Lisa Davies, Andrew Webber
and Jason Timmins

The Nature of Disadvantage

Faced by Children in New Zealand: implications for policy and service provision

Abstract

This article summarises key findings from three recent New Zealand research projects looking at how disadvantage due to a lack of resources and increased 'toxic stress' in the household impacts on child wellbeing and development in early childhood. About one in ten children experience substantial disadvantage relating to a lack of resources during early childhood, and for many children this lack of resources is persistent. This disadvantage is inequitably distributed across the population and is associated with worse outcomes later in childhood. The challenge for policy is to find a way to provide support that is flexible and values the choices family and whānau make to look after their children in the early years of life.

Keywords child wellbeing, child development, multidimensional wellbeing

Lisa Davies is a senior policy analyst at the Social Wellbeing Agency. **Andrew Webber** is chief economist at the Social Wellbeing Agency. **Jason Timmins** is a principal advisor at the New Zealand Productivity Commission.

Conception, through birth, to early childhood is a critical stage of development for children (Haas, 2008; Hayward and Gorman, 2004). A child's development and wellbeing are shaped by the environment and the people around them. However, in New Zealand, approximately one in ten young people and their families face ongoing stress and a lack of resources, which can reduce wellbeing and hamper development and make it harder to reach full potential later in life.

This article summarises key findings from three recent New Zealand research projects looking at how disadvantage due to a lack of resources and increased 'toxic stress' in the household impacts on child wellbeing and development in early childhood:

- Prickett et al. (forthcoming),[1] statistically analysing trajectories of disadvantage from before birth to age 8, using the Growing Up in New Zealand (GUiNZ) study;
- Morton, Knowles and Morar (forthcoming),[2] drawing on the GUiNZ

study and other sources to examine resources available during the first 1,000 days of a child's life, and how they are related to developmental outcomes; and
- an examination by the Southern Initiative and the Social Wellbeing Agency of the quantitative data and the experiences of families having a baby in South Auckland;[3] this provided more nuanced understanding of disadvantage in early childhood and the ways in which perceived aspects of disadvantage can include resilience, as well as risk factors.

The evidence from these studies is broadly similar to the international research on child development, but also contributes details of how these issues manifest in a New Zealand context. The resulting insights imply that policies and services are likely to be more effective at reducing disadvantage if they are designed flexibly and understand the choices and aspirations of parents.

How stressors cluster in early childhood

Indicators based on employment or income at the time of birth and early childhood are not always the best way to assess the level of resources available to families and their children. Morton, Knowles and Morar identify four different types of resources as being important for supporting children's wellbeing and development (Table 1). There is likely to be a high level of association between the four types of resources. For example, household overcrowding could be caused by a lack of financial resources, which might also lead to a greater reliance on renting and mean having to move more often. Overcrowding can create additional hazards for a family's physical and mental health, which can exacerbate stress and conflict in the home. However, overcrowding can also be caused by whānau living in the same house, who can contribute positively to relationships, the home education environment, and the identity, language and culture of all household members.

These recent New Zealand studies tell us that:
- between 10% and 20% of children in New Zealand experience disadvantage;
- disadvantage has impacts on child development;
- disadvantage during childhood is often persistent; and
- the strongest predictor is maternal education.

Between 10% and 20% of children in the GUiNZ study experience disadvantage in a cluster of factors known to have an impact on child development

Morton, Knowles and Morar and Prickett et al. used different approaches to identify children in the GUiNZ study who were experiencing disadvantage in early childhood. Prickett et al. used access to seven resources to identify disadvantage in early childhood. Morton, Knowles and Morar used a model, sometimes described as 'toxic stress' (Center of the Developing Child, 2010), that includes a range of factors measuring the resources available to the family (e.g., income, owning your own home), as well as a number of factors that could create additional stress in the family, such as maternal depression, smoking during pregnancy and being a single parent.

Both studies found that children who were disadvantaged in one area were more likely to experience disadvantage in other areas. Prickett et al. found that between 13% and 22% of children in the GUiNZ study experienced disadvantage in a cluster of factors between antenatal and age 8 years. This study grouped children based on the level of resources (including income, financial hardship and overcrowding) relative to other children. Children were identified as having above average levels of resources (advantaged), average, and below average (disadvantaged). Low levels in one resource (e.g., income) was found to be strongly correlated with disadvantage in other resources (e.g., frequent moves of address). Disadvantaged children were typically below average in six out of the seven resources included in the study.

