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Public Housing in an Urban Setting

an inclusive wellbeing framework

Abstract

We outline a wellbeing framework to underpin analysis within a major research programme in which a key component is to examine effects of public housing on tenant wellbeing. The wellbeing framework is designed to be inclusive by drawing on multiple international approaches to wellbeing (especially the capabilities and subjective wellbeing approaches) and on te ao Māori and Pacific wellbeing frameworks. Key features of the framework are that it: emphasises

both individual and whānau wellbeing; enables wellbeing judgements to be made by the tenants themselves; allows for co-determination of factors affecting wellbeing; and allows for interpersonal factors to affect wellbeing. We describe surveys of public housing tenants being conducted within the research programme and outline how they can be analysed with reference to the inclusive wellbeing framework.

Keywords wellbeing, public housing, subjective wellbeing, capabilities

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A five-year research programme, Public Housing: Maximising Wellbeing and Urban Regeneration (supported by the MBIE Endeavour fund), began in late 2020.² The research programme is designed to improve the wellbeing of public housing tenants and their communities by providing evidence that leads to healthier and more environmentally sustainable development. Considerable research has been conducted in New Zealand on the effects of housing quality on health, wellbeing and sustainability (for a comprehensive summary, see Howden-Chapman et al., 2023). However, there is considerably less evidence on the specific relationships between public housing and each of health, wellbeing and sustainability.

Public housing tenants, on average, face greater socio-economic disadvantages than do private sector tenants or homeowners. In part, this reflects the eligibility criteria for acceptance into public housing, which include adequacy (e.g., not currently in accommodation), suitability (e.g., family violence), affordability (e.g., inability to afford private rentals), accessibility (e.g., discrimination) and sustainability (e.g., social functioning) (Ministry of Social Development, 2022). Some disadvantages faced by public housing tenants may be ameliorated by their payment of income-related rents (which reduces their rental costs compared with private renters) and through provision (in many cases) of better-quality housing than experienced in private rentals. These differentiating features of public housing and of public housing tenants, coupled with the key role of housing in supporting wellbeing, makes an understanding of how public housing can contribute to tenant wellbeing of considerable importance.

Researchers in this programme are working in close partnership with public and community housing organisations across seven different public housing providers to increase understanding of the wellbeing impacts of different public housing settings.³ The programme studies how the diversity of governance arrangements, financial planning, and housing and urban design approaches of the seven providers affect tenant outcomes. At least two of the partner programmes

have explicit urban regeneration goals in addition to the provision of public housing. The full research programme aims to: identify a range of positive wellbeing outcomes; analyse sustainable urban regeneration and carbon reduction efforts; understand what enables socially inclusive communities and neighbourhoods; outline how public housing providers can achieve the above elements while building efficiently and effectively at scale; and understand and inform housing models that support and enable hapū and iwi housing aspirations. The wellbeing analysis, to which this article contributes, focuses primarily on outcomes experienced by

of these factors, and of public housing more generally, it is important to outline the concepts of wellbeing that frame the analysis and to describe how these concepts relate to public housing. Provision of this framework is the purpose of this article. The framework is an input into the design of surveys of public housing tenants within this research programme that will be used to interpret the elements of wellbeing, and contributions to wellbeing, of the tenants. Subsequent papers will analyse the data gathered from the surveys in the context of the conceptual framework outlined in this article and in two companion papers noted below.

Given that there are both similarities and differences in the way that people view wellbeing, a wellbeing framework needs to be conceptualised in an inclusive way that can reflect how different individuals and groups perceive their wellbeing and how housing and neighbourhood factors influence their wellbeing.

existing public housing tenants in comparison with outcomes for people in other housing tenure types.

In the short term, the findings will provide evidence to help decision makers improve strategic public housing policies and support more effective allocation of government funding. In the long term, this research can help enhance wellbeing and improve environmental sustainability through decisions that result in the provision of more effective, equitable and sustainable public housing and urban regeneration.

Multiple factors related to public housing affect tenants' lives and so are included within the programme's analysis. These factors include governance, housing quality, transport, energy use, community place-making, and consistency with te ao Māori. To interpret the wellbeing impacts

In outlining our framework, we are cognisant that people with different cultural and disciplinary backgrounds may have different conceptions of what constitutes wellbeing, and of how housing and neighbourhood factors contribute to wellbeing. For instance, some researchers essentially equate wellbeing with a self-identified measure of subjective wellbeing based on a question about an individual's life satisfaction (e.g., Layard, 2011; Easterlin, 2020; Frijters and Krekel, 2021). Others, especially those who draw on the capabilities approach (Sen, 1999; Alkire, 2007), see wellbeing as multi-dimensional, with evaluative wellbeing constituting just one dimension of a broader concept of wellbeing. The framework in this article is inclusive of both these approaches.

