
Excellent	-0.03	0.01	-2.68	0.01	-0.06	-0.01
Very good	-0.02	0.01	-2.56	0.01	-0.04	-0.01
Good	0.02	0.01	2.66	0.01	0.01	0.04
Fair	0.02	0.01	2.61	0.01	0.01	0.04
Poor	0.01	0.00	2.60	0.01	0.00	0.02
Income adequacy (base enough) **Not enough**						
Excellent	-0.07	0.01	-6.77	0.00	-0.09	-0.05
Very good	-0.06	0.01	-5.15	0.00	-0.08	-0.04
Good	0.05	0.01	6.65	0.00	0.04	0.07
Fair	0.06	0.01	5.73	0.00	0.04	0.08
Poor	0.02	0.00	4.77	0.00	0.01	0.03
Just enough						
Excellent	-0.04	0.01	-5.02	0.00	-0.06	-0.03
Very good	-0.03	0.01	-4.71	0.00	-0.04	-0.02
Good	0.03	0.01	4.91	0.00	0.02	0.05
Fair	0.03	0.01	4.99	0.00	0.02	0.04
Poor	0.01	0.00	4.44	0.00	0.01	0.02
More than enough						
Excellent	0.05	0.02	3.01	0.00	0.02	0.09
Very good	0.02	0.00	3.74	0.00	0.01	0.03
Good	-0.04	0.01	-3.06	0.00	-0.06	-0.01
Fair	-0.03	0.01	-3.31	0.00	-0.04	-0.01
Poor	-0.01	0.00	-3.44	0.00	-0.01	-0.00
Number of major housing issues (base none) **One**						
Excellent	-0.07	0.01	-8.05	0.00	-0.09	-0.06
Very good	-0.06	0.01	-6.05	0.00	-0.08	-0.04
Good	0.06	0.01	8.44	0.00	0.04	0.07
Fair	0.06	0.01	6.28	0.00	0.04	0.08
Poor	0.02	0.00	5.57	0.00	0.01	0.03
Two or more						
Excellent	-0.11	0.01	-13.86	0.00	-0.13	-0.09
Very good	-0.11	0.01	-8.20	0.00	-0.13	-0.08
Good	0.08	0.01	14.41	0.00	0.07	0.09
Fair	0.10	0.01	9.02	0.00	0.08	0.13
Poor	0.04	0.01	6.72	0.00	0.03	0.05

TABLE

35

**Average Marginal
Effects at each
level of time
felt depressed**

	dy/dx	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Age category (base 18-24 years)						
25-34 years						
All	0.00	0.00	3.07	0.00	0.00	0.00
Most	0.01	0.00	3.12	0.00	0.00	0.02
Some	0.03	0.01	3.26	0.00	0.01	0.05
A little	0.03	0.01	3.28	0.00	0.01	0.05
None	-0.07	0.02	-3.29	0.00	-0.12	-0.03
35-44 years						
All	0.00	0.00	3.48	0.00	0.00	0.01
Most	0.01	0.00	4.07	0.00	0.01	0.02
Some	0.03	0.01	4.20	0.00	0.02	0.05
A little	0.03	0.01	4.13	0.00	0.02	0.05
None	-0.08	0.02	-4.22	0.00	-0.12	-0.04
45-54 years						
All	0.00	0.00	3.65	0.00	0.00	0.01
Most	0.01	0.00	4.37	0.00	0.01	0.02
Some	0.04	0.01	4.40	0.00	0.02	0.06
A little	0.04	0.01	4.50	0.00	0.02	0.06
None	-0.10	0.02	-4.53	0.00	-0.14	-0.06
55 years and over						
All	0.00	0.00	2.31	0.02	0.00	0.00
Most	0.01	0.00	2.35	0.02	0.00	0.01
Some	0.02	0.01	2.37	0.02	0.00	0.04
A little	0.02	0.01	2.38	0.02	0.00	0.04
None	-0.05	0.02	-2.39	0.02	-0.10	-0.01
Sex (base female) **Male**						
All	-0.00	0.00	-3.76	0.00	-0.00	-0.00
Most	-0.01	0.00	-4.91	0.00	-0.02	-0.01
Some	-0.03	0.01	-5.38	0.00	-0.04	-0.02
A little	-0.03	0.01	-5.28	0.00	-0.04	-0.02
None	0.07	0.01	5.34	0.00	0.05	0.10
Deprivation (base quintile 1) **Quintile 2**						
All	0.00	0.00	1.75	0.08	-0.00	0.01
Most	0.01	0.00	1.95	0.05	-0.00	0.02
Some	0.03	0.01	1.92	0.06	-0.00	0.05
A little	0.03	0.01	1.88	0.06	-0.00	0.05
None	-0.06	0.03	-1.91	0.06	-0.13	0.00

