What matters to people throughout the world and why should we care?

Participatory wellbeing frameworks, applications, and impacts

Kate Sollis

May 2023

A thesis submitted for the degree of Doctor of Philosophy of
The Australian National University

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Declaration

I am the author of the thesis entitled: **What matters to people throughout the world and why should we care? Participatory wellbeing frameworks, applications, and impacts** submitted for the degree of Doctor of Philosophy. The word count of the body of this thesis is 75,563 words.

Chapters 4, 5, 7, and 8 of the thesis are based on working papers and journal articles that I have co-authored with panel members and other collaborators. The references for these papers are as follows:

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In all cases, I contributed roughly 80–90 per cent of the material in each of those chapters. I have received express written permission from my co-authors to reproduce any and all of the material from those papers within this thesis.

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Abstract

The use of wellbeing measures has been growing in prominence over the last two decades, with researchers, practitioners, and policymakers seeking to analyse and more closely capture the things that matter to people. Alongside this has been slow, but increasing, recognition that wellbeing is often conceptualised uniquely by different population groups throughout the world. This has resulted in a growing number of governments, organisations, practitioners, and academics developing "participatory wellbeing frameworks", created by working closely with the population of interest and asking the question, "What does wellbeing mean for you?" While key motivations for undertaking such studies include identifying culturally specific conceptualisations of wellbeing, developing further applications and influencing and shaping programs and policy, there has been little empirical research on the extent to which wellbeing conceptualisations vary by population group, how they have been applied, and the extent to which they have impacted research, programs, and policy.

This thesis seeks to fill this gap, using multiple methods to scrutinise the participatory wellbeing frameworks that have been developed throughout the world over the past two decades. Firstly, through a systematic review of 130 participatory wellbeing frameworks, I show that while there is a high degree of universality in how wellbeing is conceptualised, communities and population groups throughout the world have unique and nuanced ways of understanding wellbeing. Secondly, by examining how these 130 different frameworks have been utilised, I will illustrate that while participatory wellbeing frameworks have been applied more extensively for research purposes, there has been less of a focus on policy-related applications. I will further highlight the value and challenges of applying participatory wellbeing frameworks for quantitative analysis through two case studies, one focused on child wellbeing in Australia and the other examining the migrant wellbeing gap in Papua, Indonesia. Finally, through a key informant study with 16 individuals who have developed participatory wellbeing frameworks, the thesis highlights that while relatively few frameworks have directly impacted programs, practice, or policy, achieving indirect impacts, such as greater awareness amongst policymakers and starting a dialogue in the community, was commonplace. Ensuring a rigorous participatory process was identified as an important enabler in achieving both direct and indirect impacts.

In sum, this thesis highlights the value of utilising participatory approaches in achieving a context-specific, holistic understanding of wellbeing that comes from the voices of those who are the experts in their own lives. It is hoped that this thesis will demonstrate to the research and policy community the value of utilising participatory approaches for wellbeing measurement, will provide an evidence-based set of approaches for doing this, and will support the community in achieving greater research and policy impact into the future.

List of Abbreviations

HRQoL	Health-related quality of life
IWS	Indonesian Wellbeing Scale
LSAC	Longitudinal Study of Australian Children
MODA	Multiple Overlapping Deprivation Analysis
PWI	Personal Wellbeing Index
SEIQoL	Schedule for the Evaluation of Individual Quality of Life

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Chapter 1 Introduction

There has been a growing movement over the past two decades within societies across the world to make better use of wellbeing measures for policy and research. Within the policy sphere, this has most notably been influenced by the "Beyond GDP" movement and its agenda to encourage governments throughout the world to reduce their reliance on traditional measures of progress such as GDP and unemployment, and look to indicators that more closely capture the human experience (Stiglitz et al., 2009). The Capability Approach has also been highly influential in this regard in the field of development studies, with Sen (1993, 1999) arguing that to improve the lives of individuals in a meaningful way, we must ensure programs and policies enrich the aspects of life that individuals value, or their "valued capabilities". These notions have led to a number of governments, organisations, communities, and scholars throughout the world utilising measures of wellbeing to guide policy and measure progress. Well-known examples include the Organisation for Economic Co-operation and Development (OECD) (Exton & Shinwell, 2018), the New Zealand Government (Dalziel et al., 2019), Bhutan (Ura & Galay, 2004), and smaller communities such as Jacksonville in the United States (Jacksonville Community Council, 2010).

Within the research domain, the development of measurement tools to assess wellbeing has become widespread, with a variety of disciplines seeking to examine wellbeing and quality of life (Alexandrova, 2017; Gasper, 2007; Phillips, 2006) This can be exemplified through the sheer number of wellbeing measurement tools available (Linton et al., 2016). Such wellbeing measurement instruments have been applied widely, in fields such as psychology, economics, health sciences, and development studies (e.g. Diener, Kahneman, et al., 2010; Easterlin, 1974; Pequeno et al., 2020; Robeyns, 2005). Furthermore, while more critical of wellbeing measurement tools, the disciplines of anthropology and sociology have become increasingly engaged in the wellbeing space, seeking to better understand how meanings of wellbeing vary by cultural context (Cieslik, 2014; Ferraro & Barletti, 2016).

One of the most substantive, and often overlooked, challenges facing scholars and policymakers interested in developing and measuring wellbeing relates to which dimensions, domains, and indicators should be incorporated into these wellbeing frameworks and

measurement tools. There are a range of approaches that have been used to identify dimensions of wellbeing, including the use of existing data, normative assumptions, public consensus, ongoing deliberative participation, and existing empirical evidence. All these approaches come with benefits and drawbacks, and their suitability may depend on the research context and resources available (Alkire, 2013). A growing number of scholars and governments throughout the world advocate for the use of participatory approaches, influenced by the broader participatory movement (e.g. Chambers, 1994b; Narayan, 2000). Proponents of such approaches contend that through engagement and consultation with the community, wellbeing frameworks will more closely reflect the views and values of the population of interest (Hall & Rickard, 2013; Oranga Tamariki (Ministry for Children) & Children's Commissioner, 2019; Scott, 2012; White & Pettit, 2004)

Participatory approaches use bottom-up processes to ensure that participants are the starting point for research, not simply as research subjects, but as experts on the subject matter as well as partners within the research process (Chambers, 1994a; Holland, 2013). Participatory approaches sit on a scale, ranging from those that consult with the population of interest, to those which are entirely community-led (e.g. Arnstein, 1969; Cornwall & Jewkes, 1995; Hart, 1992; Pretty, 1995; Shirk et al., 2012). The reported benefits of incorporating greater levels of participation are numerous, including making the most of expert knowledge of those with lived experience (e.g. MacAulay et al., 1999; Moser & Stein, 2013), partnering with community members as co-researchers (e.g. Christopher et al., 2008), empowering participants and the wider community (e.g. Chambers, 1994b; Travers, 1997), ensuring research is culturally appropriate (e.g. Leeuw et al., 2012), and helping to ensure the sustainability and continuity of projects (e.g. Jagosh et al., 2012).

While the literature highlights that there can be drawbacks in utilising participatory approaches, such as burden on participants, confidentiality of data, ability to access a wide and representative sample, potential hijacking by local elites, and the level of resources required (Alkire, 2013; Gough & McGregor, 2007; Holland et al., 2010; Lund & Saito-Jensen, 2013), the potential benefits, particularly those related to empowering the change agents, can go beyond the results of the study itself, possibly outweighing the drawbacks highlighted.

In this thesis I explore the value of utilising participatory approaches to identify dimensions, themes, or indicators of wellbeing (referred to as participatory wellbeing frameworks within this thesis). Such wellbeing frameworks may have used participatory approaches which sit across the continuum, ranging from those that simply ask community members what wellbeing means to them, to those that partner with communities. A participatory wellbeing framework may have been developed to identify conceptualisations of wellbeing for a particular group. It may have been put together for a specific purpose, such as to develop a measurement tool or a policy framework. And it may have been developed for policy purposes, such as monitoring and evaluation, or simply to hear the voices of, and empower, a particular population group.

In the context of wellbeing frameworks, many have highlighted that the consultation process can have benefits that go beyond just the selection of dimensions. For example, Hall and Rickard (2013) argue that in the context of government wellbeing frameworks, the incorporation of consultation processes can result in the strengthening of democracy and a greater understanding amongst citizens of viewpoints across the political spectrum, and that the consultation process can help empower individuals and communities. In research contexts, scholars argue that ensuring individuals have the opportunity to provide input into how their wellbeing is measured is vital in ensuring agency and inclusion (Biggeri & Anich, 2009; Camfield et al., 2008; Fattore et al., 2007).

However, while participatory approaches have been touted as valuable in developing wellbeing frameworks for a number of reasons by governments and researchers throughout the world, there has been little empirical evidence to substantiate these claims, and little guidance on best practice in developing wellbeing frameworks and achieving impact. I seek to fill this gap by empirically examining at both a micro- and macro-level whether there are indeed benefits of utilising participatory approaches to develop wellbeing frameworks in different contexts throughout the world. Such analysis provides a more concrete and comprehensive understanding of the value of participatory wellbeing frameworks, as well as the limitations and challenges of ensuring they have a positive impact.

This chapter lays the groundwork for the thesis, highlighting three often-reported benefits of participatory wellbeing frameworks, and how I will test these claims. Finally, I provide an overview of the thesis structure.

1.1 The reported benefits of participatory wellbeing frameworks

As briefly highlighted above, proponents of participatory wellbeing frameworks cite a number of benefits of utilising participatory approaches, in contrast to other methods of identifying dimensions, domains, or themes of wellbeing. This section will outline three key benefits that are articulated throughout the literature and discuss the extent to which they have been empirically tested.

1.1.1 Reported benefit 1: Participatory wellbeing frameworks identify context-specific understandings of wellbeing

The most common reported benefit of participatory wellbeing frameworks is that they result in a set of dimensions, indicators, or themes that are unique to the population group of interest, as well as resonating with and having meaning for the group. Through deeply engaging with individuals or communities, using approaches such as interviews, focus groups, or surveys, the utilisation of participatory approaches ensures that we are more closely measuring what matters. This was articulated simply by White and Pettit (2004, p. 8), who noted that "…perhaps the most obvious contribution of participatory research to the understanding of well-being is in its capacity to draw out culture, location and social group-specific understandings of the dimensions of well-being". This was also a key focus of the Wellbeing in Developing Countries research group (WeD), who were foundational in putting forward participatory approaches as a valuable tool to measure wellbeing in the context of development studies. They argued that incorporating consultative processes into the development of wellbeing frameworks "can make measures more comprehensible and relevant to respondents, provide contextual information to explain particular outcomes, and…ensure that the "stylised facts" such as the "a dollar a day" metric that influence international assistance are based on measures of what matters" (Camfield et al., 2008, p. 7). A large number of other participatory wellbeing studies cite similar benefits (e.g. Greco et al., 2015; Maulana et al., 2018; Yap & Yu, 2016).

However, there has been a long-running debate within the theoretical literature as to whether conceptualisations of wellbeing are indeed context-specific. Lomas (2015) outlines that within the positive psychology movement, which has been highly influential on the science of wellbeing, the dominant narrative has largely been universalist, with wellbeing understandings seen to be impervious to culture. Such illustrations of universalist paradigms being applied include Maslow's (1943) hierarchy of needs, Doyal and Gough's (1991) theory of human needs, and Nussbaum's (2003) list of central human capabilities. However, this has started to shift, with cultural diversity and relativism being more frequently acknowledged by scholars in the wellbeing space. This narrative is most evident within the Eastern versus Western debate regarding wellbeing philosophies, with Eastern philosophies emphasising collectivist notions of wellbeing, while Western philosophies tending to be more focused on individualistic notions (Joshanloo, 2013; Markus & Kitayama, 1991). Scholars and community members in the Indigenous space also emphasise that Indigenous notions of wellbeing vary from Western notions, with cultural, spiritual, collectivist, and connection to nature elements identified as important components of wellbeing (Butler et al., 2019; Durie, 2006; Manuela & Sibley, 2012; Yap & Yu, 2016). This debate has now extended well beyond the Eastern-Western and Indigenous paradigms, with Lomas (2015) contending that wellbeing is made up of both universalist and relativist components.

While the theoretical debate regarding whether conceptualisations of wellbeing are indeed universal or global has been long-running, little empirical research using data collected with communities on how they understand wellbeing has been conducted to test these claims. To date, the scant empirical literature that does exist focuses on comparing conceptualisations of wellbeing between a small number of population groups, and supports Lomas' (2015) model of universal relativism. For example, to test Eastern versus Western understandings of wellbeing, Exenberger et al. (2019) contrasted how wellbeing is conceptualised between children living in India and Europe. They identified a range of global sources of happiness between the two groups, but also important differences. For example, the dimensions of social skills and appreciation of nature was raised only by children in India, while leisure was raised only by children in Europe. Universal relativism was also identified in a large study in four countries (Canada, China, India, and Japan) by Tafarodi et al. (2012). Cultural nuance sat

alongside commonalities in how wellbeing was conceptualised, with community involvement identified as important for the Chinese participants, hobbies and leisure being important for the Japanese participants, and world travel noted as important by the Canadian participants. A similar finding on cultural distinctions was reached through a study with Italian and Cuban adults by Galati et al. (2006).

While these studies provide some evidence that conceptualisations of wellbeing are indeed context-specific, their findings rely on data collected with a small number of population groups. While a large number of participatory wellbeing studies have been conducted in singular (or multiple, as discussed above) contexts, to date there has been no review which has brought together the participatory wellbeing studies to examine how wellbeing is conceptualised and the extent to which conceptualisations are universal. Furthermore, there has been no analysis conducted on the resulting themes from such studies, or on how conceptualisations vary by cultural context. To fill this gap, I firstly undertake a systematic review of participatory wellbeing frameworks throughout the world, identifying the contexts where these studies have been conducted, the methodologies applied, and, most notably, the wellbeing conceptualisations that are elicited through these studies. To empirically test the assertion that conceptualisations of wellbeing are unique across population groups, a macro-level analysis is conducted to test the extent to which these conceptualisations vary by context. Such analysis fills an important gap in knowledge by providing robust evidence on the degree to which wellbeing conceptualisations do indeed vary by cultural context.

1.1.2 Reported benefit 2: Participatory wellbeing frameworks are valuable for further applications

A second reported benefit of participatory wellbeing frameworks is that they are a valuable form of evidence to utilise for further applications. Such applications could include the development of a measurement tool or a policy framework, or for monitoring and evaluation purposes. For example, qualitative research with adults in the United Kingdom on what is important in their lives was conducted specifically for the purposes of developing a widely used health economics tool, the ICECAP-A (Al-Janabi et al., 2012). Recognising that many global measurement tools are inappropriate for use in Eastern contexts, interviews with

individuals in Indonesia were undertaken to better understand meanings of wellbeing to develop a subjective wellbeing index, the Indonesian Wellbeing Scale (Maulana et al., 2019; Maulana et al., 2018). Another participatory wellbeing study involved adults with Crouzon syndrome, and was carried out to develop an action plan to address quality of life needs (Wheeler & Early, 2018). Finally, Dew et al. (2019) conducted a participatory study with the Indigenous Anangu community in Australia to provide policy recommendations on how people with disability can be better supported to achieve a good life, by their own definition.

While such studies provide a degree of insight into the value of participatory wellbeing frameworks for further applications, there is currently limited understanding of the degree to which participatory wellbeing frameworks have been applied, and a deep investigation into the benefits, challenges, and limitations in doing so has not been conducted. I fill this gap by firstly conducting a review into how participatory wellbeing frameworks have been applied. Such evidence can provide researchers with a clearer understanding of the potential for participatory wellbeing frameworks, as well as highlight the extent to which they have been applied in different ways. Secondly, I present two case studies which apply two participatory wellbeing frameworks that were identified in the systematic review. The first application is demonstrated through developing a new measurement tool based on existing data, and the second through applying a measurement tool to collect data. While such applications have been undertaken previously, this thesis explores more deeply the benefits, challenges, and limitations in applying participatory wellbeing frameworks for these purposes. The findings from the two case studies will provide a useful guide for researchers and policymakers within this space, whilst also providing more comprehensive evidence on the degree to which participatory wellbeing frameworks are a useful source of evidence for further applications.

1.1.3 Reported benefit 3: Participatory wellbeing frameworks can help achieve research and policy impact

The last key benefit often put forward by proponents of participatory wellbeing frameworks is that they can help achieve research and policy impact. This may be through a number of avenues, such as intrinsic benefits to participants through involvement in the participatory process, or impact through changes to programs and policy. For example, a range of wellbeing

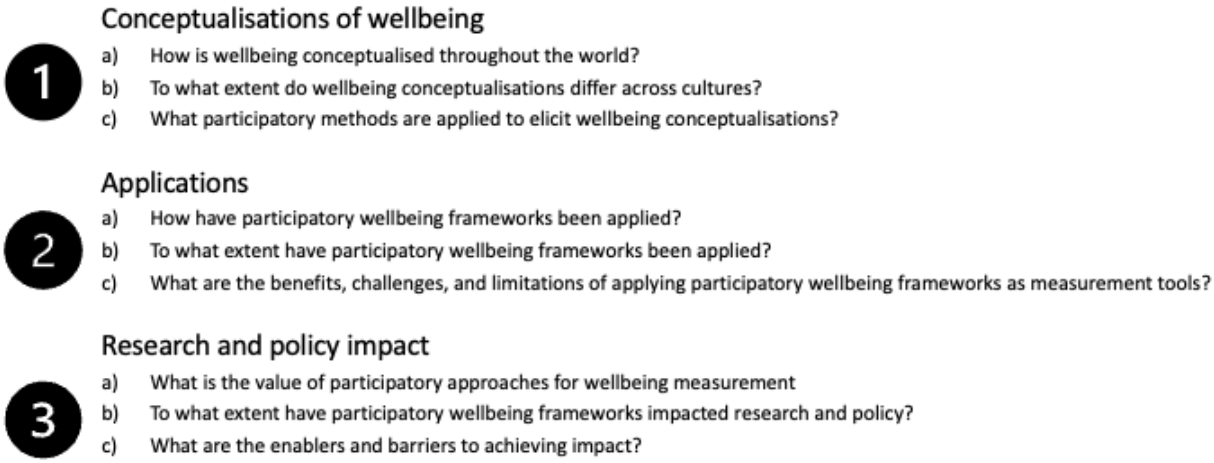
studies which partner with children emphasise the importance of including children in the research process to ensure their rights are upheld (Biggeri et al., 2006; Exenberger et al., 2019; September & Savahl, 2009). Furthermore, many scholars highlight that they have undertaken studies specifically to inform and transform policies and programs. For example, as noted by Fattore et al. (2009, p. 74): "When we seek to gain an understanding of the meanings that children attach to well-being, it prompts a reassessment both of the issues to be regarded as policy relevant and the parameters of existing policy debate on children's issues". In the context of developing a multidimensional wellbeing index (MWI) in Namibia, Collomb et al. (2012, p. 242) highlight that: "the MWI itself presents an aggregate view of quality of life, which helps get a broad indication, but in order to guide specific policy recommendations, disaggregated sub-indices can also be considered". Finally, Biggeri and Anich (2009) stress that "from a policy point of view it becomes fundamental to understand that street children suffer a lack of achieved functionings, which can be seen as capability deprivation since they value those dimension as important or very important".

While many developers of participatory wellbeing frameworks have a purpose and intention to achieve research and policy impacts, the extent to which this has actually been realised has not previously been assessed. Through a key informant study with authors of participatory wellbeing frameworks, I fill this gap by better understanding the extent to which researchers feel the participatory wellbeing frameworks they have been involved in developing have achieved impacts, and the barriers and enablers to this.

1.2 Research questions

In light of the research gaps highlighted above, I seek to address the following research questions in this thesis, as shown in Figure 1-1.

Figure 1-1 Research questions



1.3 Thesis structure

The remainder of the thesis will be structured as follows. Part 1 provides details on the foundations of the thesis, with Chapter 2 providing a detailed description of the conceptual framework informing the approach taken to address the above research questions and outlining the relevant literature. Chapter 3 provides an overview of the analysis approach, highlighting how the various studies incorporated into the thesis address the research questions.

Part 2 outlines the methodology and results of an exploration of participatory wellbeing frameworks and conceptualisations of wellbeing drawing on existing scholarship. Chapter 4 presents the findings from a systematic review of participatory wellbeing frameworks, which describes the contexts where participatory wellbeing studies have been undertaken, the methodologies applied, and the wellbeing conceptualisations elicited. Chapter 5 then conducts a meta-analysis of how wellbeing conceptualisations vary by cultural context.

Part 3 examines the applications of participatory wellbeing frameworks, with Chapter 6 presenting the results of a review exploring how participatory wellbeing frameworks have been applied, and the extent to which they have been applied. Given the relatively high prevalence of participatory wellbeing frameworks being applied as measurement tools,

Chapters 7 and 8 then demonstrate the benefits, challenges, and limitations of applying participatory wellbeing frameworks for this purpose through two case studies: one exploring the wellbeing of children in Australia, and another examining the migrant wellbeing gap in Papua, Indonesia.

Part 4 then explores the research and policy impact of participatory wellbeing frameworks, with Chapter 9 presenting the findings of a key informant study which sought to better understand the extent to which participatory wellbeing frameworks have achieved research and policy impacts, and the barriers and enablers of doing so.

Finally, Part 5 brings the findings of the thesis together, with Chapter 10 firstly highlighting the key findings of the studies and their implications for research and policy. Chapter 11 finishes with some concluding remarks.

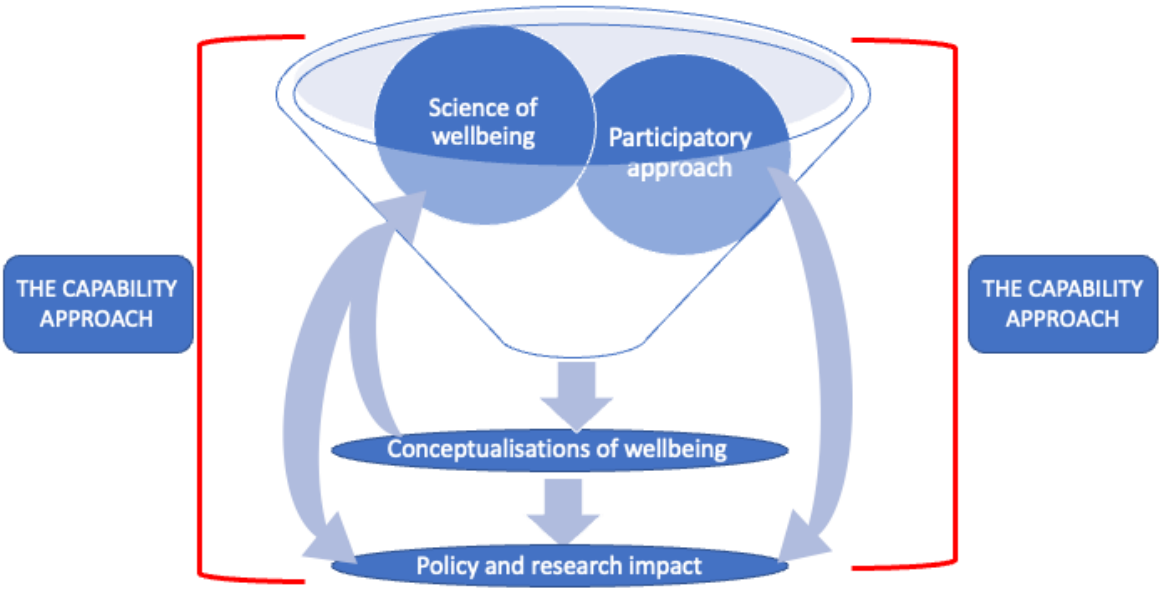
In sum, while it is clear from the literature that there is great potential in the development and application of participatory wellbeing frameworks, there has been little empirical examination regarding whether the purported benefits are indeed realised. This thesis will help provide some answers to fill this research gap.

Part 1 Thesis foundations

Chapter 2 Conceptual framework and literature review

This chapter provides a detailed account of the conceptual framework applied to address the research questions identified in Chapter 1. An illustration of this conceptual framework is provided in Figure 2-1. This chapter will be structured to align with this framework, by firstly discussing the broader concepts of the science of wellbeing and participatory approaches, before narrowing down into conceptualisations of wellbeing, and their research and policy impact. In this thesis, I define the science of wellbeing as the constructs used to represent wellbeing, as well as how wellbeing is measured. The arguments made in the thesis will firstly demonstrate, through reviewing and applying findings from existing literature, that the incorporation of participatory approaches into the science of wellbeing is necessary to elicit conceptualisations or understandings of wellbeing in a meaningful manner. Conceptualisations of wellbeing generated in this manner can go on to have policy and research impact in a number of ways.

Figure 2-1 Conceptual framework for this thesis



As highlighted in Chapter 1, if conceptualisations of wellbeing are indeed unique across cultures, then they provide a deeper understanding of what wellbeing means to a particular population group. Secondly, participatory wellbeing frameworks can be applied in a number

of ways, and this has the potential to impact research and policy. This includes the use of participatory wellbeing frameworks to inform wellbeing and its measurement, thus influencing research and policy through the "science of wellbeing" (as depicted in Figure 2-1). Finally, the conceptualisations of wellbeing themselves can go on to have research and policy impact. Given the extensive literature highlighting the potential for participatory approaches themselves to impact research and policy, this link will also be examined throughout the thesis. The Capability Approach provides a useful overarching framework for this study, as the core elements of the Capability Approach are concerned with not just how wellbeing is conceptualised but, equally important, the ways in which wellbeing conceptualisations are elicited.

This chapter provides a comprehensive review of the literature pertaining to each component of the conceptual framework and how these are interlinked (see Figure 2-1). Furthermore, in this chapter I explain and justify the conceptual underpinnings of the methodology used within the existing literature. The broader concepts of the science of wellbeing and participatory approaches will be discussed first, before narrowing in on the areas more closely related to the topic of interest: wellbeing conceptualisations, policy and research impact, and their intersections with the other components of the conceptual framework. The relevance and contribution of the Capability Approach will then be detailed. The chapter will conclude by highlighting four foundational issues, which are key areas of contestation inherent within this conceptual framework: anthropocentrism, individualism, adaptive preferences, and salience and stigma.

2.1 The science of wellbeing

The chapter begins first by outlining a key component within the conceptual framework: the science of wellbeing. In this section, the key philosophical theories of wellbeing relevant to measurement are described alongside the development in wellbeing literature across the disciplines of psychology, economics, health, anthropology, sociology, and development studies. The recent movement toward seeing wellbeing as a multidimensional construct is then put forward, before highlighting the Western bias in wellbeing measurement.

2.1.1 Philosophies of wellbeing and their influence on the science of wellbeing

For centuries, philosophers, scholars, and religious leaders have been considering and developing theories of wellbeing to better understand what makes a good life and how individuals can flourish (Fletcher, 2015b). Such philosophies have been instrumental in shaping how all disciplines understand and measure wellbeing today. This section discusses the key wellbeing philosophies that have influenced the science of wellbeing more broadly, as well as those which are closely related to participatory wellbeing frameworks: hedonism, eudaimonism, desire-fulfillment, and objective list theories. It should be noted from the outset that wellbeing measurement has been predominantly influenced by Western notions of philosophy, largely originating from Ancient Greece (Joshanloo, 2014)[1]. It is for this reason only that this section takes a focus on these theories. The Western bias within the science of wellbeing, which has been present in both philosophy and psychology (as well as other disciplines), presents concerns for wellbeing measurement, and will be discussed further in Section 2.1.4.

Hedonism has been the most influential theory of wellbeing within the psychology discipline, driving some of the most commonly used subjective wellbeing instruments. While hedonism has been found in Eastern philosophies of wellbeing, such as Yangism (Yang, 2016) and some schools of Hinduism (Moen, 2015), it is the Ancient Greek philosophies of hedonism which have been the key influence for wellbeing measurement in the last two to three decades (Delle Fave et al., 2011; Henderson & Knight, 2012; Kashdan et al., 2008; Stoll, 2014). Hedonism is broadly defined as the belief that happiness is achieved through pleasurable experiences, while negative experiences detract from one's happiness (Gregory, 2015). While proponents of hedonism contend that the theory is an intuitive way of understanding happiness, with pleasure being a natural signal of happiness, critics of hedonism assert that hedonism can lead to over-consumption, self-indulgence, addiction, and greed (Veenhoven, 2003). Hedonism comes into direct conflict with other philosophies of wellbeing, such as Buddhism, which

[1] While some measurement tools have been developed based on Eastern philosophies, such as Buddhism (e.g. Neff, 2003), they are not widely used. Moreover, such scales have been criticised for being grounded in Western mindfulness notions (as opposed to true Buddhist philosophies) and have been found to not be valid amongst Buddhist population groups (Zeng et al., 2016).

maintain that the craving of pleasure can lead to suffering due to the transient nature of pleasure (Wallace & Shapiro, 2006).

Eudaimonism has long been considered as a superior alternative by critics of hedonism, although there is growing consensus amongst scholars that the two theories can be used collectively to more comprehensively understand and measure wellbeing (Henderson & Knight, 2012). Eudaimonia, which can be traced back to the writings of Aristotle, is often associated with the ideas of flourishing, living virtuously, or actualising one's potential (Ryan & Deci, 2001). This is in stark contrast to the hedonic understanding of wellbeing, which stresses the importance of mental states. Proponents of eudaimonism claim that it is superior to hedonic understandings due to its objectivity, comprehensiveness, multidimensionality, and moral validity (e.g. Annas, 1998, 2004). At the same time, critics contend that the fact that eudaimonism has not been used to develop a consistently defined measurement tool suggests that eudaimonia may be too difficult a concept to operationalise. Another common critique is that even though it is considered an objectivist theory, it relies on reports of subjective experiences (Kashdan et al., 2008). Indeed, as will be discussed in Section 2.1.2, while eudaimonism is considered to be a key theory of wellbeing, measurement tools directly based on the theory of eudaimonism (or a mix of hedonism and eudaimonism) are relatively lacking in contrast to those based on hedonism.

Eudaimonism can be considered to be a form of an objective list theory, which maintains "…that a plurality of basic goods directly benefit people" (Rice, 2013, p. 196). The key features of an objective list theory are that wellbeing is considered to be pluralistic and attitude-independent. Being attitude-independent means that a good has a positive impact on one's wellbeing regardless of one's attitude toward the good (Fletcher, 2015a). At first glance, objective list theories appear to come into direct conflict with participatory wellbeing frameworks due to the attitude-independent attribute. Indeed, we can see examples of this; for example, Nussbaum (2000), under the Capability Approach, formulated a list of 10 central human capabilities which was universalist in nature. Nussbaum's work has been highly

criticised on this basis (e.g. see Jaggar, 2006)[2]. Another key objective list theory is the basic needs approach (Streeten, 1984). Proponents of objective list theories argue that there is considerable overlap amongst cultures throughout the world as to what can be considered good for wellbeing (such as loving relationships and pleasure (Rice, 2013)). However, it should be noted that, in some ways, participatory wellbeing frameworks could be considered a form of an objective list theory. While they are culturally adapted to suit a specific context, the framework would then go on to assume that "goods" in a list (or dimensions, themes) are important for the wellbeing of the whole community. In this sense, participatory wellbeing frameworks could be considered a hybrid form of objective-list and desire-fulfillment theories.

Desire-fulfillment theory, a form of subjectivism, maintains that wellbeing is achieved through individuals getting what they want, or fulfilling their desires (Heathwood, 2015). Haybron (2008, p. 34) argues that desire-fulfillment theory is currently one of the leading theories of wellbeing, given its flexibility in accommodating individual preferences and desires. One can immediately see that participatory wellbeing frameworks align closely with desire-fulfillment theory, due to individual values being considered. However, it is important to note some critical differences. Firstly, desires are related to, but distinct from, wellbeing conceptualisations. Responding to the question, "What does wellbeing mean for you?" or "What do you need to live a good life?" will likely elicit different responses compared to questions asking about desires. Furthermore, participatory wellbeing frameworks aggregate wellbeing conceptualisations at the community or population level, while desire-fulfillment theory is focused on the achievement of desires at the individual level. This averts some limitations of, or challenges to, desire-fulfillment theory, such as ill-informed or unwanted desires (Heathwood, 2015). Haybron and Tiberius (2015) have developed "pragmatic subjectivism" as a theory of wellbeing for policy purposes, arguing that "policies aimed at promoting well-being are justified only when they are grounded in the conceptions of well-being of those on whose behalf policy is being made" (p. 713). Pragmatic subjectivism favours a subjectivist, or desire-fulfillment, approach, but is "person-respecting", allowing for some

[2] It should be noted that Nussbaum rejects these criticisms on the basis that the list is sufficiently vague, is intended to be political rather than comprehensive, and that the capabilities should be considered as opportunities individuals are entitled to rather than being persuaded to live up to (Nussbaum, 2012).

level of paternalism (Haybron & Tiberius, 2015). This theory can thus be seen to be closely related to the approach taken by participatory wellbeing frameworks.

Within the context of this thesis, it should be highlighted that I do not give preference to certain philosophies over others. While some are, overall, more aligned with the approach taken by participatory studies of wellbeing (as already discussed), the conceptual framework for this study does not reject any philosophy of wellbeing utilised in the development of participatory wellbeing frameworks. This aligns with the stance put forward by Alexandrova (2017) that a philosophy for the science of wellbeing should be pluralistic and contextual, and not be reliant on a single theory of wellbeing. As highlighted by Alexandrova and Fabian (2022), wellbeing is a value-laden concept, and is "thick" in the sense that it both describes and evaluates simultaneously. They argue that the most appropriate strategy to account for wellbeing being a thick concept is to seek political legitimacy through democratic processes, which removes the need to subscribe to a particular theory of wellbeing. The conceptual framework put forward in this thesis aligns closely corresponds with the position taken by Alexandrova and Fabian (2022).

2.1.2 The multidisciplinary nature of wellbeing constructs

While wellbeing constructs and measurement have historically been more of a philosophical and psychological preoccupation, the science of wellbeing has now expanded to a number of different disciplines, all of which have made an important contribution to our understanding of wellbeing and how it is measured (see Alexandrova (2017), Gasper (2010), and Phillips (2006)). As well as being open to all philosophies of wellbeing within this thesis, wellbeing frameworks across almost all disciplinary boundaries are considered. This section will briefly outline how some key disciplines have understood the science of wellbeing; namely, psychology, economics, health sciences, sociology and anthropology, and development studies.

Wellbeing in psychology

Traditionally, the field of psychology has been predominantly focused on the diagnosis and treatment of mental illness. However, in the 1980s, the work of Diener (1984) on subjective

wellbeing scales led to wellbeing being a greater focus for psychologists, both academically and clinically. Since that time, the number of tools developed to measure the wellbeing of individuals has grown exponentially. The scope of this thesis does not allow us to consider the various types of tools that have been developed (see Linton et al. (2016) for one review on wellbeing measures in adults). Instead, this section will outline the most prominent psychological measurement tools used to assess wellbeing in the population.

As highlighted earlier, while wellbeing and its measurement have been considered by various philosophical traditions, including Ancient Greek philosophy, Buddhism, and Confucianism (see Joshanloo (2014) for a review of Eastern traditions), wellbeing measurement within psychology has predominantly been influenced by Western philosophies of wellbeing. The most widely used psychological wellbeing measurement tools align predominantly with the Ancient Greek theory of hedonism[3], although tools developed based on the theory of eudaimonism are starting to become more commonplace (Deci & Ryan, 2008). While psychologists have historically been divided as to whether hedonism or eudaimonism is the appropriate theory for wellbeing measurement, there is growing consensus that both theories should be integrated to form a more holistic understanding of wellbeing within psychology (Henderson & Knight, 2012).

Measurement tools associated with the hedonic tradition of wellbeing comprise of both evaluative and affect measures. Evaluative measures consist of survey questions asking an individual to evaluate their quality of life, either on a broad level or in specific domains[4], while scales related to affect involve questions regarding recent emotional states[5] (Diener, 2009). Repeated measures of experienced wellbeing, which ask individuals how they feel at a particular moment, are also a hedonic measure of wellbeing (de Vries et al., 2021). Eudaimonism, on the other hand, relates more closely to "living well, or actualizing one's

[3] While non-Western cultures have also historically subscribed to forms of hedonism, the literature indicates that the form of hedonism used within wellbeing measurement tools is influenced by the Ancient Greeks (Delle Fave et al., 2011; Henderson & Knight, 2012; Kashdan et al., 2008; Stoll, 2014).

[4] Examples of evaluative measures include the "Cantril Ladder", which asks respondents to evaluate their life on a 10-point scale (Bjørnskov, 2010) and the Personal Wellbeing Index (PWI) which asks for evaluations of a number of life domains such as standard of living, health, relationships, and community (Cummins et al., 2003)

[5] Affect measures generally ask respondents how often they experience a number of different emotional states. Examples include the Scale of Positive and Negative Experiences (SPANE) (Diener, Wirtz, et al., 2010) and a wellbeing module for the European Social Survey developed by Huppert et al. (2009).

human potentials" (Deci & Ryan, 2008, p. 2). In contrast to hedonic measures, there is less consensus amongst psychologists as to how eudaimonic measures should be constructed, which has led to a wide variety of scales measuring different interpretations of eudaimonic theory (Kashdan et al., 2008). Constructs that are often associated with eudaimonic scales include personal growth, meaning in life, purpose, self-realisation, and values congruence (Baumeister & Vohs, 2002; Delle Fave et al., 2011; Huta & Ryan, 2010; Ryan & Deci, 2000)[6].