The framework draws on a diverse international literature that deals with

wellbeing approaches to public policy. These approaches include some that have been used to assess wellbeing across a wide range of countries (Grimes, 2021). The framework also draws on prior work relating to wellbeing of Māori and Pacific peoples in New Zealand. Nevertheless, no framework can be all-encompassing. For this reason, the article is complemented by two companion frameworks developed for this research programme. The first of these outlines a wellbeing model grounded in te ao Māori (Penny et al., 2023) and the second outlines a Pacific wellbeing framework (Teariki and Leau, 2023), each with respect to public housing. The three papers are intended to be complementary,

and owner-occupiers who live close to some of the surveyed public housing tenants. Inclusion of this wider sample enables us to compare outcomes for people in different tenure types within the same geographical area.

To set the scene, we first summarise some prominent conceptual and practical wellbeing frameworks used elsewhere, especially in the Western literature (from Europe, North America and Australasia) and describe how these relate to the role of public housing in affecting wellbeing. The papers by Penny et al. (2023) and Teariki and Leau (2023) provide much deeper insights into Māori and Pacific wellbeing approaches relevant to the research

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each having insights that are relevant to the analysis of wellbeing in the public housing context in New Zealand.

Given that there are both similarities and differences in the way that people view wellbeing, a wellbeing framework needs to be conceptualised in an inclusive way that can reflect how different individuals and groups perceive their wellbeing and how housing and neighbourhood factors influence their wellbeing. It must also incorporate links between people, since the wellbeing of each of us is influenced by the wellbeing of others, whether within the whānau or the wider neighbourhood. Additionally, a range of measures of wellbeing, and its different facets, will be included when taking the framework to the gathering of evidence, which we do by incorporating multiple wellbeing measures in surveys designed specifically for public housing tenants. The survey is also being conducted with people in private rentals

programme. We then present an inclusive framework in the context of public housing that builds on these approaches. The framework emphasises intertemporal relationships (given the path dependency of housing) and interpersonal relationships which may be enhanced or diminished by the housing and neighbourhood situation. In the final section, we discuss how the wellbeing framework will be incorporated into the broader research programme, including a brief description of surveys of public housing tenants that have been designed to reflect this framework.

The focus throughout this article is on frameworks suitable for interpreting adult wellbeing. There is considerable evidence indicating that adult wellbeing is a major influence on children's wellbeing within the family (Casas et al., 2008; Powdthevee and Vignoles, 2008; Clair, 2012), but we do not separately survey children's wellbeing within the research programme.⁴

Prior frameworks

We outline two conceptual approaches that form the basis of much international wellbeing literature, the subjective wellbeing approach and the capabilities approach,⁵ and note how the New Zealand Treasury's Living Standards Framework (Treasury, 2021c)⁶ fits with these approaches. We also provide some brief background regarding te ao Māori and Pacific wellbeing concepts that are developed in depth in the Penny et al. (2023) and Teariki and Leau (2023) companion papers.

Subjective wellbeing approach

Wellbeing frameworks that focus on understanding people's subjective wellbeing are influenced by the approach of 18th- and 19th-century utilitarian philosophers (e.g., Bentham, 1789; Mill, 1879). Subjective wellbeing approaches have been adopted by scholars across several social science and humanities disciplines, including philosophy, psychology, sociology and economics (e.g., Singer, 2011; Pinker, 2018; Diener, 1984; Veenhoven, 2014; Layard, 2011; Helliwell, Layard and Sachs, 2012; Easterlin, 2020; Benjamin et al., 2021). Following the guidance of Stiglitz, Sen and Fitoussi (2009),⁷ the OECD (2013)⁸ posits three main concepts comprising subjective wellbeing: (positive and negative) affect (referred to as hedonic wellbeing by Stiglitz, Sen and Fitoussi), eudaimonia (psychological flourishing) and evaluative wellbeing (often summarised through a measure of overall life satisfaction).

The first concept emphasises people's feelings or emotional states (e.g., anger, worry, excitement) at a point in time. Data on these aspects may be obtained through the 'day reconstruction method' of Kahneman et al. (2004) or through point-in-time survey approaches such as ecological momentary assessment (Shiffman, Stone and Hufford, 2008).

Aspects of eudaimonic wellbeing include the pursuit of a meaningful life and the degree of control one has over one's life. Statistics New Zealand gathers data on these items through the General Social Survey and Te Kupenga. Concepts of 'balance' and 'harmony', which are related to eudaimonic wellbeing, are given prominence in many non-Western cultures.

Evidence shows that these concepts are also prioritised by people in Western countries, and indeed tend to be experienced more prevalently by people in richer Western countries relative to people in non-Western settings (Lomas et al., 2022). Currently, no data on balance and/or harmony is collected by official surveys in New Zealand.