	dy/dx	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Quintile 3						
All	0.00	0.00	1.37	0.17	-0.00	0.00
Most	0.01	0.00	1.42	0.16	-0.00	0.01
Some	0.02	0.01	1.40	0.16	-0.01	0.04
A little	0.02	0.01	1.35	0.18	-0.01	0.04
None	-0.04	0.03	-1.38	0.17	-0.10	0.02
Quintile 4						
All	0.00	0.00	2.17	0.03	0.00	0.00
Most	0.01	0.00	2.49	0.01	0.00	0.02
Some	0.03	0.01	2.43	0.02	0.01	0.05
A little	0.03	0.01	2.22	0.03	0.00	0.05
None	-0.06	0.03	-2.36	0.02	-0.12	-0.01
Quintile 5						
All	0.00	0.00	1.55	0.12	-0.00	0.00
Most	0.01	0.00	1.67	0.09	-0.00	0.01
Some	0.02	0.01	1.63	0.10	-0.00	0.04
A little	0.02	0.01	1.52	0.13	-0.01	0.04
None	-0.04	0.03	-1.59	0.11	-0.10	0.01
Family type (base couple without children)						
Couple with one or more dependent children						
All	-0.00	0.00	-3.01	0.00	-0.00	-0.00
Most	-0.01	0.00	-3.46	0.00	-0.02	-0.00
Some	-0.03	0.01	-3.69	0.00	-0.05	-0.01
A little	-0.03	0.01	-3.80	0.00	-0.05	-0.02
None	0.08	0.02	3.73	0.00	0.04	0.12
Single parent with one or more dependent children						
All	0.00	0.00	0.22	0.83	-0.00	0.00
Most	0.00	0.00	0.22	0.83	-0.01	0.01
Some	0.00	0.01	0.22	0.83	-0.02	0.02
A little	0.00	0.01	0.22	0.83	-0.02	0.02
None	-0.01	0.03	-0.22	0.83	-0.06	0.04
Single parent or couple with unknown child dependency status						
All	0.00	0.00	1.00	0.32	-0.00	0.00
Most	0.00	0.00	1.02	0.31	-0.00	0.01
Some	0.01	0.01	1.04	0.30	-0.01	0.03
A little	0.01	0.01	1.06	0.29	-0.01	0.03
None	-0.03	0.02	-1.04	0.30	-0.07	0.02