Morton, Knowles and Morar found a similar pattern of exposure to disadvantage using the slightly different 'toxic stress' approach to identifying children as disadvantaged. Children were classified as being in families facing high levels of adversity, or disadvantage, if they had four or more (out of 12) risk factors known to be associated with child development. These factors included family variables that have a direct impact on child development, such as maternal depression, less direct family factors, such as relationship stress, and home environment factors, such as overcrowding. Between 12.5% and 13.2% of children in the GUiNZ study had four or more of these risk factors at antenatal, 9 months and 2 years of age.

Table 1: Four types of resources supporting child wellbeing and development

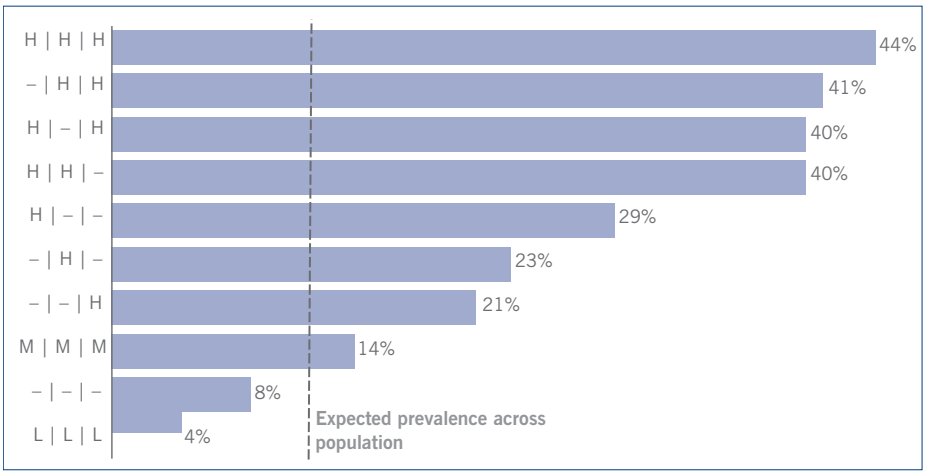
Domain	Indicator of resource
Economic resources	• Employment (labour force status) • Household income • Sources of income • Paid parental leave • Economic hardship
Physical resources	• Home ownership • Residential mobility • Household safety • Health status • Health service access
Social resources	• Parent-parent relationships • Parent-child relationships • Relationship status • Household structure
Human resources	• Early childhood education • Home educational environment • Cultural identity and belonging • Equity

Source: Adapted from Morton, Knowles and Morar, forthcoming, Figure 6

Disadvantage has impacts on child development

A large volume of research indicates that a lack of resources at home can create toxic stress, which can have negative impacts on a child's development (Center on the Developing Child, 2010). To get a sense of what this can look like for child outcomes in New Zealand, Morton, Knowles and Morar examined behavioural outcomes at age 4.5 years using the strengths and difficulties questionnaire.[4] In this work, the outcomes at 4.5 years are compared between groups of children constructed on the basis of how often (from antenatal to 2 years of age) the child was classified as having low, medium or high levels of disadvantage. Morton, Knowles and Morar found that children who were highly disadvantaged in at least two of the three time periods went on to display more behavioural issues at age 4.5 years. Between 40% and 45% of these children living in disadvantage were flagged as having potential behavioural issues, compared to

Figure 1: Prevalence of behavioural issues at 4.5 years, by prior disadvantage at antenatal, 9 months and 2 years of age



Note: The vertical axis categories indicate whether the child was highly disadvantaged ('H', had four or more indications of disadvantage, of the 12 examined by the authors); moderately disadvantaged ('M', had one–three indications of disadvantage); not disadvantaged ('L', had no indications of disadvantaged); or were not high ('–', had fewer than four indications of disadvantage, i.e. 'L' and 'M' combined), at each stage of antenatal, 9 months and 2 years of age.

Source: Morton, Knowles and Morar, Figure 8.

only 10% across all children in the GUiNZ study, and only 4% of children who spent their early childhood in homes with no aspects of disadvantage (Figure 1).