Psychological wellbeing measurement tools, developed through both the hedonic and eudaimonic tradition, are used for a number of different applications. These include comparing the wellbeing of individuals in different countries (e.g. Loubser & Steenekamp, 2017), assessing disparities in wellbeing between different population groups (e.g. Stavrova et al., 2012), and identifying the determinants of wellbeing (e.g. Fleche et al., 2012). Some have argued that subjective wellbeing should be measured and closely monitored by governments throughout the world as a way to assess progress, replacing or complementing other measures such as GDP (Costanza et al., 2014; Frijters et al., 2020; Krueger et al., 2004). Given the wide and expansive use of psychological measurement tools to assess wellbeing, it is clear the psychology discipline has had significant influence in the direction of how other disciplines have measured wellbeing.

Wellbeing in economics

The field of economics has historically relied on utility theory to explain people's choices, preferences, and behaviour. Utility theory holds that individuals' judgements and preferences are (or should be) made to maximise utility (or usefulness). Utility was defined by Bentham (1789, p. 2) as the "property in any object, whereby it tends to produce benefit, advantage, pleasure, good, or happiness (all this in the present case comes to the same thing) or (what comes again to the same thing) to prevent the happening of mischief, pain, evil or unhappiness to the party whose interest is considered". Mill (1879) referred to utility as the "Greatest

[6] Examples of eudaimonic measures include the Flourishing Scale, which asks respondents their level of agreement with eight statements related to constructs such as living a purposeful and meaningful life, contributing to the wellbeing and happiness of others, and being a good person and living a good life (Diener, Wirtz, et al., 2010), and the Flourishing Index by Huppert and So (2013) which incorporates the constructs of competence, engagement, meaning, optimism, positive relationships, resilience, self-esteem, emotional stability, vitality, and positive emotion.

Happiness Principle", arguing that "actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness" (p. 210). Mill defined happiness as "intended pleasure, and the absence of pain", and unhappiness as "pain, and the privation of pleasure", reflecting a hedonic understanding of wellbeing.

The understanding and definition of the concept of utility has been adapted markedly since initially put forward by Bentham and Mills (Broome, 1991). While there is still considerable debate regarding its definition and usage, utility is now generally defined as "the value of a function that represents a person's preference", holding that an individual's preferences will maximise utility (Broome, 2019). This relates closely to the theory of revealed preferences, which broadly states that if an individual chooses to purchase one combination of goods over another (given an individual's current economic situation), then that individual is assumed to prefer that combination of goods and thus have greater utility, wellbeing or happiness (Varian, 1987).

The theories of utilitarianism and revealed preferences thus contend that greater levels of income lead to a larger choice set, and subsequently higher utility, wellbeing, or happiness. However, this assertion has been disputed through a large number of studies. Most prominently, the Easterlin Paradox has proposed that happiness does not increase with income growth over time, based on data from a large number of countries throughout the world (e.g. Easterlin, 1974; Easterlin & O'Connor, 2020). This, as well as other limitations of utilitarianism and revealed preference theory, has led to numerous critiques of economic theories (Kőszegi & Rabin, 2008). In developing the Capability Approach, Sen (1999) was a vocal critic of utilitarianism, highlighting that it undermined the concept of social justice for three reasons. Firstly, Sen argued that by focusing on maximising utilitarianism within a society, it ignores inequalities in utility, leading to distributional indifference. Secondly, utilitarianism neglects rights, freedoms, and other non-utility concerns. Finally, Sen argued that utilitarianism overlooks the impacts of adaptation and mental conditioning (adaptive preferences are discussed in greater detail in Section 2.6.3).

With utilitarianism generally reflects a hedonic philosophy of wellbeing, measures of subjective wellbeing are often used as proxies for utility (Frey & Stutzer, 2002). Measures of

subjective wellbeing now hold an important place for many empirical economic studies, such as examining the relationship between economic growth or income and subjective wellbeing, and identifying the economic determinants of wellbeing (e.g. Easterlin, 1974; Kenny, 2005; Reyes-García et al., 2019).

It should be noted that while in this thesis I explore participatory wellbeing frameworks across all disciplines, the foundations of utility and revealed preferences based on classical economic theory are at odds with the central tenets of wellbeing as measured through participatory approaches. A participatory wellbeing framework relies on consultation with population groups as to what wellbeing means to them, or what constitutes wellbeing. Utilitarianism and revealed preference theory assert that utility, wellbeing, or happiness can be assessed simply through an individual's behaviour or choices, which is at odds with the consultative approach upheld by participatory wellbeing studies.

Wellbeing in health sciences

While health has historically focused on matters related to absence of illness, a shift in the last century has led to health taking on a broader meaning, with the World Health Organization (WHO) in 1948 defining health as a "state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (World Health Organization, 2014, p. 18). This more holistic understanding of how we view health, which has strong ties to how wellbeing is generally understood, has led to the health discipline seeking ways to measure health as defined by the WHO.

Health-Related Quality of Life (HRQoL) has been an approach commonly used by researchers and practitioners in the health sciences seeking to measure this broader definition of health. The term "quality of life" (QoL) was first used within the medical literature in the 1960s, with the term HRQoL being coined some decades later in the 1980s (see Karimi & Brazier, 2016). The terms QoL (within the health sciences) and HRQoL are often used interchangeably, with Karimi and Brazier (2016) highlighting that a lack of clear distinction between the two terms has led to confusion and is a cause for concern. It should be noted that I examine only those participatory wellbeing frameworks within the HRQoL space which reflect a more holistic understanding of wellbeing, closer to QoL than HRQoL as defined by Karimi and Brazier (2016).

There are now a large range of HRQoL measurement tools, which have been developed for certain contexts, purposes, and conditions (see Pequeno et al., 2020, for a systematic review). Those most widely used include the SF-36 which is predominantly health focused but includes a social domain[7], the EQ-5D which is focused on physical and mental health[8], and the WHOQOL-100[9] which encompasses a broad range of dimensions covering various components of wellbeing. HRQoL measurement tools are used to assess patient progress (e.g. Smith et al., 2014), to compare population groups (e.g. Bisegger et al., 2005), and to calculate quality-adjusted life-year (QALY) alongside life expectancy, to obtain "healthy" life years (Prieto & Sacristán, 2003).

Wellbeing in anthropology and sociology

The concepts of wellbeing and happiness have only been seriously considered within the disciplines of anthropology and sociology relatively recently (Cieslik, 2014; Ferraro & Barletti, 2016). With wellbeing measurement predominantly being dominated by psychology and economics, Cieslik (2014, p. 422) suggests that from a sociological perspective, "this neglect of happiness research is rooted in how sociologists often construct happiness as something that is predominantly a subjective, positive phenomenon that has emerged with the wider development of western modernity". From an anthropological perspective, Mathews and Izquierdo (2009) maintain that anthropologists have been sceptical of the study of wellbeing, due to wellbeing studies traditionally being preoccupied with universal measurement tools and the comparison of levels of wellbeing across different cultures, as well as the Western bias inherent within wellbeing measurement (as will be discussed further in Section 2.1.4), which are incompatible with anthropological ideologies.

However, there has been a growing movement within these two disciplines to take happiness and wellbeing studies more seriously. Thin (2009) argues that anthropologists *must* engage

[7] The SF-36 includes eight dimensions: physical functioning, social functioning, role limitations (physical problems), role limitations (emotional problems), mental health, vitality, pain, and general health perceptions (Brazier et al., 1992).
[8] The EQ-5D includes five questions related to mobility, self-care, usual activities, pain/discomfort, and anxiety/depression (Balestroni & Bertolotti, 2012).
[9] The WHOQOL-100 includes six dimensions: physical capacity, psychological, level of independence, social relationships, environment, and spiritual/religion/personal beliefs (World Health Organization, 1998).

more heavily in the wellbeing discourse to fill a number of deficits that are inherent in the way the more dominant disciplines treat the science of wellbeing. In particular, some anthropologists argues that anthropology can, should, and must promote the idea that wellbeing is socially and culturally constructed, with societies having different conceptions and understandings of wellbeing (Ferraro & Barletti, 2016; Mathews & Izquierdo, 2009; Thin, 2009). In a similar vein, Cieslik (2014) argues that accounts of happiness are typically "thin" (i.e. "crude representations of happiness as vehicles for our traditional depictions of modernity", p. 422), and that sociologists can help to redefine happiness as a "slippery concept that has subjective dimensions as well as being used to represent collaborative activities, processes and practices" (p. 426). Such attempts by scholars to contribute to the wellbeing discourse in these ways can be observed in a number of anthropological and sociological studies (e.g. Izquierdo, 2009; Loera-González, 2016; Thompson, 2018).

It should be highlighted that how wellbeing is considered within the anthropology discipline, which emphasises the influence of culture and context in shaping understandings of wellbeing, has a closer overlap with participatory wellbeing frameworks than the approaches of other disciplines. However, it should be noted that, at the same time, certain aspects of the overall conceptual framework for this study are in conflict with the anthropological perspective. As will be discussed in Section 2.4, research and policy impact is an important component of the conceptual framework, with the application of participatory wellbeing frameworks (as described in Part 3) seen as an important path to achieving impact. Some applications explored, and also undertaken, within this thesis entail the development of measurement tools to assess the level of wellbeing within a society or across societies. Anthropological paradigms would generally reject the idea of developing wellbeing measurement tools, arguing that such approaches are crude, and undermine the complexity of wellbeing as a concept (Ferraro & Barletti, 2016). Indeed, while there are a number of examples of participatory wellbeing studies being undertaken within the anthropological literature through the use of ethnographic approaches, very few examples within this literature base were explored in this thesis due to these studies not clearly articulating a set of dimensions, themes, or indicators, which was part of the criteria for the systematic review presented in Chapter 4. Thus, while there are strong ties between participatory wellbeing

frameworks and anthropological/sociological paradigms, there are also some noteworthy conflicts between these paradigms and the overall conceptual framework use for this thesis, which highlights the influence of other disciplines on this thesis.

Wellbeing in development studies

As with other disciplines discussed above, development studies has traditionally been predominantly deficit-focused, placing greater emphasis on the lessening of poverty and deprivation rather than the enhancement of wellbeing (White, 2010). As highlighted by White (2009), a major impediment to the concept of wellbeing being incorporated into development studies and practice is that it is "notoriously difficult to define because it means different things to different people" (p. 3). However, the advancement of our understanding of wellbeing through the fields of anthropology and sociology has enabled development studies to make better use of wellbeing understandings and measurement tools.

As put forward by Copestake (2008), the measurement of wellbeing for development incorporates four key models of development, which have traditionally been used in isolation. Firstly, an *income-first approach* has focused on increases in income or consumption to improve the lives of individuals. The income-first approach has been justified and utilised because it has been seen as a mechanism to enhance freedom of choice, and due to its appropriateness as a proxy for welfare and poverty (Laderchi et al., 2003). Secondly, the *needs-first approach* grew through a concern that economic growth alone was not adequately addressing levels of poverty throughout the world (Streeten & Burki, 1978). A basic needs approach stresses the importance of meeting certain standards of resources, such as nutrition, access to health services, education, housing, and employment (Stewart, 1985). Thirdly, a *rights-first approach* emphasises the importance of enhancing the rights of marginalised population groups to enable equal access to resources (Cornwall & Nyamu-Musembi, 2004). Finally, a *local-first approach* affirms that development should preserve local culture, and incorporate the views and traditions of communities (Copestake, 2008). Thus, according to Copestake (2008, p. 580), "combining these four distinct mental models requires an understanding of the contrasting and partial views of wellbeing that they reflect, and hence a broader definition of wellbeing capable of incorporating them all".

The Capability Approach has also been influential in broadening the focus of development from income-based measures to the expansion of capabilities (as discussed further in Section 2.5) (Sen, 1985b). While the operationalisation of the Capability Approach initially led predominantly to the development and use of multidimensional poverty measures (Alkire & Foster, 2011), the theory is now applied to the field of wellbeing more broadly (see Robeyns, 2017).

In highlighting the potential value of incorporating the concept of wellbeing into development studies, White (2009) discusses the various approaches that have been used within the field. While there are divergences between these, the common characteristics are that the approaches are multidimensional and context-specific, that wellbeing is seen as a process rather than a state, that wellbeing is understood as being dependent on institutional/environmental as well as individual factors, and that the enhancement of wellbeing is seen as beneficial for all.

2.1.3 Wellbeing as a multidimensional construct

Having discussed the key disciplines through which the science of wellbeing has been influenced, it is important to now briefly discuss wellbeing as a multidimensional construct. Participatory wellbeing frameworks are inherently multidimensional, as they identify a set of dimensions, indicators, or themes that holistically conceptualise wellbeing for a particular population group. Therefore, this section will briefly outline the history of wellbeing as a multidimensional construct, detailing its increased usage over the last few decades.

Wellbeing has been considered as a multidimensional construct by some schools of thought for several decades. In particular, the Capability Approach has been highly influential in promoting the idea of wellbeing, or poverty, being measured multidimensionally. As will be discussed further in Section 2.5, Sen (1985a) argued that in order to improve the lives of individuals in a meaningful way, human development should seek to expand the freedoms and capabilities of people to lead the kind of lives they have reason to value, rather than relying on single measures such as income. A “capability set” (as will be discussed in Section

2.5.1), is inherently multidimensional, identifying the areas of life that are important for a particular population group.

While the concept of a multidimensional view of wellbeing has existed for some time, its usage in empirical work is only relatively recent. Instigated by the Capability Approach, the Human Development Index was developed in 1990, and sought to complement existing national measures of progress such as GDP by incorporating three dimensions of health, education, and standard of living into an index (United Nations Development Programme, 2020). Other examples utilising the Capability Approach include the Multidimensional Poverty Index developed by Alkire and Foster (2011), and multidimensional measurement tools developed in more localised contexts (e.g. Greco et al., 2015; Yap & Yu, 2016).

Of particular influence has been the *Report by the Commission on the Measurement of Economic Performance and Social Progress*, which promoted the Beyond GDP movement (Stiglitz et al., 2009). The report argues that in order to measure national progress, countries and international bodies throughout the world should go beyond the sole use of standard measures such as GDP, and look to measure multidimensional wellbeing, incorporating dimensions such as health, education, political voice, and social connections. This report has been instrumental in supporting a number of nations and institutions throughout the world to measure multidimensional wellbeing. Examples include the OECD (2011), Iceland (Government of Iceland, 2019), and New Zealand (Dalziel et al., 2019). Such frameworks and their policy impact will be a focus of Section 2.4.

The measurement of multidimensional wellbeing has not only been prevalent within the Capability Approach and through use of measures of progress, but also in other disciplines. For example, the Social Indicators Movement, launched in the 1960s, has been highly influential in shaping our understandings of wellbeing and quality of life (see Land & Michalos, 2018). Furthermore, there has been a growing movement to recognise subjective wellbeing as a multidimensional phenomenon. For example, the Personal Wellbeing Index (PWI) has been one of the more commonly used multidimensional measurement tools to assess subjective wellbeing. Developed for both adults and children (Cummins et al., 2003; International Wellbeing Group, 2013), the index comprises a number of dimensions, such as

standard of living, achieving in life, and personal safety, and is widely used throughout the world (e.g. Casas et al., 2012; Pérez-Belmonte et al., 2021; Tomyn & Cummins, 2011; Tomyn et al., 2013; Yiengprugsawan et al., 2010). More recently, scholars have also been developing context-specific multidimensional subjective wellbeing measurement tools (e.g. Manuela & Sibley, 2012; Maulana et al., 2019; White et al., 2014). Multidimensional wellbeing measurement has also been integral within the health sciences discipline through measures of HRQoL, as already discussed.

2.1.4 A Western bias in wellbeing measurement and conception?

It has been well established that research in the social sciences is heavily influenced by a Western bias (e.g. Arnett, 2008; Henrich et al., 2010). For example, a review of studies published in six top journals within the psychology discipline found that 68% of research samples were based in the United States, 14% were based in other English-speaking countries, and 11% were from Europe. The remaining samples were located in Asia (1%) and Israel (1%) (Arnett, 2008). This bias was mirrored when examining the location of first authors, with 73% of first authors based at universities within the United States, and only 2% of authors affiliated with universities outside of English-speaking countries or Europe (Arnett, 2008). As Henrich et al. (2010) show, individuals from WEIRD (Western, Educated, Industrialised, Rich, and Democratic) countries – those countries dominating research studies – are not representative of the global population on a range of measures. Thus, the assumption by social researchers that their findings and theories are universal is unfounded and has significant implications for how we understand human behaviour.

This same Western bias found within the social sciences more generally is also evident within the science of wellbeing. As has already been outlined, wellbeing measurement has been dominated by Western philosophies of wellbeing, with other philosophies such as Islamic or Eastern philosophies of wellbeing gaining little attention (Joshanloo, 2013, 2014)[10]. In fact, one of the greatest contentions surrounding wellbeing measurement has been over the use

[10] It should be noted that the distinction between different philosophies is more fluid than the binary labels of "East" and "West" convey, with there being many commonalities between "Eastern" and "Western" philosophies (e.g. see Sharma, 2011). This discussion uses these labels to distinguish between Greek and non-Greek philosophies.

of two Ancient Greek philosophies of wellbeing (eudaimonia and hedonia) (Henderson & Knight, 2012), as opposed to discussion over whether non-Western wellbeing philosophies should be incorporated into measurement. While subjective wellbeing measurements within psychology are seemingly value-neutral (such as life evaluations), Christopher (1999) highlights that such instruments implicitly incorporate Western values such as individualism (with the respondent required to make that evaluation themselves) and freedom of choice into how wellbeing is assessed.

This lack of attention to non-Western philosophies of wellbeing has strong implications for the science of wellbeing and its use of tools developed using Western philosophies in non-Western countries. In contrasting key Western (hedonism and eudaimonism) and Eastern (Hinduism, Buddhism, Taoism, Confucianism, and Sufism) philosophies of wellbeing, Joshanloo (2014) highlights a number of key points of difference. Of most relevance, Joshanloo (2014) argues that concepts of hedonism tend to be rejected within Eastern philosophies, suggesting that such philosophies tend to be more eudaimonic in nature (while stressing that Western models of eudaimonism may not be directly applicable to Eastern populations). This is of particular concern, given the dominance of subjective wellbeing measures in psychology and their roots in hedonism (Deci & Ryan, 2008). What is particularly problematic is that negative emotions and suffering are not necessarily considered detrimental for wellbeing in Eastern cultures, and can contribute to spiritual development (Joshanloo, 2014). Thus, the use of hedonic instruments to measure wellbeing in such cultures may well yield invalid results in certain populations.

Secondly, Joshanloo (2014) contends that Eastern philosophies of wellbeing or happiness tend to emphasise self-transcendence, as opposed to Western philosophies which highlight the importance of self-enhancement. This is seen through Western societies seeing attributes such as autonomy and self-esteem as important for wellbeing, while Eastern understandings tend to de-emphasise the concept of the self. Thirdly, Western models of wellbeing emphasise mastery over harmony, with a good life understood as “attempting to change, master, and control the world (including various aspects of one’s life, relationships and nature)” while Eastern understandings of wellbeing highlight the importance of achieving harmony with others, the environment, and the cosmos (Joshanloo, 2014, p. 485). Finally, Joshanloo (2014)

draws attention to the fact that religion and spirituality are often explicitly left out of wellbeing models (although they may well be used as a predictor for wellbeing) on the grounds of rationality, testability, and objectivity, while spirituality and religion are entwined into understandings of wellbeing in the East. These findings regarding Eastern and Western conceptualisations of wellbeing have been echoed by a number of scholars (e.g. Lu & Gilmour, 2004, 2006; Maulana et al., 2018; Uchida & Kitayama, 2009; Uchida et al., 2004)

These concerns are not limited only to Asian cultures. For example, the *buen vivir* model, which has influenced wellbeing policy throughout Latin America, integrates the Indigenous concepts of living in harmony with each other and the natural environment to surmount concerns that development was becoming increasingly focused on progress and wealth accumulation (Ruttenberg, 2013). Furthermore, models of Indigenous wellbeing throughout Australia and the Pacific highlight cultural, spiritual, collectivist, and connection with nature concepts as dimensions of wellbeing which are often excluded in existing instruments and frameworks (Butler et al., 2019; Durie, 2006; Manuela & Sibley, 2012; Yap & Yu, 2016).

This same bias is also prevalent within measures of multidimensional wellbeing, particularly around the constructs of wellbeing utilised within measurement tools. As already noted, the PWI is one of the most commonly used psychological tools to evaluate wellbeing multidimensionally. The domains for the PWI were developed and validated based on an Australian sample in 2001, yielding the dimensions of standard of living, health, personal achievement, personal relationships, personal safety, community connectedness, and financial security (Cummins et al., 2003). The PWI has since been used widely in a large number of contexts, including Brazil, Bosnia and Herzegovina, Chile, Croatia, Serbia, Spain, and Thailand (Casas et al., 2012; Jovanović et al., 2018; Pérez-Belmonte et al., 2021; Yiengprugsawan et al., 2010).

Proponents of universal measurement tools would argue that a process of instrument validation can help to ensure their cultural appropriateness in different contexts. Indeed, this has been done extensively for the PWI in the contexts described above, and in some cases has resulted in minor adjustments to the scale such as reducing the number of scale items (e.g. Jovanović et al., 2018). However, with most validation processes relying on the accuracy of

translation and statistical tools such as Factor Analysis or Principal Components Analysis, these approaches to validation often lack meaningful engagement with participants to ensure the constructs measured are culturally relevant. Thus, while measurement tools often undergo some form of validation to suit different cultural contexts, these processes can be seen as fitting square (Western) pegs into round holes, perhaps at times making minor adjustments to suit a new cultural context, but nevertheless being grounded in Western philosophies and conceptualisations.

Western biases can also be observed in constructs of wellbeing beyond the discipline of psychology. For example, Mahlert (2018) analysed the Western bias of the Human Development Index, arguing that the indicators of a decent living standard (measured through per capita Gross national income and knowledge (school enrolment rates) are strongly influenced by Western modernity through a focus toward professionalisation and inclusion in institutions. Firstly, Mahlert contends that the use of school enrolment rates to measure knowledge elevates the status of formal schooling, while overlooking alternative non-Western forms of knowledge-building through sources such as family, peers, and social networks. In relation to a decent standard of living, Mahlert (2018) argues that per capita Gross national income is a crude indicator, which relies on a Western belief system that inclusion in the economic system is vital for living standards, ignoring other ways in which a decent living standard can be achieved.

Another example of potential Western bias in the measurement of societal progress is the OECD Better Life Index[11], especially where it is applied beyond the OECD countries. The index utilises 11 dimensions of wellbeing (housing, income, jobs, community, education, environment, civic engagement, health, life satisfaction, safety, and work-life balance) to compare the overall wellbeing of the 35 OECD member countries, plus selected non-member countries (such as Brazil, Russia, and South Africa). The OECD also notes that there are plans for the index to cover China, India, and Indonesia in the future[12]. A description of the process to select dimensions can be traced back to the 2011 “How’s life?” report (OECD, 2011), which

[11] See https://www.oecdbetterlifeindex.org
[12] https://www.oecdbetterlifeindex.org/about/better-life-initiative/#question3

specified that the framework was shaped by three separate sources: the report by Stiglitz et al. (2009), previous work by the OECD (Hall et al., 2010), and measurement practices throughout the world (highlighting Australia, Finland, Germany, and New Zealand – all generally considered to be Western countries – as key examples).

The reliance on these three sources of influence for the development of a highly used and influential framework warrants some examination. When scrutinising the two reports mentioned, Stiglitz et al. (2009) give little background or justification for the dimensions which they propose should be considered[13]. The framework put forward by Hall et al. (2010) is more comprehensive, but the authors are still not explicit about how the dimensions were identified, simply stating that "to define these dimensions, we have looked at work from around the world" (p. 16), without noting any specific countries or frameworks. When examining the dimensions and indicators raised by Stiglitz et al. (2009) and Hall et al. (2010) we can see that they succumb to some of the biases raised earlier. Specifically, they emphasise self-enhancement as opposed to self-transcendence, and overlook the importance of religion and spirituality, as raised by Joshanloo (2014). Furthermore, they elevate the importance of professionalism and inclusion in institutions as put forward by Mahlert (2018).

Despite these examples of Western influence, there is a growing appreciation of cultural and context nuance in the field of wellbeing measurement (e.g. see OECD, 2015). As discussed previously, the anthropology discipline has been a strong critic of traditional approaches to measuring wellbeing, arguing that the intention to measure wellbeing universally and compare across cultures is inappropriate, and that instruments to measure wellbeing are inherently Western-biased (Mathews & Izquierdo, 2009). One way to overcome this bias, and better appreciate the diversity in how wellbeing is understood, is to use participatory approaches to consult more deeply with population groups on meanings of wellbeing.

[13] The dimensions proposed are material living standards (income, consumption, and wealth), health, education, personal activities including work, political voice and governance, social connections and relationships, environment (present and future conditions), and insecurity (of an economic as well as a physical nature).

2.2 Participatory approaches

To define wellbeing as a multidimensional concept, a process needs to be undertaken to determine what constructs of wellbeing should be considered. To ensure that constructs of wellbeing are culturally relevant (and to avoid the Western bias previously discussed), I am primarily concerned with the use of participatory approaches to represent and measure wellbeing. Within this thesis, the term "participatory approach" refers exclusively to research participation, with the concept of political participation considered out of scope.

This section will firstly outline the various definitions and scales of research participation that have been developed and will put forward the definition that I employ for this thesis. The benefits of research participation will then be discussed at both a general level and in the context of participatory wellbeing frameworks. Finally, the limitations and challenges of participatory approaches will be outlined.

2.2.1 What definition of participatory research?

As highlighted by Chambers (1994a), "participatory research" and related terms have been used since before the 1970s. Initially fostered within the development sector as an approach to providing adult education, the central tenets of participatory research were that "poor people are creative and capable, and can and should do much of their own investigation, analysis and planning; that outsiders have roles as convenors, catalysts and facilitators; that the weak and marginalized can and should be empowered." (Chambers, 1994a, p. 954).

Since the 1970s, participatory approaches have become increasingly utilised within research, stemming from a growing recognition that research should seek to incorporate the views and opinions of individuals through bottom-up processes (Fahy, 2015). This movement has now progressed beyond just the development sector, and is used widely in a number of disciplines, such as child studies (Groundwater-Smith et al., 2014) and the health sciences (Minkler & Wallerstein, 2011). Alongside this growing movement, however, has been a continued blurring of the term "participatory", with the phrase being used to represent different things. As highlighted by Cornwall and Jewkes (1995, p. 1668), "'participation' is rapidly becoming a catch-all concept, even a cliché". They argue that the key difference between participatory

research and other methodologies is where power lies at different stages in the research process, with genuine participatory research seeking to reduce power imbalances between the research team and participants.

There is now general consensus amongst scholars that there is no one-size-fits-all definition of participatory research, but rather that levels of participation are on a sliding scale, from studies that are minimally participatory, to those that are highly participatory (Arnstein, 1969; Cornwall & Jewkes, 1995; Hart, 1992; Pretty, 1995; Shirk et al., 2012). The rest of this section will outline these various "scales" or "ladders" before clearly articulating how the definition of participatory research I use in this thesis aligns with such scales.

Arnstein's (1969) ladder of citizen participation is one of the more influential scales of participation. While initially developed for the purposes of public participation, it has since been applied widely for participatory research (e.g. Jardine & James, 2012; Snoeren & Frost, 2011; Wykes, 2014). Arnstein's ladder of participation begins at the lowest end with forms of non-participation in the political process (manipulation and therapy), to degrees of tokenism (informing, consultation, and placation), and finally to degrees of citizen power (partnership, delegated power, and citizen control). As the labelling suggests, Arnstein (1969) argues that true participation comes only through citizen power; that is, either through partnership, delegated power, or citizen control. A similar ladder has been developed specifically for children's participation (encompassing both political and research participation), which incorporates non-participation (manipulation, decoration, and tokenism) and degrees of participation (assigned but informed, consulted and informed, adult-initiated shared decisions with children, child-initiated and directed, and child-initiated shared decisions with adults) (Hart, 1992).

Developed specifically for the purposes of research participation, Cornwall and Jewkes (1995) discuss four different modes of participation, as put forward by Biggs (1989). They are: (1) contractual, whereby individuals are contracted into a study; (2) consultative, with individuals asked for their views and opinions regarding policy experiments; (3) collaborative, where researchers and local people work in partnership on a research study; and (4) collegiate, whereby the research is led by local people in an environment of mutual learning.

The scale outlined by Cornwall and Jewkes (1995) has similarities to that put forward by Shirk et al. (2012) who identify five models to characterise what they have coined "public participation in scientific research". These models are: (1) contractual, whereby scientists are contracted by a community to conduct research and report on the results; (2) contributory, which are projects designed by scientists but for which the public primarily contribute data; (3) collaborative, which are projects designed by scientists where the public contribute data, but also contribute to aspects of the research cycle; (4) co-created, where scientists and the community work in partnership, with the public involved in most or all phases of the research process; and (5) collegial, whereby individuals in the community conduct research independently.

The definition of "participatory" within the context of wellbeing frameworks that I use in this thesis is broad, encompassing any research which has engaged or consulted with individuals or communities (through qualitative or quantitative approaches) to better understand conceptualisations or understandings of wellbeing. The primary reason for the use of the term "*participatory* wellbeing frameworks" is its wide use within the literature to delineate such frameworks from those that have been developed without consultation with individuals or communities, relying predominantly on so-called "experts" (generally meaning academics or practitioners in the field) (e.g. see Alkire, 2013; Camfield, 2006; White & Pettit, 2004).

Moreover, as will be shown in Chapter 4, participatory wellbeing frameworks have been developed using varying degrees of participation. When translated from the sphere of "political" to "research" participation, the definition of "participatory" as used in this thesis loosely spans the rungs on the ladder identified as "citizen power" by Arnstein (1969) and those identified as "degrees of participation" by Hart (1992). Within the "research participation" models, this definition of "participatory" encompasses all participation modes as discussed by Cornwall and Jewkes (1995) and all models except the first, contractual, model identified by Shirk et al. (2012) (as the public does not contribute any data). A scale of participation, established specifically for the purposes of participatory wellbeing frameworks, will be put forward and described in Chapter 4.

2.2.2 Benefits of participatory approaches

In its attempt to overhaul traditional, colonial paradigms and ways of doing research, participatory approaches are purported to bring about a number of benefits when implemented appropriately. According to Chambers (1994b, p. 2), participatory research describes "an empowering process which enables local people to do their own analysis, to take command, to gain confidence, and to make their own decisions". This section will firstly unpack a number of reported benefits of participatory approaches identified in the literature, namely the incorporation of expert knowledge of those with lived experience; the value of participants as co-investigators; increased empowerment of communities; culturally appropriate research; and sustainability and continuity of research impact. The literature related to participatory approaches and policy impact will be discussed in greater detail in Section 2.4.4. The section will then conclude by briefly discussing these benefits in the context of wellbeing measurement. The challenges and limitations of participatory approaches will be discussed in Section 2.2.3.

Expert knowledge of those with lived experience

One of the more frequently noted benefits of participatory research is that the approach values the knowledge of participants or community members, seeing them as experts in their own right. This is a substantial shift from traditional research paradigms, which largely see researchers and scientists as the experts. For example, Moser and Stein (2013) outline a participatory research project to measure urban adaptation to climate change in Kenya and Nicaragua, and highlight that local knowledge was integral in better understanding significant weather hazards that had occurred, adaptation practices, and institutional mapping. Within the health sciences, MacAulay et al. (1999) outline a range of studies that have benefited from local expertise and knowledge, emphasising that collaboration and research partnerships are integral to the success of such projects. While there are fewer examples of participatory studies within economics, Pietrykowski (2015) argues that social economics could benefit greatly through increased utilisation of participatory approaches. For example, community members could help to monitor changing economic and environmental conditions within a neighbourhood.

The value of local knowledge is of particular relevance in the context of participatory wellbeing frameworks, throughout the whole spectrum of participation. In contrast to theoretical, bureaucratic, or technocratic approaches to selecting dimensions of wellbeing (see Alkire, 2013 for a review), participatory approaches ensure that the resulting set of dimensions, themes, or indicators closely reflect the views of the community. White and Pettit (2004, p. 8) highlight this point, noting that "…perhaps the most obvious contribution of participatory research to the understanding of well-being is in its capacity to draw out culture, location and social group-specific understandings of the dimensions of well-being". This perspective is clear when looking at studies that have developed participatory wellbeing frameworks. For example, Greco et al. (2015, p. 75) in their participatory wellbeing study with women in rural Malawi note that "the study's findings portray complex and highly nuanced perceptions that women in rural Malawi have of their life and wellbeing", while Biggeri and Anich (2009, p. 90) in their study with street children in Kampala found that "…the children participating in our research identified dimensions and issues (agency, autonomy, love and care) often not covered by other approaches".

The value of participants as co-researchers

A core component of participatory studies (especially those which sit at the higher levels of the participatory spectrum) is the value of community members or participants as co-researchers. Participants have been shown to have a valuable role to play in many components of the research cycle, including research design, data collection, and analysis (Brown & Tandon, 1983; Jagosh et al., 2012; Lundy et al., 2011; O'Fallon & Dearry, 2002; Pope, 2020). In particular, the greater levels of trust that co-researchers often have with the community – in contrast to researchers, who can be seen as outsiders – can help ensure higher levels of recruitment and a greater richness in the data collected (e.g. Castleden et al., 2008; Christopher et al., 2008; Jagosh et al., 2012). The limitations regarding the extent to which co-researchers are actually involved in participatory studies is discussed in Section 2.2.3.

Empowerment of communities

Increased empowerment has been a key principle of participatory research since its inception (Chambers, 1994b). The instances of participatory research studies highlighting their impact

on community empowerment, community cohesion, and capacity building of community members are abundant within the literature. For example, Rambaldi (2013) highlights how participatory 3-dimensional modelling (involving the development of spatially referenced models of community environments) has resulted in improved self-esteem of individuals and social cohesion of communities. Travers (1997) discusses how a group of low-income women in a participatory action research study on health education were empowered to achieve social change and went through a process of continual learning.

Such findings suggest that empowerment could be achieved through participatory wellbeing studies which sit at the higher end of the participatory spectrum. Furthermore, even at the lower end of the participatory spectrum the process of considering, deliberating, and identifying what wellbeing means and how it should be measured may lead to empowerment, and to a greater sense of social cohesion and mutual understanding amongst community members.

Culturally appropriate research methods

Community engagement in research design and research practices can help lead to more culturally appropriate research methods being employed. For example, the utilisation of traditional research paradigms within Indigenous communities has often been a source of distress for individuals and communities due to a history of colonisation, insensitivity by researchers in seeing research participants as passive beings requiring assistance from "experts", and lack of trust (Castleden et al., 2008; Cochran et al., 2008; Leeuw et al., 2012; Smith, 2021). Further to this, traditional research methods can be seen as extractive, with the community perceiving itself as gaining little from the process. Cochran et al. (2008, p. 1) reflect this sentiment through a quote from a member of an Alaskan Indigenous community, who stated that "researchers are like mosquitoes; they suck your blood and leave".

Thus, the integration of participatory approaches can be one approach to help ensure the cultural appropriateness of research methods and ensure research is beneficial to communities. Indeed, in their systematic review of the benefits of participatory research within the health space, Jagosh et al. (2012) find that ensuring culturally appropriate research is a key reported benefit. They highlight that the incorporation of participatory approaches

helped to shape the scope and direction of research, supported research teams to develop program and research protocols, and resulted in the use of appropriate data collection processes. However, as noted by Leeuw et al. (2012), participatory approaches by themselves may not necessarily be enough to avert ethical and political dilemmas, with the quality of relationships between researchers and community particularly imperative to ensure the decolonisation of research methods with Indigenous population groups.

Sustainability and continuity of research impact

Incorporating participatory approaches into action research projects can help to ensure the sustainability of such projects, resulting in greater long-term impact. As highlighted by Jagosh et al. (2012), participatory approaches can result in community members building capacity and expertise in the subject matter, developing momentum, and establishing networks to help ensure that a project continues to be relevant beyond the initial funded timeframe. In contrast, when such projects are conducted with lower levels of community participation, they are less likely to continue when outside experts, with all the knowledge, experience, and expertise, leave the project. The link between policy impact, wellbeing frameworks, and participatory approaches will be discussed in greater detail in Section 2.4

2.2.3 Limitations and challenges of participatory approaches

While a number of benefits of participatory approaches to research have been outlined, these are not uncontested, with a vast literature outlining the limitations, challenges, and even potential dangers of participatory approaches to research. This section will outline some of the key limitations and challenges outlined within the participatory literature: rhetoric and tokenism; power imbalances; confidentiality of data; time burden and challenges in recruitment; and elite capture.