Evaluative wellbeing reflects a broad assessment of a person's satisfaction with their life. It is typically measured in surveys by asking people to consider their overall life situation (Cantril, 1965). In New Zealand, the wording of the relevant question in Statistics New Zealand surveys (including Te Kupenga, the General Social Survey and Household Economic Survey)⁹ is:

I am going to ask you a very general question about your life as a whole these days. This includes all aspects of your life. Looking at [the showcard below], where zero is completely dissatisfied, and ten is completely satisfied, how do you feel about your life as a whole?

The evaluative approach to considering wellbeing underpins many modern subjective wellbeing approaches to public policy and the measures perform well in terms of face validity, convergent validity and construct validity (OECD, 2013).¹⁰ This approach to incorporating subjective wellbeing is commonly emphasised in policy applications because it: (a) is the broadest concept of the three, with both affect and eudaimonic influences potentially contributing to a person's evaluation of their overall wellbeing; and (b) has been shown to be more closely aligned with the basis on which people actually make decisions than is the case for the other measures (Kahneman, Wakker and Sarin, 1997). It is also easy to collect and imposes little respondent burden relative to the information it collects.

A considerable body of research has examined the key underpinning factors of people's evaluative subjective wellbeing as measured by life satisfaction (e.g., Dolan, Peasgood and White, 2008). Many of these underpinning factors are common for people both within and across cultures (Cantril, 1965; Easterlin, 2020; Lomas et al., 2022). Layard (2011) summarises seven

key drivers of life satisfaction as: family relationships, financial situation, work, community and friends, health, personal freedom and personal values. Helliwell, Huang and Wang (2017) summarise major drivers of evaluative subjective wellbeing across countries at a macro level as: income, social support, healthy life expectancy, freedom, generosity, perceptions of corruption (quality of governance) and hedonic wellbeing.

Capabilities approach

The second main conceptual approach to wellbeing in relation to public policy is the 'capabilities approach' advanced by Amartya Sen. Sen considers that a person's

what a person achieves (both in a material and a non-material sense).

Sen does not specify a required set of capabilities for individuals.¹¹ This aspect provides a practical challenge for the approach, especially if people are considered potentially to be poor judges of their own wellbeing. If an external observer were to state which capabilities are required – as does Martha Nussbaum (2003) – this could be seen as paternalistic in that it prioritises the views of an external observer who 'knows best' what is in the interests of the person concerned. Sen's response has been to emphasise the procedural aspects of agreeing to a core set of capabilities, arguing that it is important that any set of

One pragmatic way of conceptualising the relationship between the capabilities and subjective wellbeing approaches is to treat capabilities as contributors to a person's functionings, which in turn contribute to the person's evaluative subjective wellbeing.

perception of their own wellbeing should not be treated as an end in itself. One reason advanced for this view is that some people may be poor judges of their own wellbeing, in part because they do not know what other possibilities may be open to them.

Sen instead advocates that wellbeing consists of people's freedom to 'lead the kinds of lives they value – and have reason to value' (Sen, 1999). Sen suggests that the scope of a person's freedom provides them with a set of capabilities which can be used to achieve the things that they have reason to value. Thus, having a higher level of capabilities is tantamount to having greater real opportunities in life – i.e., to enlarge the scope of people's choices. Sen conceives of capabilities as contributing to functionings, where the latter are essentially

capabilities does not come from a narrow academic or philosophical perspective but is grounded in a widespread, well-informed, democratic process.

While faced with these challenges, the capabilities approach is useful in highlighting that many underpinning factors (capabilities) contribute to a person's overall wellbeing, and most lists of capabilities align well with the main factors found to determine evaluative subjective wellbeing (Smith, 2018). One pragmatic way of conceptualising the relationship between the capabilities and subjective wellbeing approaches is to treat capabilities as contributors to a person's functionings, which in turn contribute to the person's evaluative subjective wellbeing. Under this conceptualisation, it is the person who defines what they value most when considering their evaluative

subjective wellbeing. This conceptualisation is reflected in the framework set out in this article.

International and national wellbeing frameworks

The Stiglitz–Sen–Fitoussi Commission report (Stiglitz, Sen and Fitoussi, 2009) recommended the adoption of a dashboard of indicators to summarise people’s objective and subjective conditions and capabilities which goes beyond simply looking at income and production as measures of wellbeing. It also recommended a dashboard of sustainability indicators that underpin future wellbeing.

with the addition of a cultural domain. The 2021 Living Standards Framework incorporates 12 domains for ‘Our individual and collective wellbeing’: health; knowledge and skills; cultural capability and belonging; work, care and volunteering; engagement and voice; income, consumption and wealth; housing; environmental amenity; leisure and play; family and friends; safety; and subjective wellbeing (i.e., subjective wellbeing is again placed alongside the other domains). In a paper commissioned by Treasury, Smith (2018) argued to place life satisfaction at the top of a hierarchy, making it explicit that life satisfaction provides a summary measure of the degree to which other