Prickett at al. found a similar association between a child's exposure to disadvantage and wellbeing and developmental outcomes. Children who were mostly disadvantaged during their early childhood had:

- worse internalising (e.g., depression and anxiety) and externalising (e.g., aggression) behaviours at 9 months, 2 years, 4.5 years and 8 years of age (again, measured using the strengths and difficulties questionnaire);
- lower cognitive skills at 9 months, 2 years and 4.5 years of age (unable-to-model impact at 8 years of age);
- worse parent-reported health at 9 months and 8 years of age; and
- more exposure to acute illnesses (self-reported) at 9 months and 2 years of age.

Disadvantage during childhood is often persistent

The longitudinal nature of the GUiNZ study means it is possible to examine a child's exposure to disadvantage during early childhood to see if these are one-off events or are more persistent. Like all significant life events, the birth of a child can potentially increase a family's vulnerability to multiple disadvantages as they adjust to caring for their new baby. However, if these disadvantages persist, the impacts on the child's development are likely to be more severe.

Prickett et al. identified children who experienced mostly advantaged levels of resources, mostly average resources, or mostly disadvantaged levels of resources. The analysis found that 10% of children were exposed to disadvantage for most of their early childhood, from antenatal to 8 years of age. A smaller group of children (2.7%) were persistently exposed to disadvantage at every GUiNZ interview (antenatal, 9 months, 2 years, 4.5 years and 8 years of age) during early childhood.

That research also found that moving into disadvantage was more common than moving out of disadvantage. Eight per cent of children moved to a more disadvantaged level of resources between birth and 8 years of age, and most of this transition occurred between 9 months and 2 years. A smaller group of children (4.5%) experienced an improvement in their level of resources over the first eight years of life, with most of this transition occurring before 9 months. During pregnancy, the group of children who subsequently moved out of disadvantage had access to a similar level of resources across most domains compared with children who remain in disadvantage later in childhood. The exception to this is material hardship, which, in the group moving out of disadvantage, was much lower and closer to the level of hardship experienced by children with average resources in their home environments. It is possible that these children had access to additional resources at antenatal and after birth periods, such as support from their family and whānau. This may help explain why resources for these children quickly increased shortly after birth.

The strongest predictor of disadvantage is maternal education levels

After identifying children in households with less resources, Prickett et al. looked at the characteristics of these children, to examine the extent to which disadvantage occurs inequitably across society. This research found that children mostly exposed to disadvantaged levels of resources are more likely to:

- have a mother with lower educational attainment;
- belong to a minority ethnic group;
- be the child of a recent migrant (moved to New Zealand after 18 years of age); and
- have a mother with a disability.

The strongest predictor of a child being disadvantaged during their early childhood is their mother's education. Children of mothers with no school qualifications are nearly 100 times more likely to be mostly disadvantaged during early childhood (all else being equal), compared to experiencing advantaged levels of resources. In comparison, a child born to a mother who moved to New Zealand after turning 18 years of age is four times more likely to be mostly disadvantaged during early childhood, compared to being advantaged.

This means that the mother's education, more than any other measure, tends to cluster with indicators of disadvantage. While there are some migrant parents who were financially constrained, had insecure housing or lived in more disadvantaged communities, there are also many migrant parents for whom this is not true. In contrast, relatively few children whose mothers have no formal qualification have good access to financial, housing, labour market or neighbourhood resources. In the GUiNZ study, less than 0.5% of children with advantaged resources also had a mother with no formal qualifications.

Having a baby can create further stress in the family, particularly for more disadvantaged families

Having a baby can place additional stress on a family (e.g., on maternal mental health, having to move home, and lower income

from taking a break from employment) and can mean that some families are at risk of becoming further disadvantaged, which can make things worse for the family and the child's outcomes and increase the risk of intergenerational transmission of disadvantage.

Prickett et al. found a strong correlation between the home resource factors and maternal depression. Mothers of children with the most disadvantaged levels of resources were 80% more likely than mothers with the most advantaged home environment to report symptoms that indicate clinical depression.

While residential mobility increased for all families in the GUiNZ study following the birth of their child, it was much higher for children in disadvantaged households compared to more advantaged households.

- Between the antenatal period and birth, children in the 'always advantaged' households experienced 0.19 moves, compared to 0.5 moves for children in 'mostly disadvantaged' households.
- Between 2 years and 4.5 years of age residential moves averaged 0.5 for the 'always advantaged' children and 1.2 for 'mostly disadvantaged' children.
- Residential moves declined between 4.5 years and 8 years of age for 'always advantaged' children, but not for 'mostly disadvantaged' children.