Rhetoric and tokenism

One of the key challenges noted within the participatory research literature is the frequent rhetoric around participatory research as a "gold standard", and the tokenism emerging in this context, with some researchers claiming to use participatory approaches, but in fact doing so at only a superficial level. Hayward et al. (2004) discuss how the term "participatory" has

been increasingly used as a buzzword, automatically eliciting positive sentiments about research applying such approaches, which can result in the actual participatory techniques applied in studies receiving little critique. In a similar vein, Mohan and Stokke (2000) outline how the concept of "the local" is often romanticised within the development literature, which downplays the complexities involved in undertaking community-based participatory research, such as social inequities and power imbalances. Gallacher and Gallagher (2008) highlight the dangers in participatory approaches undertaken in children's research being seen as a catch-all solution, which can lead to what they term "methodological immaturity" in the approaches undertaken.

In undertaking a critical review of their own participatory study, Holland et al. (2010) outline a range of ways in which traditional methodologies often touted as participatory may fail to effectively engage participants in the research process. They argue that any genuine participatory research should involve researchers continually demonstrating reflexivity in how participation actually plays out between the various parties involved in the research. As they highlight, "ticking participatory boxes, in civic participation practice or in research, does not necessarily mean that participants experience the process as participatory, nor will it always affect the quality of research outputs" (Holland et al., 2010, p. 373). While looking predominantly at examples of political participation, in a scoping review of co-production in local decision-making Pennington et al. (2017) find that the majority of studies were tokenistic and did not employ a true participatory approach.

Given that the definition of "participatory" that I use within this thesis is deliberately broad, encompassing a number of levels of participation, it should be noted that many wellbeing frameworks examined do not self-proclaim to be participatory (but nonetheless meet the criteria of engaging directly with individuals in a population group). As will be shown in Chapter 4, some studies do incorporate what would be termed "participatory techniques" but sit at varying levels on a participatory spectrum. Given the risks of tokenism and rhetoric within the participatory literature, it was important in this thesis to closely scrutinise and critique frameworks self-identifying as participatory and develop objective criteria for the degree to which participatory approaches were applied. This process will be outlined in Chapter 4.

Power imbalances

While participatory research strives to reduce power imbalances between the research team and participants, many scholars have argued that this ambition is unrealistic, with power imbalances inherent in all research, even those studies that utilise participatory approaches. This issue is particularly pertinent within participatory research with children and young people. Flicker (2006) outlines that despite the good intentions of research teams, power imbalances can result in tensions between various parties in the research process. Drawing upon the experiences of their own study, Flicker (2006) highlights that young people, who were co-researchers in the study, felt out of the loop and excluded from the research process, whilst academics failed to show up to youth meetings related to the project, making the young people involved in the study feel that they were second-class.

A number of scholars highlight that the "ideal" of participatory research is never truly achieved (Pain & Francis, 2003; Pole et al., 1999). In particular, Pain and Francis (2003) argue that it is unrealistic to believe that children can have an equal level of impact compared to adult researchers in the dissemination of results, and that meaningfully including children in the analysis process faces a host of logistical issues. Pole et al. (1999) note that traditional research processes, such as applying for funding and putting forward research proposals, automatically preclude children from genuinely being equals in the research process, resulting in perpetual power imbalances. A similar point is put forward by Gallacher and Gallagher (2008), who discuss how the participation of children in research is entirely dependent on adult-led studies. Furthermore, the way in which participatory projects are generally facilitated involves explicit instruction by researchers, as opposed to genuine partnerships.

It should be noted that these challenges in achieving balances in power are not limited to just research involving children. For example, a review of community-based participatory research studies by Viswanathan et al. (2004) found that out of 60 studies, only 28 saw community members help to set priorities and develop hypotheses; 14 noted community involvement in the development of proposals; and 28 described community involvement in study design and implementation.

These challenges highlight that while researchers may endeavour to reduce power imbalances when conducting participatory research, researchers should be continually aware and reflexive of the way power is distributed within participatory research studies, and develop an understanding of which aspects of participation matter most to the participants.

Confidentiality of data

Ethical issues around the confidentiality of data have been noted to limit the degree of participation researchers are able to permit within studies. Participatory studies can often be of a sensitive, personal nature, and thus researchers have an obligation to ensure the confidentiality and anonymity of the data collected. This can be challenging in a participatory study, which elevates the importance of community members being involved in various aspects of the research process, including data collection and analysis. Holland et al. (2010) argue that it is generally ethically unviable to include participants in the analysis of data due to confidentiality concerns. Titterton and Smart (2008) and Flicker (2006), in reflecting on their studies, note that participants within their studies had concerns around confidentiality and potentially losing the respect of their peer group, highlighting ethical concerns as well as issues around data quality.

This challenge may limit the inclination of researchers to include participants in the data collection and analysis phases for participatory wellbeing studies.

Time burden and challenges in recruitment

Time burden, for both the research team and participants, has been noted as a key limitation and challenge within the participatory literature. In particular, the time burden placed on participants in studies with higher levels of participation creates additional challenges in respect to recruitment and retention.

Looking firstly to the time burden placed on the research team, Flicker (2006) outlines how the incorporation of participatory approaches resulted in tasks taking much longer than they would in a less participatory study (while noting that the process likely contributed to the success of the project). This is especially pertinent in a budget context, where funders are not necessarily aware of the time costs involved in participatory research. As noted by Flicker

(2006), their experience in participatory research has been of the time commitment increasing while funding has remained unchanged.

There may be an assumption within the participatory space that participants are always eager and available to engage in participatory research. In their participatory study, Holland et al. (2010) describe the large time burden placed on participants, which they suggest may not be replicable for future studies. Hayward et al. (2004) question the legitimacy in participatory research of requiring active engagement by participants. They argue that choosing *not* to participate may actually be a more legitimate form of participation. Thus a project with low levels of participation may actually align more closely to a participatory paradigm, as opposed to one that implicitly puts pressure on participants to engage in a study. Hayward et al. (2004) also note that community members can experience fatigue from consultation, again questioning whether participatory research really does empower individuals and promote agency in these contexts. This time burden placed on participants within participatory studies can lead to challenges in participant recruitment and retention. Pain and Francis (2003) outline that within their participatory study it was very difficult to recruit young people, and that only a small number of participants were engaged throughout the project.

These examples highlight that greater levels of participation are not necessarily always "better". The context of the study, including the willingness of community members to participate, should be considered closely when assessing the legitimacy and level of participation within participatory research.

Elite capture

Participatory approaches have been often noted to be prone to elite capture, with local elites (either intentionally or unintentionally) wielding their status and authority to assert influence over the process. This undermines the purpose and process of participatory research, which seeks to reduce power imbalances and consider all community members as equal partners in the research process. Hayward et al. (2004) highlight how some participatory studies result in only the more prominent voices getting heard. In particular, some studies touted as participatory engage only community leaders, while Holland et al. (2010) observe that in their study sometimes the stronger voices drowned out weaker ones.

Mohan and Stokke (2000) discuss how the term “community” tends to elicit ideas of a homogenous unit, which overlooks societal inequalities within community and varying levels of power. They highlight that decisions, findings, or outcomes said to have arisen through consensus may have been over-influenced by the local elite, resulting in more entrenched power of the elite, as opposed to empowerment of community members more generally. However, such domination by the elite could be overcome through more long-term participatory studies. In a longitudinal study conducted by Lund and Saito-Jensen (2013), the authors find that while early aspects of a participatory project may have contained elements of elite capture, with those in positions of power taking greater leadership in the project, over time these imbalances disappeared, with other community members exerting greater levels of influence.

Participatory wellbeing frameworks are similarly prone to issues of elite capture (see Alkire, 2013). This could be through researchers or developers of frameworks limiting consultation to those in positions of power, such as bureaucrats or community leaders. Participatory wellbeing frameworks could also be vulnerable to elite capture through those in positions of power dominating the dialogue in studies where focus group methodologies are utilised. The first concern can be overcome in this study by limiting eligible participatory wellbeing frameworks to those which engage widely with the community, not just with elites. The second is a little more problematic, with approaches to circumvent elite capture relying on researchers utilising appropriate qualitative data collection techniques to ensure that voices within the community are equally heard. Given that this thesis interrogates wellbeing frameworks developed using participatory approaches, it is limited by the information provided by authors in published papers. Thus, when analysing the results of the study, it is important to be aware of the potential for elite capture to be influencing results.

2.3 Conceptualisations of wellbeing

The integration of the science of wellbeing and participatory approaches, as discussed above, leads us to a deeper understanding of wellbeing conceptualisations. The term “conceptualisation” is used widely and inconsistently within the literature, at times referring to different disciplines, philosophies, or understandings of wellbeing. Within this thesis, I use

the term “wellbeing conceptualisations” to refer to how a population group defines or articulates wellbeing, happiness, the good life, and other related terms. Participatory approaches are a key method for identifying the conceptualisations of wellbeing for a particular population group.

How wellbeing is conceptualised throughout the world is a key focus of this thesis. In particular, Chapter 4 will conduct a systematic review of participatory wellbeing studies, with Chapter 5 presenting a meta-analysis aimed at better understanding how these conceptualisations vary across cultures. Together, the findings from the two chapters fill a notable gap within the literature. As such, this section will provide only a brief overview of research and literature related to conceptualisations of wellbeing, and how this has evolved over time.

While philosophies of wellbeing have been debated over many centuries, the idea of wellbeing conceptualisations varying across cultures has emerged within the academic literature only relatively recently. While there has been much focus on how the determinants of wellbeing vary across cultures, the positive psychology movement has generally seen the meaning of wellbeing as largely impervious to culture (Lomas, 2015). Lomas (2015) highlights that the dominant narrative within positive psychology is universalist, which argues that individuals share a common human nature, despite apparent cultural differences. For example, Maslow’s (1943) hierarchy of needs is a universalist model, stipulating that certain needs, such as psychological, safety, and belonging and love, are “basic needs” which must be satisfied before other needs, such as self-actualisation and transcendence. Other universalist models include Doyal and Gough’s (1991) theory of human need and Nussbaum’s (2003) list of central human capabilities.

Despite the dominant universalist narrative around wellbeing conceptualisations, there has recently been a stronger movement toward seeing wellbeing as more relativist, or culturally specific. One particularly prevalent narrative is the Eastern versus Western debate regarding wellbeing conceptualisations, as discussed in Section 2.1.4, which highlights that Western philosophies of wellbeing tend to more individualistic, in contrast to the more collectivist notions of wellbeing in Eastern societies (e.g. Joshanloo, 2014; Lu et al., 2001; Markus &

Kitayama, 1991). The debate has now expanded beyond the Eastern-Western paradigm, with a growing awareness that, while there may be some underlying universalist notions of wellbeing indicating a common human nature, conceptualisations of wellbeing vary considerably across culture and context (Lomas, 2015). This debate has been advanced substantially though the use of participatory approaches to better understand wellbeing conceptualisations.

The use of participatory approaches to better understand wellbeing conceptualisations grew out of a movement toward the use of "Participatory Poverty Assessments" (PPAs), which became popular throughout the 1990s. PPAs sought to engage with communities living in poverty to identify what poverty meant to them. The "Voices of the Poor Study", funded by the World Bank, was a particularly influential report, reviewing 81 PPAs with over 40,000 individuals in 50 countries around the world (Narayan, 2000). The study culminated in six key dimensions of poverty being identified from the perspective of people living in poverty: lack of food; psychological dimensions; access to basic infrastructure; literacy; poor health and illness; and managing assets.

In trying to shift the focus of development studies to well-being instead of ill-being, the Wellbeing in Development Countries (WeD) project was instrumental in showcasing methodologies to identify wellbeing dimensions through participatory approaches. Camfield (2006) utilised qualitative methodologies in four developing countries – Bangladesh, Ethiopia, Peru, and Thailand – to better understand what subjective wellbeing means to individuals in these countries. The study highlights that while there some commonalities in wellbeing dimensions raised between the study sites, there were also cultural differences. Camfield (2006) outlines the importance of utilising participatory approaches for wellbeing measurement to better understand people's lives in their own terms.

White and Pettit (2004) discuss how participatory approaches and wellbeing are inherently intertwined, with the process of participation often claimed to increase wellbeing in and of itself (as discussed in Section 2.2.2). They highlight that one important contribution participatory approaches can make to the understanding and measurement of wellbeing is that participatory approaches are "experience-near", resulting in them being "able to reflect

more closely the knowledge and worldview of people themselves than more formal, abstract, or 'scientific' approaches" (White & Pettit, 2004, p. 4).

While the momentum to use participatory approaches to measure wellbeing has been particularly strong within development studies, we can see evidence of such approaches being used in a wide variety of disciplines. As will be further highlighted in Chapter 4, the health sciences have employed participatory approaches to develop wellbeing instruments such as the ICECAP and SEIQoL measurement tools (e.g. Al-Janabi et al., 2012; Graham Beaumont & Kenealy, 2004); psychology has utilised participatory approaches to better understand subjective wellbeing and happiness (e.g. Kim et al., 2007; Lu & Gilmour, 2004); the environmental sciences have highlighted the importance of examining community conceptualisations of wellbeing to explore the interplay between wellbeing and sustainability (e.g. Abunge et al., 2013; Beauchamp et al., 2018); childhood studies have used participatory approaches widely to better understand what wellbeing means from a child's perspective (e.g. Biggeri et al., 2006; Savahl et al., 2015); and studies on Indigenous wellbeing have strongly emphasised the importance of participatory approaches (e.g. Greiner et al., 2005; Yap & Yu, 2016).

While the benefits of utilising participatory approaches for wellbeing measurement have been widely documented, there are a number of limitations and challenges to be noted. Some of these relate to the challenges of participatory methodologies more broadly, as already discussed in Section 2.2.3. Firstly, a wellbeing framework developed through participatory approaches can give the false impression of a "homogenised" set of wellbeing conceptualisations within a community (White & Pettit, 2004). This highlights the importance of emphasising that participatory wellbeing frameworks present an aggregated and generalised framework for the wellbeing of a community. Secondly, given that wellbeing is a complex, multifaceted, and elusive concept, the "true" understanding of wellbeing for a community may be impossible to elicit through qualitative or quantitative research, even when using highly participatory processes. Thirdly, defining wellbeing, according to how a community understands it, will likely result in indicators or dimensions that are not comparable across contexts. While many proponents of anthropological approaches to the study of wellbeing would argue that comparison is inappropriate and unnecessary (e.g.

Mathews & Izquierdo, 2009), this does present challenges for a large number of studies and reports which seek to do exactly this. Fourthly, as already articulated in Section 2.2.3, participatory approaches can be vulnerable to elite capture. Finally, participatory approaches to better understand wellbeing can be prone to adaptive preferences, whereby individuals may adapt their expectations downwards (or upwards), thereby giving a skewed illustration of what wellbeing means to them. This will be further discussed in Section 2.6.3.

Despite these limitations and challenges, better understanding wellbeing conceptualisations through participatory approaches can bring about substantial benefits. One benefit is that policymakers and practitioners can draw upon the findings of participatory wellbeing studies to better understand the population group they are working with. Furthermore, participatory wellbeing frameworks can be applied in a number of ways, such as for monitoring and evaluation purposes, the creation of measurement tools, and for advocacy and developing policy recommendations. A full review of how participatory wellbeing frameworks have been applied will be outlined in Chapter 6. The potential of participatory wellbeing studies to enable research and policy impact will be outlined in the following section.

2.4 Research and policy impact

This section will firstly outline the literature related to research and policy impact generally, discussing the various definitions used for research/policy impact (and clearly articulating the definition used in this thesis) before discussing the factors which have been shown to affect research and policy impact. I will then go on to discuss the literature base on research and policy impact specific to wellbeing measurement, focusing on the impact of wellbeing indicators, as well as on measures developed by governments. I will then outline the literature on how participatory approaches can achieve impact, before finally discussing the limited research conducted on the interplay between wellbeing measurement, participatory approaches, and impact.

2.4.1 A definition for research and policy impact

The increasing pressure from governments, funders, and philanthropists to demonstrate impact from research studies has resulted in this issue being widely discussed within the

literature. However, the definition of what constitutes research and policy impact within the literature is highly inconsistent, with little consensus on what these terms mean, and whether there is any distinction between research and policy impact (Alla et al., 2017; Boaz et al., 2009; Penfield et al., 2014; Weiss, 1979). This issue is also discussed within the context of participatory research, with researchers having varied understandings of the term "impact" (Cook et al., 2017).

Policy and research impact are elusive terms, defined in various different ways throughout the literature. As highlighted by Boaz et al. (2009), terms such as outcomes, benefit, payback, translation, transfer, uptake, and utilisation are often used interchangeably to describe "research impact". Through a systematic review of definitions used for "policy impact" within public health research, Alla et al. (2017) identify four key definitions used within the literature: "(1) research impact defined as demonstrable contribution to society and economy…;(2) research impact defined as an effect, change or benefit to society and economy…;(3) bibliometric definitions; and (4) use-based definitions" (p. 4). Bibliometric definitions are those which define impact through quantitative approaches, such as the number of citations, while use-based definitions are those which distinguish between research impact, use, and outputs. In particular, studies which employ use-based definitions make a distinction between instrumental impact – that is demonstrable change – and conceptual or indirect impact, which is having an impact on the knowledge or attitude of policymakers.

Weiss (1977) argues that trying to find discernible impact from a study on policy is a futile exercise given the complex nature of decision-making processes. As noted by Weiss (1977, p. 534), "because the process is so indirect, it is not easily discernible. Outsiders cannot often trace the effect of a particular finding or a specific study on a public decision. Even the social scientists who do policy research are often unaware of the consequences of their study for policy". Instead, Weiss contends that researchers should see their role as "enlightening" policymakers through offering insights to gradually influence the ways in which policymakers understand issues and see the world.

In this thesis I employ a "use-based" definition, as defined by Alla et al. (2017), clearly distinguishing between the indirect and direct policy impacts that can be achieved through

research, and aligning with the enlightenment model put forward by Weiss (1977). This is due to the potential of participatory wellbeing frameworks, and their applications, to influence and shape the way a decision-maker understands a community and their level of wellbeing, through a deeper appreciation of what wellbeing means to them. Furthermore, as will be discussed in Section 2.4.3, measures of wellbeing have been shown to have substantial indirect impacts on policy (e.g. Corlet Walker et al., 2020; Sébastien et al., 2014).

Thus, in examining the extent to which participatory wellbeing frameworks have impacted research and policy, and the mechanisms through which they have done so, this thesis uses a broad definition of research and policy impact. With these terms being largely used interchangeable within the literature, in this thesis I delineate between research and policy impact. As articulated in Table 2-1, research impact is defined as studies having an impact on participants, the research team, or the wider research community. Policy impact is defined as the impact achieved, either indirectly or directly, on programs, policy, or decision-making. As defined in this thesis, policy impact can be achieved at any level, and is not restricted to policy/program changes at the government level. Thus, policy impact encompasses impacts on programs and policy at the community, organisational, jurisdictional, or national level (either through government or other bodies). These definitions, and how they are operationalised for the use of participatory wellbeing frameworks, will be discussed further in Chapter 9.

Table 2-1 Definitions of research and policy impact used within this thesis

Research impact	Impacts achieved throughout the research process, and directly from research outputs.
Policy impact	Impacts achieved through either the enlightenment of decision-makers (at any level), or instrumental changes to programs or policy (within any context).

2.4.2 Factors affecting research and policy impact

Before discussing research and policy impact in relation to wellbeing measurement and participatory approaches more specifically, I will firstly highlight the evidence related to the factors affecting policy impact more generally. Policy impact (based on the above definition)

is considered more specifically in this section, given that the research impact on participants through participatory approaches has already been discussed in detail in Section 2.2.2. While there are some particular characteristics of wellbeing measurement and participatory approaches which may influence the process and extent of impact, it is likely that those factors which influence impact more generally will also be relevant in the context of this study.

Research can have impact at various stages of the policy cycle. As highlighted by Sumner et al. (2011), research can have impact at the agenda-setting phase through influencing the priorities of decision-makers; in changes to the content of policy by providing policy recommendations; and in changes to the way policy is delivered or implemented. However, the evidence indicates that, in reality, despite clear intentions by researchers to impact policy, achieving impact is difficult and rarely achieved (Evans & Cvitanovic, 2018; Oliver & Cairney, 2019). For example, as highlighted by Newson et al. (2021), a review of how 148 child obesity research studies had impacted policy (defined as both awareness and influence) found that only 16% had a direct impact on local policy, and decision-makers were aware of an additional 19% of studies (with no evidence they influenced policy decisions). The remaining studies (66%) were found to have no impact.

However, despite these challenges, there is a vast literature on the factors which influence policy impact. Firstly, a large number of scholars have highlighted that a clear understanding of the policy process is vital to achieving impact (Evans & Cvitanovic, 2018; Oliver & Cairney, 2019; Weible et al., 2012). For example, Oliver and Cairney (2019) outline the literature which suggests that academics are often advised to understand how policy works, learn the basics of government, and learn to recognise the broader dynamics in policymaking. Having knowledge of policy problems and processes in a local context has been considered to be particularly imperative (Oliver & Cairney, 2019; Weible et al., 2012).

Secondly, developing strong relationships with key stakeholders is widely cited in the literature as an effective approach to achieving impact (Bache, 2019; Cairney & Oliver, 2018; Evans & Cvitanovic, 2018; Farmer, 2010; Oliver & Cairney, 2019; Oliver et al., 2014; Sumner et al., 2011). Nurturing trusting relationships with decision-makers enables greater exposure of one's research, an enhanced public profile, and greater access to a more expansive network,

which have also been highlighted as other important enablers in achieving impact (Evans & Cvitanovic, 2018; Sumner et al., 2011; Weible et al., 2012).

Thirdly, producing relevant and accessible research that is written in a way that policymakers can understand and use is highly important in achieving impact (Bache, 2019; Oliver & Cairney, 2019; Oliver et al., 2014). This includes making research available through open-source platforms, and not relying solely on subscriber-only peer-reviewed journals (Farmer, 2010; Oliver et al., 2014). Those producing research also need to recognise that there is a disconnect between the typical goals of politicians (getting re-elected), and those of researchers (getting tenured) (Farmer, 2010). The research skills of policymakers can also be a barrier (or enabler) to policy impact (Oliver et al., 2014), as well as to the quality of the research (Bilotta et al., 2015; Oliver & Cairney, 2019).

Fourthly, the personal characteristics of researchers can have an important role to play in developing relationships and influencing decision-makers. In particular, Evans and Cvitanovic (2018) note the importance of honesty, resilience, openness, and humility, while Oliver and Cairney (2019) discuss the literature regarding the importance of entrepreneurial skills and personal reflection. Patience is another important attribute, with the literature highlighting that achieving policy impact can take considerable time. Weible et al. (2012) outline how it is important to participate in policy processes for long periods of time in order to achieve impact. This is due to the time it takes to develop knowledge about policy subsystems, the time it takes to negotiate and shape agendas, waiting for a "window of opportunity" to appear (as put forward by Kingdon & Thurber, 1984), and the fact that it can often take at least a decade for "scientific and technical information to diffuse among decision makers and lead to change" (p. 15).

Cairney and Oliver (2018) highlight that despite a range of studies pointing to simplified solutions to increase impact (including some of those outlined above), the complex nature of policymaking can make such attempts futile. Thus, an actor wishing to influence policy should recognise the complexity of decision-making processes. For example, researchers should recognise that policymakers take into account a range of different types of evidence, including public opinion and feedback from consultations, as well as research papers. Furthermore, as

noted by Head (2010), the movement toward evidence-based policy throughout the world has not necessarily materialised in policy decisions being informed primarily through evidence. There are a number of reasons for this, such as evidence for particular areas not being readily available, politicians and policymakers being motivated by factors outside of evidence, research findings not always being translatable to policy recommendations, the relative importance of professional knowledge in decision-making, and certain policy areas being subject to rapid change, with research unable to keep up.

In the context of wellbeing policy, Bache (2019) highlights that research evidence is only one factor that is influential in shaping policy, with the influence of political, professional, and experiential forms of knowledge often underestimated within an "evidence-based" paradigm. Most notably, political will to make policy change may simply not be there, in part due to competing political pressures and priorities (Oliver et al., 2014; Sumner et al., 2011). Gentry et al. (2020) discuss that models for translating research into policy are often described as linear or cyclical, while in reality the process is much more complex.

To overcome this complexity, Gentry et al. (2020) propose that collaboration between local policymakers and researchers can be a more effective way to achieve impact. This recognises that research impact is often not achieved in a linear fashion, whereby research is purported to be duly taken up by engaged policy actors after completion. Instead, a collaborative approach enables a closer relationship between decision-makers and researchers, allowing for the research to be more policy-oriented, and for political actors to have greater ownership of the research itself. This can be taken one step further, through the engagement of participants and citizens in research studies using participatory approaches, which have been found to improve the uptake of research outcomes (Jones & Bice, 2021). This will be discussed further in Section 2.4.4.

In sum, there are a range of factors outlined within the literature which can enable or hinder policy impact from research. The following sections will discuss policy and research impact in relation to wellbeing measurement and participatory approaches more specifically.

2.4.3 Wellbeing and impact

The Beyond GDP movement's widely known slogan "what we measure affects what we do" (Stiglitz et al., 2009, p. 7) infers that measurement does consequently have a meaningful impact on program and policy. This proclamation has led to organisations, communities, and governments throughout the world shifting measurement tools and frameworks to indicators of wellbeing, in contrast to relying more heavily on traditional measures such as GDP and unemployment. However, do wellbeing measurement tools and indicators actually have a demonstrable impact on policy? And to what extent have wellbeing government frameworks and the "wellbeing policy" movement (defined in the context of this discussion as the movement toward identifying wellbeing dimensions which government policy should seek to address) impacted the way government business is done? This section will address these questions in greater detail, firstly discussing the theoretical literature on wellbeing measurement and policy before outlining the empirical evidence regarding the impact of wellbeing indicators (and indicators more generally) on policy. While government wellbeing frameworks are not an explicit focus for this thesis (although those that are developed through participatory approaches are certainly in scope), given the strong "wellbeing policy" movement, the section will conclude by examining the evidence regarding government-level wellbeing frameworks and their impact on policy.

A large number of scholars and policymakers throughout the world have argued the case for using wellbeing measures to evaluate the progress of societies. Of most influence has been the *Report by the Commission on the Measurement of Economic Performance and Social Progress* by Stiglitz et al. (2009), which has markedly furthered the Beyond GDP movement. Stiglitz et al. (2009) argued that societies throughout the world have developed an over-reliance on GDP to measure progress, and that measures of wellbeing should complement existing indicators to more holistically assess progress. This message has been reinforced by a large number of international bodies and governments throughout the world, including Bhutan (Ura et al., 2012), the United Kingdom (Dolan et al., 2011), Australia (Gruen & Spender, 2012), New Zealand (Dalziel et al., 2019), and the OECD (Durand & Exton, 2019). The benefits for policy of measuring wellbeing have also been espoused by academics. For example, Adler and Seligman (2016) argue that "research increasingly supports that wellbeing indicators may

be employed to assess and inform policy domains such as externalities, social capital and trust, unemployment, tax structures, and moral debates". Forgeard et al. (2011) assert that measuring wellbeing for public policy is "doing the right thing", and that scientists can have an important role to play.

Such assertions by policymakers and academics that measuring wellbeing can contribute positively to society are somewhat speculative, with idealistic notions that measuring what matters will automatically lead to improvements in the lives of individuals. Therefore, it is important to look to the empirical literature on the impact of wellbeing measures (as well as of indicators more generally) and the impact of government-level wellbeing frameworks to gain a clearer and deeper understanding of the tangible impacts of measuring wellbeing.

Given the heavy use of indicators to measure progress and develop policy by organisations and governments throughout the world, there is a wide literature base on the influence of indicators on policy. Much of this literature aligns closely with the "use-based" definition of policy impact put forward by Alla et al. (2017) and the delineation between direct and indirect impacts outlined by Weiss (1977), as discussed in Section 2.4.1. Bauler (2012) outlines three types of uses of indicators by policymakers. These are: (1) instrumental, defined as directly using information expressed in indicators to form policy decisions; (2) conceptual, defined as indirect use whereby information cannot be translated directly into policy decisions, due to complexity, varied opinions, conflicting views, and lack of opportunity; and (3) political, whereby indicators are used as ammunition to promote a particular political agenda. Whitby, Seaford and Berry (2014) delineate political use further, separating it into strategic use (indicators are used to justify a position that has already been taken), tactical use (decisions are postponed due to the data behind an indicator being compiled), and symbolic use (indicators are used only to convey a message).

This and similar paradigms that recognise the non-linearity and complexity of information use in decision-making have been used by a large number of scholars to better understand take-up of indicators by decision-makers (Corlet Walker et al., 2020; Lehtonen et al., 2016; Sébastien et al., 2014; te Lintelo et al., 2020; Turnhout, 2009). Aligning with the definition of

policy and research impact put forward in Section 2.4.1, I use this broad definition of indicator use for better understanding the impact of participatory wellbeing frameworks and indicators.

The fact that instrumental impact is commonly seen as the *only* type of impact leads some scholars to report that wellbeing indicators, and indicators more generally, have little effect on policy. For example, Barrington-Leigh and Escande (2018, p. 904) in their comparative review of wellbeing frameworks found "little evidence of strong public or policy impact associated with most measures" for dashboard or collections of indicators, as measured through uptake of frameworks by government.

However, those studies which use a more comprehensive understanding of impact, taking into account more complex conceptual definitions, come to somewhat more nuanced conclusions. For example, through a process-tracing exercise of the policy impact of the Hunger and Nutrition Commitment Index internationally and in four countries, te Lintelo et al. (2020) find that policy impact was evident at the international level, and within three of the four study countries. Policy impact was identified conceptually, defined as governments publicly responding to the index, and/or making political commitments to hunger and nutrition policy, and/or reporting that the index inspired them to make hunger and nutrition a greater policy priority. Similar findings regarding the influence of indicators have been observed in the fields of law (e.g. Davis, 2014), corruption (e.g. Galtung, 2006), and development (e.g. Parks et al., 2015). Thus, with instrumental impact being notoriously difficult to measure and observe, it is important to take into account this broader definition of impact, which considers the complexities and non-linearity in the decision-making process.

But what actually influences the impact of indicators on policy? Many tout the importance of the technical attributes of an indicator, such as the amount of information feeding in to the indicator, and weighting approaches (e.g. Ravallion, 2012). The perceived salience, credibility, and legitimacy of an indicator by a decision-maker has also been highlighted as an important factor in take-up (Bauler, 2012), as well as indicators having meaning and resonance to both the general public and decision-makers (Scott, 2012). Related to this is the noted importance of institutional embeddedness (Bauler, 2012; Cash et al., 2003; Innes, 1998). Through a greater ownership of, and agreement with, an indicator set, an organisation or institution will be more

inclined to make use of the information the indicators provide for decision-making (due to the information being perceived as more salient, credible, and legitimate). This was a key finding of Scott (2012), who undertook an ethnographic study of the experiences of a local council developing a wellbeing framework, highlighting the value of involving both policymakers and citizens in the process of developing a wellbeing framework to help increase its useability as a policy tool.

Recognising this, Corlet Walker et al. (2020) conducted a mixed-methods study to better understand the views of civil servants in measuring wellbeing, through a case study of the United Kingdom Measuring National Wellbeing program. They identify three distinct discourses on views of wellbeing measurement, with some civil servants noting the importance of incorporating information on natural, social, and human capital into decision-making processes, some emphasising that opportunity and autonomy are key factors promoting wellbeing, and some focusing on the technical aspects of wellbeing measurement. The study highlights that recognising the importance of these discourses in the development of wellbeing frameworks will help to increase their useability and usefulness by decision-makers.

The fact that institutional embeddedness and perceived salience, credibility, and legitimacy by decision-makers has been shown to increase the uptake of wellbeing indicators has important implications for this thesis. Participatory wellbeing frameworks that have been developed by (or with) the institution that intends to use them may go on to have higher levels of impact, in contrast to purely academic studies. Institutional embeddedness can be explored further through examining government-level wellbeing frameworks, which by definition have been developed by the same institution which intends to use them. As outlined previously, an increasing number of governments throughout the world have been developing wellbeing frameworks to prioritise budgets, develop and evaluate policy, and measure progress. For example, the governments of Scotland, New Zealand, Iceland, Wales, and Finland currently form the Wellbeing Economy Governments partnership, as part of the Wellbeing Economy Alliance[14]; members of this alliance actively utilise and advocate for a wellbeing approach

[14] https://weall.org/wego

within government. Other countries that currently, or have previously, developed wellbeing frameworks include Australia (Australian Bureau of Statistics, 2013; Gruen & Spender, 2012), Bhutan (Ura et al., 2012), and the United Kingdom (Dolan et al., 2011).

Wellbeing policy can take a number of different forms, with White (2016) identifying four different "faces" of wellbeing within public policy, ranging from the objective to the subjective, and from the substantive to the evaluative. The four faces are: comprehensive wellbeing, which looks beyond measures of economic progress such as GDP to develop adequate indicators to accurately reflect the human condition; personal wellbeing, which relates to behavioural change, such as health policy; utility which is largely concerned with measures of subjective wellbeing and happiness; and development alternative, which poses that development should exclusively seek to serve human fulfillment and environmental sustainability. I will focus here on the policy impact of "comprehensive" wellbeing approaches, due to their focus on measuring wellbeing using a holistic framework of indicators, which is of most relevance in the context of this thesis.

As noted previously, while a number of governments throughout the world strongly advocate for the use of such comprehensive wellbeing approaches through the development of wellbeing frameworks, there has been limited evidence of their impact on policy. For example, a study by the OECD highlights that wellbeing frameworks can *potentially* be used by governments in a number of ways, such as providing a more complete and comprehensive picture of living conditions and quality of life; supporting the strategic alignment of outcomes across government; highlighting inequalities and diversity of experiences through providing data at a granular, people-centred level; considering both wellbeing outcomes today and resources for tomorrow; promoting evaluation of how policy impacts people's lives; and fostering public debate (Exton & Shinwell, 2018). However, Exton and Shinwell (2018) also note the challenges in measuring the impact of wellbeing frameworks on policy, such as defining impact, developing appropriate counterfactuals, and identifying causality. They hypothesise that enablers of impact may include strong leadership, as well as engagement and buy-in from across government. Possible barriers put forward include the challenges in mainstreaming indicator sets and advocating for the tools, and silos across government departments. Further desktop research using a case-study approach by the OECD suggests

that perceived legitimacy by indicator users, the salience of indicators and their fitness for purpose, and incentivising decision-makers to act on information produced by indicators are integral for societal progress indicators to be utilised within decision-making processes (Scrivens & Iasiello, 2010).

However, despite the challenges noted by Exton and Shinwell (2018), some more comprehensive analyses of the impact of government wellbeing frameworks have been conducted. Taking a focus on multidimensional poverty, as opposed to wellbeing, Cuesta et al. (2020) assessed the political economy in the utilisation of multidimensional child poverty measurement tools within government in Mexico and Uganda. Through content analysis of policy documents and interviews with key informants and stakeholders, they find that three conditions must be met in order for countries to produce and use these tools: political consensus regarding the value of a multidimensional child poverty measure; technical capacity of the government to finance, collect, and analyse data; and polity, meaning that the political benefits exceed the costs.

The BRAINPOoL Project specifically evaluated the policy impact of wellbeing measures within government through examining the use, barriers to, and enablers of frameworks through the lens of the Beyond GDP movement (Whitby, Seaford, & Berry, 2014; Whitby, Seaford, Berry, et al., 2014). Through desktop reviews, interviews with indicator producers and users, and case studies, Whitby, Seaford and Berry (2014) find that salience of the indicators for decision-makers, salience of the indicators for a broader audience, credibility and methodological robustness in the indicators, and relationships/stakeholder engagement were factors vital for impact. Three key barriers were noted: political (lack of perceived democratic legitimacy, lack of justification or a compelling narrative for the indicators, or lack of political imperative for change), methodological, and structural (organisational and analytical challenges in taking a multidimensional focus, resistance to change, and a disconnect in priorities between indicators producers and users). Based on these findings, Whitby, Seaford and Berry (2014) propose a number of recommendations to improve the use and impact of Beyond GDP indicator sets, including engaging citizens in the process to improve the democratic legitimacy of indicators, clearly communicating the value of Beyond GDP indicators, improving the

methodological and technical aspects of indicators, and developing strategies for overcoming resistance.

Finally, Wallace and Schmuecker (2012), through examining six case studies of government-level wellbeing frameworks, find that there was wide variation in the level of instrumental impact evidenced by the different frameworks. To better understand this variation, they highlight that more successful frameworks tended to have strong leadership with a clear vision, ensured buy-in from civil society and citizens, made appropriate use of wellbeing data in policy development and evaluation, and demonstrated wide communication and dissemination. Based on these findings, Wallace and Schmuecker (2012) recommend that governments engage heavily with civil society to help promote a wellbeing policy agenda, and that civil society organisations play an active role in education and dissemination within the population.