Policies and other factors that affect wellbeing are rated according to their effects on evaluative subjective wellbeing. Using this approach, a ‘WELLBY equates to a one-point change in life satisfaction on a 0–10 scale, per person per year’ (Treasury, 2021a). For instance, in the UK, becoming unemployed is estimated to reduce subjective wellbeing by 0.7 of a step, so being unemployed for two years would correspond to a WELLBY cost of 1.4. The approach relies on two crucial assumptions: (1) that ‘reporting functions’ (scales) for evaluative subjective wellbeing are identical across individuals; and (2) that the subjective wellbeing measure can be interpreted cardinally despite surveys adopting an ordinal scale (e.g., integer values between 0 and 10). If one is prepared to accept that these two assumptions hold (at least approximately), then two strengths of the WELLBY approach are: (1) that it can be used to compare effects of disparate influences (provided that the impacts of each influence on subjective wellbeing can be calculated); and (2) that the effects reflect people’s own experiences of the relevant influences and the effects of these influences on their own subjective wellbeing, rather than relying on lists of capabilities stipulated by other people and which may not be considered important by the individual concerned.

While there is evidence indicating that many factors which contribute to wellbeing are similar across cultures ,, there are culturally specific differences in the relative importance of different factors and how these are communicated or conceptualised.

The report has been operationalised through the OECD’s *How’s Life?* report and Better Life Index (OECD, 2011, 2020). *How’s Life* incorporates 11 wellbeing ‘domains’: housing, income and wealth, work and job quality, social connections, knowledge and skills, environmental quality, civic engagement, health, work–life balance, safety, and subjective wellbeing. Subjective wellbeing is represented by life satisfaction and measures of affect, and is included as a separate wellbeing domain rather than as an overarching measure of wellbeing. The framework also incorporates four ‘capitals’ – human, social, natural, economic – which are considered to underpin future wellbeing.

The most recent version of the New Zealand Treasury’s Living Standards Framework (Treasury, 2021c; Hughes, 2021) updates and extends the 2018 Living Standards Framework, which in turn was modelled closely on the OECD framework,

domains contribute to a person’s overall wellbeing. Reflecting this suggestion, Treasury encourages other government agencies to use life satisfaction as a summary measure of wellbeing when valuing non-market outcomes for the purposes of cost–benefit analysis (Treasury, 2021a). As with the OECD, Treasury includes four forms of capital (or wealth) in the Living Standards Framework as factors that underpin future wellbeing, and adds a layer of institutions and connections that govern the ways in which the capitals are transformed into domains of wellbeing.

Neither the OECD nor the Treasury’s Living Standards Framework approach provides an overarching measure that can be used to summarise the effect of a policy initiative (such as a new public housing initiative) on a person’s overall wellbeing. An alternative approach adopts the concept of wellbeing years (WELLBYs; see De Neve et al., 2020; Frijters and Krekel, 2021).¹²

The WELLBY approach has similarities with approaches in health that use QALYs (quality-adjusted life years) and DALYs (disability-adjusted life years) to measure outcomes of policy initiatives.¹³ The overarching nature of an evaluative wellbeing measure means that a WELLBY captures a broader range of factors than do QALYs or DALYs, potentially including process characteristics arising from an intervention. These process factors may include aspects such as respect and autonomy (i.e., eudaimonic aspects), which may be important to people. The breadth of the WELLBY approach is particularly relevant to a research programme examining public housing that is designed to capture a wide range of impacts arising from public housing and which may arise also in processes of urban regeneration. These impacts may include, for example, effects of housing on education outcomes and thence on wellbeing, as well as process

aspects relating to governance practices. Process aspects are particularly highlighted in the te ao Māori and Pacific frameworks of Penny et al. (2023) and Teariki and Leau (2023).

Te ao Māori and Pacific approaches

While there is evidence indicating that many factors which contribute to wellbeing are similar across cultures (Cantril, 1965; Helliwell, Layard and Sachs, 2012; Exton, Smith and Vandendriessche, 2015; Smith, 2018), there are culturally specific differences in the relative importance of different factors and how these are communicated or conceptualised.

The companion paper by Penny et al. (2023) sets out a 'whakawhanaungatanga Māori wellbeing model' that provides a te ao Māori approach to wellbeing in the context of housing and urban development. Prior contributions that outline aspects of te ao Māori approaches to wellbeing include Durie (1985), Cram (2014), Kukutai, Sporle and Roskruge (2017), O'Connell et al. (2018), Te Puni Kōkiri and Treasury (2019, 2021b). The companion paper by Teariki and Leau (2023) outlines Pacific worldviews that are relevant to public housing and urban regeneration policy initiatives. Prior contributions that describe Pacific approaches to wellbeing include Pulotu-Endemann (2001), Thomsen, Tavita and Levi-Teu (2018) and Ministry for Pacific Peoples (2018).