Household employment patterns also changed during early childhood. For most children in the GUiNZ study, the probability of having at least one person employed in the household declined between the antenatal period and 9 months and then increased again. For children living in advantaged households, the drop in household employment was small, with employment declining from 96% in the antenatal period to 89% at 9 months, and then increasing to 99% at 8 years of age. The pattern for mostly disadvantaged children was slightly different. Average employment rates at antenatal, 9 months and 2 years of age were around 30%, but then increased to around 70% at 4.5 and 8 years of age. Interestingly, the strong increase in employment between 2 years and 4.5 years of age was not accompanied by a similar increase in income for mostly disadvantaged children.

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How data on disadvantage translates into real world experiences

Quantitative data from research studies such as GUiNZ are important in identifying where there are opportunities to make a policy impact. However, they often produce findings that are ambiguous in how they might be interpreted, or lack the necessary detail in people's lives to pinpoint the exact solutions that are likely to make a difference. One recent research project – 'Having a Baby in South Auckland' – aimed to enhance the evidence base through combining quantitative and qualitative data.

This research project was a partnership between the Social Wellbeing Agency, the Southern Initiative and the South Auckland community, and examined circumstances surrounding birth for parents living in South Auckland from 2005 to 2017. The project involved statistical analysis of government data about people's lives, and then conversations with local whānau and community providers about what the statistical findings might mean. This provided important context about what life really looks like in the spaces between the quantitative results, giving us clues as to potential causes and solutions. The project uncovered and contextualised four key results that are important in understanding disadvantage in early childhood.

Many fathers stop earning around the birth

Income data revealed a gap in earnings for most fathers in the weeks surrounding the birth of a child. This income gap was mainly unrelated to what was happening with the mother; it occurred regardless of whether the father was living with the mother, whether the mother was having her first or subsequent baby, or the presence or absence of other resources for the whānau.

The economic resources and cultural norms of whānau had an influence on fathers' income. Follow-up research by the Social Wellbeing Agency examining fathers' incomes found that nationally, the biggest breaks in earnings occurred mainly for higher-income fathers (Kulkarni and Mok, 2021). But in South Auckland it was the opposite: lower-income fathers lost income for six to eight weeks around the birth of a child, compared to four weeks for other fathers. Both community insight and quantitative data point to this difference in trends being strongly driven by cultural norms in Pacific and Māori families. In South Auckland, community members confirmed that there is a strong belief that a father's need to be physically present to support mother and baby outweighs any loss of income.

For some fathers, this loss in income is made worse because of the lack of available leave, or because navigating systems relating to leave is too difficult at an already stressful time. Fathers are entitled to up to two weeks of unpaid parental leave, depending on their length of employment and hours worked. Kulkarni and Mok (2021) estimated that a quarter of Māori and Pacific working fathers would not have been eligible for any unpaid parental leave, given their patterns of working. Casual and temporary workers are also less likely to be eligible for forms of paid leave to take over this period. Those interviewed in the South Auckland study indicated that sometimes fathers just quit employment altogether, as it is perceived to be easier.

This loss in income contributes stress at an already stressful time. The presence of fathers in the home, rather than at work, is a valuable protective factor in many whānau. However, community members in South Auckland also reported that sometimes the presence of fathers (for a variety of reasons, including their own stress, struggle with competing expectations and perceived lack of choice) can add to whānau stress, the risk of violence, or relationship breakdown.

Mothers moving address is common

About one in five mothers (19%) in South Auckland register a change of address while pregnant or soon after birth (compared to 16% of mothers in the rest of Auckland). Mothers were more likely to move over this time if they were younger, receiving the sole parent benefit, had a corrections sentence, or had a low birthweight baby.

These moves can occur for many reasons. Moving to a new space is often intended as a resilience practice. This can involve moves between different family members who can support the mother, or finding a new space that is safer or makes life better for their baby. In many cases, however, moves are not voluntary. Frequent moves and couch-surfing are seen as common for new mothers in South Auckland, and may not be fully captured by administrative or survey data.