In sum, the limited research conducted on the policy impact of wellbeing indicators and frameworks aligns closely with that of the more general research impact literature. Firstly, instrumental impact of wellbeing indicators and frameworks has been found to be relatively low. However, a wide range of scholars emphasise the importance of moving beyond a narrow evidence-based policy frame in examining impact, recognising that the complex nature of decision-making can result in indicators and frameworks having more conceptual impacts. Secondly, the literature highlights institutional embeddedness, salience and perceived legitimacy of indicator sets by users, stakeholder engagement, relationships and buy-in, strong leadership, and methodological robustness and technical attributes of indicators as important for enabling impact. Noted barriers are largely political and institutional, being silos across government departments, lack of incentivisation for decision-makers to utilise indicators, technical capacity of government or institutions, and political will.

While this previous literature highlights a number of barriers and enablers to research and policy impact which may be relevant for this thesis, it is also important to better understand the potential influence of participatory approaches on research and policy. This will be more closely examined in the following two sections.

2.4.4 Participatory approaches and impact

Participatory approaches can have substantial positive impacts for those participating in research studies, including increased empowerment, self-esteem, and social cohesion. There is also a body of literature highlighting the potential of participatory approaches to achieve greater policy impact. This was discussed briefly in Section 2.2.2 and will be further elaborated here.

Scholars examining impact within the participatory research space emphasise that the definition of impact needs to be broader than the evidence-based policy, instrumental paradigm put forward by funding bodies (Abma et al., 2017; Armstrong & Alsop, 2010; Cook et al., 2017; Darby, 2017; Morton & Fleming, 2013; Van Langenhove, 2011). This assertion is aligned closely to the discussion regarding the definition of research and policy impact in Section 2.4.1, with the definition I use within this thesis corresponding closely with the principles of impact for participatory research.

There has been a relatively stronger focus on the impact of co-design, co-creation, or co-production processes (hereafter referred to as co-design) on policy within the literature. Co-design has a close relationship with participatory approaches, in that it engages the community of interest in a particular project; however, a disparity that exists within the context of this thesis is that it necessitates having decision-makers as co-partners within the research process. Such studies are certainly within the scope of this thesis, with participatory wellbeing frameworks potentially utilising a co-design model, however it should be noted that that there is only partial overlap, with some studies utilising participatory approaches, but not considered to be using a co-design model.

Studies on the impact of co-designed research largely highlight that, when conducted appropriately, they have high potential for impact. For example, Armstrong and Alsop (2010) argue that co-design processes which incorporate strong relationships and the involvement of participants and decision-makers at all stages of the research process are more likely to achieve impact (defined as instrumental, conceptual, capacity-building, cultural change, and enduring connectivity). Coming to similar conclusions, Greenhalgh et al. (2016) show through

a narrative review and case-study approach that successful co-design models, which go on to achieve change, had a number of common features. These were that they incorporated a systems perspective, framed the research as a creative endeavour with a focus on human experience, and placed an emphasis on process in framing the program, ensuring high-quality relationships, as well as appropriate governance arrangements and leadership styles. Greenhalgh et al. (2016) highlight that co-creation models which failed were often found to have abandoned or never adopted at least one of these principles. Jones and Bice (2021) contend that research participants who are involved in co-design processes have greater ownership and understanding of research findings, improving the likelihood that the research is translated into policy change.

While there have been numerous studies examining the social benefits of participatory research for participants, as highlighted in Section 2.2.2, there have been relatively few examining their potential for policy impact. One study by Pain and Francis (2003) maintains that achieving impact is highly influenced by the willingness of more powerful actors to act upon the findings of a research study. Thus, when those actors are resistant to change, the incorporation of participatory approaches within a research study makes little difference to achieving impact. However despite this, Pain and Francis (2003) put forward a number of recommendations to researchers seeking to achieve change through participatory approaches, such as careful planning, an appreciation of the policy context, collaborating with those in power, disseminating results to participants and key decision-makers throughout the process, and developing governance structures such as steering groups involving both key actors and participants.

In sum, the factors enabling greater impact within co-designed and participatory research are not dissimilar from those factors enabling research impact already discussed in Section 2.4.2 and 2.4.3. Namely, developing strong relationships and disseminating findings widely have been found to be important elements in achieving policy impact. However, some nuances can be observed within the research on impact from participatory and co-designed studies. In particular, it is important to note that the processes that often sit within a participatory paradigm (where enacted appropriately) automatically lend themselves to achieving greater impact. For example, focusing on the human experience, ensuring strong governance

structures, and collaborating with those in power are features that have been highlighted within this section as important for policy impact, which also align closely with definitions of participatory approaches that sit higher on the participatory ladder, as discussed in Section 2.2.1. This therefore suggests that those studies which are more participatory may have greater opportunity for higher impact. The key informant study undertaken within this thesis provides a valuable opportunity to fill this research gap; this will be discussed in Chapter 9.

2.4.5 The interplay between the science of wellbeing, participatory approaches, and impact

This final subsection will bring together the four central components of the conceptual framework and the interplay between them. These are the science of wellbeing, participatory approaches, wellbeing conceptualisations, and impact. This thesis makes a substantial contribution to this literature base, which has so far largely relied on theoretical discussions, singular case studies, and a focus on government-level frameworks. By taking a macro-level approach and examining how participatory wellbeing frameworks have created impact (and the barriers and enablers for doing so) at a broader scale, we can gain a more comprehensive understanding of the value of conducting such research, and how to improve impact into the future.

From a philosophical perspective, Haybron and Tiberius (2015) make a strong case for the use of participatory, democratic approaches to measure wellbeing for public policy. They argue for a form of "pragmatic subjectivism" within wellbeing policy, which contends that "polices aimed at promoting well-being are justified only when they are grounded in the conceptions of well-being of those on whose behalf policy is being made" (p. 713). Rather than advocating for a pure subjectivist theory for wellbeing policy, they outline that pragmatic subjectivism demands that policy takes account of people's conceptions of wellbeing, as opposed to simply their preferences.

In the context of international development, J. A. McGregor (2004) discusses the tensions between universal and local understandings of wellbeing, highlighting the importance of incorporating local conceptions of wellbeing into policy. McGregor points to the success of Grameen Bank, a credit and savings intervention in Bangladesh, arguing that the program's

success is largely owed to the fact that it was developed with full awareness and recognition of the local context. Despite this, and a large body of research within the international development literature highlighting the importance of adapting programs and policy to the local context, J. A. McGregor (2004) describes how there has been a tendency for local understandings of wellbeing to be supplanted by universal models. In practice, McGregor contends that within international development there is a need to have a balance between universal and local understandings of wellbeing within program and policy development, recognising that there are universal principles governing programs and understandings of wellbeing, but that it is also important to take into account local context.

Alongside this theoretical literature, there have been a small number of analyses empirically examining the impact of wellbeing studies that incorporate participatory approaches. Firstly, we can examine studies which emphasise the importance of *process* in achieving impact. For example, in putting forward an innovative computer-facilitated methodology to consult with individuals, Hogan et al. (2015) argue that true consultation with individuals regarding wellbeing conceptualisations, involving cooperative relationships "characterized by reciprocity, discussion, mutual respect, perspective taking, and a coordination of each individual's views with those of others" (p. 872) is integral for wellbeing measurement to be effective in practice.

Scott (2012) conducted an ethnographic study of the process through which a local council in the United Kingdom developed a participatory wellbeing framework. Scott highlights the importance of taking a discursive lens to policy impact, as opposed to focusing solely on a rational, evidence-based policy paradigm (Scott & Bell, 2013). One of Scott's (2012) key findings is that in order for wellbeing frameworks and indicators to be useable, they must have meaning for and resonate with, both decision-makers and the general public. Participatory or democratic approaches, involving both policymakers and citizens, are therefore vital in ensuring the relevance and subsequent useability of wellbeing frameworks.

This point is reiterated by Hall and Rickard (2013), who examined the consultation process behind seven governmental/organisational quality of life indicator sets (noting Hall and Rickard used a more liberal definition of consultation than the definition of "participatory"

used within this thesis). These were from Bhutan, Canada, the European Union, the United States (Jacksonville), New Zealand, South Africa, and Australia (Tasmania). Through interviews with civil servants from each of these jurisdictions, Hall and Rickard (2013) highlight the value of the consultative process, with informants outlining three key benefits of consulting with citizens in the development and selection of indicators. Firstly, they contend that the process can "strengthen the machinery of democracy" through providing citizens with the opportunity to have input into policy and how progress is measured. Secondly, they argue that consultation can "make the business of government easier" through citizens better understanding differing viewpoints from across the political spectrum, recognising the trade-offs inherent within policymaking, and developing informal networks within the community. Finally, they highlight that consultation can help "build capacity and resilience", through greater empowerment from the participatory process, and engage individuals in the policy process.

Kroll (2011), through examining the process behind indicator selection for a large number of governments, highlights the importance of participatory approaches for wellbeing measurement in capturing citizens' ideas and opinions, increasing a sense of procedural justice, and making the populace more aware of societal issues. As noted by Kroll (2011, p. 22), "consultation processes…are to be strongly recommended. In this way, citizens are actively involved in the debate, confinement to an ivory tower is prevented and democratic legitimacy is significantly increased, thereby amplifying the potential political attention paid to progress indicators".

While the benefit of process has been highlighted in the few studies just outlined, there has been limited empirical evidence regarding the impacts that go beyond this. In their analysis examining six case studies of government-level wellbeing frameworks, Wallace and Schmuecker (2012) emphasise the value of consultative processes in building a broad support base for wellbeing frameworks amongst citizens and community organisations. They highlight that they observed a wide variation in the level of consultation across the different frameworks, with those governments which more heavily involved citizens and community organisations emphasising that consultation improved the legitimacy of the framework.

Through a community-university partnership developing quality of life indicators in Saskatoon, Williams et al. (2008) highlight that their participatory action research project was highly successful in achieving impact. While their definition and measure of success is not clear, they put forward four knowledge translation strategies that helped to improve the impact of their study: (1) engaging the local media to help influence the positions of community members; (2) conducting community engagement forums to facilitate mutual learning and collaboration within the community; (3) developing appropriate governance structures through a steering committee to ensure collaboration between the university and community organisation partners; and (4) employing an action researcher to operate as a policy entrepreneur to help create a clear linkage between the university and community organisation partners.

To conclude, while some limited empirical evidence has highlighted the value in using consultative processes to develop wellbeing frameworks, there has been very little focus on the research and policy impacts of such frameworks. Those studies that have been conducted focus almost exclusively on government-developed wellbeing frameworks, and do not focus specifically on participatory wellbeing frameworks (although some of the frameworks may have incorporated some level of consultation). Thus, this thesis makes a substantial contribution to the literature by examining at a macro level the research and policy impacts of participatory frameworks developed by researchers, organisations, and governments, to gain a deeper understanding into the level of impact achieved, and the barriers and enablers in doing so.

2.5 The Capability Approach

The Capability Approach provides the overarching framework for this thesis. This is because, at a broad level, it encompasses each of the core components of the conceptual framework: participatory approaches, wellbeing and its measurement, wellbeing conceptualisations, and policy and research impact. Taken together, these individual components strongly align with the key principles of the Capability Approach.

The Capability Approach, as originally put forward by Sen (1985a, 1999), argued that human development should be primarily concerned with expanding the freedoms and capabilities of individuals to lead the kind of lives that they have reason to value. This, therefore, involves determining what individuals within a community or population group value, and utilising policy tools to expand their capabilities to achieve the lives that they value (or have reason to value)[15]. It should be noted that the Capability Approach as a conceptual framework has progressed and developed immensely since Sen's work, so much that Sen has noted that "it has grown over my head" (Robeyns, 2017, p. 4). Various critiques and identified limitations of Sen's version of the Capability Approach have been addressed and clarified by other Capability Approach scholars such as Robeyns (2001, 2017), Alkire (2002), and Nussbaum (2011), resulting in substantial refinement to the framework. That is not to say that the Capability Approach, as applied today, does not come with limitations and critiques, but rather that the Capability Approach as applied in this thesis is grounded on the approach as it has progressed over time, and not strictly on Sen's account of the framework.

The Capability Approach is thus central to the conceptual framework for this thesis because of the strong argument for deliberative participation put forward by Sen (1985a, 1999) and other Capability Approach scholars, as well as wellbeing measurement being seen as a key operationalisation of the Capability Approach. This section will outline how each component of the conceptual framework – the science of wellbeing, participatory approaches and wellbeing conceptualisations, and policy and research impact – are encompassed within the Capability Approach.

2.5.1 The science of wellbeing

In Sen's earlier writings, the relationship between wellbeing and the Capability Approach was not well defined. Instead, the core components of the Capability Approach consisted of freedoms, capabilities, and functionings (Sen, 1985a). As outlined by Sen (1999), the notion of functionings has Aristotelian roots, and "reflects the various things a person may value doing or being" (p. 75). Examples of functionings may include being physically healthy, having social

[15] The inclusion of "reason to value" has since been questioned by Capability Approach scholars, such as Robeyns (2017).

connections, or having the ability to walk. A person's capability is a broader concept, defined as the various sets of functionings that a person is able to achieve. Thus, according to Sen, the expansion of functionings for an individual leads to an expanded capability set, which ultimately leads to growth in human development.

One can immediately see the relationship of functionings and capabilities with wellbeing, and Capability Approach scholars have, over time, increasingly come to view wellbeing as a core and integral aspect of the Capability Approach (e.g. Alkire, 2016; Clark, 2005; Deneulin & McGregor, 2010; Gasper, 2010). For example, when defining the Capability Approach in the book *Wellbeing, Freedom and Social Justice: The Capability Approach Re-Examined*, Robeyns (2017) claims that "the assessment of individual levels of achieved wellbeing and wellbeing freedom" (p. 24) is one of the most prominent components of the Capability Approach. While this does not contradict Sen's account of the Capability Approach, it is more explicit regarding the integration of wellbeing in the Capability Approach.

It should again be emphasised that this thesis draws upon the Capability Approach in its broad form. Thus, while a number of the participatory wellbeing frameworks explored within this thesis utilise the Capability Approach, and explicitly develop indicators for capabilities and functionings, some do not. Rather, some studies utilise other theories such as psychological wellbeing, happiness, or children's rights (e.g. Bragin et al., 2014; Delle Fave et al., 2016; Savahl et al., 2015). While examination of the raw data does suggest that many such studies implicitly developed capabilities and functionings, it should be highlighted that this is not always explicit, and furthermore, many indicators would not be identified as either capabilities or functionings. Furthermore, the participatory wellbeing frameworks examined in this thesis do not only focus on wellbeing outcomes, with some highlighting pathways or processes to achieving wellbeing. The thematic analysis applied within the systematic review follows the qualitative narrative provided by authors.

Whilst the Capability Approach is strongly related to notions of wellbeing, it should be emphasised that the Capability Approach does not endorse, or utilise, a particular theory of wellbeing. Using Partfit's (1984, p. 493) three types of philosophical wellbeing (hedonistic, desire-fulfillment, and objective list theories,) Robeyns (2017) argues that any one of these,

or a mix, may be used when applying the Capability Approach. For example, for those undertaking macro-level analysis on multidimensional poverty in various countries, an objective list may be used that characterises the necessities in life. In contrast, a participatory wellbeing study, which highlights the importance of hearing the views, values, and preferences of a community, may relate more closely to the desire-fulfillment theory. Robeyns (2017), on the other hand, argues that hedonistic notions of wellbeing are not, as a whole, compatible with the Capability Approach, but by themselves may form a specific functioning. As outlined in Section 2.1.1, I subscribe closely to this theory-neutral view of wellbeing within this thesis, with many of the participatory wellbeing frameworks using a wide range of wellbeing theories from varied disciplines.

Approaches to selecting wellbeing or poverty dimensions within the Capability Approach are summarised by Alkire (2013), who identifies existing data, normative assumptions, public consensus, ongoing deliberative participation and existing empirical evidence as key approaches used within the Capability Approach. Examples of the application of these different approaches include the use of Nussbaum's framework to select indicators in existing data sources (e.g. Anand et al., 2004), the translation of human rights frameworks to capabilities and functionings (e.g. Vizard & Speed, 2016), and the use of participatory approaches to select relevant capabilities or functionings (e..g Biggeri & Anich, 2009; Clark, 2003; Greco et al., 2015; Yap & Yu, 2016).

The selection of wellbeing constructs within the Capability Approach has predominantly relied on quantitative approaches, as summarised by Chiappero-Martinetti and Roche (2008). However, qualitative and mixed-methods approaches are more frequently being applied to evaluate capabilities and functionings (e.g. Meijering et al., 2019; van Casteren et al., 2021). Thus, while Sen (1999) and other Capability Approach scholars (e.g. Biggeri et al., 2006; Clark, 2003; Greco et al., 2015; Yap & Yu, 2016) have argued that democratic approaches are the ideal way to identify the functionings, capabilities, and wellbeing dimensions that communities value, in practice there have been numerous ways in which Capability Approach scholars have identified these. In this thesis, however, I will focus exclusively on the use of participatory approaches to understanding wellbeing, with the relationship between

participatory approaches and the Capability Approach discussed in greater detail in the following subsection.

2.5.2 Participatory approaches and conceptualisations of wellbeing

In developing the Capability Approach, Sen has consistently argued that democratic approaches should be used to determine the valuable capabilities, or dimensions of wellbeing, for a community or population group. This has continued to be argued in the face of criticism by scholars such as Sugden (1993) and Nussbaum (2003) that Sen's work lacks guidance on how functionings, capabilities, and wellbeing can be adequately measured. Some argue that a definitive list should be developed; the most prominent and influential of these scholars is Nussbaum (2003), who identified a list of 10 central human capabilities[16]. In response to this, Sen has argued that while a global list of capabilities may be useful and practical in certain circumstances, a final, fixed list of capabilities is inappropriate for a number of reasons. This is because a list of capabilities needs to adapt to different purposes, social conditions, and priorities. Furthermore, Sen emphasises the value of public discussion and reasoning, which Sen maintains lead to a better understanding of certain capabilities (Sen, 2004), which is also emphasised within the participatory research literature, as highlighted in Section 2.2.2.

A large number of Capability Approach scholars have employed participatory approaches, asserting that the Capability Approach and participatory approaches are inextricably linked (see Frediani et al., 2019). They include work by Yap and Yu (2016), who used participatory approaches with the Yawuru people in Australia to identify capabilities. Greco et al. (2015) employed focus group discussions to identify what a good life means for women in rural Malawi. A final example is Al-Janabi et al. (2012), who conducted interviews to identify capabilities for a now widely used capability-based wellbeing measurement tool for adults in health settings (ICECAP-A)[17].

[16] These capabilities are: (1) life; (2) bodily health; (3) bodily integrity; (4) senses, imagination, and thought; (5) emotions; (6) practical reason; (7) affiliation; (8) other species; (9) play; and (10) control over one's environment.

[17] See Chapter 4 for a systematic review and a full list of participatory wellbeing studies that have used the Capability Approach.

However, it should be emphasised that while many Capability Approach scholars apply and promote the use of participatory approaches, in practice a range of different approaches are used determined by the philosophical underpinnings of a study and available data and resources. For example, a large number of Capability Approach applications utilise Nussbaum's list of central human capabilities (e.g. Lorgelly et al., 2015; Simon et al., 2013). The Human Development Index, which draws heavily on the Capability Approach, uses three consistent dimensions (long and healthy life, knowledge, and a decent standard of living) to assess human development in countries throughout the world (United Nations Development Programme, 2020). Finally, the Global Multidimensional Poverty Index compares countries around the world based on 10 indicators of multidimensional poverty (United Nations Development Programme & Oxford Poverty and Human Development Initiative, 2021)[18]. However, in this thesis I explicitly apply the Capability Approach through a participatory paradigm, as the thesis examines only studies which incorporate participatory approaches. This thus aligns with Sen's view of the Capability Approach, highlighting the importance of a participatory, democratic approach to identifying relevant dimensions of wellbeing for a particular community.

2.5.3 Policy and research impact

While a central tenet of the Capability Approach is to develop policies (whether at the international, national, sub-national, community, or organisational level) to help improve the lives of humans through the expansion of capabilities, there has been very little research on the extent to which the Capability Approach has achieved this. As highlighted by Anand (2021), there have been clear illustrations of the Capability Approach being applied to develop frameworks for public policy at both the international and national levels. Examples of this include the Human Development Index, the Millennium and Sustainable Development Goals, the OECD's Better Life Initiative, and policy measurement frameworks in Australia, Bhutan,

[18] The 10 indicators are separated into three dimensions: health (nutrition and child mortality); education (years of schooling and school attendance); and standard of living (cooking fuel, sanitation, drinking water, electricity, housing, and assets).

and the United Kingdom. Furthermore, Anand (2021) notes that there are numerous examples of NGOs applying the Capability Approach, with these rarely being documented.

However, while measurement frameworks based on the Capability Approach have been utilised for public policy at various jurisdictional and organisational levels, similar to the policy impact of participatory wellbeing frameworks, there has been very little examination at a macro level of the *tangible* impacts the Capability Approach has achieved. For example, while the Multidimensional Poverty Index has been implemented widely, with many highlighting the benefits of using such approaches for measurement and policy development (e.g. WHO, 2021), there has been only limited illustration of how the index has actually impacted policy (e.g. OPHI, 2015). Thus, as well as the literature lacking a thorough macro-level examination of participatory wellbeing frameworks, we can also see a lack of evidence regarding the degree to which the Capability Approach, at a more general level, has achieved impact. Therefore, given the importance placed within the Capability Approach of realising impact, this thesis also provides an important contribution to the evidence base regarding the Capability Approach and impact, as well as the impact of participatory wellbeing frameworks more specifically.

2.6 Foundational issues

This final section of the chapter will outline some common theoretical issues and areas of contestation relevant to the conceptual framework used within this thesis. Four key criticisms will be discussed, highlighting the key arguments and how the approach I take within this thesis circumvents these criticisms and challenges. Firstly, I will outline the issue of anthropocentrism, with a discussion of how participatory wellbeing frameworks inherently favour human perspectives, and how this may come at the expense of other beings and life forms, such as animals and the environment. Secondly, I will discuss the individualistic nature of participatory wellbeing frameworks, highlighting that asking the question, “What does wellbeing mean to *you*?” does not necessarily diminish collectivist notions of wellbeing. Thirdly, I will summarise the challenges involved in adaptive preferences before discussing salience and stigma in raising certain areas of wellbeing.

2.6.1 Anthropocentrism

While the definitions and understandings of anthropocentrism are highly contested (Hayward, 1997), anthropocentrism can be loosely defined as "the belief that value is human-centred and that all other beings are means to human ends" (Kopnina et al., 2018, p. 109). Anthropocentrism is often discussed in the context of animal rights and welfare (e.g. Singer, 1995) and environmental conservation (e.g. Tallis & Lubchenco, 2014), with the advancement of human values said to come at the expense of animal welfare and environmental sustainability. Furthermore, favouring such anthropocentric perspectives can also come at the expense of future generations (Fisher et al., 2019).

With participatory wellbeing frameworks being inherently anthropocentric, there is a danger that using them for decision-making could implicitly promote anthropocentrism, further exacerbating issues related to animal welfare and the environment. While many population groups throughout the world are acutely aware of their connection to the environment and other beings (e.g. High, 2012; D. McGregor, 2004), this is not the case for all communities. As an extreme example, if a community notes that material items such as the plastic used to package items, fast fashion, the use of personal vehicles over public transport, and access to cheap meats from factory farms are important for their wellbeing, using such evidence to drive policy change will undoubtedly have negative consequences for the environment and animal welfare.

Setting aside the fact that a focus on areas such as environment and animal welfare can have long-term benefits for human wellbeing (e.g. McIntyre-Mills, 2013), concerns regarding wellbeing measurement and anthropocentrism have been noted in the literature. For example, stakeholder consultation used in one study highlighted that the anthropocentric nature of using wellbeing indicators for measures of progress created concerns for some decision-makers, who argued that it was incompatible with their focus on sustainability (Sustainable Development Commission, 2006).

However, a number of scholars have highlighted that these concerns can be alleviated by utilising models such as sustainable development and ethical universalism. Anand and Sen

(2000) argue that despite advocating for a democratic approach to wellbeing measurement, the Capability Approach aligns closely with the concepts of sustainable development and ethical universalism, highlighting that "we cannot abuse and plunder our common stock of natural assets and resources leaving the future generations unable to enjoy the opportunities we take for granted today. We cannot use up, or contaminate, our environment as we wish, violating the rights and the interests of the future generations" (p. 2030). O'Mahony (2017) advocates for "integrated wellbeing pathways" which involve balancing what is important for individual wellbeing while ensuring sustainability.

Similar to these approaches, the conceptual framework for this study does not argue that participatory wellbeing frameworks should be the *only* form of evidence used to achieve impact. Rather, such frameworks should be used in conjunction with other forms of evidence to ensure that what matters to the community is appropriately acknowledged by policy, with other issues such as conservation, animal welfare, and the needs of future generations, also being considered for policy decisions. We can see evidence of such practices within both research and policy. For example, the Millennium Ecosystem Assessment framework (MA, 2003) explicitly examines the interlink between ecosystems and human wellbeing, with some scholars using this framework as a lens to examine wellbeing through participatory approaches (Abunge et al., 2013; Pereira et al., 2005).

Governments throughout the world have also tried to ensure that environmental dimensions are incorporated into measures of progress, incorporating dimensions such as natural capital, or environment within wellbeing frameworks (Australian Bureau of Statistics, 2002; Dalziel et al., 2019; Government of Iceland, 2019; Office for National Statistics, 2018; Ura et al., 2012). By definition, participatory wellbeing frameworks will only incorporate dimensions such as environment and animal wellbeing if they are explicitly noted by participants. Therefore, this thesis contends that participatory wellbeing frameworks can help to inform policy regarding the human experience through decision-makers better understanding the population group of interest. However, other forms of evidence should also be utilised as necessary to ensure that policy concurrently pays attention to other aspects of society.

2.6.2 Methodological individualism

Methodological individualism is defined by Bhargava (1992, p. 1) as the belief that "all social phenomena must be accounted for in terms of what individuals think, choose and do". Thus, according to this definition of methodological individualism, social goods fail to exist, with only those goods of value which can be traced to individual components or behaviours comprehensible and recognisable (Stewart & Deneulin, 2002). As noted in Section 2.1.4, individualism has been inherent within the field of wellbeing measurement, largely due to Western philosophies of wellbeing taking precedence over other wellbeing theories. While participatory wellbeing frameworks, through engaging directly with the community, can help to overcome this bias through incorporating cultural values and nuance into wellbeing measurement, simply asking the question, "What does wellbeing mean to *you*?" can still be seen as individualistic due to the focus on the individual as the subject of interest.

As will be highlighted through the inclusion criteria for the systematic review in Chapter 4, this thesis exclusively examines participatory wellbeing frameworks that are targeted at the individual level, excluding studies which ask the question, "What does wellbeing mean for *your community*?" Such studies were excluded due to the fact that the question framing tends to elicit dimensions more closely related to institutional and macro-level factors, as opposed to seeing what is important to the individual. Thus, in order to ensure some level of consistency within the participatory wellbeing frameworks examined, and given the importance of examining dimensions that improve the wellbeing of people's lives (as opposed to, for example, improving aspects of the institutions and society that they live in), an individual lens is applied within this thesis.

Due to this attribute, some may argue that this thesis subscribes to methodological individualism, potentially perpetuating a Western bias that has plagued wellbeing measurement for decades. Similar criticisms have been levied at wellbeing measurement more generally. For example, Stewart and Deneulin (2002) argue that the Capability Approach is an illustration of methodological individualism, with social goods, such as norms, cultural practices, and trust, seen as important because they are instrumental for individual wellbeing, not because they are seen as social goods in their own right. In short, they are good because

they are good for the *individual*, disregarding their value at the community or collectivist level. This argument is reiterated by Deneulin and McGregor (2010). However, these claims are rebuffed by Robeyns (2017), who argues that the Capability Approach necessarily takes on a form of *ethical* individualism, with its focus on ensuring that "we ask questions about *how the interests of each and every person are served or protected*" (p. 58) [italics in original], ensuring a level of equality and social justice in decision-making. However, this does not mean that the Capability Approach is methodologically individualistic, with the framework being utilised to better understand collective capabilities and wellbeing within and between groups (e.g. Ibrahim, 2006; Kabeer, 2003).

In a similar vein, participatory wellbeing frameworks, which ask the individual what wellbeing means to them, can be (and have been) used to better understand wellbeing at a more collectivist level. While this will largely rely on the methodology and level of participatory approach applied within a study, the use of certain approaches will elicit more collectivist notions of wellbeing within a community. For example, the use of focus groups allows individuals to deliberate on how wellbeing conceptualisations vary within a community, and more consultative approaches will allow population groups to come to some consensus on how the community conceptualises wellbeing. Furthermore, participatory wellbeing frameworks provide the opportunity for individuals to highlight the more collectivist or relational aspects of wellbeing.

However, it should be noted that some methodologies applied to elicit wellbeing understandings, such as surveys, may subscribe more closely to methodological individualism. As this thesis explores the participatory wellbeing frameworks that have been developed throughout the world (including those that use surveys as the sole data collection instrument), some of these frameworks may be prone to issues of individualism. As a general approach, I argue, however, that participatory wellbeing frameworks are not *necessarily* individualistic, with this assessment largely relying on the methodology and participatory approach applied within individual studies.

2.6.3 Adaptive preferences

Khader (2011, p. 51) defines an adaptive preference as "a preference that (1) is inconsistent with a person's basic flourishing, (2) was formed under conditions nonconductive to her basic flourishing, and (3) that we do not think a person would have formed under conditions conducive to basic flourishing". A famous example of adaptive preferences is Elster's (1983) analysis of La Fontaine's fable of the fox and sour grapes. Unable to reach grapes that hang above them, the fox declares them sour. In fact, they are not sour, but the fox is adapting their preferences to what is available, forever considering the grapes as sour.

Adaptive preferences are considered to be a major limitation to participatory wellbeing frameworks, given that the participatory nature of framework development may result in wellbeing components being formed through preferences that are adapted to an "overly positive" or "overly negative" state. While Khader (2011) explicitly defines adaptive preferences as those which are "downwardly adaptive", within this thesis adaptive preferences can also be considered "upwardly adaptive" in the context of opulence, with similar methodological concerns present in each.

There are a number of critics of the theory of adaptive preferences. For example, Baber (2007) argues that people do not have "adaptive preference", but rather that people choose the best available option to them. This may not be what is seen as "satisfactory" by those in the West, but, generally, of the opportunities available to a person, their chosen path is the one that will maximise their wellbeing and utility. It should be noted that this does not come into direct conflict with the arguments put forward by those concerned with adaptive preferences. For example, Nussbaum (2001) suggests that adaptive preferences occur when an individual is unaware of the opportunities available to them. Thus, individuals adapt their preferences to the opportunities they are aware of, not the opportunities that they are entitled to. Development, therefore, has an obligation to inform individuals, particularly those living in circumstances of deprivation or discrimination, of their rights and opportunities.

A number of scholars have highlighted how adaptive preferences can create issues in the context of development, where people's preferences "adapt" to contexts of deprivation or

discrimination (e.g. Khader, 2011; Nussbaum, 2001; Sen, 1999). Such scholars emphasise the importance of recognising adaptive preferences and putting in place approaches to ensure that the adaptive preferences do not present a barrier for development. For example, Khader (2011) and Nussbaum (2001) highlight the value in having a "central list" of capabilities that are integral for human flourishing. Without such a "core list", one cannot be certain that the preferences articulated by individuals are not being influenced by adaptive preferences. Such a central list can be construed as a list of rights, without which human flourishing cannot occur.

A similar approach can be taken to decision-making based on participatory wellbeing frameworks in the context of this thesis. As highlighted throughout this section, participatory wellbeing frameworks should only be one input to decision-making and should sit alongside a range of other evidence. Better understanding a population's values and conceptualisations around wellbeing helps ensure that decision-making will have meaningful impact for those in that community. However, given that adaptive preferences may result in participatory wellbeing frameworks failing to represent the full flourishing potential of a community, solely relying on them for decision-making may similarly result in policies and programs that fail to allow the community to flourish to their full potential. Thus, as well as relying on participatory wellbeing frameworks for decision-making, actors should also consider any aspects of human flourishing that are missing from such a framework.

2.6.4 Salience and stigma

The final foundational issue to discuss within the conceptual framework for this thesis are concerns around salience and stigma in raising certain wellbeing dimensions throughout the consultation process within participatory wellbeing studies. In asking individuals within a community what is important for their wellbeing, those issues which are less salient, and any areas that participants feel might be stigmatised (either by others in the community or the research team), are less likely to be raised. This raises concerns about the validity of the resulting participatory wellbeing framework, with dimensions truly important for wellbeing within the community potentially missed throughout the participatory process.

Dimensions of wellbeing which a community, overall, feels satisfied with, may be less salient to some individuals within the population group. For example, individuals in a community where living standards are relatively high and homelessness low may be less likely to spontaneously raise housing as an area of life important for their wellbeing. It is simply taken for granted. Matthys et al. (2021) refer to such areas as “tacit dimensions”, in that they are likely important for a good life, but often not spontaneously mentioned. Similarly, taboo, shame, or social desirability may result in stigma around raising certain wellbeing topics. For example, Matthys et al. (2021) note that within their participatory wellbeing study with farmers in East Nepal, subjects such as religion and domestic violence were not raised. However, given the importance of religion within the community and the prevalence of domestic violence, these are likely tacit dimensions, not mentioned due to the stigma surrounding such topics.

To overcome this limitation, there are two important points to make. The first is related to the methodology used, as well as the skills and experience of the research team throughout the consultation process. The use of qualitative approaches, such as focus groups and interviews, provides the research team more opportunity to prompt participants on tacit dimensions. Such opportunities are not present through the use of surveys. In overcoming stigma, incorporating higher levels of participation in the research design may result in greater levels of trust between participants and the research team (Christopher et al., 2008), resulting in participants’ concerns around stigma, shame, and social desirability being alleviated. The second point relates to the fact that decision-makers should be using participatory wellbeing frameworks as only one input to program and policy development/evaluation, as has been reiterated throughout this section. This can help to ensure tacit dimensions are still taken into account for policy development and decision-making.

Chapter 3 Analysis approach

Taking into account both the research questions outlined in Chapter 1, and the conceptual framework put forward in Chapter 2, this chapter will broadly outline the analysis approach and methodology used for this thesis. The thesis comprises six separate but related studies, which together address the research questions put forward in Chapter 1. The specific methodologies and approaches taken for each individual study will be described in detail within the relevant chapters (Chapters 4 to 9). This chapter will briefly summarise the data used and methodologies applied at a broad level, and how they address the relevant research questions.

3.1 Study 1: A systematic review of participatory wellbeing frameworks

The first study within the thesis forms the foundations for the rest of the thesis. By undertaking a systematic review of participatory wellbeing frameworks, I gain a comprehensive understanding of the work that has already been conducted in this space and collect valuable data to address a number of the research questions. The full methodology and results are outlined in Chapter 4.

The inclusion criteria for the systematic review correspond with the definition of a participatory wellbeing framework, as outlined in Chapter 1. That is, a participatory wellbeing framework engages with the population of interest to elicit dimensions, indicators, or themes of what wellbeing means to the population. Thus, to be in scope, a robust study must have been conducted that collected data directly from the population of interest, such as focus groups, interviews, surveys, or other approaches. The data collection process must have included at least one open-ended question regarding what wellbeing means to the participants, or other similar positively phrased terminology, including “good life”, “quality of life”, or “happiness”. Studies which sought to better understand what ill-being, poverty, or deprivation means to a community were not in scope.

Seven databases were searched for the study, as well as Google and Google Scholar. The selection process involved an additional author cross-screening abstracts and full texts to

assess eligibility, and an additional author cross-extracting data. The data collected included details of the study, such as the context within which the study was conducted, details on the population group, purpose of the study and research questions, methodology, the wellbeing question posed in the research, and the dimensions, themes, or indicators raised. The dimensions raised were thematically analysed, with cross-coding by two additional authors to ensure the findings were reliable and valid.

3.2 Study 2: Cross-cultural conceptualisations of wellbeing

Study 2 drew upon the data on wellbeing conceptualisations collected in the systematic review to better understand how wellbeing conceptualisations vary by culture. The 30 wellbeing areas identified in the systematic review were firstly grouped into a smaller number of groups using Exploratory Factor Analysis. To categorise population groups who were represented in the systematic review, two measures were applied. Firstly, an economic measure was applied using country income level based on World Bank classifications (The World Bank, 2021). Secondly, a cultural measure was applied based on the GLOBE (Global Leadership and Organizational Behaviour Effectiveness) framework (House et al., 2004; Mensah & Chen, 2013). To analyse the data, regression techniques were applied to assess the degree to which certain economic and cultural groups were more likely to raise certain wellbeing areas within the participatory studies. See Chapter 5 for the full methodology and results.