Without attempting to summarise the two companion papers, there are several key shared elements within the two frameworks that are highly relevant when considering the wellbeing of public housing tenants. These elements include the central importance of relationships with whānau/family (both current and past), and the importance of spirituality, including spiritual connections to land and nature both currently and across time. While these elements have counterparts in findings from the international wellbeing literature (particularly the importance of relationships with family and friends for people's wellbeing), they are perhaps more strongly emphasised in Māori and Pacific wellbeing models than they are in models derived from Western cultures.

In an urban setting, these emphases indicate the importance of paying

particular attention to having places in which people can interact with friends and whānau/family and build interpersonal and spiritual relationships in a stable, and culturally and environmentally appropriate, context. In considering the role of a public housing development on wellbeing, it is therefore important that attention extends to the presence of these culturally appropriate aspects that relate to wellbeing.

An inclusive wellbeing framework

We bring together the various approaches to wellbeing outlined above within a model that is intended to be inclusive of different wellbeing concepts and approaches. This conceptual model sets the scene for the

they do not move house). Similarly, health, education, work, spirituality (and many other factors) are likely to have high persistence, and they may be co-determined with each other. Co-determination of factors implies that a policy action which affects one factor may indirectly affect another factor, which then impacts on wellbeing. Furthermore, factors which relate to one person may influence factors facing other people and so are interactive (between people). For example, in a public housing development, choices regarding provision of fixed neighbourhood facilities (such as a community centre or playing fields) will have long-lived effects on factors such as personal health and on

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design of a survey tailored to the situations of public housing tenants. The key facets of this survey, which includes questions specifically on the tenant's house and questions relating to a range of factors that may interact with housing in influencing wellbeing, are presented in the following section.

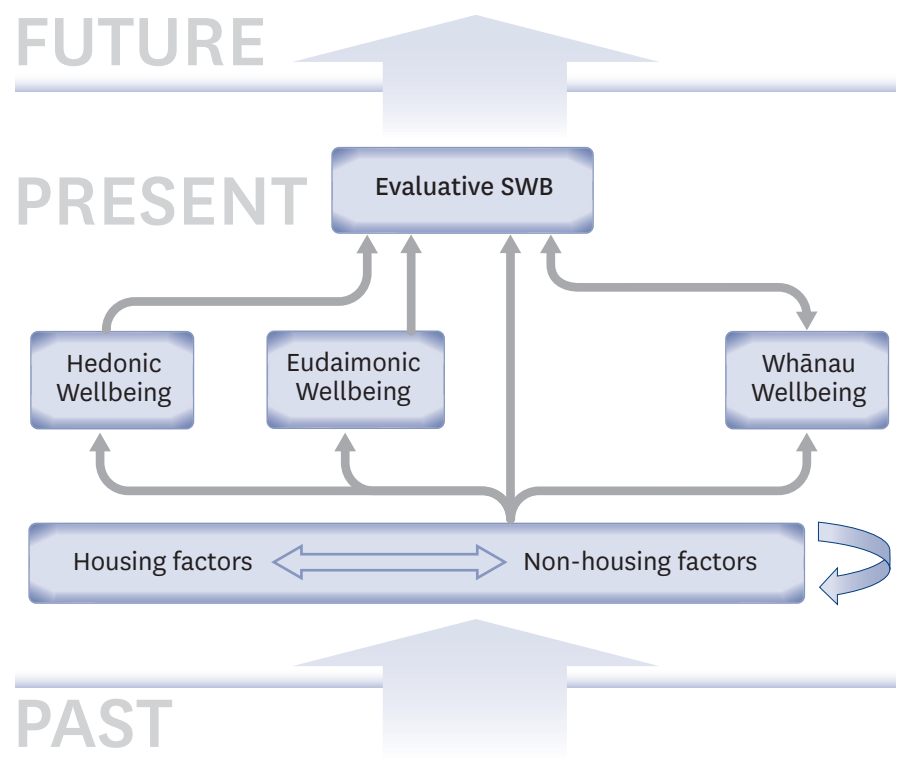
Our model recognises that wellbeing represents a flow over time, so conceptually should be considered within an inter-temporal framework. For instance, current wellbeing may depend not just on current circumstances, but also on past personal, historical and cultural experiences, as highlighted particularly in te ao Māori and Pacific wellbeing approaches. For instance, a person may retain a warm glow (or the opposite) from past family interactions. Furthermore, many factors that affect subjective wellbeing are persistent: for example, a person's housing conditions next year are likely to be related to their housing conditions this year (especially if

neighbourhood interactions.