Regardless of the reason for the move, moves can lead to additional stress, particularly when they create disruption and require organisation, they involve newly blended families, or they make mothers feel judged. Stepchildren and half siblings often change living arrangements during this time too, as care arrangements and relationships change. This can involve older children moving away to live with others while their mother looks after the baby. Moving with many children is much more difficult, and can mean that families wear out their welcome more quickly.

Mothers in South Auckland have less contact with the health system after giving birth

The 'Having a Baby in South Auckland' project found that mothers in South Auckland are less likely to be prescribed anti-depressants (3.9% of mothers in South Auckland, compared to 8.1% nationally), and have less contact with midwives after birth (but not before). There are strong differences by ethnic group here: Pākehā mothers were 3.6 times more likely to be prescribed anti-depressants than Pacific mothers, and had five times more visits from midwives after the birth.

These statistics were interpreted in nuanced ways by whānau in South Auckland. Higher service use by Pākehā was seen as a risk factor for their wellbeing: Pākehā mothers aren't receiving the support they need from their own whānau and community, and so are forced to rely on medication and services that, in the experience of Pacific and Māori mothers, are more about examination and judgement than care and nurturing.

For South Auckland parents, there is high participation in tertiary education during pregnancy: 25% of mothers and 22% of fathers are enrolled in education or training over this time.

Many in the South Auckland community also said it was important to improve support for the mental health and wellbeing of mothers, in a form that felt welcoming. Many Pacific families reported shame and judgement relating to depression, anger, grief and loss, for both mothers and fathers. This can be harder when, as many whānau reported, mothers have less opportunity to talk to people outside the family without judgement.

Parents often participate in education before the baby, but not after

For South Auckland parents, there is high participation in tertiary education during pregnancy: 25% of mothers and 22% of fathers are enrolled in education or training over this time. This is more common when mothers are teenagers; are getting the sole parent benefit; have two or more other children; are going to drug, alcohol or mental health programmes; or have a corrections sentence. This participation in education is to build resilience and create a better life in the long term for the family. In some instances, it is also because meeting Work and Income requirements by enrolling in training is considered easier than looking for work at an already stressful time.

However, education can also contribute to this stress. Education can be logistically difficult (with a lot of forms, travel, and juggling of other responsibilities), and parents can feel judged when entering education, especially if they previously had negative experiences of school. While parents are expecting the arrival of a baby there is a lot of thinking and planning they are having to do (working out new budgets, making health decisions, sorting new housing, negotiating relationships, new childcare and parenting issues, filling out a lot of forms, acquiring goods for the baby). Participation in education or training can add to this cognitive burden.

Both the administrative data and reports from community members indicate that education is commonly not completed after the baby is born. Whānau reported that participating in education was almost impossible with a baby or a toddler, with obstacles such as travel and the lack of facilities: 'there wasn't even a changing table'. Parents wanted to take a break from study and return at a later point, but perceived there would be little opportunity to do this. This often caused them to give up on half-finished qualifications they felt would have been in the long-term best interest of their whānau to complete.

What does this evidence imply for policy?

This article has summarised a range of evidence relating to disadvantage in early childhood, including quantitative data from the Growing Up in New Zealand study and from administrative sources. This evidence indicates that about one in ten children experience substantial disadvantage relating to a lack of resources – economic, physical, social and human capital – during early childhood. For many children, this lack of resources is persistent; few children move out of disadvantage between 9 months and 8 years of age. This disadvantage is inequitably distributed across the population, and is associated with worse outcomes later in childhood.

Whānau and service providers in South Auckland have also provided insights about how these statistics on disadvantage translate into experiences during pregnancy, birth and early childhood.

These insights provide important nuance around the ways in which many indicators of 'disadvantage' can be resilience, as well as risk, factors. A lack of income can be an indication of financial stress, but also an indicator that parents have chosen to take time to be with and support their new baby. Changes in address can indicate insecure housing for children, and can be caused by mothers moving to sources of support and safety. Less attachment to the health system might indicate less access to caring, culturally responsive health services for some mothers. It also shows that many mothers can and do rely on their whānau, community and culture – not doctors – to provide support.

These are not mutually exclusive possibilities: each of these aspects creates the possibility for both damaging and nurturing experiences for children. An overly narrow focus on resources – particularly as determined by proxy measures in administrative data – is simplistic and can lead to stigmatising views of parents and their experiences. However, a 'strengths-based' approach might also unintentionally de-emphasise that some families and whānau are denied access to effective support to help their children thrive; that access is not equal on many dimensions (such as ethnicity and socio-economic background); and that controlling access to resources is an important way that society transmits inequity between generations.