3.3 Study 3: Applications of participatory wellbeing frameworks – A review

To better understand the extent to which, and how, participatory wellbeing frameworks have been applied, study 3 involved a review based on the data collected in the systematic review. An application was defined as any further analysis or utilisation of the participatory wellbeing framework, with examples being the development of a measurement tool, monitoring and evaluation, use of the framework for advocacy purposes, or its use as a policy framework. Firstly, each of the 130 eligible papers from the systematic review were examined to identify whether there were any applications of the framework within the initial paper. Bibliographic

details of these papers were noted for each eligible paper, alongside a short description of the application. Secondly, a review was undertaken to identify any additional follow-on papers which applied the results of each participatory wellbeing study. This involved searching relevant databases using keywords from each study, as well as examining the publication history of key authors.

Following the data collection process, the descriptions of applications were thematically analysed, and the number of applications for each eligible study noted. Descriptive statistics were then produced to develop a deeper understanding of the extent to which participatory wellbeing frameworks have been applied and how they have been applied, and breakdowns by the theoretical justification of the study (as collected through the systematic review) were analysed. See Chapter 6 for the full methodology and results.

3.4 Studies 4 & 5: Two case studies applying participatory wellbeing frameworks

To understand more deeply the value, challenges, and limitations of applying participatory wellbeing frameworks, two case studies were undertaken drawing on participatory wellbeing frameworks identified in the systematic review. One case study developed and applied a measurement tool, while the second case study utilised an existing measurement tool for analysis. Measurement tools as an application was a specific focus due to this being the most frequent application identified in study 3.

Case study 1 (see Chapter 7) used a national-level child wellbeing framework developed by ARACY (2012) to develop an indicator set to analyse child wellbeing outcomes over time using an existing, nationally representative longitudinal dataset: the Longitudinal Study of Australian Children (LSAC). This indicator set was then applied to better understand the associations between being born into poverty and wellbeing later in childhood.

Case study 2 (Chapter 8) incorporated an existing wellbeing measurement tool developed in consultation with individuals in Indonesia (the Indonesian Wellbeing Scale) (Maulana et al., 2019; Maulana et al., 2018) into a survey to better understand the migrant wellbeing gap in Papua, Indonesia.

These two case studies were chosen, in particular, to reflect the varying approaches that are used based on different data sources and contexts, and the benefits and challenges associated with these. The first case study developed a measurement tool using existing data; this has different challenges from those in case study 2, which was developed directly from the participatory process. Case study 1 translated a national-level wellbeing framework to a national-level data source, while case study 2 utilised a national-level wellbeing framework for a more localised context. Furthermore, examining wellbeing for different age cohorts, with children being the focus for case study 1 and adults being the focus for case study 2, allowed for the examination of the different challenges in measuring wellbeing for population groups at different life stages.

A reflective process was undertaken with each case study to consider the value of the participatory process in developing these measurement tools, how the applications may help support policy and research, and the challenges and limitations of the method applied.

3.5 Study 6: Key informant study

The last study consisted of a key informant study with authors of participatory wellbeing frameworks, to more deeply understand how participatory wellbeing frameworks have been applied, what impact (if any) they have had on research and policy, and the barriers and enablers to achieving impact. Using the systematic review as a sampling frame, 12 informants/research teams took part in the study. The study used a consultatory, participatory model comprised of two stages. Stage 1 involved 12 semi-structured interviews, conducted between March and June 2021, in which informants provided details on the development of their framework/s, their applications, their research and policy impact, and the barriers and enablers to achieving impact.

Following thematic analysis of first stage interviews, stage 2 involved seven informants from stage 1 participating in focus groups or interviews, with the aim of consulting with informants on the preliminary findings. Specifically, informants were asked for their reflections, comments, and feedback. Data collected in stage 2 helped to refine the thematic coding

structure and provided more depth to the results. The full methodology and results can be found in Chapter 9.

3.6 Addressing the research questions

The link between the research questions in Chapter 1 (see Figure 1-1) and the six studies outlined in this chapter is shown in Table 3-1, with each study addressing at least two of the research questions.

Table 3-1 Linking studies to research questions

Study	Research questions addressed
Study 1: A systematic review of participatory wellbeing frameworks	1a, 1c, 3a
Study 2: Cross-cultural conceptualisations of wellbeing	1b, 3a
Study 3: Applications of participatory wellbeing frameworks – A review	2a, 2b
Study 4: Case study 1	2c, 3a
Study 5: Case study 2	2c, 3a
Study 6: Key informant study	3a, 3b, 3c

Through undertaking a systematic review, study 1 answers research question 1a, concerning how wellbeing is conceptualised throughout the world. Through thematic analysis of wellbeing dimensions, we gain a clearer understanding of wellbeing conceptualisations throughout the world. Research question 1b is addressed through the meta-analysis of wellbeing conceptualisations to better understand the degree to which they vary across cultures. Research question 1c is examined through the systematic review, which explores the various methodologies that have been applied to develop participatory wellbeing frameworks.

The review of applications addresses research questions 2a and 2b through examining how participatory wellbeing frameworks have been applied, and the extent to which they have been applied. Research question 2c is explored through the two case studies, which bring to light the benefits, challenges, and limitations of applying participatory wellbeing frameworks as measurement tools.

Finally, research questions 3a, 3b, and 3c are covered through the key informant study, in which authors of wellbeing frameworks provide insights into the value of participatory approaches to wellbeing measurement, how their frameworks have impacted research and policy, and the barriers and enablers to achieving impact. Research question 3a is also examined through all other studies (aside from study 3), which highlight the extent to which wellbeing conceptualisations vary, and the value in applying participatory wellbeing frameworks as measurement tools.

Taken together, these six studies comprehensively examine the value of participatory wellbeing frameworks in eliciting unique, context-specific conceptualisations of wellbeing, their value in developing further applications, and their research and policy impact.

Part 2 Conceptualisations of wellbeing

Chapter 4 Conceptualisations of wellbeing and quality of life: A systematic review of participatory studies[19]

4.1 Introduction

To develop a better understanding of the participatory wellbeing frameworks that have been developed, the methods applied, and the wellbeing conceptualisations elicited, this chapter presents the findings of a systematic review of participatory wellbeing frameworks throughout the world. A participatory wellbeing framework, as defined in this review, results in a set of dimensions, themes, or indicators that capture how a particular group conceptualises wellbeing, or what they feel they themselves need to live a good life. To be identified as participatory, the target population must be consulted with during the development of the framework to identify the conceptualisations of wellbeing or a "good life" for that population group. It should be noted that there are some limitations, and even objections, to the use of participatory approaches in defining wellbeing. These include adaptive preferences (Khader, 2011; Nussbaum, 2001), anthropocentrism (Srinivasan & Kasturirangan, 2016), elite capture (Alkire, 2013), and potential stigma in raising certain topics (Matthys et al., 2021). These limitations were discussed in detail in Chapter 2. However, despite these limitations, participatory wellbeing studies have an important role to play in ensuring that the voices of individuals and communities are incorporated into the development of wellbeing frameworks.

This chapter of the thesis makes a significant contribution to the literature in two ways. Firstly, while there are a small number of systematic and scoping reviews assessing the literature on aspects of wellbeing (e.g. Barrington-Leigh & Escande, 2018; Carrillo et al., 2021; Charlemagne-Badal et al., 2015; Cummins, 1996; Dex & Hollingworth, 2012; Miranti et al., 2017), to date there has been no systematic review that examines participatory wellbeing studies globally and throughout the life course. Therefore, this review provides researchers, development practitioners, and policymakers with a useful reference point to begin exploring the work previously conducted in this space. This offers a deeper understanding of why

[19] This chapter was co-authored with Mandy Yap, Paul Campbell, and Nicholas Biddle.

participatory wellbeing studies have been conducted, where they have been conducted and with whom, and the methods used. This systematic review will therefore allow researchers and practitioners to better understand the studies already undertaken, and to draw on previous methodologies to improve the standard of studies going into the future.

The second key contribution of this systematic review is to provide a detailed understanding of the dimensions of wellbeing important to individuals throughout the world, enabling greater insight into the diversity of how wellbeing is conceptualised. While a number of studies (including those contained within this review) have examined wellbeing conceptualisations for a particular context, or even compared understandings of wellbeing across multiple contexts, there has been no study to date that takes a macro perspective to assess the varied conceptualisations of wellbeing throughout the world. By drawing on existing studies, we provide an insight, at a very broad level, on what matters to individuals. Furthermore, it provides greater insight into the extent of variation in what matters to people throughout different population groups. If the conceptions of wellbeing for different population groups throughout the world are found to be highly nuanced, this will highlight the potential value of participatory approaches to ensure that wellbeing measurement frameworks accurately and adequately reflect what matters to individuals.

This chapter will firstly outline the methodology of this review, before going on to highlight the review results. In particular, we will assess the authors' motivations behind the development of the 130 participatory wellbeing studies, where they have been developed, how they have been developed, with whom, and the wellbeing dimensions emerging from eligible studies. We will then discuss some limitations of the review before discussing the results in greater detail. This systematic review was pre-registered through the Open Science Foundation (Sollis et al., 2020).

4.2 Methods

4.2.1 Eligibility criteria

This review sought to analyse papers which developed a participatory wellbeing framework, defined as a set of dimensions or indicators which reflect what wellbeing, a good life, or quality of life means to individuals in a community or population group.

Inclusion criteria

Data collection methods that interact directly with the population group must have been utilised for the study, such as interviews, focus groups, surveys, or pictorial/visual representations (White & Pettit, 2004). Studies that also consulted with other individuals related to the target population (e.g. parents may have been included in consultations for child participatory wellbeing studies) were considered in scope, as long as the target population were the primary participants.

The data collection process must have included at least one open-ended question regarding what wellbeing (or other similar, positively phrased terminology, including "good life", "quality of life", or "happiness") means to the participants. Relevant terminology encompassed a broad range of concepts and constructs within the science of wellbeing, including happiness, subjective wellbeing, multidimensional wellbeing, and quality of life. Studies which sought to validate a predefined list of wellbeing dimensions were in scope, however thematic analysis must have been applied for the validation exercise using an open-ended wellbeing question.

Studies were not excluded based on quality assessment by the authors or peers. Papers of any language were considered eligible to be included in the review.

Exclusion criteria

Studies that sought to examine what ill-being, poverty, or deprivation meant to individuals were not included in the review. Studies that asked individuals about wellbeing in particular aspects of their lives, such as wellbeing at school or wellbeing as a parent, were not in scope, as the understandings of wellbeing needed to be global in nature. Finally, studies that asked

participants to rank wellbeing areas according to a predefined list were not in scope. Theses, entire books, protocols, conference proceedings, and presentations were excluded.

4.2.2 Search strategy

Seven databases were searched for this study; Applied Social Sciences Index and Abstracts (ASSIA), PubMed, PsycInfo, Social Sciences Citation Index, EconLit, International Bibliography of the Social Sciences (IBSS), and Sociological Abstracts. These databases were chosen for their relevance to the research topic and to cover the various disciplines that were in scope (social sciences, psychology, economics, and health). Google and Google Scholar were used to complement the database searches with grey literature, with the first 100 search results from each being screened. Papers published between January 2000 and January 2020 were eligible for inclusion in the review.

The key search terms covered the concepts of (a) wellbeing, (b) frameworks, and (c) participatory approaches. A summary of the search terms is presented in Table 4-1, with the exact search strategy for each database outlined in Appendix A1.

Table 4-1 Search terms

Search concept	Search term
Wellbeing[20]	"quality of life" OR "well-being" OR wellbeing OR HRQOL[21] OR capability OR capabilities OR "good life"[22]
Framework	framework AND (dimension OR indicator OR domain OR theme)
Participatory approach[23]	"participatory method" OR "participatory technique" OR "participatory research" OR "participatory framework" OR "participatory approach" OR "participatory process" OR "participatory wellbeing" OR "participatory well-being" OR "participatory assessment" OR "participatory study" OR "participatory exercise" OR "participatory activity" OR "participatory evaluation" OR "self-perceive" OR "self perceive" OR "self-rate" OR "self rate"

Note: HRQoL is a commonly used acronym for "Health-related quality of life".

4.2.3 Selection process

After removing duplicates, two reviewers (KS and PC) screened non-blinded titles, abstracts, and full texts of studies to assess eligibility, with reviewers resolving discrepancies in eligibility by consensus. If no consensus could be reached, a third reviewer (NB) resolved the discrepancies. The reference lists of the full texts considered eligible were screened to incorporate additional studies (citation chasing, or iterative searching), which then subsequently went through the title, abstract, and full text screening process. While the original search strategy was conducted in English only, references listed in any language were in scope to be included through the iterative searching. Google and Google Scholar results were screened by one reviewer (KS), with results considered potentially eligible subsequently going through the title, abstract, and full text screening process.

[20] Future studies on this topic may wish to include non-English words related to wellbeing, such as *'buen vivir'* and *'sumak kawsay'*.

[21] Studies which took on a more holistic understanding of wellbeing within the health-related quality of life (HRQoL) field were considered in scope for this review (as opposed to those which focused exclusively on physical and mental health). The terms "quality of life" (within the health sciences) and HRQoL are often used interchangeably, with Karimi and Brazier (2016) highlighting that a lack of clear distinction between the two terms has led to confusion. Eligible studies utilise a definition of wellbeing which is closer to quality of life than HRQoL as defined by Karimi and Brazier (2016).

[22] Studies that focus on understandings of the term "happiness" were considered in scope for the review. Future systematic reviews on this topic could adapt this search strategy by incorporating "happiness" as a search term. Future studies may also wish to incorporate the term "flourishing".

[23] Future systematic reviews on this topic could adapt this search strategy by incorporating terms such as "conceptualisation" and "understanding".

4.2.4 Data collection process

Two reviewers (KS and MY) independently extracted data from all studies deemed eligible. This included publication information (such as authors, year of publication, and journal) and study information. The study information extracted included:

- country where the study was conducted and details on the specific context
- details on the population group of interest (including any sub-groups)
- whether individuals outside of the population of interest were included in consultations
- purpose of the study and research questions
- theoretical justification
- participatory approach
- data collection methodology (e.g. interviews, focus groups, surveys etc.)
- sample size
- the wellbeing question posed in the research (e.g. “What does a good life mean to you?” or “What does wellbeing mean to you?)
- wellbeing dimensions or themes
- wellbeing sub-domains/sub-themes/indicators
- analytical technique to derive wellbeing dimensions/sub-domains (i.e. either through a data-driven approach or validation of an existing framework alongside thematic analysis).

The participatory approach variable required a set of specific response options during the extraction process, adapted from a widely used scale of public participation (IAP2, 2018). The IAP2 scale is based on a number of other models, including Arnstein’s (1969) ladder of citizen participation and Hart’s (1992) ladder of children’s participation (Organizing Engagement, n.d.). It is a frequently used model to better understand shared decision-making (Nabatchi, 2012) and to compare approaches to public participation (e.g. Nelimarkka et al., 2014). This scale is comprised of the categories “inform”, “enrich” (added for the purposes of this study), “consult”, “involve”, “collaborate”, and “empower”. These are explained in detail in Appendix A2.

The theoretical justification variable was also coded using a set of response options, developed using Gasper’s (2010) summary of the various approaches to measure wellbeing as a starting point, with certain categories removed due to being out of scope, and additional response options being added by reviewers as necessary. Upon completion of the first round of data extraction, the theoretical justifications for all papers were extracted again using the

full list, outlined in Appendix A2. A study could have multiple theories attached to it. The study purpose was extracted as free text, with the first author (KS) undertaking a thematic analysis of the responses, and developing a set of possible codes, summarised in Appendix A2. Data on "geographic level" and "key terms to elicit wellbeing meanings" were also thematically analysed by the first author (KS) and categorised following data extraction.

Any discrepancies in data extraction between the two reviewers were initially sought to be resolved through consensus. If no consensus could be reached, a third reviewer (NB) resolved discrepancies.

4.2.5 Coding of wellbeing areas

To code the conceptualisations of wellbeing raised in eligible studies, thematic analysis was undertaken using an iterative process[24]. The first step involved two authors (KS and MY) independently reviewing the conceptualisations of wellbeing raised in 20% of eligible studies (randomly selected) and identifying key areas of wellbeing. The list of wellbeing areas was drawn primarily from wellbeing dimensions provided in the papers as much as possible. Where dimensions were not explicitly provided in the paper, the authors derived keywords or wellbeing themes from analysing the analysis and discussion sections of the publications. Through consensus and discussion, a preliminary list of 30 wellbeing areas, which were broadly reflective of the understandings of wellbeing in all eligible studies, was developed.

The second step encompassed coding the conceptualisations of wellbeing raised in each study to this list of 30 wellbeing areas. The lead author (KS) coded all studies, with two authors (MY and PC) each cross-coding 50% of studies. A single theme, dimension, or indicator could be coded to more than one wellbeing area. The coding was contrasted, and any discrepancies were resolved by consensus. Minor adjustments to the 30 wellbeing areas were made where necessary, to ensure this list of 30 wellbeing areas adequately reflected the conceptualisations of wellbeing reported in eligible studies.

[24] One study (Amazonas et al., 2019) was excluded from this analysis due to lack of contextual information in the paper to permit accurate coding.

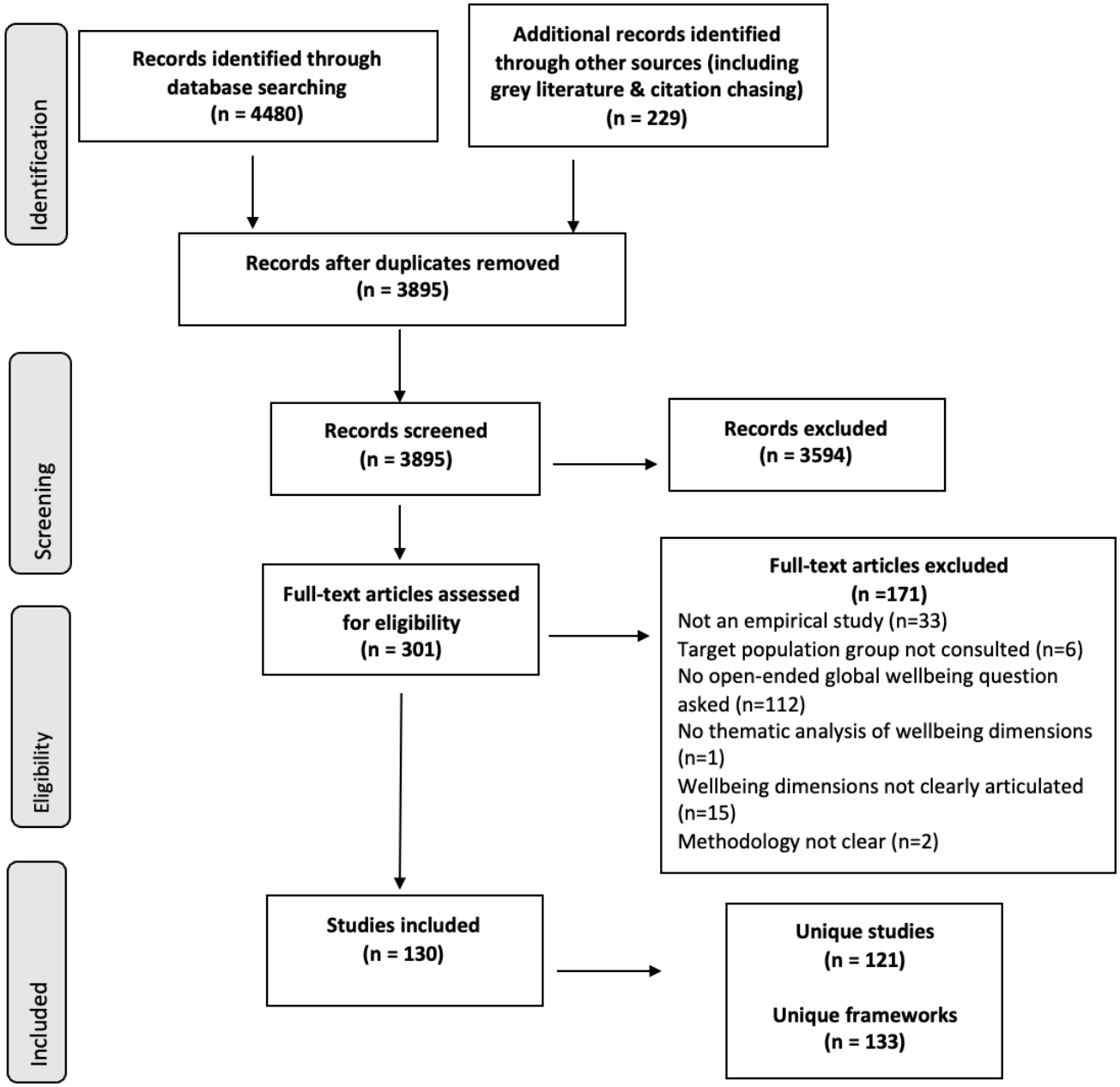
The third step entailed reviewing the coding of all studies to ensure any necessary changes following minor adjustments made to the list of 30 wellbeing areas. Finally, reliability and consistency checks were conducted to ensure that all three authors involved in this process agreed with the coding scheme, and that identical keywords (with identical meanings) were consistently coded to the same wellbeing area. This involved back-coding the conceptualisations of wellbeing in all studies to the 30 wellbeing areas, so that a list of keywords for each wellbeing area was identified. The keywords were reviewed by the three authors to ensure reliability of the 30 wellbeing areas, and minor adjustments to the coding scheme were made. The final consistency check entailed the first author (KS) ensuring that all keywords were consistently coded to the relevant wellbeing area.

4.3 Results

4.3.1 Study selection

The PRISMA flow diagram for the review is outlined in Figure 4-1, highlighting that 130 studies were considered eligible for the review. Of these studies, 127 were written in English, with one study written in French, one in Portuguese, and one in Spanish. After taking into account papers which drew on the same data, there were 121 unique studies that included in the review. As some of the 121 unique studies produced more than one set of wellbeing dimensions for different contexts, there were 133 unique frameworks, or collections of wellbeing dimensions, assessed in the review. Appendix A3 provides a list of all references, including summary information on each.

Figure 4-1 PRISMA flow diagram



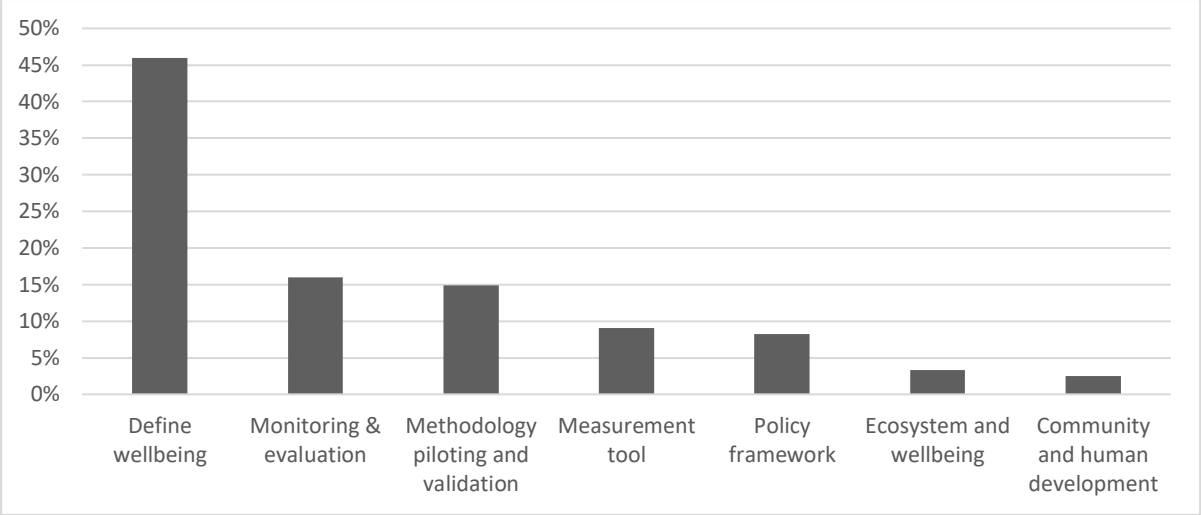
4.3.2 Why have participatory wellbeing studies been undertaken?

A range of different purposes for participatory wellbeing studies were identified within the papers. As highlighted in Figure 4-2, by far the most common stated purpose was to simply define what wellbeing means to that population group (46%). For example, Camfield (2006) sought to identify the elements important for subjective wellbeing in four developing countries to make up for the over-concentration of such research in rich Western countries,

while Kono and Walker (2020) conducted their study to develop and validate a theory on how Japanese university students pursue *ikigai*, or a life worth living.

Another common stated purpose for undertaking a study was methodology piloting and validation (15%). This relatively large proportion is not surprising, given that measuring wellbeing through participatory approaches is still in its relative infancy. Many such studies assessed the suitability of using the Schedule for the Evaluation of Individual Quality of Life (SEIQoL)[25], which explores wellbeing through a health lens (e.g. Bayle et al., 2000; LeVasseur et al., 2005; Prince & Gerber, 2001; Smith et al., 2000). Many others piloted various qualitative methodologies as an approach to elicit wellbeing conceptualisations (Amazonas et al., 2019; Armstrong et al., 2004; Crivello et al., 2009).

Figure 4-2 Purpose of studies (%)

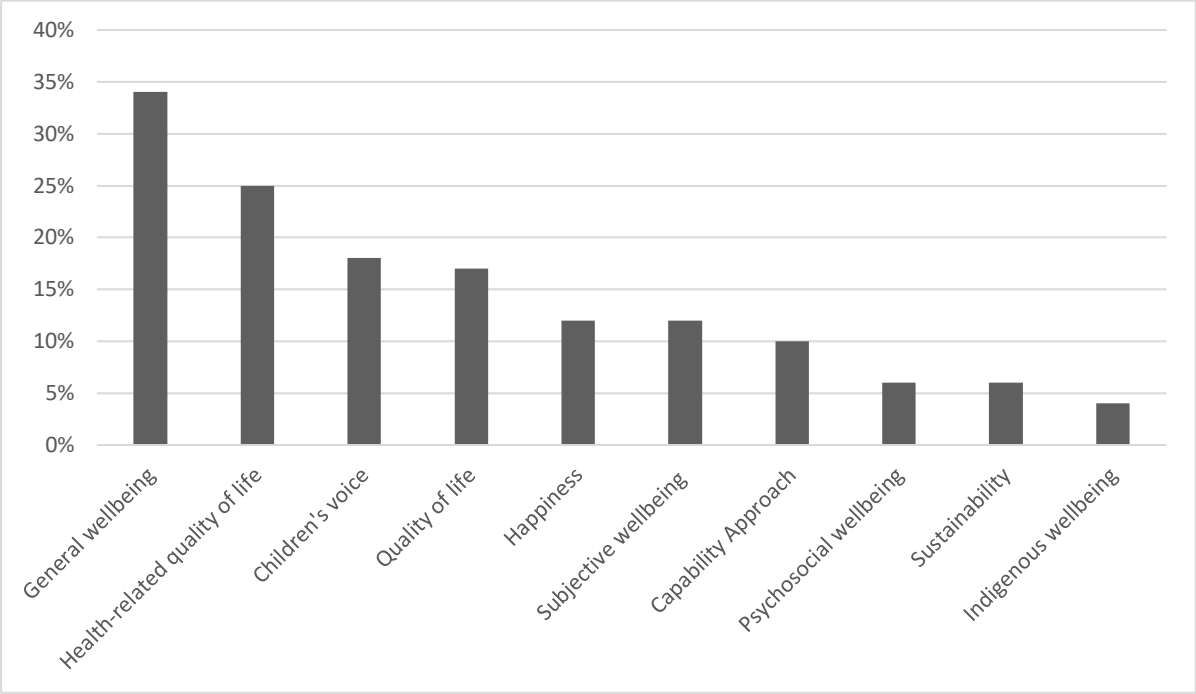


A number of theoretical justifications for the studies were provided by authors, covering a wide range of disciplines, including the health sciences, psychology, environmental science, the social sciences, and development. Figure 4-3 outlines the various theoretical justifications for the studies (see Appendix A2 for a description of each), with "general wellbeing" being the most common justification (defined as those studies which refer to the value of applying wellbeing measures more generally), utilised in 34% of studies (e.g. Maulana et al., 2018).

[25] SEIQoL is a self-administered survey whereby participants are asked to write down the five areas of life they consider most important in determining their quality of life (O'Boyle et al., 1993) The SEIQoL tool has predominantly been applied within the medical sciences.

Studies could be classified under more than one theoretical justification. While happiness and subjective wellbeing are highly related, these theories were separated given that many such studies strongly classified their approach within either happiness or subjective wellbeing paradigms. These results emphasise that a wide range of disciplines and studies utilising a broad range of wellbeing concepts can incorporate participatory approaches into the research process.

Figure 4-3 Theoretical justifications for studies (%)



Note: Graph outlines the percentage of studies utilising each theoretical justification. The total sum of percentages is greater than 100% as multiple theories could be selected for each study.

4.3.3 Where have participatory wellbeing studies been conducted?

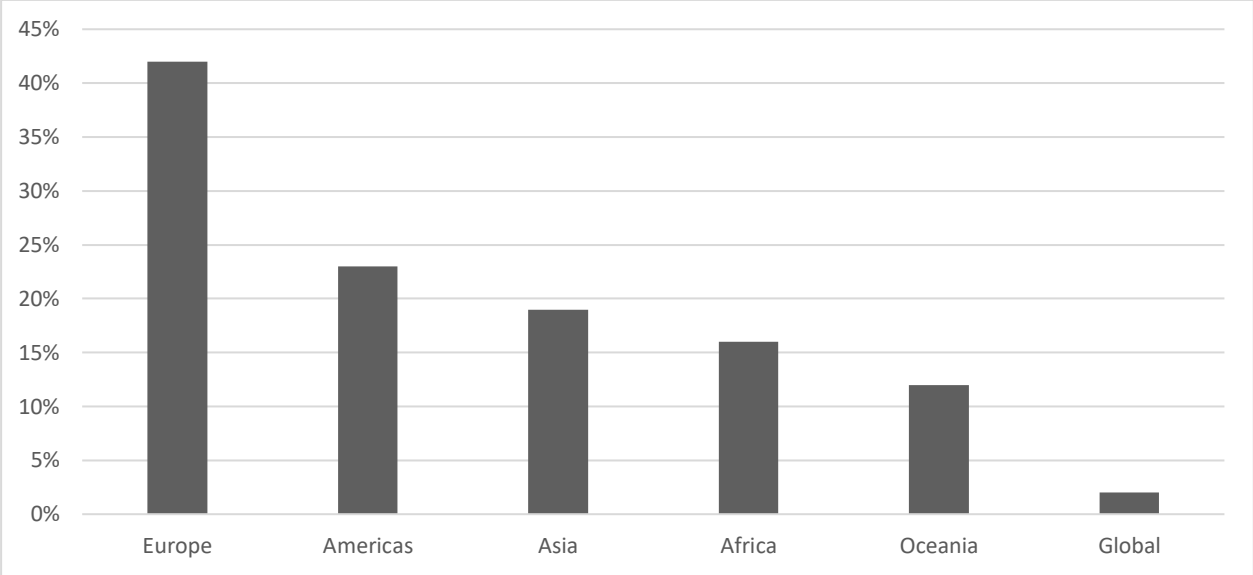
Participatory wellbeing studies have been undertaken in all five inhabited regions of the world (Europe, Americas, Asia, Africa, and Oceania)[26], as well as two studies which did not look at any specific region of the world, but rather examined wellbeing conceptualisations at a global level (Biggeri et al., 2006; Bintliff et al., 2018). Figure 4-4 highlights that a large proportion of studies (42%) have been undertaken in Europe. These predominantly took place in the United Kingdom (19 of 51 European studies). Twenty-three per cent of studies were conducted in the

[26] The regional analysis was conducted for descriptive purposes only, recognising that within each region there is a high level of cultural and economic disparity.

Americas, most notably in the United States and Canada (10 and 9 of 28 studies in the Americas respectively), 19% of studies were conducted in Asia (with a reasonable spread across countries), 16% of studies were conducted in Africa (with countries represented being Burundi, Ethiopia, Ghana, Madagascar, Malawi, Kenya, Namibia, Uganda, South Africa, and South Sudan), and 12% of studies were conducted in Oceania (predominantly in Australia, with 12 of 15 Oceanic studies undertaken there).

It is important to highlight that while a broad range of countries were represented in the review, there was a strong bias toward certain English-speaking countries (United Kingdom, Australia, United States, and Canada). While this may have in part been caused by the fact that the search strategy was conducted in English, it should also be noted that there has been a strong movement within these countries toward the use of wellbeing measures for policy (Barrington-Leigh & Escande, 2018; Exton & Shinwell, 2018). All up, participatory wellbeing studies were conducted in 50 separate countries, as outlined in Appendix A4.

Figure 4-4 Regions where participatory wellbeing studies have been conducted (%)

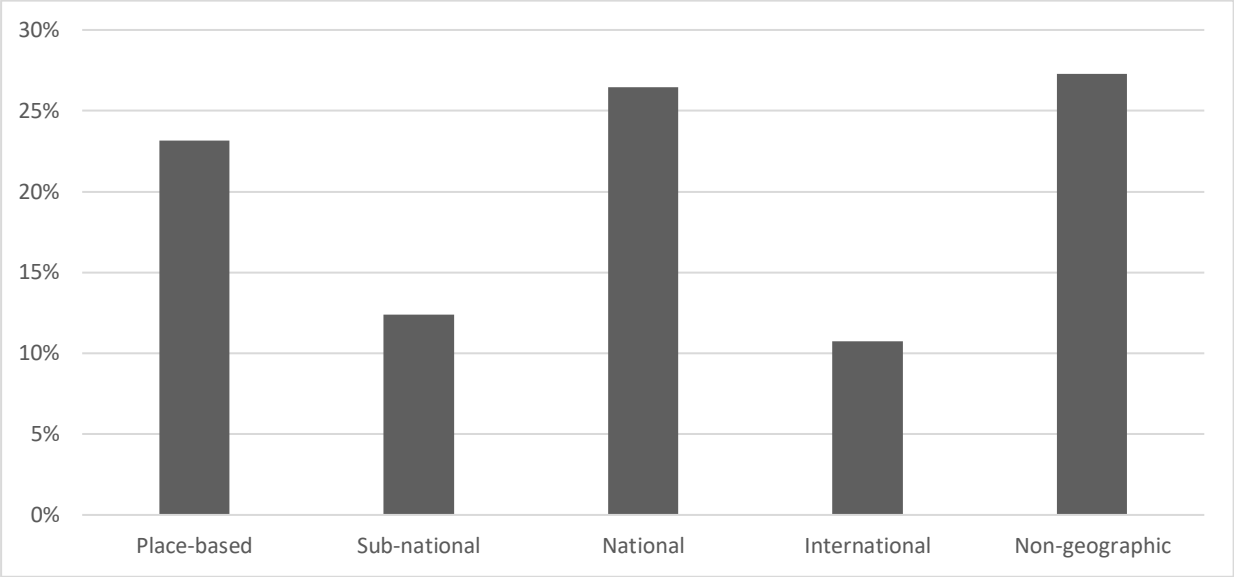


Note: The total sum of percentages is greater than 100% as some studies were conducted in multiple regions. One study was excluded from this analysis (Fossas, 2019) as the geographic context of the study was not clear.

The studies in scope of the review represented different levels of geography where participatory approaches have been undertaken. Figure 4-5 shows that 23% of studies are considered “place-based”, in that they sought to reflect the understandings of wellbeing within a small geographic community (e.g. village, suburb, town, or city). Examples of such

papers include a study to examine meanings of wellbeing for street children in Kampala (Biggeri & Anich, 2009) and a study to understand quality of life perceptions of older adults in a London borough (Graham Beaumont & Kenealy, 2004). Twenty-seven per cent of studies did not seek to represent the views of a particular geographic community, but rather to provide a global representation of wellbeing understandings for individuals with a particular characteristic, such as an illness (e.g. Carlson et al., 2005; Pitkänen et al., 2009).