The importance for wellbeing of interactions between people is highlighted in te ao Māori, Pacific and Western contributions, including the related social capital literature (Putnam, 2000). Relevant interactions for our purposes may include involvement with whānau, positive social capital factors such as trust and volunteering, negative factors such as discrimination, and interactions with authorities (including, for tenants, their housing provider). The family element means that evaluative subjective wellbeing may be 'reflective' (i.e., one's own subjective wellbeing affects a whānau member's subjective wellbeing, which reflects back on one's own subjective wellbeing).

Given the preceding discussion, a wellbeing framework that is suited to application within a public housing research programme needs to account for the following features:

Figure 1: An inclusive wellbeing framework



- a person’s representation of their own evaluative subjective wellbeing;
- a person’s evaluation of the subjective wellbeing of their whānau;
- housing and other (possibly co-determined) capability-related factors which have an impact on the person’s and their whānau’s current and future subjective wellbeing;
- the persistence of housing, neighbourhood and related factors which influence the person’s and the whānau’s wellbeing; and
- interactive factors (between people) which affect each other’s wellbeing.

To reflect these features, our framework incorporates several subjective wellbeing concepts, including an evaluative concept that reflects overall life satisfaction, hedonic wellbeing and eudaimonic wellbeing factors, and the influence of whānau wellbeing on a person’s own wellbeing. The weightings placed on these factors and on a range of capabilities in determining a person’s wellbeing will differ across people and across cultures (Amendola, Gabbuti and Vecchi, 2021). For instance, discrimination may not have been experienced by some people, whereas it may be a constant issue for another person; subjective wellbeing of the former person

will not reflect discrimination even though it would do so if they were to become subject to discrimination.

Figure 1 provides a schematic depiction of a wellbeing framework which reflects each of the aspects discussed above. Focusing initially on the PRESENT panel, the framework incorporates a range of (potentially co-determined) housing and other capability-related factors which may affect the current evaluative wellbeing of a person. To keep the diagram simple, a single box is used to represent factors that are specifically within the housing domain plus factors within other (potentially co-determined) domains (e.g., health, housing, transport, energy, education, governance). Co-determination (marked by the bi-directional arrow between housing and other domains) is particularly important in the context of a public housing intervention since the housing situation may influence health and other outcomes for residents, while other factors (e.g., transport links) will influence the suitability of a house for a resident, so impacting their wellbeing. In addition, the impact of some factors, such as neighbourhood characteristics, may depend on interactions between people. Another form of interaction between

people is the potential effect of interpersonal comparisons (e.g., relative material living standards) on an individual’s wellbeing (which we will be able to test for by having different comparator groups across our various public housing sites). These interpersonal interactions are signified by the curved arrow in Figure 1.

The channels for the influence of various factors through to evaluative wellbeing may be direct or be via the person’s hedonic or eudaimonic wellbeing, and may also operate through their effect on the wellbeing of whānau. Moreover, the diagram indicates that the relationship between own wellbeing and whānau wellbeing is reflective, so that the effects are bi-directional.

Current factors affecting wellbeing and wellbeing outcomes are influenced by past factors and by past subjective wellbeing, shown by the single arrow from the PAST to the PRESENT panels.¹⁴ These past factors may be long-lived, such as intergenerational effects of land loss for Maori (Thom and Grimes, 2022), or they may reflect the more recent past (e.g., a recent neighbourhood event). Similarly, factors may be persistent, so that current factors that affect wellbeing may help determine future factors. Future factors then affect future evaluative wellbeing via the same channels discussed above. In addition, subjective wellbeing is persistent, so current evaluative wellbeing will have an effect on future evaluative wellbeing.

Applying the framework to interpret wellbeing effects of public housing

The public housing research programme is applying the conceptual wellbeing frameworks outlined here and in the companion papers to analyse the impacts of public housing through data gathered across several research strands. This work includes the gathering of evidence both from public housing tenants and from providers of public housing. Evidence on governance and finance matters are being collected from documentary sources and through face-to-face interviews with public housing providers. A 73-question survey of adult tenants at each site is gathering evidence from the viewpoint of the tenants themselves. Questions in the

survey have been chosen with input from the programme's Māori strand to ensure adherence to matauranga Māori and the principles of te Tiriti o Waitangi.¹⁵

The survey, which builds on the conceptual framework outlined above, includes questions relating to: tenant characteristics (age, ethnicity, gender, length of existing tenancy, educational qualifications and employment status), and tenant views on domains comprising house quality, energy use, neighbourhood and community, social capital, health, transport, Māori cultural involvement, ability to express one's own culture, spirituality, discrimination and trust (including in the public housing provider). The domains, and questions within each domain, have been chosen to reflect factors that interact with housing and the neighbourhood to affect tenant wellbeing. Where possible, wording of questions in the survey mirrors the wording in Statistics New Zealand or other available surveys, so that direct comparisons can be made with external data sources covering similar tenant groups.