	dy/dx	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Individual does not reside in a family nucleus						
All	0.00	0.00	1.86	0.06	-0.00	0.00
Most	0.01	0.00	1.95	0.05	-0.00	0.02
Some	0.02	0.01	1.95	0.05	-0.00	0.04
A little	0.02	0.01	1.99	0.05	0.00	0.03
None	-0.05	0.02	-1.97	0.05	-0.09	-0.00
Income adequacy (base enough) **Not enough**						
All	0.01	0.00	4.17	0.00	0.00	0.01
Most	0.02	0.00	5.48	0.00	0.02	0.03
Some	0.07	0.01	6.68	0.00	0.05	0.08
A little	0.05	0.01	7.62	0.00	0.04	0.07
None	-0.15	0.02	-6.95	0.00	-0.19	-0.11
Just enough						
All	0.00	0.00	3.67	0.00	0.00	0.00
Most	0.01	0.00	4.59	0.00	0.01	0.02
Some	0.04	0.01	5.03	0.00	0.02	0.05
A little	0.03	0.01	5.08	0.00	0.02	0.05
None	-0.09	0.02	-5.05	0.00	-0.12	-0.05
More than enough						
All	-0.00	0.00	-1.91	0.06	-0.00	0.00
Most	-0.00	0.00	-1.94	0.05	-0.01	0.00
Some	-0.02	0.01	-1.93	0.05	-0.03	0.00
A little	-0.02	0.01	-1.86	0.06	-0.04	0.00
None	0.04	0.02	1.90	0.06	-0.00	0.08
Number of major housing issues (base none) **One**						
All	0.01	0.00	4.08	0.00	0.00	0.01
Most	0.02	0.00	4.72	0.00	0.01	0.03
Some	0.06	0.01	5.82	0.00	0.04	0.08
A little	0.06	0.01	7.45	0.00	0.04	0.07
None	-0.14	0.02	-6.32	0.00	-0.19	-0.10
Two or more						
All	0.01	0.00	5.16	0.00	0.01	0.02
Most	0.05	0.01	9.59	0.00	0.04	0.06
Some	0.13	0.01	11.52	0.00	0.11	0.15
A little	0.08	0.00	16.97	0.00	0.07	0.09
None	-0.27	0.02	-14.52	0.00	-0.30	-0.23

TABLE
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Average Marginal
Effects at each level of
Whānau Wellbeing

	dy/dx	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Age category (base 18-24 years)						
25-34 years						
Badly	0.03	0.00	5.28	0.00	0.02	0.04
Moderate	0.06	0.01	5.39	0.00	0.04	0.08
Well	0.00	0.00	0.02	0.98	-0.01	0.01
Extremely well	-0.09	0.02	-5.59	0.00	-0.12	-0.06
35-44 years						
Badly	0.03	0.00	6.91	0.00	0.02	0.04
Moderate	0.07	0.01	7.02	0.00	0.05	0.09
Well	-0.00	0.00	-0.79	0.43	-0.01	0.01
Extremely well	-0.10	0.01	-7.42	0.00	-0.12	-0.07
45-54 years						
Badly	0.03	0.01	5.52	0.00	0.02	0.04
Moderate	0.07	0.01	5.59	0.00	0.05	0.10
Well	-0.00	0.00	-0.98	0.33	-0.01	0.00
Extremely well	-0.10	0.02	-6.09	0.00	-0.13	-0.07
55 years and over						
Badly	0.00	0.00	1.13	0.26	-0.00	0.01
Moderate	0.01	0.01	1.14	0.25	-0.01	0.03
Well	0.00	0.00	1.19	0.23	-0.00	0.01
Extremely well	-0.02	0.02	-1.16	0.25	-0.05	0.01
Sex (base female)						
Male						
Badly	0.01	0.00	2.51	0.01	0.00	0.02
Moderate	0.02	0.01	2.57	0.01	0.00	0.04
Well	-0.00	0.00	-1.86	0.06	-0.00	0.00
Extremely well	-0.03	0.01	-2.52	0.01	-0.05	-0.01
Deprivation (base quintile 1)						
Quintile 2						
Badly	0.00	0.01	0.67	0.51	-0.01	0.02
Moderate	0.01	0.01	0.66	0.51	-0.02	0.04
Well	0.00	0.00	0.25	0.80	-0.00	0.00
Extremely well	-0.01	0.02	-0.65	0.51	-0.06	0.03
Quintile 3						
Badly	0.00	0.01	0.16	0.88	-0.01	0.01
Moderate	0.00	0.02	0.16	0.88	-0.03	0.03
Well	0.00	0.00	0.15	0.89	-0.00	0.00
Extremely well	-0.00	0.02	-0.16	0.88	-0.05	0.04
Quintile 4						
Badly	0.02	0.01	2.46	0.01	0.00	0.03
Moderate	0.03	0.01	2.28	0.02	0.00	0.06
Well	-0.00	0.00	-1.48	0.14	-0.01	0.00
Extremely well	-0.05	0.02	-2.20	0.03	-0.09	-0.01
Quintile 5						
Badly	0.01	0.01	1.47	0.14	-0.00	0.02
Moderate	0.02	0.01	1.41	0.16	-0.01	0.05
Well	-0.00	0.00	-0.41	0.68	-0.00	0.00
Extremely well	-0.03	0.02	-1.37	0.17	-0.07	0.01