The challenge for policy is to grapple with these tensions. This means finding a way to provide support that is flexible and values the choices family and whānau make to look after their children in the early years of life; understanding why they have made these choices; and acknowledging (and reducing) the situations in which these choices can lead to negative, as well as positive, effects. While the nature of much disadvantage is a lack of tangible resources, families and whānau also pointed to the many ways the social services system has made it harder for them, and where there are practical, small-scale ways in which the government can improve their lives. These include clarity on:

- How do I know what I am entitled to and how to get it?
- How can my partner get the financial support they need to provide support for me and my child at home?
- How can I engage with the labour market and education system in a way that works for me and my young family?
- Who can I talk to outside my whānau who will offer support and not judgement?

These questions have been thoughtfully considered by many working in communities affected by disadvantage, leading to evidence-based local interventions. For example, Morton, Knowles and Morar report on a situation where research and community evidence identified three conditions that promoted wellbeing: having good informal networks and support systems; having safe spaces to gather to support each other outside the home; and services being able to come to these safe spaces. This insight led to a project using libraries as a venue for parents and children to gather, and for support agencies to be available. The evidence points to education providers (both tertiary and early childhood education) being a similar promising safe space for many parents, so long as they are perceived as accessible and welcoming.

However, reducing disadvantage for families also requires a substantial increase in tangible resources. This might involve increases in financial support (and reducing barriers to access financial support), such as the recent introduction of the Families Package (Ministry of Social Development, 2017); working through bottlenecks in the social sector specialist workforce; and simplifying the range of support across the social system to make it easier to navigate. We know how critical the first few years of childhood are to a child's wellbeing for the rest of their life. With all the evidence from research with communities, we can make progress so that all children in New Zealand reach their potential.

1 This research was commissioned by the New Zealand Productivity Commission to inform their current inquiry 'A fair chance for all?' (Prickett et al., forthcoming).
2 This research was commissioned by the Social Wellbeing Agency to support the government's Child and Youth Wellbeing Strategy.
3 Some of the findings from this project are published in Southern Initiative and Social Wellbeing Agency, 2020, and some follow-up quantitative analysis in Kulkarni and Mok, 2021. However, discussion in this article also draws upon more detailed findings from this project that have not yet been published.
4 This is a screening questionnaire that asks parents about a range of aspects of their child's behaviour. The assessment is scored, with higher scores indicating more potential support needs. In their work, Morton, Knowles and Morar have applied a score threshold that is calibrated so that 10% of children in the population could be expected to have scores higher than the threshold (termed 'abnormal behaviour' in that report).

References

Center of the Developing Child (2010) *The Foundations of Lifelong Health Are Built in Early Childhood*, Cambridge, Mass: Center for the Developing Child, Harvard, www.developingchild.harvard.edu

Haas, S. (2008) 'Trajectories of functional health: the "long arm" of childhood health and socioeconomic factors', *Social Science and Medicine*, 66 (4), pp.849–61

Hayward, M.D. and B.K. Gorman (2004) 'The long arm of childhood: the influence of early-life social conditions on men's mortality', *Demography*, 41, pp.87–107

Kulkarni, R. and T. Mok (2021) *'What about the Menz?' Low employer attachment and ineligibility for partner parental leave: an analysis using Integrated Data Infrastructure data*, Auckland: Southern Initiative and Auckland Council, www.aucklandco-lab.nz

Ministry of Social Development (2017) 'Families Package', https://www.workandincome.govt.nz/about-work-and-income/news/2017/families-package.html

Morton, S., S. Knowles and M. Morar (forthcoming) *Academic Perspectives of Wellbeing*, to be published at www.swa.govt.nz

Prickett, K.C, S.J. Paine, P.A Carr and S. Morton (forthcoming) *A Fair Chance for All? Family resources across the early life course and children's development in Aotearoa New Zealand*, Wellington: New Zealand Productivity Commission

Southern Initiative and Social Wellbeing Agency (2020) *Towards Better Social Sector Decision Making and Practice: a social wellbeing approach*, https://swa.govt.nz/assets/Publications/reports/J000443-SIA-Print-Collateral-_-Case-study-2.3-FINAL-DIGITAL-v2.pdf