Questions that relate specifically to house quality cover issues of: dwelling condition, cold, mould, dampness, excess heat, pride in the house and how well the house meets the tenant's needs. These questions have been chosen to reflect key findings in the literature on shortcomings of housing in the New Zealand context (Howden-Chapman et al., 2023). Questions that relate to the neighbourhood include factors such as safety after dark, sense of belonging and ease of accessing green space. Questions included across other domains reflect factors that interact with housing to affect health, wellbeing and sustainability of dwellings and their residents. In each case, questions have been chosen to reflect issues that may be particularly important for public housing tenants, either because of the disadvantaged economic position of many public housing tenants or because of the greater proportion of Māori and Pacific tenants in public housing relative to the broader housing stock. For instance, our choice of survey questions emphasises issues of discrimination faced by the tenant, aspects of Māori culture, and aspects of spirituality that may be particularly important for

Pacific peoples and for some other ethnicities.

The survey questions that relate directly to wellbeing comprise four questions that are included in Statistics New Zealand's Te Kupenga survey and General Social Survey. These questions cover: (1) evaluative subjective wellbeing, based on overall satisfaction with one's own life; (2) the wellbeing of the whānau; (3) a eudaimonia question relating to control over one's own life; and (4) the WHO-5 mental well-being Index set of questions that relate to feelings of cheerfulness, calmness, activity, rest and interest. The survey is being administered twice through the programme at each site

whether education and health outcomes are related) and will test for associations of capabilities with the wellbeing outcomes of the public housing tenants.¹⁶

In interpreting results of the analysis as inputs into development of policies and practices with respect to public housing, it will be important to distinguish between four mechanisms:

- the direct impact of an intervention on a domain outcome for a person (which may or may not be directly via the housing domain);
- the interaction of changes in multiple domains (including housing) that affect the person (so incorporating the

In analysing the survey data, the inclusive nature of our approach, together with the incorporation of multiple wellbeing measures, will make it straightforward to switch the places of whānau wellbeing and evaluative subjective wellbeing within Figure 1 to reflect a cultural perspective that places more weight on collective than individual wellbeing.

(and to neighbouring private renters and owner-occupiers) to test whether changes (e.g., in transport links) have occurred between surveys and whether these changes affect the various dimensions of tenant wellbeing.

In analysing the survey data, the inclusive nature of our approach, together with the incorporation of multiple wellbeing measures, will make it straightforward to switch the places of whānau wellbeing and evaluative subjective wellbeing within Figure 1 to reflect a cultural perspective that places more weight on collective than individual wellbeing. Similarly, we can focus on outcomes for specific capabilities in relation to wellbeing. We will test for associations between capabilities (e.g.,

potential for complementarities, such as between transport options and work status);

- the impact of these changes on outcomes for others, including whānau;
- the impact of each of these changes on a person's wellbeing reflected in the various subjective wellbeing measures.

In each mechanism, it is important to understand the effects in the context of the person subject to the intervention, since: (a) the impacts of the intervention on the domain outcome may differ across people; and (b) the impact of the domain outcome on subjective wellbeing may differ across different groups of people. For instance, some factors which contribute to the wellbeing of some individuals and/or their whānau may not contribute to others'

wellbeing. Questions relating to spirituality may be an example here. In other cases (e.g., paid work), the weight placed on a factor may differ across groups (Durie, 1985; Haines and Grimes, 2022). For these reasons, we will undertake disaggregated analyses by population group to test whether particular wellbeing relationships are more important for tenants of some ethnicities than for others.

To illustrate the potential use of the framework within the broader research programme, consider a hypothetical example. We may be interested in how different public sector governance structures affect the wellbeing of public housing tenants. The effects of the governance structure may have its immediate impact on outcomes within the housing and neighbourhood domains, including housing quality and the availability of culturally appropriate meeting spaces. In turn, these changes may affect outcomes in the health/disability domain and in social capital, such as volunteering and interpersonal trust. These latter outcomes may impact on the wellbeing of others, including, but not limited to, whānau. We will wish to ascertain the changes in each of these outcomes that arise from a different governance structure. We then need to ascertain the effects of these changes on various measures of subjective wellbeing (which may vary according to personal characteristics), including the impacts of any interactive effects between the individual, whānau and others.

As a second hypothetical example, consider a case in which public transport that services a public housing site improves. The improved transport link may open up additional employment opportunities for members of a household, which may then have income and health consequences that affect the tenant's wellbeing. In the statistical analysis, we will therefore wish to test not only for the direct influences on wellbeing from specific domains, but also test for interactive effects on wellbeing across multiple domains.