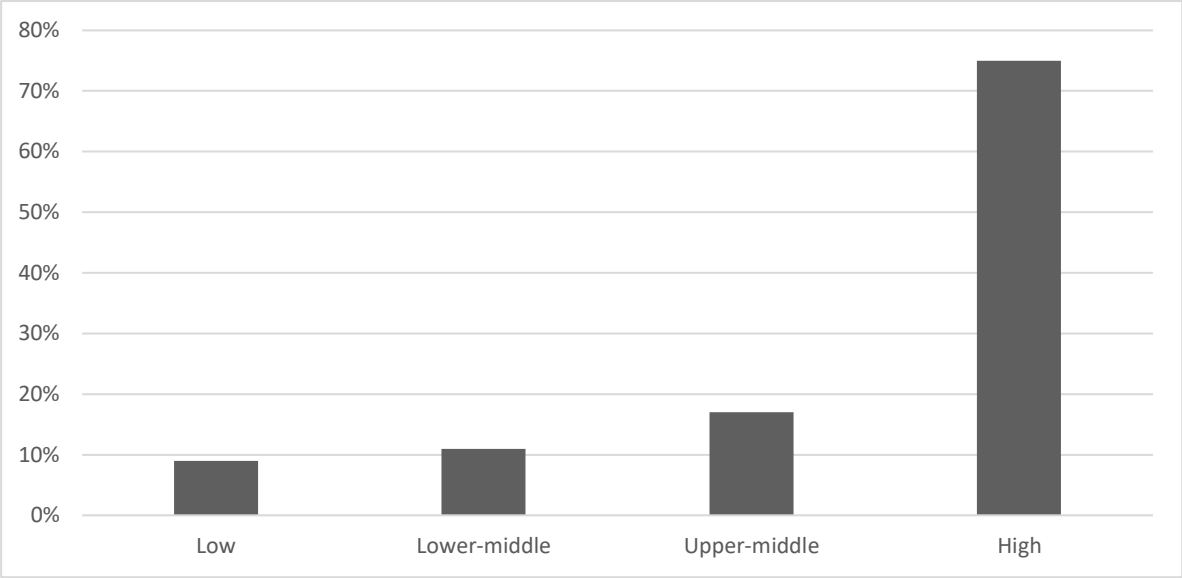
Figure 4-5 Geographic level of studies (%)



The distribution of studies by country income level is represented in Figure 4-6, based on World Bank 2020–2021 income classifications (The World Bank, 2021). It shows that participatory wellbeing frameworks are heavily biased toward high-income countries, with 75% of studies based in a high-income country and only 9% in a low-income country. In terms of the absolute number of countries within each category, there were seven different countries in the "low income" category, seven different countries in the "lower-middle income" category, 12 different countries in the "upper-middle income" category, and 24 different countries in the "high-income" category[27].

[27] The 27% of studies that did not seek to reflect the views of a geographic community were coded according to the country of data collection.

Figure 4-6 Percentage of studies by country income level, based on World Bank income classifications (The World Bank, 2021)

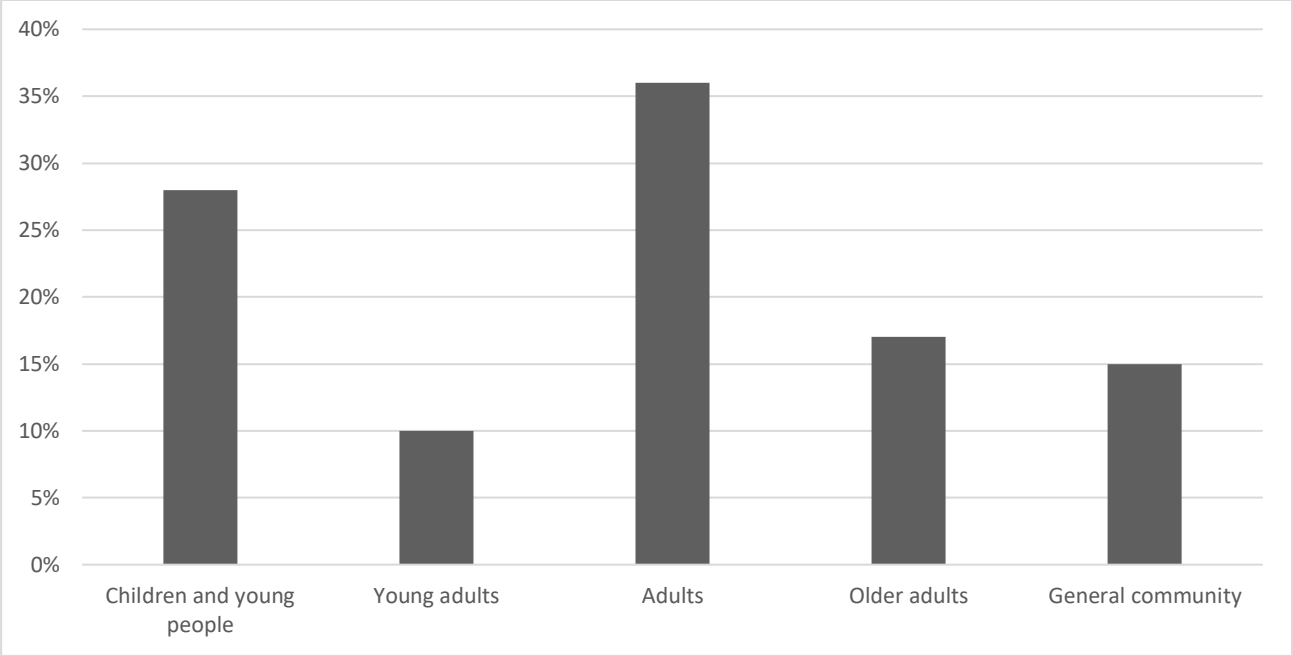


Note: The total sum of percentages is greater than 100% because some studies were conducted with multiple countries at different income levels. Three studies were excluded from this analysis (Biggeri & Anich, 2009; Bintliff et al., 2018; Fossas, 2019) as they either examined wellbeing at a global level (with no specific countries identified) or they did not clearly specify a country.

4.3.4 With whom have participatory wellbeing studies been developed?

Participatory wellbeing studies have been developed with individuals at all stages of the life course, from early childhood to those at the end of life. As shown in Figure 4-7, studies were predominantly undertaken with adults (36%), however a large proportion of studies were conducted with children and young people (28%, self-identified in the papers but loosely defined as those aged under 18) and older adults (17%). Studies that examined a general community (i.e. those that did not have a focus on age) included those focused on specific geographic communities or those with particular characteristics (such as those with an illness), making up 15% of studies.

Figure 4-7 Studies by stage of life course (%)



Note: The total sum of percentages is greater than 100% as some studies were conducted with individuals at multiple life stages.

Beyond life stage and country, some studies were conducted with population groups with specific characteristics. These included those with an illness (n=28), Indigenous population groups (n=6), those who had experienced conflict or displacement (n=5), university students (n=5), those who were experiencing homelessness (n=3), those who were experiencing another form of material disadvantage (n=4), and those with disability (n=3). The studies associated with population groups having these characteristics are identified in the full list of studies in Appendix A3.

While the majority of studies (85%, n=103) were conducted exclusively with the population of interest, some studies also sought the views of those outside the target group (15%, n=18) (e.g. Banerjee et al., 2010; Parry et al., 2010). These studies incorporated the views of parents, carers, men (for studies focused on women), policy officials, and professionals.

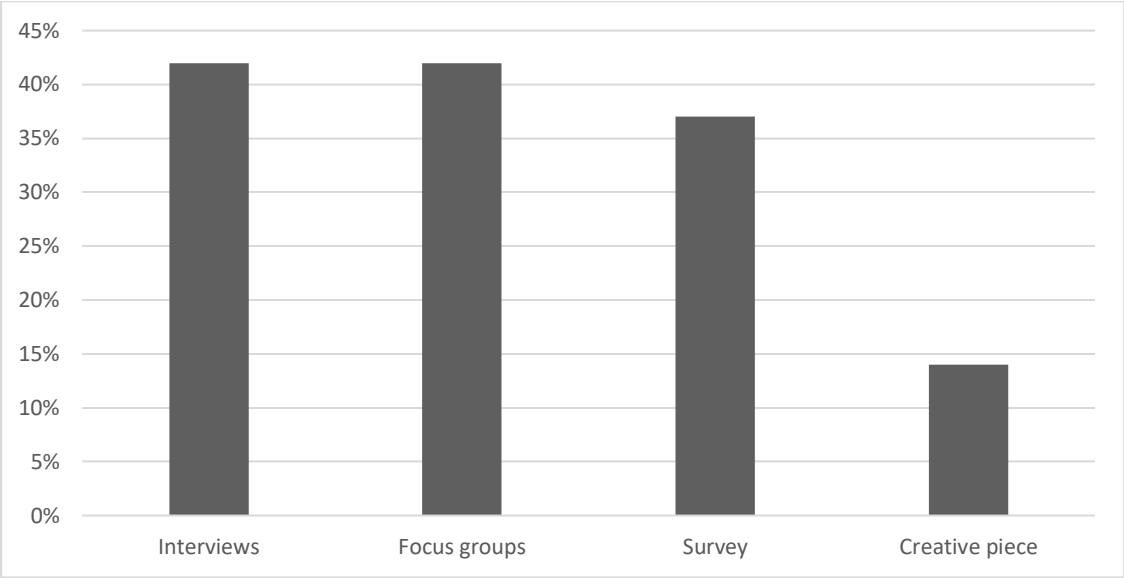
4.3.5 How have participatory wellbeing studies been undertaken? Methodologies and participatory approaches

A wide range of approaches have been used to undertake participatory wellbeing studies, which can be replicated for future projects. In this section, we examine the data collection methodology, the question used to elicit wellbeing meanings, the participatory technique, and

finally the analysis approach undertaken to develop the dimensions and sub-domains of wellbeing.

As shown in Figure 4-8, the data collection methodologies employed were predominantly interviews and focus groups (each used in 42% of studies), followed by surveys (used in 37% of studies), and finally creative pieces, including drawings, photographs, and essays (used in 14% of studies). Many studies (32%) used a mix of these approaches. In particular, creative pieces were almost always accompanied by interviews or focus groups.

Figure 4-8 Percentage of studies using given data collection methodology



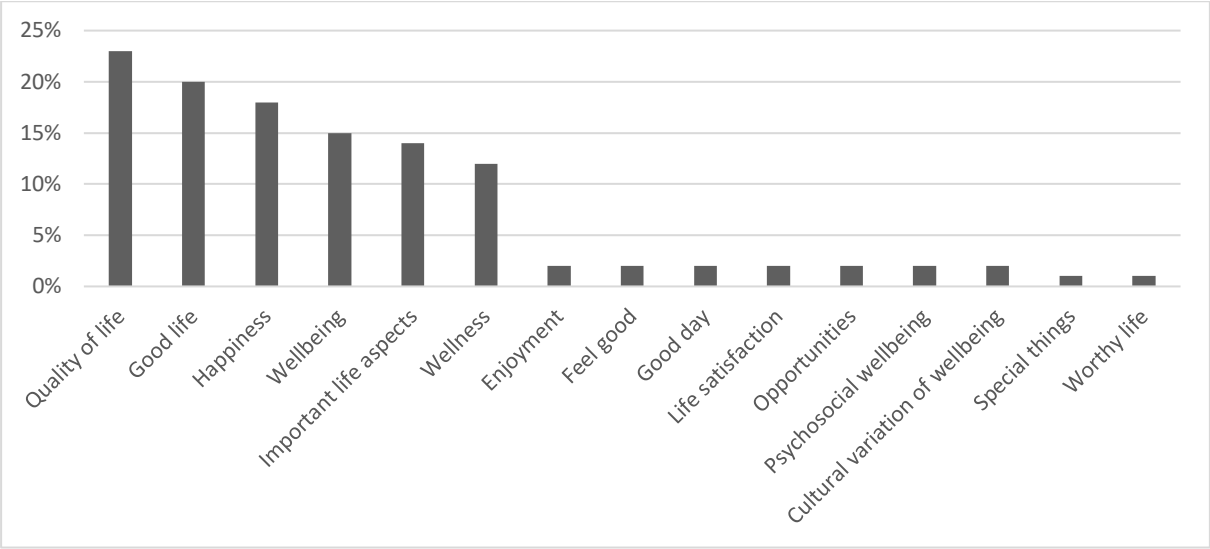
Note: The total sum of percentages is greater than 100% because some studies were conducted using multiple methodologies.

A variety of survey, interview, and focus group questions were used to elicit the meanings of a good life, or wellbeing, for participants. As highlighted in Figure 4-9, the most common terms used were “quality of life”, “good life”, “happiness”, “wellbeing”, “important life aspects” and “wellness”. Three studies used a cultural/linguistic variation of the term “wellbeing”, such as “nallam irukka” for a study in Sri Lanka (Armstrong et al., 2004), “ikigai” for a study in Japan (Kono & Walker, 2020), and “mabu liyan” for a study with the Yawuru people in Australia (Yap & Yu, 2016).

It is well documented that the choice of method can bias how participants respond in social research studies (Podsakoff et al., 2012). Therefore, it is possible that these different

terminologies may have resulted in some wellbeing dimensions being more likely to be raised than others. This can be explored through future research.

Figure 4-9 Percentage of studies using given key term within question to elicit wellbeing meanings

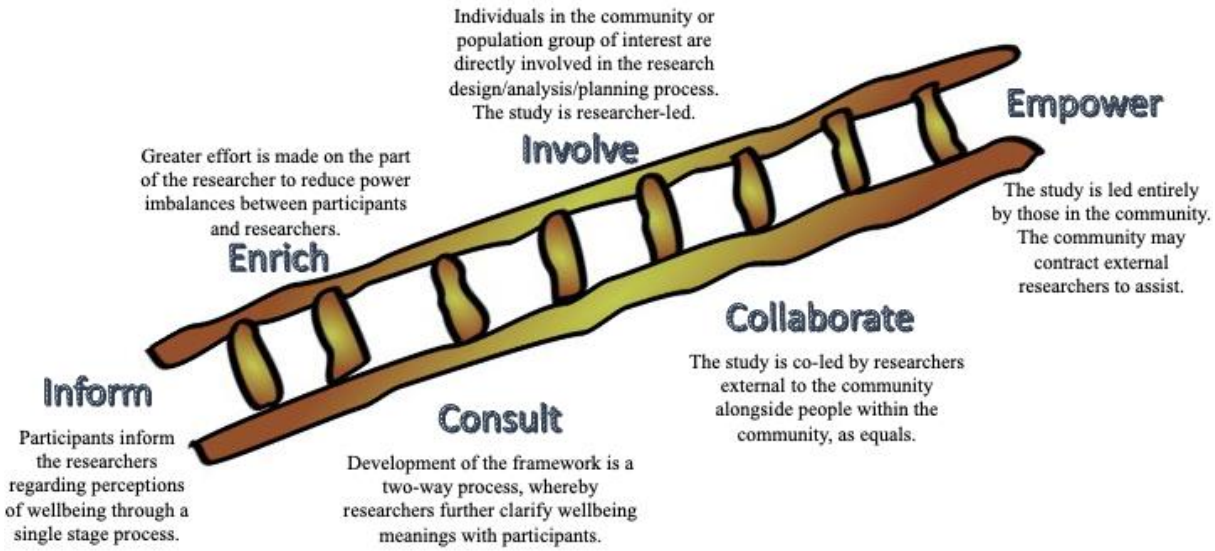


Note: The total sum of percentages is greater than 100% because some studies used multiple questions.

As explained in the Methodology section, a scale comprising six categories was used to describe the participatory approach used in studies. A brief description of each category is outlined in

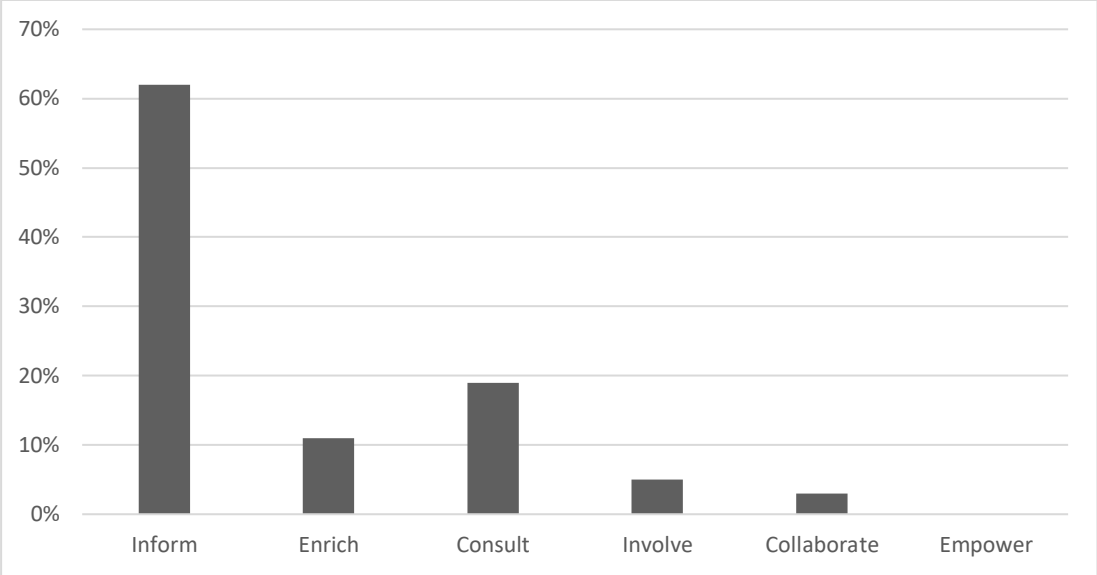
Figure 4-10, with further explanation articulated in Appendix A2.

Figure 4-10 Scale of participation for participatory wellbeing studies



As shown in Figure 4-11, the vast majority of studies (62%, n=75) sat on the lowest end of the participatory scale in the "inform" category. These studies comprised one stage of data collection, in which researchers did not seek to further clarify wellbeing meanings following data collection, or did not ask participants to come to a final consensus during focus group discussions. Following that, 11% (n=13) of studies came under the "enrich" category, meaning that the researchers for these studies made a greater effort to reduce power imbalances between participants and researchers and data may have been collected and reviewed through multiple stages. Nineteen per cent (n=23) of studies used a consultative methodology, whereby data collection was more of a two-way process, with researchers clarifying wellbeing meanings with participants following data collection or groups being asked to come to a final consensus. Very few studies (5%, n=6) used an "involve" methodology, in which participants are directly involved in the research design, analysis, or planning process. Only 3% (n=4) of studies used a collaborative methodology, whereby the research team and individuals from the population of interest work together in an equal partnership to undertake the study. Finally, no study in the review used an "empower" methodology, which is defined as entirely community-led.

Figure 4-11 Participatory approach used in studies (%)



In order to be eligible for the review, some thematic analysis must have been used to derive wellbeing dimensions and/or sub-domains. However, some studies also incorporated validation of resulting dimensions against existing frameworks when deriving wellbeing dimensions and sub-domains. Overall, 86% (n=104) used pure thematic analysis, while 14% (n=17) also incorporated some framework validation. This included studies that validated their resulting dimensions to the Millennium Ecosystem Assessment framework (Abunge et al., 2013; Beauchamp et al., 2018; Pereira et al., 2005), as well as one study that validated results to Nussbaum's (2011) list of central capabilities (Andresen & Fegter, 2011).

4.3.6 What wellbeing areas are raised?

The thematic analysis of wellbeing dimensions, domains, themes, and indicators raised within the participatory wellbeing frameworks identified 30 broad wellbeing areas (see Table 4-2). These wellbeing areas span a broad range of topics including relationships, emotional wellbeing, self-concept, happiness, physical health, spirituality, independence and autonomy, material needs, community, connection to culture, and environment.

Table 4-2 Description of 30 wellbeing areas identified through thematic analysis

Wellbeing area	Description	Example keywords
Family relationships	Relationships with children, parents, siblings, and other family members. Does not include relationship with spouse	Parental love; Happiness in the family; Family harmony; Family relations; Family and kinship

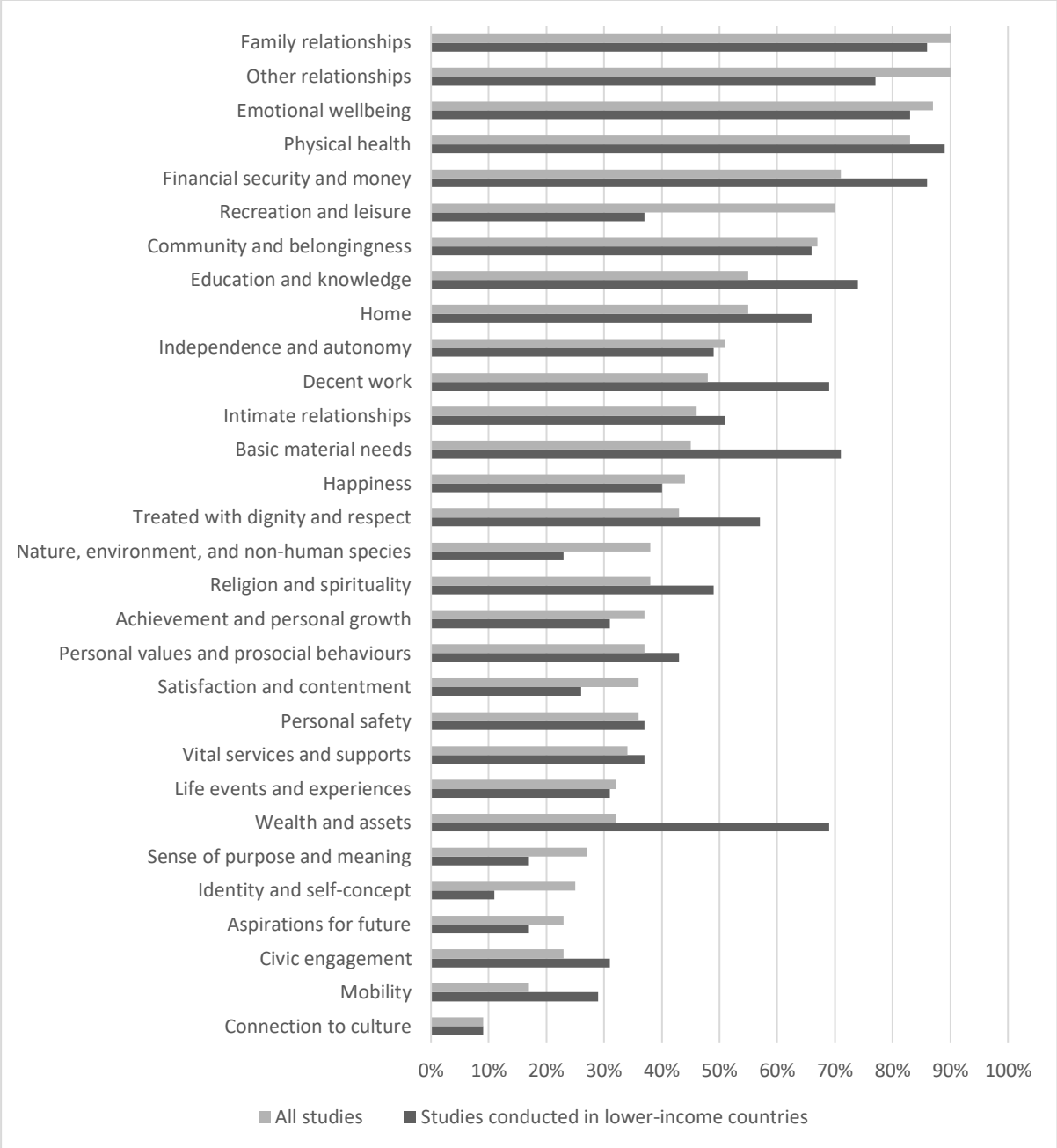
Other relationships	Relationships with anyone other than the family or spouse, including friends and neighbours	Friendship; Supportive friends; Neighbours; Peers; Human contacts
Emotional wellbeing	The presence of a positive mood, or absence of a negative mood. This also includes the broad domain of "Health"	Health; Emotions; Stress; Nervousness; Anxiety; Psychological
Physical health	Being physically healthy, free of illness, or engaging in physical activity	Health; Exercise; Good nutrition; Physical strength; Walking; Illness
Financial security and money	Being financially secure and having money for socially perceived necessities	Finances; Money; Financial welfare; Income; Not poor
Recreation and leisure	Activities, recreation and leisure time	Entertainment; Leisure; Activities; Hobbies; Gardening; Relaxation; Recreation
Community and belongingness	Integration with a community, social cohesion, supports, and a sense of belonging	Unity; Community; Support networks; Social life; Belongingness; Reciprocity
Education and knowledge	The value of learning, acquiring knowledge and formal education	Education; Learning; School; Academic
Home	The importance of housing and home	Home; Accommodation; A good house
Independence and autonomy	Freedom, independence, and autonomy	Decision-making; Independent; Freedom; Choice; Agency; Autonomy
Decent work	Access to and satisfaction with employment	Job; Guaranteed work; Job satisfaction; Availability of jobs
Intimate relationships	Relationship with spouse or intimate partner	Love; Supportive partner; Spouse; Being in love
Basic material needs	The basic needs (excluding housing) that are essential for life	Essential needs; Material basics; Clothes; Food
Happiness	Notions related to happiness or joy	Happiness; Pleasure; Joy; Enjoying life
Treated with dignity and respect	Feeling respected and having a sense of dignity	Respect; Dignity; Voice; Social status; Good appearance; Reputation
Nature, environment, and non-human species	The importance of nature, environment, and non-human species	Nature; Pets; Environment; Clean neighbourhood; Looking after Country
Religion and spirituality	The importance of religion or spirituality	Spirituality; God; Praying; Faith; Religion; Church
Achievement and personal growth	Achievement in life and personal growth	Achievement; Progress; Life skills; Growth; Personal development; Competition; Success
Personal values and prosocial behaviours	Living up to personal values and exhibiting prosocial behaviours	Social justice; Developing values and morals; Good behaviour; Honest; Respectful; Other-regarding
Satisfaction and contentment	Feelings of satisfaction and contentment, or assessments of one's life expressed through life evaluations	Feeling settled; Satisfaction; Acceptance; Serenity; Peace of mind; Life satisfaction; Tranquillity
Personal safety	Being safe and free from violence in all its forms	Safety; Bodily integrity; Safe and secure; Danger avoidance; Safe neighbourhood
Vital services and supports	Access to services and supports deemed as essential (except education)	Medical care; Government and social policy; Council services; Care assistance
Life events and experiences	Important life events and experiences	Birthday celebrations; Get married and have a family; Travel; Mark events with rituals
Wealth and assets	Economic prosperity through having access to wealth and assets	Wealth; Land; Assets; Debt; Economic status
Sense of purpose and meaning	Sense of purpose or meaning in life, including having self-perceived important roles	Purpose; Giving meaning to the day; Feeling useful; A fulfilling life; Household responsibility
Identity and self-concept	Feelings about oneself	Self-esteem; Self-worth; Identity; Positive self-image; Self-concept

Aspirations for future	Optimism and aspirations for the future	Having goals; Looking forward; Hope; Life aspirations
Civic engagement	Political and civic engagement	Volunteering; Participating; Politics; Civic life
Mobility	Transportation and the ability to get around	Transport; Getting about; Motor car
Connection to culture	Being connected to one's culture	Culture; Traditional knowledge stories; Looking after Country; Engage in cultural traditions

Figure 4-12 illustrates the percentage of studies for which each of these 30 wellbeing areas were raised. When examining all studies, this analysis demonstrates that areas such as family relationships (90%), other relationships (90%), emotional wellbeing (87%), physical health (83%), financial security and money (71%), recreation and leisure (70%), and community and belongingness (67%) were most commonly noted as being important for a good life in many communities included in the review. While more novel areas of wellbeing, such as connection to culture (9%), mobility (17%), civic engagement (23%), aspirations for future (23%), identity and self-concept (25%), and sense of purpose and meaning (27%) were raised less often, they were still reported in a considerable number of studies. Indeed, when analysing the six least-raised areas as a group (connection to culture; mobility; civic engagement; aspirations for the future; identity and self-concept; and sense of purpose and meaning), we find that at least one of these wellbeing areas was raised in two-thirds (66%) of studies. This emphasises that while there are similarities in what matters to people throughout the world, the vast majority of studies also include more novel wellbeing areas.

Given the over-representation of studies conducted in high-income countries, we also conducted this analysis with studies conducted in high-income countries removed. A comparison of the results (see Figure 4-12) indicates that while there are some similarities, there are also important differences in how population groups in lower-income countries conceptualise wellbeing. In particular, a substantially lower percentage of studies conducted in lower-income countries raised recreation and leisure when compared to the full dataset, but many more studies identified wealth and assets as important to wellbeing. It should be noted that the propensity of population groups to raise particular wellbeing areas may be prone to framing and context effects. This can be examined more deeply through further research by undertaking a meta-analysis of the collected data.

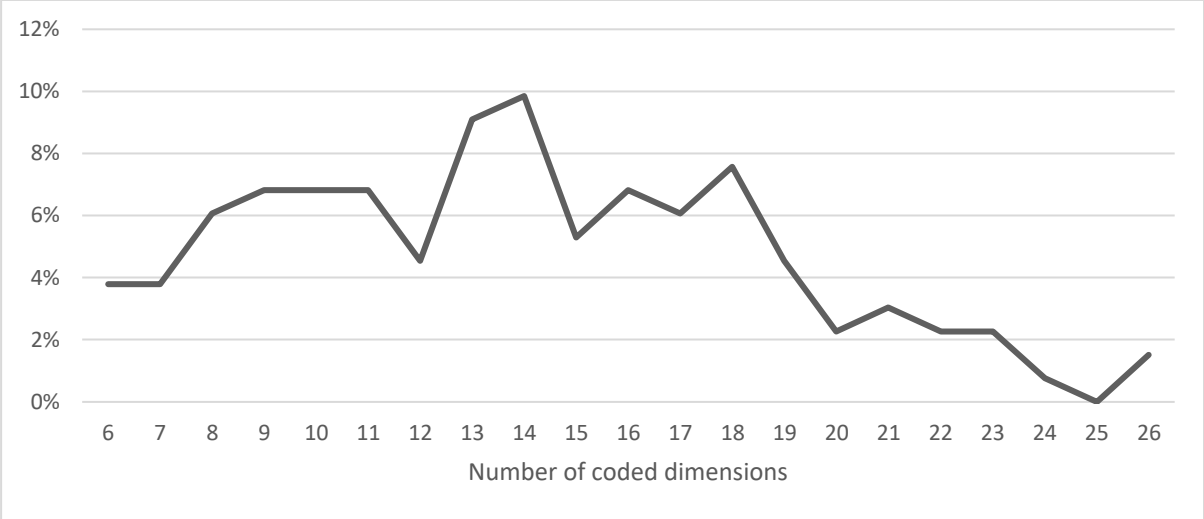
Figure 4-12 Studies identifying each wellbeing area (%)



Note: 'Lower-income countries' includes low, lower-middle and upper-middle countries as defined by The World Bank (2021).

The median number of wellbeing areas coded within each framework was 14. Figure 4-13 outlines the number of wellbeing areas coded within the frameworks, highlighting that all frameworks identified between 6 and 26 wellbeing areas. It is important to note that even at the lower end of the spectrum, a minimum of six wellbeing areas suggests that wellbeing is considered by individuals and communities to be multidimensional.

Figure 4-13 Percentage of frameworks identifying given number of wellbeing areas



4.4 Limitations

When interpreting these results, this study has a number of limitations that should be kept in mind. Firstly, this study is not representative of the global population, but rather only studies that have been undertaken and published. While it is not the intention of this chapter to advocate for using this list as a definitive account of what wellbeing means to people throughout the world, the scope and coverage of the systematic review provide a good guide as to what wellbeing does mean to people based on eligible existing studies. It is important to note that some bias may be present through the over-representation of certain population groups and disciplines. For example, there was an over-representation of population groups living in high-income countries (75% of studies), and a large proportion of studies were based within a medical science background (23% of studies). It should be noted that there was overlap in these biases, with 100% of eligible studies within the medical science discipline being conducted in high-income countries.

Secondly, it is important to be aware that we are taking a macro-level perspective through the thematic analysis of wellbeing areas. Because of this, we may miss some distinctiveness and nuance as to what actually matters to population groups at the more granular level. This may be particularly pertinent for non-English papers as the authors were reliant on translations.

Thirdly, the way the question is asked likely matters. While the question eliciting conceptualisations of wellbeing in eligible studies needed to be global in nature, participants may have been primed to some extent by the focus of the study. For example, if a study sought to explore understandings of wellbeing for school students, participants may have implicitly framed their responses based on their identity as a "school student" (see McConnell, 2010). Furthermore, asking about one's quality of life, while seemingly synonymous with what makes a good life or what brings about happiness, is likely to elicit different responses and wellbeing meanings. Further research drawing on this data can examine the extent of this.

Finally, it should be noted that thematic analysis of the wellbeing conceptualisations entailed analysing what was reported by authors (and, subsequently, how they themselves interpreted the raw data), as opposed to analysing what was reported by population groups directly. While some authors provided a detailed description of wellbeing dimensions and themes, others simply gave a list with little description. One paper was not used in the analysis of wellbeing dimensions as there was insufficient context provided around the results to enable coding. The process we used of cross-coding by two authors, as well as consistency and reliability checks, helped to ensure that the coding of wellbeing areas aligned with how wellbeing conceptualisations were reported by eligible studies.

4.5 Discussion

The present results are significant in at least three major respects; namely, the range of methodologies and approaches applied to undertake participatory wellbeing studies; the utility of a list of 30 overarching wellbeing areas; and the diversity and nuance of conceptualisations of wellbeing.

Firstly, the development of participatory wellbeing studies can entail a wide range of techniques and approaches. Certain methods may be more appropriate in particular contexts. Researchers, community development workers, and policymakers conducting work within this space can use the studies identified in this review as a reference to help guide the development of their own methodology. Thus, this study provides a comprehensive reference which researchers can use to improve the quality of their studies.

One particularly interesting finding was the fact that most studies sat at the lowest end of the participatory scale, within the "inform" category. This raises a critical question about the central tenet of participatory approaches, in terms of their goal of transforming power relations through research methodologies, and also points to the shortfall in realising the full potential in participatory research across the continuum. There can be drawbacks to incorporating higher levels of participation into studies, and valid reasons not to do so. For example, focus groups can be dominated by certain individuals, including elites (Alkire, 2013); individuals may have adaptive preferences, making it challenging to understand through consultation the true conceptualisations of wellbeing for individuals and communities (Khader, 2011; Nussbaum, 2001); and there may be stigma or taboos associated with raising certain areas of wellbeing (Matthys et al., 2021). However, despite these limitations, when implemented appropriately participatory techniques can come with a number of benefits (Jagosh et al., 2012). Thus, researchers, development practitioners, and policymakers may wish to consider ways they can increase the level of participation in their studies and projects. The list of eligible studies identified in this review, and particularly their methodology, can help support researchers, organisations, and policymakers to achieve this.

The review also highlighted several gaps where we still have little understanding of what matters to certain population groups. There is an over-representation of studies in English-speaking countries (Australia and the United Kingdom in particular, given their population size), and very few studies in some geographic areas, such as Africa. Only 25% of studies were conducted in low, lower-middle, or upper-middle income countries. While this over-representation may have been influenced by the search strategy being conducted only in English (keeping in mind that some non-English papers were identified through the iterative searching process), it still highlights that there is a relative dearth of participatory wellbeing research based in lower-income countries in published English-language papers (which tend to be the most cited in academic journals and are therefore more likely to have increased exposure). In contrast, representation across the life course was reasonably good, with age groups from young children to older adults represented. However, greater emphasis could be placed on conducting research with more minority population groups. For example, we did not find any studies that were conducted with population groups identifying as LGBTQI+.

A second important outcome of this study is the identification of the 30 wellbeing areas which, at a very broad level, summarise how wellbeing is conceptualised throughout the world and over the life course. While certain population groups may be more likely to raise particular areas as important to their wellbeing, and there are differences in how each of these areas are conceptualised (see below), this list of 30 wellbeing areas can be used by researchers, development practitioners, and policymakers to better understand how wellbeing *may* be understood in their communities or populations of interest. As this study provides a comprehensive analysis of how wellbeing is conceptualised in a large number of contexts, researchers and practitioners can utilise this list in situations where participatory research is not feasible. For example, researchers may wish to draw upon this list to consider what areas of wellbeing are important to measure in their research. Development practitioners can identify which areas of wellbeing may be more important to the community they are working with to help develop and adapt programs. Finally, policymakers can make use of this list to consider how policy can help improve the lives of individuals and communities in a meaningful way.

Thirdly, the study illustrates a high level of diversity in how population groups conceptualise wellbeing. As shown in the findings, there are similarities in what matters to people throughout the world, with aspects such as relationships, financial security, and emotional wellbeing highlighted in the vast majority of frameworks. However, nuances exist within every group and also within each wellbeing area. When analysing the more novel wellbeing areas as a group (sense of purpose and meaning; civic engagement; aspirations for the future; identity and self-concept; mobility; and connection to culture), at least one of these areas was raised in two-thirds of frameworks. This indicates that a large proportion of population groups have a more nuanced understanding of wellbeing. This is an important finding and emphasises the importance and utility of applying participatory methods, as we may only become aware of these more novel wellbeing areas when using such approaches. This finding will be explored more deeply in Chapter 5.

Furthermore, the thematic analysis has simply described the wellbeing conceptualisations at an overarching level. While there are similarities in the way each of these 30 wellbeing areas are conceptualised between different population groups, each is nuanced in its own way. For

example, "personal values and prosocial behaviours" is understood in varying ways by different population groups, including good *tarbia* (manners and relationships with others) for war-affected children in Kabul (De Berry et al., 2003), having good conduct for women in rural Malawi (Greco et al., 2015), and developing values and morals for children in Australia (ARACY, 2012). "Connection to culture" is conceptualised as having culture and knowledge for individuals in Italy and Cuba (Galati et al., 2006), while it is more specifically about singing and dancing together, a tradition known as *Akazehe*, for conflict-affected women in Burundi (Bragin et al., 2014). Thus, while this data can be used for further analysis to better understand at a broad level how wellbeing may be understood differently for population groups of different cultural, economic, or socio-demographic backgrounds, there is also a large degree of variation in how each of the 30 wellbeing areas is understood.