	dy/dx	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Family type (base couple without children)						
Couple with one or more dependent children						
Badly	-0.02	0.01	-3.98	0.00	-0.03	-0.01
Moderate	-0.05	0.01	-4.06	0.00	-0.07	-0.03
Well	0.01	0.00	1.75	0.08	-0.00	0.01
Extremely well	0.07	0.02	4.23	0.00	0.04	0.10
Single parent with one or more dependent children						
Badly	-0.01	0.01	-1.28	0.20	-0.02	0.00
Moderate	-0.02	0.01	-1.29	0.20	-0.04	0.01
Well	0.00	0.00	1.25	0.21	-0.00	0.01
Extremely well	0.02	0.02	1.28	0.20	-0.01	0.05
Single parent or couple with unknown child dependency status						
Badly	-0.01	0.01	-1.89	0.06	-0.02	0.00
Moderate	-0.02	0.01	-1.86	0.06	-0.05	0.00
Well	0.01	0.00	1.81	0.07	-0.00	0.01
Extremely well	0.03	0.02	1.82	0.07	-0.00	0.06
Individual does not reisde in a family nucleus						
Badly	-0.01	0.01	-2.41	0.02	-0.02	-0.00
Moderate	-0.03	0.01	-2.37	0.02	-0.05	-0.00
Well	0.01	0.00	1.93	0.05	-0.00	0.01
Extremely well	0.03	0.01	2.40	0.02	0.01	0.06
Income adequacy (base enough)						
Not enough						
Badly	0.04	0.01	6.02	0.00	0.03	0.05
Moderate	0.08	0.01	7.00	0.00	0.06	0.10
Well	-0.02	0.01	-2.66	0.01	-0.03	-0.00
Extremely well	-0.10	0.01	-8.13	0.00	-0.13	-0.08
Just enough						
Badly	0.02	0.00	5.93	0.00	0.02	0.03
Moderate	0.05	0.01	6.02	0.00	0.04	0.07
Well	-0.01	0.00	-1.99	0.05	-0.01	-0.00
Extremely well	-0.07	0.01	-6.25	0.00	-0.09	-0.05
More than enough						
Badly	-0.01	0.00	-1.51	0.13	-0.01	0.00
Moderate	-0.02	0.01	-1.51	0.13	-0.04	0.00
Well	-0.00	0.00	-1.20	0.23	-0.01	0.00
Extremely well	0.03	0.02	1.45	0.15	-0.01	0.06
Number of major housing issues (base none)						
One						
Badly	0.04	0.01	5.76	0.00	0.03	0.05
Moderate	0.08	0.01	6.85	0.00	0.06	0.11
Well	-0.02	0.01	-3.41	0.00	-0.03	-0.01
Extremely well	-0.10	0.01	-7.72	0.00	-0.12	-0.07
Two or more						
Badly	0.04	0.01	4.79	0.00	0.02	0.06
Moderate	0.08	0.02	5.36	0.00	0.05	0.11
Well	-0.02	0.01	-2.51	0.01	-0.04	-0.00
Extremely well	-0.10	0.02	-6.53	0.00	-0.13	-0.07

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