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The tenancy survey does not capture momentary affective reactions in relation to the tenant's housing situation other than through inclusion of the WHO-5 mental wellbeing questions. We will supplement the tenancy survey with an ecological momentary assessment survey designed to measure hedonic wellbeing (i.e., short-term affect) associated with the tenant's current situation. This survey will be administered (by mobile phone) in the year after the first survey to a subset of tenants who undertake the initial survey so that the momentary assessment data can be combined with information gathered in the broader survey.

The survey information will provide valuable data to analyse factors that determine public housing tenants' individual wellbeing and that of their whānau. The data will be supplemented by information gathered through other strands of the Public Housing and Urban Regeneration programme, including governance practices of each provider. The results will present decision makers with a rich picture of factors related to tenants' experiences of public housing and their neighbourhood that affect multiple facets of their wellbeing.

- 1 Public Housing and Urban Regeneration: Maximising Wellbeing team members comprise: Mark Apperley, Clare Aspinall, Sarah Bierre, Ralph Chapman, Elinor Chisholm, Brodie Fraser, Caro Fyfe, Libby Grant, Michael Keall, Amber Logan-Riley, Kate Murphy, Crystal Olin, Jenny Ombler, Kim O'Sullivan, Guy Penny, Nevil Pierson, Tiria Pehi, Ed Randal, Bridget Robson, Jacinta Ruru, Ian Shearer, Ian Short, Mary Anne Teariki, Lucy Telfar-Barnard, Helen Viggers, Teresa Wall.
- 2 <https://www.sustainablecities.org.nz/our-research/current-research/public-housing-urban-regeneration-programme>.
- 3 The seven public housing partners within the programme are: Tamaki Regeneration Programme, Eastern Porirua Regeneration Programme, Wainiōmata Marae Trust, Wellington City Council, Ōtautahi Community Housing Trust, Salvation Army and Dwell.
- 4 We will instead use data from the Growing Up in New Zealand survey to examine impacts of public housing versus private tenancies on children's wellbeing.
- 5 A third strand of literature which conceptualises wellbeing as positive mental health (Roscoe, 2009; Oswald and Powdthavee, 2010; Cooke, Melchert and Connor, 2016) adopts a narrower definition of wellbeing that is not well suited to the public housing research programme.
- 6 The Living Standards Framework presented in Treasury (2021c) updates and extends the Living Standards Framework presented in Treasury (2018).
- 7 Stiglitz, Sen and Fitoussi state: 'National statistical agencies should incorporate questions on subjective well-being in their standard surveys to capture people's life evaluations, hedonic experiences and life priorities' (2009, p.216).
- 8 See Figure 1.1 in OECD, 2013 and its surrounding text.

- 9 The Household Economic Survey (and earlier waves of the General Social Survey) use a 5-point scale rather than an 11-point scale.
- 10 Face validity refers to respondents and others judging that the items are appropriate given what they are told about the assessment objectives; convergent validity relates to whether the measure correlates well with other measures for the same underlying concept; and construct validity refers to whether the measure performs in the way theory suggests with respect to the construct being measured (OECD, 2013).
- 11 Although Sen has avoided setting out a comprehensive or final list of capabilities, the *Report of the Commission on the Measurement of Economic Performance and Social Progress* (Stiglitz, Sen and Fitoussi, 2009) does set out a pragmatic set of outcome measures intended to capture important capabilities (and functionings) in the context of official statistics.
- 12 The WELLBY approach in De Neve et al. differs mechanically from that in Frijters and Krekel but in practical terms they are identical. We use the latter approach as it is the one adopted by Treasury in its cost-benefit model (CBAx) (Treasury, 2021a).
- 13 A QALY may be defined as a 'health outcome measure based on survival weighted by quality of life, where quality of life is scored between 1 for full health and 0 for death', while a DALY instead weights by the level of disability that a person experiences (Guinness and Wiseman, 2011, p.217).
- 14 We do not ask retrospective questions in our surveys other than to ask for the length of current tenancy, so will not detect specific life events that may have affected the wellbeing of an individual. By running two surveys for a longitudinal sample of tenants, we will nevertheless be able to control for past responses of the individual when analysing responses to the second survey. One feature that this will help to control for is the process of adaptation of an individual's subjective wellbeing to their existing situation, a feature known as the 'hedonic treadmill' (Brickman and Campbell, 1971). One interesting feature that we will not be able to test is whether tenants retrospectively reassess their past wellbeing.
- 15 The full survey can be accessed at: <https://www.sustainablecities.org.nz/our-research/current-research/public-housing-urban-regeneration-programme/tenant-wellbeing-survey>.
- 16 Smith and Davies (2020) provide a prior example of analysis which captures the impacts of housing outcomes on evaluative wellbeing.

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