These findings on diversity of wellbeing conceptualisations make an important contribution to the ongoing debate regarding universal versus context-specific lists of wellbeing areas. One of the more prominent of these debates is within the Capability Approach, with Sen (1999) emphasising the value of democratic processes to identify relevant functionings and capabilities (which can be loosely translated to wellbeing attributes). Furthermore, Sen (2004) emphasises the value of public discussion and reasoning, which Sen maintains leads to a better understanding of certain capabilities. This is also emphasised by a number of Capability Approach scholars (see Frediani et al., 2019). In contrast, Nussbaum (2003) asserts that Sen's work lacks guidance on how functionings, capabilities, and wellbeing can be adequately measured, arguing that a definitive list should be developed. This stance led to the development of Nussbaum's list of 10 central human capabilities[28]. The diversity in wellbeing conceptualisations identified in this review favour Sen's position, with a list of wellbeing attributes needing to adapt to different purposes, social conditions, and priorities.

4.6 Conclusion

This study provides a unique insight into participatory wellbeing studies, their methodology, and the wellbeing dimensions elicited from these studies. The findings highlight that

[28] These capabilities are: (1) life; (2) bodily health; (3) bodily integrity; (4) senses, imagination, and thought; (5) emotions; (6) practical reason; (7) affiliation; (8) other species; (9) play; and (10) control over one's environment.

participatory wellbeing studies apply a broad range of methodologies and approaches which researchers, development practitioners, and policymakers can draw on to help develop and enhance their own studies in similar fields. In particular, the participatory wellbeing studies eligible for inclusion in the review primarily saw participants as simply informants rather than active research participants, with a few exceptions. Thus, those undertaking research within this field may wish to draw on the methodologies with higher levels of research participation that are contained in this review.

Furthermore, the list of 30 wellbeing areas, which at a very broad level summarises how wellbeing is conceptualised by population groups throughout the world and over the life course, can be useful in and of itself. For example, in cases where participatory research is not feasible, this list can be used to inform wellbeing measurement, as well as program and policy development.

Finally, the study identified that while there are similarities in how different population groups understand wellbeing, with certain dimensions such as relationships, emotional wellbeing, and financial security being commonly cited, the vast majority of studies also cited more novel dimensions that are less commonly used in wellbeing frameworks. In sum, this review highlights the importance of considering a broad range of wellbeing areas when developing a wellbeing framework and, if possible, using participatory approaches. Doing so will help to ensure that wellbeing frameworks more closely reflect how population groups around the world truly conceptualise and understand wellbeing.

Chapter 5 Cross-cultural conceptualisations of wellbeing and implications for measurement: A meta-analysis[29]

5.1 Introduction

The results of the systematic review outlined in Chapter 4 highlight that while certain dimensions of wellbeing appear to be relevant for the vast majority of population groups throughout the world, there is also a large degree of uniqueness and nuance in what wellbeing means to each group. The study presented in this chapter takes this analysis one step further by using the data collected in this systematic review to determine the extent to which wellbeing conceptualisations differ based on country context. This will help to deepen our understanding of cross-cultural conceptualisations of wellbeing and provide further evidence on the extent to which measurement tools and frameworks should be adapted to better reflect understandings of wellbeing for specific groups.

This study contributes empirical findings to a largely theoretical literature base on cross-cultural understandings of wellbeing. As highlighted in Chapter 2 (Section 2.1), wellbeing measurement has predominantly been influenced by psychological schools of thought which have largely viewed the meaning of wellbeing to be relatively unaffected by cultural and societal factors. Although psychology, historically, was largely preoccupied with the diagnosis and treatment of mental illness, the pioneering work of Diener (1984), through the development of subjective wellbeing scales, and the positive psychology movement (Seligman & Csikszentmihalyi, 2000) led to the growth and expansion of wellbeing as a focus for psychologists. Throughout this growth, however, wellbeing has been seen as largely impervious to culture (Lomas, 2015).

Further to this, psychological approaches to wellbeing measurement have been predominantly influenced by Western theories and philosophies. Psychological research has been shown to be influenced almost entirely through studies conducted in WEIRD (Western, Educated, Industrialised, Rich, and Democratic) societies (Henrich et al., 2010). Moreover, the

[29] This chapter was co-authored with Nicholas Biddle, Herdiyan Maulana, Mandy Yap, and Paul Campbell.

philosophical underpinnings of wellbeing measurement also heavily rely on the Ancient Greek theories of hedonism and eudaimonism (Henderson & Knight, 2012), with Eastern philosophies of wellbeing, such as Hinduism, Buddhism, Taoism, Confucianism, and Sufism often ignored (Joshanloo, 2014).

This highlights that, historically, not only have conceptualisations of wellbeing been seen as largely impervious to culture, but also that existing research and theories are heavily biased toward Western knowledge. We have, however, begun to see changes in these respects. There is a growing appreciation amongst the positive psychology movement regarding cross-cultural differences in how wellbeing is understood. For example, Lomas (2015) argues that there is a "universal relativism" through which wellbeing is conceptualised, meaning that while there are important similarities in how wellbeing is understood across cultures, there are also "relativistic mediators", such as history, tradition, culture, and language, which influence understandings of wellbeing. Furthermore, other disciplines such as economics and development studies have become more prominent in the wellbeing space. Most notably, the Capability Approach has been highly influential in its claim that what matters to people varies by context and culture, and we should therefore be seeking to increase the ability of individuals and communities to improve the aspects of their lives that they have reason to value (Sen, 1999; Stiglitz et al., 2009).

This increasing recognition from theoretical schools of thought regarding cross-cultural understandings of wellbeing has sat alongside a growing body of empirical evidence on this topic. The vast majority of such studies confirm Lomas' (2015) theory of universal relativism. For example, through a study contrasting the conceptualisations of wellbeing between South Indian and European children, Exenberger et al. (2019) found that while global sources of happiness were found between the two groups, there were some important differences in the meanings of the themes raised, and furthermore, some themes were culturally specific. For example, social skills and appreciation of nature were raised only by children in South India, while leisure was raised only by children in Europe. Similarly, Tafarodi et al. (2012), in a study with individuals in Canada, China, India, and Japan, found that there was considerable commonality in what makes for a good life, with notable differences consistent with cultural

influences, including community involvement for the Chinese sample, hobbies and leisure activities for the Japanese sample, and world travel for the Canadian sample. Galati et al. (2006) reached a similar finding through a study with Italian and Cuban adults.

If conceptions of wellbeing are indeed influenced by culture, this has important implications for the measurement of multidimensional wellbeing. Many countries and international bodies throughout the world are making use of wellbeing measures to assess progress (Barrington-Leigh & Escande, 2018; Hall et al., 2010; Hall & Rickard, 2013; Stiglitz et al., 2009). Furthermore, there has been a proliferation of multidimensional wellbeing measurement tools for research and assessment purposes, such as the Personal Wellbeing Index (PWI) (International Wellbeing Group, 2013) and the WHOQOL (World Health Organization, 1998), being used across various cultural contexts. While these measurement tools are often validated in different languages for use in varied contexts, these validation processes primarily focus only on whether the translation is accurate and meaningful, without deeper engagement with participants on whether the underlying measures forming the instruments are culturally relevant. There are valid reasons for using these tools. These include the unavailability of culturally specific instruments. This is often the case, with many countries being in earlier stages of wellbeing measurement (see Chen & Davey, 2008; Diener & Biswas-Diener, 2000). These widely used tools also allow for the comparison of wellbeing and quality of life across different population groups. However, unwarranted use of such measures in contexts distinct from those in which they were developed may result in researchers simply measuring the wrong thing. In short, if governments, international bodies, researchers, and practitioners are seeking to improve the wellbeing of individuals, they would benefit by first understanding what wellbeing means in a specific context.

The current chapter builds on the results of the systematic review, providing an important contribution to the existing theoretical and empirical evidence on cross-cultural conceptualisations of wellbeing. While there have been some (albeit, few) qualitative studies examining cross-cultural variation in wellbeing conceptualisations (e.g. Exenberger et al., 2019; Galati et al., 2006; Tafarodi et al., 2012), these studies have been limited by using data from only a small subset of population groups. This study is the first of its kind to analyse at a

macro level how wellbeing is conceptualised by drawing on published participatory wellbeing studies conducted with a wide range of population groups throughout the world and over the life course. By drawing on this available data, we can gain a deeper and more comprehensive insight into the extent to which wellbeing conceptualisations differ by cultural context. Such analysis also has important implications for wellbeing measurement.

This chapter is structured at follows. Firstly, the methodology of this study will be outlined, describing the data, how wellbeing areas were categorised and reduced through Exploratory Factor Analysis, and how study contexts were classified. The results will then be highlighted, before outlining some limitations in the study. Finally, the key findings and their implications for wellbeing measurement will be discussed in greater detail.

5.2 Methodology

This study sought to better understand the extent to which wellbeing conceptualisations vary between population groups of different cultures throughout the world. To do this, the findings of the systematic review presented in Chapter 4 were employed to conduct a meta-analysis using regression techniques. The strength in this data is that it brings together a large number of studies conducted in different contexts throughout the world and with population groups at different stages of the life course. This section will firstly explain how the 30 wellbeing areas identified in the systematic review were grouped. The technique used to classify population groups into cultural and economic clusters will then be outlined, before describing the analysis approach used.

5.2.1 The categorisation of wellbeing areas

In order to reduce the complexity of the analysis, Exploratory Factor Analysis (EFA) was conducted to categorise the 30 wellbeing areas identified in the systematic review into a smaller number of groups. As there were no a priori hypotheses about factors or patterns of wellbeing, EFA was a helpful tool to identify a set of latent constructs underlying these wellbeing areas.

The wellbeing areas which had the highest loadings for each factor were used; however, some adjustments were made to ensure that these factors identified distinct and meaningful groups. Thus, the methodology to categorise wellbeing areas used predominantly a data-driven approach, alongside some modest thematic analysis. The approach taken aligns with best practice to interpret the results of EFA. For example, as emphasised by O'Rourke and Hatcher (2013), a researcher should ask the important question "Do the variables that load on a given factor share conceptual meaning?". Therefore, the decision on the factor structure used for analysis should be based on evidence beyond the analysis of the EFA results themselves. The results of the EFA are reported in the Results section.

5.2.2 The categorisation of study contexts

With the studies from the systematic review being conducted in a broad range of cultural and economic contexts, studies needed to be grouped to allow for macro-level analysis. The study contexts were grouped using two different measures – economic and cultural. Firstly, countries were grouped according to country income level based on World Bank classifications (The World Bank, 2021). Any framework which utilised data from multiple countries across different income levels was excluded from analysis. The distribution of studies by income level was presented in Chapter 4.

The second measure sought to identify cultural categories for population groups. Culture is commonly understood as a "high level of internal uniformity within a social system" (Rathje, 2009). In this chapter, we adopt the GLOBE (Global Leadership and Organizational Behaviour Effectiveness) framework, which operationalises culture through the lens of power relations, collectivisms, norms, and orientation. The cultural categories, referred to as clusters, were initially developed by House et al. (2004) for the purpose of examining leadership attributes in different cultures throughout the world. The authors classified 62 countries into 10 cultural clusters based on nine cultural dimensions[30]. While there are criticisms over how the GLOBE

[30] The nine cultural dimensions are power distance, uncertainty avoidance, institutional collectivism, in-house collectivism, gender egalitarianism, assertiveness, performance orientation, future orientation, and humane orientation.

framework was developed (e.g. Hadwick, 2011; Hofstede, 2006), similar criticisms have also been directed toward other cross-cultural frameworks (e.g. Javidan et al., 2006).

The GLOBE framework was the preferred approach to cluster population groups for the purposes of this study, given the extension of the GLOBE framework by Mensah and Chen (2013). They classified all countries in the world into the 10 GLOBE clusters based on demographic and socio-cultural characteristics of each country. This study utilised the classifications developed by Mensah and Chen (2013) to initially categorise population groups into clusters, with any framework based on countries in multiple cultural clusters removed from the analysis. The distribution for these initial cultural clusters using the data from the systematic review is shown in Appendix B1.

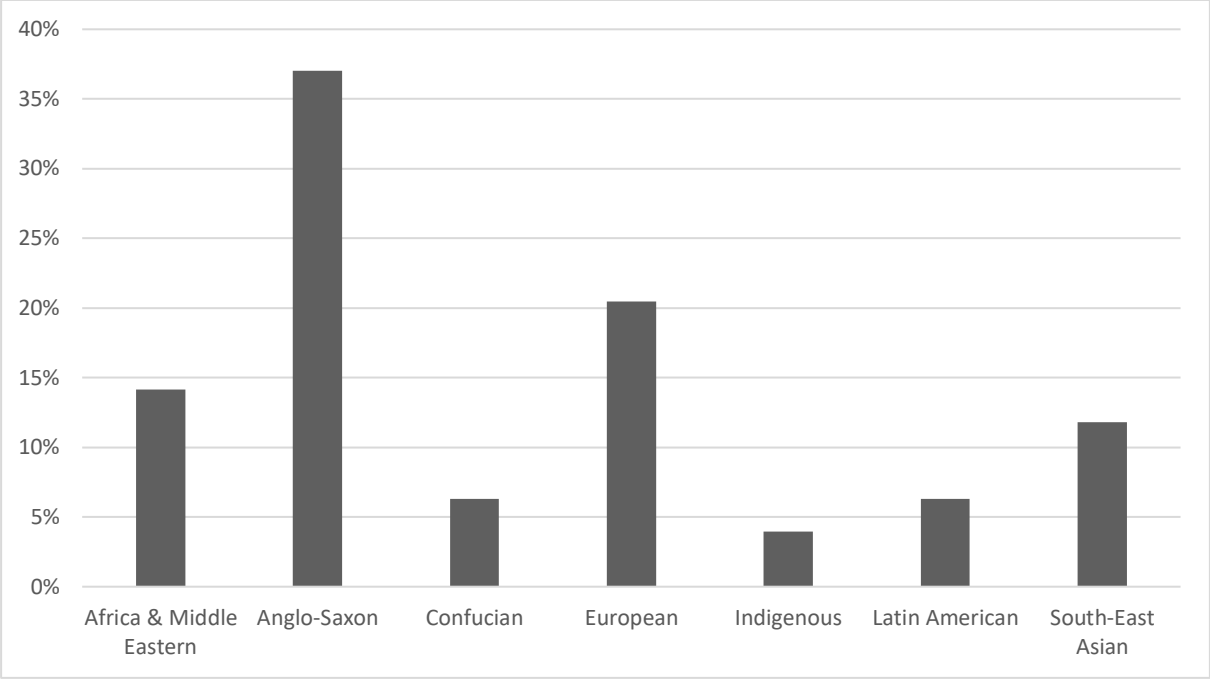
However, given the low representation of many clusters in the frameworks available in the systematic review, these clusters were further aggregated as follows: African and Middle Eastern; Anglo-Saxon; Confucian Asian; European (comprising Nordic, Eastern European, and Western European); Latin American; and South-East Asian[31]. There are some limitations in the clusters developed by Mensah and Chen (2013) in terms of capturing cultural diversity within countries. The methodology was adapted to take into account this limitation for Indigenous populations living within settler states. These population groups may perform very differently across the nine dimensions compared to broader society. Furthermore, the literature suggests that Indigenous populations have different understandings of wellbeing (Biddle, 2014; Jordan et al., 2010; Taylor, 2008; Yap & Watene, 2019). Thus, the five coded Indigenous frameworks in the systematic review were categorised into a distinct cluster[32]. The distribution of the final set of clusters used in the analysis is shown in

Figure 5-1, illustrating that while there is representation across the different clusters, the Anglo-Saxon and European clusters are relatively over-represented.

[31] These classifications are used in https://culturepluslconsulting.com/2015/03/24/mapping-cultural-distance-cultural-clusters/

[32] A sixth framework was developed with an Indigenous population group in Brazil (Amazonas et al., 2019); however, this framework was not coded to wellbeing areas due to insufficient context provided, as discussed in Chapter 4. All coded Indigenous frameworks were developed in Anglo-Saxon countries.

Figure 5-1 Distribution of final cultural clusters used for analysis



It is important to note that while these two measures – economic and cultural – make generalisations about the culture and economic status of population groups, the classification of countries was required to undertake this macro-level analysis. The limitations of these measures are discussed in greater detail in the Limitations section of this chapter.

5.2.3 Analysis approach

Based on the data reduction technique used to reduce the 30 wellbeing areas into a smaller number of groups and the classification of study context into economic and cultural clusters, regression analysis was conducted. Firstly, a count variable was produced for each of the wellbeing factors to identify the number of individual wellbeing areas raised within that factor for each study. Negative binomial models[33] were then produced, with this count variable used as the dependent variable and the two country classification variables (income level and cultural cluster) used as independent variables. Three different model sets were developed. The first two model sets examined the economic and cultural measures separately, to better understand how the cultural cluster and income status of a country independently influence conceptualisations of wellbeing for population groups. A third model set, combining these two

[33] Logistic regression was used for any wellbeing factor which comprised only one wellbeing area.

explanatory variables, was also conducted, given the potential level of correlation between some cultural clusters and country income status.

5.3 Results

5.3.1 Exploratory Factor Analysis

The results of the EFA are displayed in Table 5-1. A 12-factor solution with an orthogonal rotation was produced, further confirmed with a scree plot and parallel analysis. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.618, and the Bartlett test of sphericity was significant. Some crossloading items are evident, which is unsurprising giving the inter-related nature of wellbeing. This emphasises the importance of ensuring that the retained factors align with existing theoretical understanding of wellbeing dimensions (Li et al., 2020). The goal of EFA is to establish a clear set of common factors and interpret their relationships with other variables. Based on this, Factor 5 (with the highest loading items being 'Home', 'Mobility', and 'Religion and spirituality') was taken out, with these wellbeing areas moved to other factors as the items in this factor did not create a meaningful group, leaving 11 factors in total.

Wellbeing areas were grouped into factors using the highest factor loadings, except where a factor did not create a meaningful group These minor adjustments are summarised as follows:

- 'Financial security' was moved to Factor 7 (Material needs) as it did not align well with the other wellbeing areas in Factor 4 (items in Factor 4 are 'Physical health' and 'Emotional wellbeing'). This item is well-placed in Factor 7 as financial security is commonly perceived as an important material need.

- The removal of Factor 5 led to 'Home' being moved to Factor 7 (Material needs), 'Mobility' being moved to Factor 1 (Living in the community), and 'Religion and spirituality' being moved to Factor 9 (Spirituality and aspirations). The loadings within these new factors were the next highest, and also create meaningful groups with the other data items in these factors.

- ‘Education and knowledge’ was moved from Factor 7 to Factor 2 (Personal growth, behaviours & knowledge) as it did not align well with other wellbeing areas in Factor 7, with the other items in this factor comprising material needs (items in Factor 7 are ‘Financial security’, ‘Home’, ‘Wealth and assets’, and ‘Other material needs’). The second highest loading for this item was Factor 2, which aligns well as this factor has a focus on more internal processes rather than tangible or material possessions.

There were no restrictions on the number of wellbeing areas within each factor, and all wellbeing areas within each factor had a loading greater than 0.25. Each factor was named based on the wellbeing areas within the factor. These factors are summarised in Table 5-2.

Table 5-1 Results of Exploratory Factor Analysis

	Factor 1 Living in the community	Factor 2 Personal growth, behaviours, and knowledge	Factor 3 Inner wellbeing	Factor 4 Physical and mental health	Factor 5 (Removed)	Factor 6 Relationship with self and others	Factor 7 Material needs	Factor 8 Independence and work	Factor 9 Spirituality and aspirations	Factor 10 Engagement with the outside world	Factor 11 Connection to culture	Factor 12 Relationships inside the family	Uniqueness
Wellbeing area													
Vital services and supports	**0.686**	-0.125	0.097	0.08	0.028	-0.103	0.029	0.084	0.18	0.159	0.097	-0.073	0.406
Treated with dignity and respect	**0.642**	0.239	0.09	0.184	-0.118	0.277	0.226	0.059	0.181	-0.213	0.007	-0.039	0.264
Personal safety	**0.615**	0.077	-0.042	-0.157	0.27	0.217	0.11	0.127	-0.12	0.058	0.19	0.016	0.387
Civic engagement	**0.552**	0.422	-0.09	0.061	0.242	-0.058	-0.025	0.094	-0.067	-0.006	0.235	0.106	0.363
Community and belongingness	**0.535**	-0.115	0.089	0.163	0.172	0.018	-0.162	0.377	0.026	-0.062	0.047	0.134	0.443
Achievement and personal growth	**-0.043**	**0.744**	0.025	0.007	-0.095	0.117	0.143	0.145	0.011	0.133	-0.165	-0.062	0.33
Personal values and behaviours	0.102	**0.743**	0.133	-0.055	0.135	-0.069	-0.014	-0.204	-0.003	0.074	0.197	0.031	0.307
Sense of purpose and meaning	0.189	-0.039	**0.805**	0.047	-0.139	0.105	-0.12	-0.065	0.054	0.076	-0.04	0.097	0.243
Satisfaction and contentment	-0.34	0.176	**0.633**	-0.163	0.228	-0.034	-0.129	0.196	0.132	-0.088	0.015	-0.112	0.28
Happiness	-0.035	0.15	**0.575**	-0.124	-0.044	0.062	0.208	0.338	0.003	-0.124	0.304	-0.141	0.34
Physical health	0.109	-0.01	-0.088	**0.81**	0.106	-0.044	0.095	0.013	0.108	0.178	-0.009	-0.021	0.258
Financial security	0.056	-0.221	-0.07	0.501	0.322	-0.049	**0.426**	0.086	-0.094	0.219	0.013	0.255	0.275
Emotional wellbeing	0.034	0.115	0.217	**0.483**	-0.045	0.069	-0.162	0.379	0.289	-0.107	0.038	-0.098	0.423
Home	0.092	0.088	0.043	0.165	0.764	0.061	**0.268**	0.018	-0.072	0.012	0.036	0.058	0.285
Mobility	**0.435**	-0.069	-0.201	-0.059	0.563	-0.172	0.051	0.028	0.165	0.04	-0.227	-0.091	0.324
Religion and spirituality	-0.025	0.045	-0.095	0.162	0.558	0.019	-0.132	0.161	**0.397**	0.219	0.026	0.17	0.372

Wealth and assets	0.083	0.109	-0.013	0.196	0.116	-0.743	**0.259**	-0.094	-0.116	-0.176	-0.074	0.12	0.238
Identity and self-concept	0.191	0.151	0.137	0.143	0.151	**0.739**	0.074	0.064	0.044	-0.091	0.052	0.105	0.299
Other relationships	0.034	0.009	-0.018	-0.262	-0.098	**0.37**	0.117	0.351	0.36	0.242	-0.31	0.212	0.317
Other basic needs	0.044	0.015	-0.017	0.043	0.09	-0.078	**0.886**	-0.034	0.029	-0.026	-0.012	0.015	0.194
Education and knowledge	0.111	**0.417**	-0.25	0.048	0.1	-0.022	0.601	-0.013	-0.038	-0.027	0.163	-0.025	0.349
Independence and autonomy	0.223	-0.037	0.082	0.067	0.073	0.11	-0.034	**0.804**	-0.05	0.124	-0.054	0.081	0.247
Decent work	-0.195	-0.005	-0.33	0.358	0.257	-0.357	0.038	**0.376**	0.176	-0.164	0.246	0.09	0.262
Aspirations for future	0.104	-0.025	0.08	0.111	0.045	0.105	0.014	-0.047	**0.844**	-0.023	0.067	0.007	0.237
Recreation and leisure	-0.053	0.22	0.032	0.273	0.042	0.167	-0.088	0.13	-0.031	**0.764**	-0.079	-0.025	0.228
Nature, environment, and non-human species	0.254	-0.2	-0.17	-0.013	0.213	-0.114	0.126	-0.198	-0.003	**0.528**	0.35	0.028	0.351
Life events and experiences	-0.029	0.292	0.13	-0.261	-0.011	-0.33	0.085	0.259	0.34	**0.435**	0.17	0.157	0.287
Connection to culture	0.124	0.049	0.035	0.003	-0.031	0.061	0.026	-0.015	0.062	0.02	**0.876**	0.058	0.201
Family relationships	-0.03	-0.047	-0.088	-0.094	0.028	0.06	0.077	0.047	-0.067	0.053	0.12	**0.837**	0.246
Intimate relationships	0.062	0.091	0.208	0.255	0.091	-0.177	-0.112	0.073	0.328	-0.11	-0.131	**0.634**	0.284

Note: Factor loadings in bold indicate the wellbeing area associated with the given factor.

Table 5-2 Summary of wellbeing factors

Factor	Wellbeing areas within factor
Living in the community	Vital services and supports; Treated with dignity and respect; Personal safety; Civic engagement; Community and belongingness; Mobility
Personal growth, behaviours, & knowledge	Achievement and personal growth; Personal values and behaviours; Education and knowledge
Inner wellbeing	Sense of purpose and meaning; Satisfaction and contentment; Happiness
Physical & mental health	Physical health; Emotional wellbeing
Relationship with self & others	Identity and self-concept; Other relationships
Material needs	Financial security; Home; Wealth and assets; Other basic needs
Independence & work	Independence and autonomy; Decent work
Spirituality & aspirations	Religion and spirituality; Aspirations for future
Engagement with the outside world	Recreation and leisure; Nature, environment, and non-human species; Life events and experiences
Connection to culture	Connection to culture
Relationships inside the family	Family relationships; Intimate relationships

5.3.2 Model output

The model output is presented in Table 5-3. The count of variables within each wellbeing factor identified in the given study was used as dependent variables, with the income level and cultural cluster, based on the country of data collection, used as independent variables. Three separate model sets were developed. Model Set 1 uses only income level as the independent variable, Model Set 2 uses only the cultural cluster as the independent variable, and Model Set 3 uses both variables. In all, 33 models were produced (11 per set for each wellbeing factor). The small sample size of 126 frameworks may be driving Model Set 3 to produce very few significant results.

Table 5-3 Model output

	Living in the community	Personal growth, behaviours, & knowledge	Inner wellbeing	Physical & mental health	Relationship with self & others	Material needs	Independence & work	Spirituality & aspirations	Engagement with the outside world	Connection to culture	Relationships inside the family
Independent variables											
					Model Set 1: Income level (Base case: High-income)						
Low	1.76** (0.013)	1.60* (0.057)	1.22 (0.471)	1.00 (0.988)	0.60 (0.158)	1.53** (0.036)	1.50 (0.148)	1.79* (0.081)	0.79 (0.394)	3.66* (0.093)	1.25 (0.369)
Low-middle	0.89 (0.046)	1.46 (0.121)	0.60 (0.161)	1.02 (0.943)	0.68 (0.248)	1.69*** (0.005)	1.10 (0.753)	0.90 (0.799)	0.46** (0.026)	1 (empty)	0.90 (0.711)
Upper-middle	0.97 (0.877)	1.14 (0.590)	0.68 (0.200)	0.96 (0.831)	0.92 (0.723)	1.57*** (0.007)	1.17 (0.554)	0.95 (0.884)	0.55** (0.026)	0.61 (0.651)	0.94 (0.773)
	n = 126 Pseudo R^2 = 0.0864	n = 126 Pseudo R^2 = 0.0134	n = 126 Pseudo R^2 = 0.0139	n = 126 Pseudo R^2 = 0.0002	n = 126 Pseudo R^2 = 0.0119	n = 126 Pseudo R^2 = 0.0322	n = 126 Pseudo R^2 = 0.0069	n = 126 Pseudo R^2 = 0.0121	n = 126 Pseudo R^2 = 0.0312	n = 126 Pseudo R^2 = 0.0390	n = 126 Pseudo R^2 = 0.0036
					Model Set 2: Cultural cluster (Base case: Anglo-Saxon)						
European	0.61** (0.017)	0.92 (0.735)	1.21 (0.429)	1.03 (0.887)	0.80 (0.335)	1.03 (0.858)	0.90 (0.686)	0.74 (0.348)	1.09 (0.653)	1.875 (0.542)	0.87 (0.489)
African & Middle Eastern	1.45** (0.047)	1.28 (0.312)	1.22 (0.455)	1.00 (0.997)	0.62* (0.098)	1.52** (0.019)	1.25 (0.377)	0.98 (0.950)	0.70 (0.134)	4.5 (0.117)	0.92 (0.718)
South-East Asian	0.83 (0.411)	1.54* (0.079)	0.56 (0.127)	0.97 (0.884)	0.70 (0.221)	1.64*** (0.008)	0.91 (0.767)	0.98 (0.954)	0.43** (0.012)	1 (empty)	0.93 (0.759)
Confucian Asian	0.75 (0.353)	1.50 (0.194)	2.09** (0.011)	1.09 (0.764)	0.93 (0.837)	0.70 (0.285)	0.61 (0.296)	0.37 (0.169)	0.80 (0.520)	1 (empty)	0.83 (0.575)
Latin American	0.43** (0.040)	1.71* (0.084)	0.75 (0.534)	0.83 (0.576)	0.85 (0.671)	1.28 (0.367)	0.98 (0.958)	0.84 (0.741)	1.10 (0.751)	3.75 (0.309)	0.95 (0.869)
Indigenous	1.37 (0.317)	1.29 (0.527)	1.46 (0.350)	0.93 (0.841)	0.60 (0.317)	0.78 (0.535)	0.39 (0.194)	0.29 (0.228)	1.16 (0.676)	90*** (0.001)	0.53 (0.216)
	n = 126 Pseudo R^2 =0.0414	n = 126 Pseudo R^2 = 0.0202	n = 126 Pseudo R^2 = 0.0366	n = 126 Pseudo R^2 = 0.0017	n = 126 Pseudo R^2 = 0.0156	n = 126 Pseudo R^2 = 0.0356	n = 126 Pseudo R^2 = 0.0169	n = 126 Pseudo R^2 = 0.0202	n = 126 Pseudo R^2 = 0.0346	n = 126 Pseudo R^2 = 0.2230	n = 126 Pseudo R^2 = 0.0070

Model Set 3: Income level + Cultural cluster (Base case: High-income & Anglo-Saxon)											
Income level											
Low	0.54 (0.416)	1.69 (0.460)	2.46 (0.258)	1.78 (0.391)	0.64 (0.604)	0.185 (0.346)	3.41 (0.199)	4.24 (0.297)	0.77 (0.738)	1.03e[13] (0.993)	1.75 (0.468)
Low-middle	0.34 (0.166)	1.18 (0.816)	1.72 (0.514)	1.86 (0.346)	0.71 (0.679)	2.00 (0.283)	2.89 (0.267)	1.41 (0.806)	0.53 (0.421)	1 (empty)	1.05 (0.946)
Upper-middle	0.47 (0.281)	0.78 (0.658)	1.33 (0.642)	1.68 (0.356)	0.95 (0.941)	2.01 (0.239)	2.73 (0.237)	1.61 (0.701)	0.40 (0.111)	2190408 (0.996)	1.08 (0.907)
Cultural cluster											
European	0.61** (0.015)	0.92 (0.735)	1.21 (0.429)	1.03 (0.887)	0.80 (0.335)	1.03 (0.239)	0.90 (0.686)	0.73 (0.348)	1.09 (0.653)	1.88 (0.542)	0.87 (0.489)
African & Middle Eastern	2.95 (0.148)	0.95 (0.735)	0.60 (0.512)	0.57 (0.378)	0.84 (0.830)	0.79 (0.719)	0.40 (0.326)	0.32 (0.413)	1.08 (0.915)	0.00 (0.994)	0.63 (0.549
South-East Asian	2.08 (0.333)	1.43 (0.939)	0.34 (0.187)	0.54 (0.339)	0.89 (0.880)	0.82 (0.763)	0.32 (0.225)	0.59 (0.694)	0.86 (0.838)	1 (empty)	0.84 (0.810)
Confucian Asian	0.81 (0.492)	1.54 (0.171)	2.01** (0.023)	1.00 (0.993)	0.94 (0.856)	0.62 (0.185)	0.50 (0.192)	0.34 (0.160)	0.87 (0.681)	1 (empty)	0.82 (0.568)
Latin American	0.77 (0.689)	2.12 (0.183)	0.58 (0.452)	0.52 (0.290)	0.89 (0.869)	0.69 (0.538)	0.39 (0.299)	0.55 (0.632)	2.28 (0.108)	0.00 (0.997)	0.88 (0.853)
Indigenous	1.37 (0.306)	1.29 (0.527)	1.46 (0.350)	0.93 (0.841)	0.60 (0.317)	0.78 (0.535)	0.29 (0.194)	0.29 (0.228)	1.16 (0.676)	90.02*** (0.001)	0.53 (0.216)
	n = 126 Pseudo R^2 = 0.0472	n = 126 Pseudo R^2 = 0.0309	n = 126 Pseudo R^2 = 0.0420	n = 126 Pseudo R^2 = 0.0044	n = 126 Pseudo R^2 = 0.0183	n = 126 Pseudo R^2 = 0.0391	n = 126 Pseudo R^2 = 0.0224	n = 126 Pseudo R^2 = 0.0360	n = 126 Pseudo R^2 = 0.0464	n = 126 Pseudo R^2 = 0.2741	n = 126 Pseudo R^2 = 0.0128

***Significant at the 1% level, **significant at the 5% level, *significant at the 10% level.

Note: All dependent variables are listed in the columns, while the independent variables are listed as rows (33 models in total were run). Negative binomial models were run, except for the three models using the "connection to culture" variable, which has only a 0 or 1 value, for which logistic regression was used. The Incidence Rate Ratio (IRR) coefficient (Odds Ratio in the case of the "connection to culture" models) are listed in the table with the p-value in brackets. High-income level was used as the base case for income level. Anglo-Saxon was used as the base case for cultural cluster.

Firstly, it is clear from the results that many of the wellbeing factors had an equal likelihood of being reported by the different population groups. Specifically, no significant differences were reported for physical & mental health, independence & work, and relationships inside the family. Furthermore, very few significant differences were reported for inner wellbeing, relationship with self & others, and spirituality & aspirations. While this may be influenced to some degree by the small sample size, these findings do suggest that there is a high degree of commonality in what wellbeing means to population groups of different cultural background and economic status.

However, there are some differences which should be noted. Looking firstly to Model Set 1, we can see that low-income countries are significantly more likely to report a number of wellbeing factors compared to high-income countries. Specifically, population groups living in low-income countries were significantly more likely to raise wellbeing areas related to "living in the community", "personal growth, behaviours, & knowledge", "material needs", "spirituality & aspirations", and "connection to culture" compared to those living in high-income countries. This provides strong evidence that the conceptualisations of wellbeing for individuals in low- and middle-income countries differ from those of individuals in high-income countries. Furthermore, population groups in low-middle and upper-middle income countries were also more likely to raise aspects of wellbeing related to material needs. These findings indicate that these aspects may be either more important or more salient to individuals living in lower-income countries. Those in low-middle and upper-middle countries were also less likely to raise wellbeing areas related to "engagement with the outside world" compared to those in high-income countries, which may be influenced by those in lower-income countries perceiving recreation & leisure, nature and non-human species, and life experiences as being less important.

The findings also illustrate some variation amongst population groups of different cultural background. This is particularly observable for the "living in the community" wellbeing factor, with population groups in African and Middle Eastern countries being significantly more likely to raise this area compared to population groups in Anglo-Saxon countries, and those in European and Latin American countries being significantly less likely to raise areas falling within this wellbeing factor. Population groups in Latin American and South-East Asian

countries were also significantly more likely to raise wellbeing areas in the "Personal growth, behaviours & knowledge" factor compared to those in Anglo-Saxon countries, indicating potential differences in culture and perceived importance (or salience of the value) of education. Notably, Indigenous population groups were 90 times more likely to raise "connection to culture" as an important area of wellbeing compared to non-Indigenous population groups in Anglo-Saxon countries. This highlights that the conceptualisations of wellbeing for Indigenous communities in Anglo-Saxon countries may vary from those of other population groups within the same country, aligning with existing literature (e.g. Biddle, 2014; Jordan et al., 2010; Taylor, 2008; Yap & Watene, 2019).

5.4 Limitations of the study

Before discussing the results and implications of the study in greater detail, it is important to note a number of limitations of this study, which should be taken into account when considering these findings. Firstly, while the systematic review captured a broad range of studies, there is an over-representation of certain contexts and population groups. For example, as noted previously, there is an over-representation of studies conducted in Anglo-Saxon and high-income countries. Furthermore, there were relatively few studies undertaken in low-income countries, or in Latin American and Confucian Asian countries. Over time, we may see more participatory wellbeing studies being undertaken in these contexts, which will strengthen our ability to explore more deeply the variation in wellbeing conceptualisations throughout the world.

Secondly, the issue of sample size is important to note. The systematic review identified 133 unique wellbeing frameworks that have been developed throughout the world, 126 of which could be used for this analysis through being conducted in a single cultural cluster or in countries of equivalent income level. While the regression analysis did highlight a number of significant differences, a sample of 126 is relatively small for such analyses. This limitation is relevant for all analyses, but particularly pertinent for Model Set 3. It is hoped that this sample can grow in the future, with further studies being conducted.

A third limitation is the weaknesses in the GLOBE framework used to gather countries into culturally similar clusters. While the framework has faced criticisms (e.g. Hadwick, 2011; Hofstede, 2006), it remains the most appropriate framework to apply due to a full list of cultural clusters having been developed by Mensah and Chen (2013). A key weakness of any cross-cultural grouping for the purpose of the analysis presented in this chapter is that certain population groups may not necessarily identify with their cultural cluster. For example, a Hispanic population group in the United States would be clustered as Anglo-Saxon but may identify more closely with the Latin American cultural cluster. Ideally, we would classify population groups based on their unique characteristics, instead of clustering them by country. However, in the absence of a robust approach to cluster population groups in this way, country-level classifications are the only viable alternative. It is also important to note that the GLOBE framework assumes that these cultural clusters are static, whereas, in reality, culture within countries may be changing over time.

Finally, by categorising population groups based on the income level of their country, we are also making certain assumptions about the economic status of that population group. Population groups living in poverty in high-income countries may have distinct characteristics from other population groups within those countries; similarly, wealthy population groups in low-income countries may have different characteristics from other population groups in those countries. Both of these circumstances would potentially result in differing conceptualisations of wellbeing. However, again it is noted that such broad categorisation is a necessary approach in order to undertake a macro-level analysis.

5.5 Discussion

The findings outlined provide a deeper understanding of the extent to which wellbeing conceptualisations are influenced by contextual factors. They also have important implications for how wellbeing is measured throughout the world. This section will elaborate on these two points in greater detail.

5.5.1 Cross-cultural conceptualisations of wellbeing

A key finding of this study is that there appears to be a high degree of universality in what wellbeing means to people throughout the world. This emphasises that the shared experience of "being human" may result in similarities in what matters to people. This is supported by the theory of universal relativism in wellbeing constructions and experiences, which holds that, despite some cultural differences, there is some degree of universality in how people experience wellbeing (Lomas, 2015; Maulana et al., 2021) This is also supported empirically, with studies analysing cross-cultural conceptualisations of wellbeing highlighting key commonalities (alongside cultural nuances) between different population groups of different cultures (Exenberger et al., 2019; Galati et al., 2006; Tafarodi et al., 2012).

However, the results also highlight a degree of variation in what wellbeing means to individuals based on both income level of country and cultural cluster. There are two reasons why a wellbeing factor may be more likely to be raised as a component of wellbeing within certain population groups. Firstly, a wellbeing area may truly be considered as more important for that group. For example, aspects related to "living in the community" may truly be considered as less important for population groups in Europe and Latin America, and more important for population groups in African and Middle Eastern countries, compared to Anglo-Saxon population groups. Similarly, aspects related to "inner wellbeing" may truly be more important to population groups in Confucian countries compared to Anglo-Saxon countries.

A second reason, however, is that a wellbeing area may simply be more salient for a particular group. Thus, a wellbeing area may actually be equally important to all groups but may be more likely be raised in a participatory wellbeing framework by a certain population group due to that wellbeing area being more salient. This may particularly be the case for wellbeing areas in which a population group feels relatively deprived. This is a likely explanation for the "material needs" factor being more likely to be raised by population groups in lower-income countries. Similarly, some wellbeing factors may have been less likely to be raised due to their lack of salience, or an absence of awareness that an area may be beneficial for wellbeing. For example, this *may* explain the "connection to culture" area being less likely to be raised in

higher-income countries, if individuals have little notion about what connecting to culture entails. The extent of this could be explored and verified through further studies.

As already discussed in Chapter 4, it should again be noted that the methodology applied within a study may have an influence on the wellbeing areas reported. For example, focus group discussions may be more likely to elicit certain wellbeing conceptualisations in contrast to interviews; the wording used for eliciting wellbeing conceptualisations (for example, "wellbeing" versus "good life" versus "happiness") may influence resulting wellbeing dimensions; and the background of the researcher and their interpretation of the data may also influence the reported conceptualisations of wellbeing. The extent to which method bias has influenced the reporting of wellbeing dimensions can be explored through further analysis of this data.

In sum, this study has highlighted that while there is a high degree of commonality in what wellbeing means to population groups throughout the world, there is also some variation. Whether this is due to either the salience of particular notions of wellbeing or to true cultural differences is unclear and would need to be explored through further research. Whatever the explanation, however, these findings point to important implications for wellbeing measurement.

5.5.2 Implications for wellbeing measurement

This study has highlighted that what population groups consider as important to wellbeing does differ by cultural and economic factors based on the country of data collection. This finding has a number of implications for wellbeing measurement throughout the world.

Firstly, researchers, policymakers, and practitioners should exercise caution when applying wellbeing measurement tools and frameworks with population groups outside the context where these tools and frameworks were developed. Given that what population groups consider important to their wellbeing has been shown to differ based on cultural background and income status, and potentially other factors that were not explored in this study, measurement tools and frameworks developed in dissimilar contexts to the population of interest may not be appropriate.

Secondly, this study highlights that participatory approaches can be a valuable tool to identify the wellbeing dimensions that are important for a given population group. At a macro level, this study has shown that there is some level of variation in how population groups conceptualise wellbeing. It is important to note that this is even more apparent when examining the raw data for how these different population groups understand wellbeing, with each of the 30 wellbeing areas identified through the review conceptualised in different ways. For example, friendship is an important component of happiness for schoolchildren in Porto Alegre, Brazil (Giacomoni et al., 2014), which was coded to "Other relationships"; a fulfilling life is essential for life, as reported by older adults in Taiwan (Hsu, 2007), which was coded to "Sense of purpose/meaning"; and traditional knowledge stories are important for the wellbeing of the Nywaigi people of Queensland, Australia (Greiner et al., 2005), coded to "Connection to culture". In other words, the depth of differences in wellbeing conceptualisations go even further than the 11 factors of the 30 wellbeing areas used for analysis in this study. Thus, with all population groups having a unique understanding of wellbeing, participatory approaches can help to ensure that a resulting framework or tool closely matches the conceptualisation of wellbeing for that population group.

Finally, the results indicate that salience of particular wellbeing areas may be driving some areas of wellbeing to be more likely to be reported by certain groups. Qualitative researchers developing participatory wellbeing frameworks should be aware of this when undertaking their own research, and take steps to ensure that a broad range of wellbeing areas are considered by participants, including those areas which may not be particularly salient for those participants.

5.6 Conclusion

This chapter has provided a substantial contribution to the literature on cross-culture conceptualisations of wellbeing. It is the first of its kind to use existing participatory wellbeing studies to examine how understandings of wellbeing differ based on the culture and context of different population groups. By drawing on the results of the systematic review, we have highlighted that while there is some degree of universality in how wellbeing is understood throughout the world, there are also cultural and economic variations. This finding has

important implications for wellbeing measurement. Firstly, it highlights that researchers, policymakers, and practitioners should exercise caution when applying a wellbeing measurement tool or framework to a population group distinct from the context where that tool or framework was developed. Secondly, this finding also emphasises the value of participatory approaches to better understand how different population groups conceptualise wellbeing. Taking these steps will ensure that we are more closely capturing what wellbeing truly means to individuals throughout the world, enabling research and policy to improve the lives of individuals in a more meaningful way.

Part 3 Applications

Chapter 6 Applications of participatory wellbeing frameworks – A review

6.1 Introduction

While better understanding the conceptualisations of wellbeing for a particular population group can be highly valuable in and of itself in achieving impact, applying participatory wellbeing frameworks in a number of ways is another avenue to achieve further impact. Such applications can allow the findings of a participatory wellbeing study to be more translatable to policy, enhancing the likelihood of the framework having greater research and policy impact.

Potential examples of applications of participatory wellbeing frameworks include the development of measurement tools, such as wellbeing or multidimensional poverty indices; monitoring and evaluation; advocacy purposes and developing policy recommendations; and indicator development and selection. In some ways, these applications are no different than those that could be pursued based on wellbeing frameworks developed through other non-participatory approaches. However, there are some advantages and challenges that are unique to applications based on participatory wellbeing frameworks, and these will be outlined throughout Part 3 of this thesis.

Drawing on the results of the systematic review, Part 3 of this thesis will firstly undertake a further review of how these participatory wellbeing frameworks have been applied. This is the focus of the current chapter. Doing this helps to fill a gap in our understanding of what participatory wellbeing frameworks have actually been used for, and how they have been applied, with the results of the systematic review providing valuable data for analysing this at a macro level. There has been minimal focus on this topic in the existing literature, with the only relevant illustration of similar work being a review of statistical techniques and empirical applications of the Capability Approach by Chiappero-Martinetti and Roche (2008). They found that statistical techniques applied include scaling and ranking solutions, fuzzy set theory, multivariate reduction techniques, and regression approaches. Data used to apply the Capability Approach included primary data collected for the purpose of the research at hand,

secondary or existing data, macro-level data, and micro-level data. Thus, given the limited research conducted previously in this space, this chapter will provide an important contribution to our existing knowledge on the qualitative and quantitative applications of participatory wellbeing frameworks, the extent to which these frameworks have been applied, and what factors are associated with a greater propensity for their application.

The following two chapters within Part 3 (Chapters 7 and 8) seek to better understand the benefits and challenges in quantitatively applying participatory wellbeing frameworks. This is done through undertaking two case studies. The first case study examines child wellbeing in Australia using a nationally representative, longitudinal data source (the Longitudinal Study of Australian Children). Drawing on a participatory wellbeing framework developed with children in Australia (ARACY, 2012), the first case study develops a measurement tool using existing data and uses this tool for analysis. The second case study explores the migrant wellbeing gap in Jayapura, Papua, using an existing wellbeing measurement tool developed through consultation with adults in Indonesia (Maulana et al., 2019; Maulana et al., 2018).

These two case studies have been chosen to reflect the varying approaches, benefits, and challenges that are present when applying participatory wellbeing frameworks across different contexts and through access to different data sources. The first case study translates a national-level framework to a national-level data source, but relies on existing, longitudinal data for indicator selection, resulting in challenges to ensure the measurement tool aligns closely with the participatory wellbeing framework. In contrast, the second case study utilises an existing measurement tool developed through participatory approaches, but scales down a national-level framework to a lower geographical context, presenting potential difficulties in being certain that the national-level framework adequately reflects the local context. These benefits and challenges will be discussed in greater detail throughout Chapters 7 and 8.

This short chapter will firstly outline the methodology used to undertake the review of how participatory wellbeing frameworks have been applied. The results of the review will then be summarised, before discussing the findings in greater detail, highlighting what the results mean in the context of participatory wellbeing frameworks and their potential for impact.

6.2 Methodology

Drawing on the 130 eligible papers identified within the systematic review in Chapter 4 and using a database, the bibliographic details for each paper were noted, alongside an indication of whether or not the produced work was applied within the eligible paper and a short description of the application.

Following this, a review was carried out for each of the 130 eligible papers to identify whether any additional applications, published in follow-on papers, had been carried out. This involved searching relevant databases (including Google Scholar) using search terms based on the details of the participatory wellbeing framework. The publication history of key authors was also examined, using platforms such as Google Scholar and ResearchGate, to find any additional applications that were not found through the search terms[34].

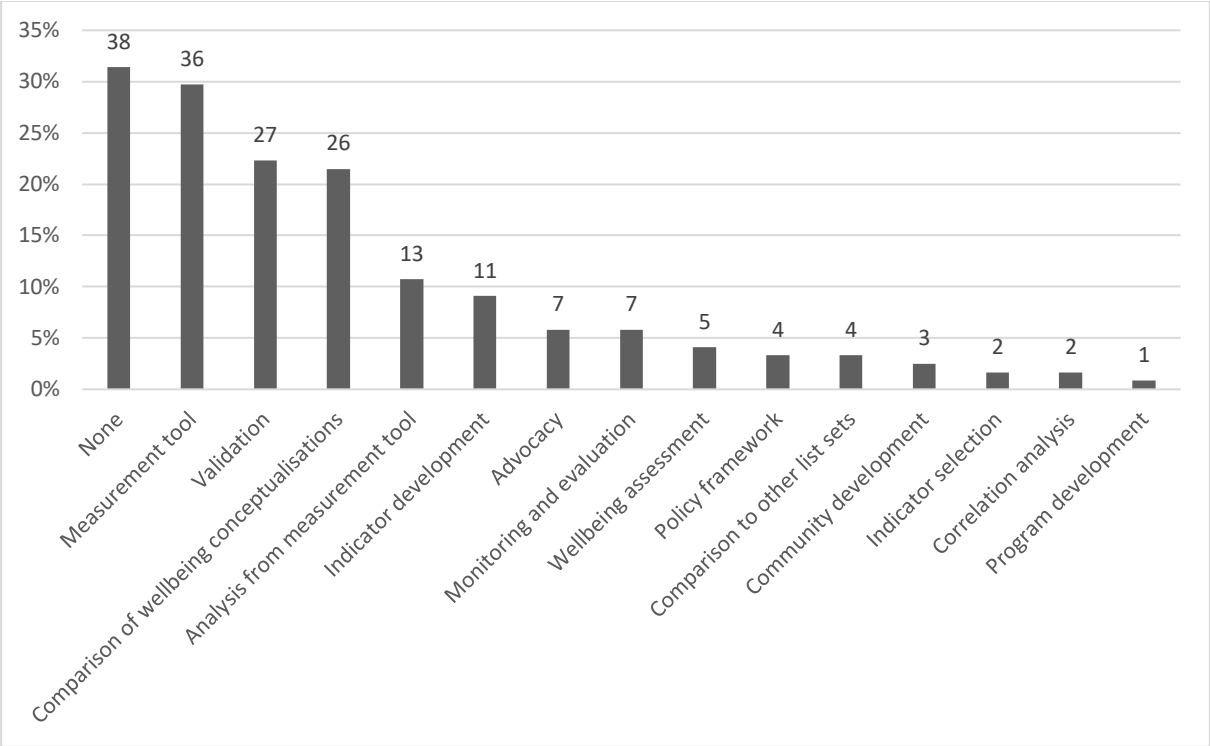
Following the review process, the descriptions of applications were thematically analysed, identifying 14 different types of applications. The number of applications for each eligible study was also calculated. Those studies that developed 10 or more applications were grouped together. This is because some participatory wellbeing frameworks, such as the ICECAP-A (Al-Janabi et al., 2012), have been applied so extensively that even systematic reviews exist on their applications (see Afentou & Kinghorn, 2020). Thus, to ensure the accuracy of the reported data, it was deemed more robust to categorise these together.

6.3 Results

The analysis identified 14 types of applications of participatory wellbeing frameworks, as shown in Figure 6-1. The vast majority of studies had been applied in some form, with just under one-third of studies not applied in any way. The most common application was the development of a measurement tool, followed by validation processes, comparing wellbeing conceptualisations across groups, utilising a measurement tool for analysis, and indicator development. A description of each application is provided in Table 6-1.

[34] The full data, including references for applications, can be provided by the author on request.

Figure 6-1: Applications of participatory wellbeing frameworks (%)



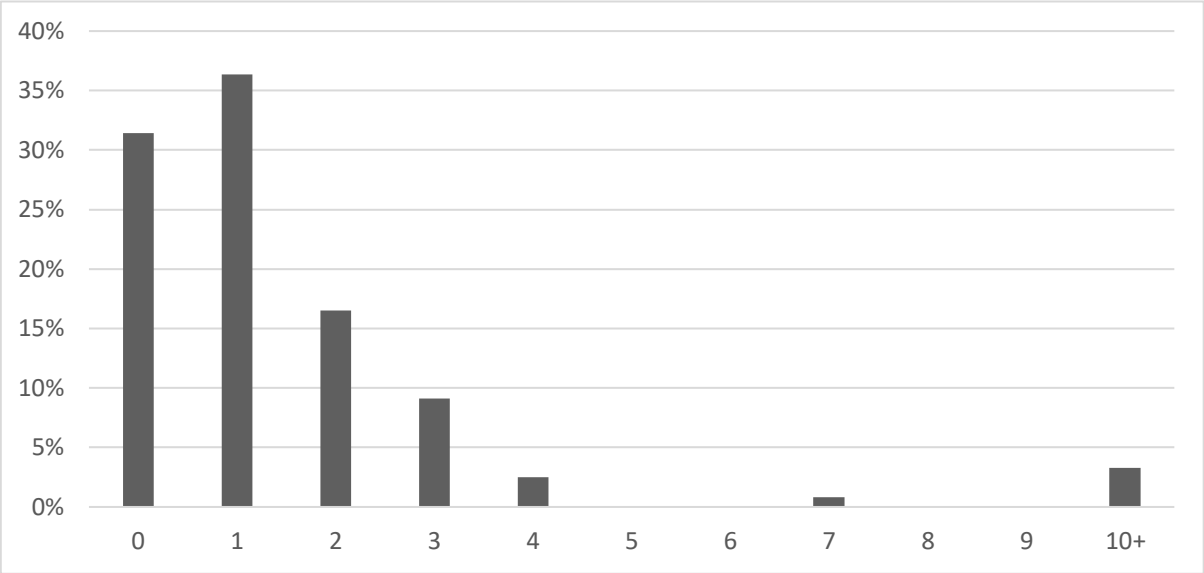
Note: Numbers above bars indicate number of studies that utilised given application. Bars sum to greater than 100% given that an individual framework could have been applied in more than one way.

Table 6-1 Description of applications

Application	Description
Measurement tool	A measurement tool is developed
Validation	A new measurement tool is validated against other instruments, or methods are piloted
Comparison of wellbeing conceptualisations	Wellbeing conceptualisations of different population groups are contrasted
Analysis from measurement tool	A measurement tool is applied for further analysis
Indicator development	Indicators are developed for inclusion in a survey etc.
Advocacy	A framework is developed for the purpose of advocacy or developing policy recommendations
Monitoring and evaluation (M&E)	A framework is utilised to monitor and evaluate programs or policies
Wellbeing assessment	The wellbeing of a population group is assessed using indicators or a measurement tool
Policy framework	A framework is utilised to guide policy and decision-making for an organisation, community, or jurisdiction
Comparison to other list sets	The resulting wellbeing dimensions are contrasted to other existing frameworks and list sets
Community development	Framework used to better understand issues within a small community
Indicator selection	The framework is used to guide indicator selection within existing data sources
Correlation analysis	The correlations between wellbeing dimensions are analysed
Program development	A framework helps to guide program development

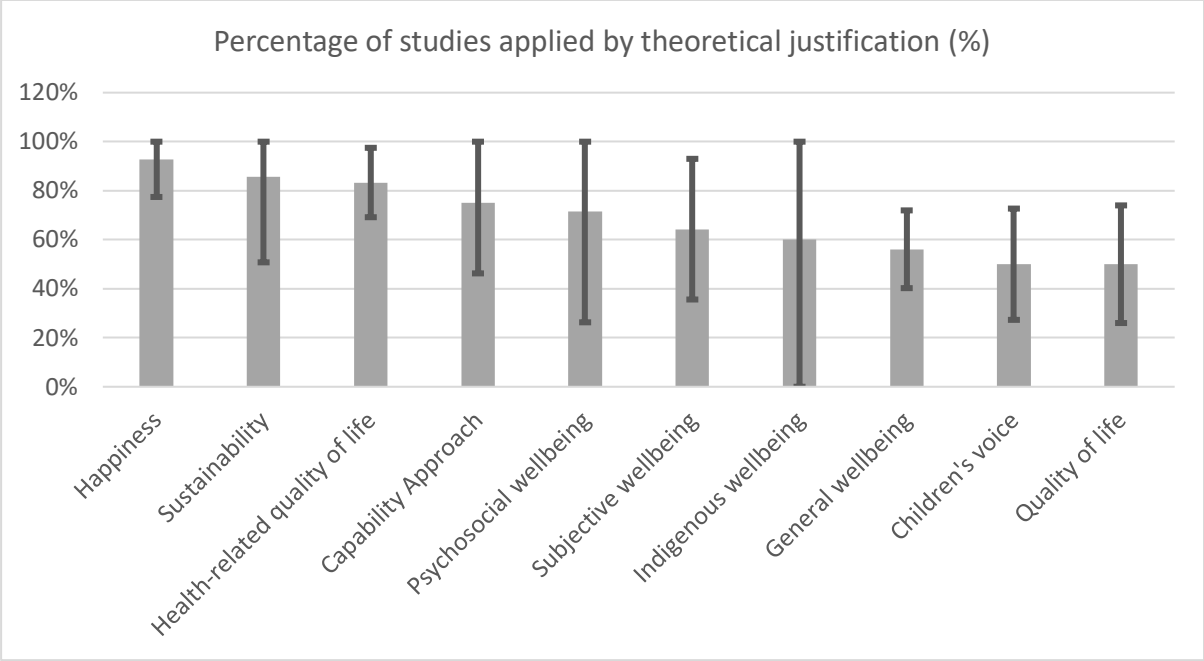
Given that a framework could have been applied more than once, Figure 6-2 presents the number of applications achieved for each study. With one-third of studies not being applied at all, around one-third were applied only once, with the remaining third applied more than once. Four studies were applied extensively (10 or more times), being studies by Al-Janabi et al. (2012), ARACY (2012), Grewal et al. (2006), and Sutton and Coast (2014).

Figure 6-2: Number of applications for each framework



Finally, this data can be used to examine whether the development of applications bears any relation to the theoretical justification for the study. Using the different categories for the theoretical justification developed in Chapter 4 (see Appendix A2), Figure 6-3 presents the percentage of studies applied within each theoretical justification. The analysis highlights that the justification for the study does provide an indication on the likelihood that a study has been applied. For example, happiness, sustainability, and HRQoL studies have a higher propensity to be applied, in contrast to those studies which use theories such as general wellbeing, children's voice, and quality of life.

Figure 6-3: Percentage of studies applied by theoretical justification



Note: Error bars indicate 95% confidence interval.

6.4 Discussion and conclusion

The results highlight two key findings regarding the utility and application of participatory wellbeing frameworks. Firstly, participatory wellbeing frameworks appear to have been extensively applied, with only around one-third of studies identified through the systematic review not being applied in any form. This provides a strong indication that participatory wellbeing frameworks have predominantly been developed for a specific purpose, such as to develop measurement tools and conduct analysis on these tools, validate measurement tools and methodologies, compare wellbeing conceptualisations across groups, and develop indicators. While it should be emphasised that participatory wellbeing frameworks by themselves can be a powerful mechanism for research and policy impact (as will be outlined in Chapter 9), the wide application of participatory wellbeing frameworks for further research, analysis, and policy purposes indicates a determination by authors to create further research and/or policy impact.

Secondly, when examining those studies which have a lower propensity to be applied, we can see that they tend to be based on theoretical justifications that have a greater focus on drawing out and identifying conceptualisations of wellbeing, as opposed to applying them for

further purposes. For example, studies based on the theoretical justifications of Indigenous wellbeing and children's voice end to be predominantly motivated by drawing out and highlighting dimensions of wellbeing for groups that tend to be marginalised from mainstream policy. Studies based on a "general wellbeing" or "quality of life" approach tend to be more interested in identifying wellbeing dimensions for a particular group, as opposed to applying them in any way. This therefore indicates that those frameworks which never had the *intention* of being further applied have a lower propensity to have any applications, further reinforcing the first key finding regarding the wide usage of participatory wellbeing frameworks. It should be noted that while such studies may have a lower propensity to be applied, this does not necessarily mean that they have low impact, as they can help shape policy in highlighting what matters to these population groups. Furthermore, motivations of the research, power dynamics, and the capacity to attract funding also have a role to play in the ability of a framework to be applied.

While these findings provide some initial indications that participatory wellbeing frameworks have indeed been widely used, it is important to further examine the benefits, challenges, and limitations of applying participatory wellbeing frameworks. This will be the focus of Chapters 7 and 8. By undertaking two case studies that apply participatory wellbeing frameworks, we can better understand what the barriers may be for researchers seeking to apply such frameworks, and support researchers in overcoming challenges and limitations. Furthermore, it should be noted that the analysis provided in this chapter, and throughout the rest of Part 3, gives us little idea of the tangible research and policy impact achieved from participatory wellbeing frameworks. This will be the topic of Chapter 9.

It is, however, important to note one key limitation in the analysis when interpreting this chapter's findings. Most notably, not all applications of participatory wellbeing frameworks will have been published. Therefore, the reliance on searches within databases may miss some key applications of frameworks. In particular, there may be some types of applications which are less likely to be available publicly, such as advocacy and policy recommendations, policy frameworks, community development, and program development. The key informant study, presented in Chapter 9 helps to fill this gap, by engaging more deeply with authors on how their study has been applied and what the research and policy impacts have been.

However, despite this limitation, conducting a review on the available evidence regarding applications of participatory wellbeing frameworks can provide researchers, practitioners, and policymakers with a clearer understanding of how participatory wellbeing frameworks can be applied and the extent to which they have been applied.

Chapter 7 Drawing on a participatory wellbeing framework and existing data to assess child wellbeing outcomes over time[35]

7.1 Introduction and background

The study outlined in this chapter seeks to highlight the benefits, challenges, and limitations of applying a national-level child wellbeing framework to an existing longitudinal, nationally representative data source. As shown in the previous chapter, while the development of measurement tools is a common application of participatory wellbeing frameworks, utilising them with existing data sources to select indicators is rare, with only two studies having been utilised in this way previously. Drawing on existing participatory wellbeing frameworks to better understand wellbeing through existing data sources makes valuable use of research and data collection which has already been conducted. The wide availability of nationally representative data sources (and, to a lesser extent, longitudinal data sources) presents a valuable opportunity to draw upon existing research to measure wellbeing, as conceptualised by the population group of interest, and provide analysis to better inform research and policy. This section will firstly outline the importance of measuring child wellbeing and the value in utilising child participatory wellbeing frameworks, before identifying an important research gap in applying child participatory wellbeing frameworks for analysis. The section will conclude with an overview of the remainder of the chapter.

Through not having the ability to vote and having little influence in policy, children and young people generally have limited opportunities to have their voices heard. Historically, this group has also been excluded from the research process and had little say in how their wellbeing is measured (Ben-Arieh, 2005). This realisation has led to research studies making greater efforts to improve the level of research participation for children and young people. For example, over the last two decades we have seen more research studies using child-centric measures to directly reflect the perceptions, views, and situation of the child themselves, instead of

[35] This chapter was co-authored with Ben Edwards. This chapter uses unit record data from Growing Up in Australia, the Longitudinal Study of Australian Children. The study is conducted in partnership between the Department of Social Services (DSS), the Australian Institute of Family Studies (AIFS) and the Australian Bureau of Statistics (ABS). The findings and views reported in this chapter are those of the authors and should not be attributed to DSS, AIFS, or the ABS.

inferring this through household characteristics (Grané et al., 2020; Main & Bradshaw, 2012; McAuley, 2012). More recently, there has been a growing movement toward participatory approaches, whereby children and young people are seen as equal partners in the research process (Gallacher & Gallagher, 2008; Pole et al., 1999).

Involving children and young people in all stages of the research process can come with a number of benefits, such as improved agency (Biggeri et al., 2006) and more meaningful policy change (Fattore et al., 2007). However, one limitation of this approach is the capacity to meaningfully engage children in participatory studies (Holland et al., 2010; Pole et al., 1999). Another is the resources and funding required to undertake full-scale participatory projects.

An alternative in these instances would be to draw on existing child participatory wellbeing frameworks to measure wellbeing. Doing this can provide a healthy balance between not including children's voices in the research process at all (low resourcing/funding, low participation) and involving children as equal partners in the research process (high resourcing/funding, high participation). While participatory wellbeing frameworks for children and young people have been developed in a range of contexts throughout the world, from young people with disability in Uganda (Biggeri & Ferrannini, 2014), to children in Ethiopia (Camfield & Tafere, 2009), and children in rural and urban areas of Australia (Fattore et al., 2007), very few have been used to guide indicator selection for quantitative cross-sectional analysis and, to the authors' best knowledge, none have been applied for longitudinal analysis.

There are two key aims to this study. Firstly, the chapter presents a methodology to apply a child participatory wellbeing framework to an existing longitudinal dataset, which can be used as an exemplar for researchers seeking to more closely measure what matters to people. Furthermore, the analysis allows us to more deeply examine the benefits, challenges, and limitations inherent in this kind of application. Secondly, the analysis examines the long-term associations of being born into poverty on the wellbeing measures that matter to children in Australia. This both highlights the value of utilising participatory wellbeing frameworks for indicator selection in existing datasets, and provides a deeper insight into the long-term trajectories of children born into higher levels of disadvantage in Australia.

There are four key benefits of applying a child participatory wellbeing framework to guide indicator selection to longitudinal analysis. Firstly, doing so ensures that the measures have direct relevance, and capture the aspects of life that matter, for children (De Berry et al., 2003; Fattore et al., 2009; González-Carrasco et al., 2019; Redmond et al., 2016; Saunders et al., 2019). This ultimately means that we obtain a more refined and nuanced conceptualisation of wellbeing that is directly applicable to the target population. Previous research has highlighted that processes to develop child wellbeing frameworks that exclude children's voices can overlook some aspects of life that are important to them (Fane et al., 2020; Vujčić et al., 2019).

Secondly, from a child rights-based perspective, it is vital that children are included in decisions that affect them. Article 12 of the United Nations Convention on the Rights of the Child emphasises the importance of respect for children's views, stipulating that children have a right to be heard on issues that affect them (UN General Assembly, 1989). Given the utility of wellbeing measurement to inform policy, it is vital that children are included in this process from the start, ensuring that they have agency and a say in how their wellbeing is defined.

Thirdly, incorporating children's voices into wellbeing measurement can ultimately help to ensure that policies and programs for children are developed and adapted to improve their lives in a meaningful way. As noted by Fattore et al. (2009, p. 74) "…when we seek to gain an understanding of the meanings that children attach to well-being, it prompts a reassessment both of the issues to be regarded as policy relevant and the parameters of existing policy debate on children's issues." To ensure these meanings are considered for policy, we need to be developing measures that align with these conceptualisations of wellbeing. Thus, as well as providing a unique perspective into the wellbeing of children and ensuring children's rights are met, using participatory frameworks to guide indicator selection for the measurement of wellbeing also helps to ensure that policy considers children's understandings of wellbeing.

Finally, given the significant transition periods that are experienced throughout childhood and adolescence (Edwards, 2012; Elder et al., 1993; Morris et al., 2005; Sroufe, 1979), how wellbeing is understood is likely to be different for children and young people at different ages. Therefore, applying a flexible framework for wellbeing that incorporates the views of children and young people allows for variation in wellbeing measures over time. This ensures

that indicators to measure child wellbeing over time can be adapted to reflect the changing nature of what matters to children and young people over their life course.

Within the international context, a small number of cross-sectional studies have drawn on participatory approaches to provide quantitative measurements of child wellbeing. For example, Trani et al. (2013) used a participatory wellbeing framework developed by Biggeri et al. (2006) to measure child wellbeing in Afghanistan using the Afghanistan National Disability Survey. Dimensions for which data was available were represented through the most relevant indicator, with analysis producing deprivation rates for each indicator, as well as aggregated dimensions. By applying a multidimensional lens, the authors were able to report on rates of multidimensional wellbeing, as well as highlight specific dimensions of concern for children in Afghanistan. Specifically, access to education for girls and children with disability was identified as a crucial barrier, as well as access to healthcare facilities.

Redmond et al. (2016) drew on in-depth discussions on meanings of wellbeing for children in Australia to develop data items for a cross-sectional wellbeing survey. Data items within this survey were subsequently aggregated to develop a wellbeing index (Redmond et al., 2018; Redmond et al., 2016). The results highlighted that young people with disability, young carers, and materially disadvantaged young people have, on average, lower wellbeing than non-marginalised young people. Finally, while measuring a slightly different construct, participatory approaches have been applied to measure child material deprivation using the consensus approach developed by Townsend (1987) in a number of contexts throughout the world (e.g. Gross-Manos, 2015; Main & Pople, 2011; Saunders et al., 2019; Swords et al., 2011). As noted above, to the authors' best knowledge, there are no studies that have previously applied an adult or child participatory wellbeing framework for longitudinal analysis.

In sum, the research literature on applying child participatory wellbeing frameworks to support quantitative analysis has been limited to cross-sectional studies, and is absent for longitudinal studies. This is the case even for contexts where both child participatory wellbeing frameworks and longitudinal studies of children already exist, such as Ireland (Gabhainn & Sixsmith, 2005) and the United Kingdom (The Children's Society, 2006).

Expanding the research base on how wellbeing changes over time is important to ascertain when best to intervene, what alters the trajectories of wellbeing, and the persistence of wellbeing states for certain groups.

This chapter thus provides a unique approach to examining the wellbeing of children over time, with wellbeing defined by children and young people themselves. In particular, this study seeks to contribute to the literature base by providing an illustration of how participatory wellbeing frameworks can be applied to measure wellbeing over childhood using existing longitudinal data.

The analysis also contributes to the existing research base in Australia on child wellbeing (e.g. Bessell, 2019; Edwards & Baxter, 2013; Mishra et al., 2017; Redmond et al., 2018; Saunders & Brown, 2020; Warren, 2017) by developing an indicator set for use with a widely used, nationally representative longitudinal dataset, the Longitudinal Study of Australian Children (LSAC), which can be used to more deeply examine the influences, trends, and trajectories of child wellbeing. In particular, this chapter will use the indicator set developed to examine the long-term associations of being born into poverty. The LSAC data has been used extensively to explore various aspects of child wellbeing through longitudinal analysis (e.g. Howard & Williams, 2018; Mishra et al., 2017; O'Loughlin et al., 2022; Wang et al., 2019; Warren, 2017). For example, in developing a longitudinal multidimensional poverty index based on the United Nations Convention on the Rights of the Child, Mishra et al. (2017) found that health and emotional wellbeing were the largest areas of concern, driven predominantly through poor body weight and bullying. Warren (2017) examined the influence of poverty on cognitive, social, and health outcomes, finding that children who had experienced poverty at some point in their lives were significantly more likely to have poorer outcomes on all measures. This was exacerbated for children who lived in persistent levels of poverty.

This study will make a substantial contribution to this existing research by selecting dimensions and indicators for analysis based on what children and young people in Australia themselves have identified as important for their wellbeing, as well as examining the associations between early experiences of poverty and these wellbeing measures. Furthermore, researchers can utilise this indicator set in LSAC for further analysis of child

wellbeing outcomes[36]. This will help to inform Australian governments and the community on where resources can be best placed from a child's perspective.

This chapter will firstly outline the methodology applied for this study, which included the use of the Nest framework developed by ARACY (2012), UNICEF's Multiple Overlapping Deprivation Analysis (MODA) (De Neubourg et al., 2013), and LSAC. Four time points were examined, when children were aged between 6 and 13. The findings will then be outlined through descriptive statistics, with the value of the approach demonstrated through a case study examining the impact of being born into poverty on later wellbeing outcomes. Finally, the chapter will conclude by discussing the results in greater detail, as well as providing some reflections on the value, challenges, and limitations of utilising a child participatory wellbeing framework to develop a longitudinal measurement tool based on an existing data source.

[36] The Stata code to create the indicator set can be accessed at http://dx.doi.org/10.26193/AJIQSF

7.2 Methodology

This section will outline the methodology used to develop an indicator set for use with an existing longitudinal dataset to measure child wellbeing over time based on data in Australia. The methodology is based on the MODA approach, developed by UNICEF to measure the deprivation, wellbeing, or poverty of children (De Neubourg et al., 2013), with a number of exceptions as described below. MODA was chosen as the most suitable method due to its emphasis on seeing the child as the unit of analysis and its acknowledgement that the needs of children change throughout the life course. MODA also discourages aggregating wellbeing or deprivation information into one single index or number, so that individual dimensions can be examined separately. Enabling the analysis of individual dimensions was seen as vital in order to comprehensively investigate the wellbeing of children in all its forms (De Neubourg et al., 2013).

However, despite MODA broadly being a highly suitable approach for this analysis, the methodology to develop the indicator set diverged somewhat from the step-by-step guidelines put forward by De Neubourg et al. (2013). This was done to ensure the methodology was appropriate for measuring wellbeing, as defined by a participatory wellbeing framework, and to accord with the available data source. Firstly, this study applies the MODA methodology but explicitly uses it as an approach to measure wellbeing, as opposed to deprivation. Focusing on wellbeing is consistent with the original intention of the MODA methodology, however previous studies using this approach have used it to measure deprivation (e.g. Chzhen et al., 2018; Chzhen & Ferrone, 2017; Ferrone & de Milliano, 2018). Moreover the value of using a strengths-based approach to measure wellbeing has been established through previous literature (Armstrong et al., 2012; Bornstein et al., 2003).

Secondly, where established indicator thresholds for indicators were not available, an alternative method was applied to determine thresholds based off the available data. While the MODA methodology suggests using a relative approach in this case (De Neubourg et al., 2013), there are no clear recommendations on how to determine the relative indicator threshold. Furthermore, using a relative approach would not align with the strengths-based approach we adopted for this study. For this reason, we applied an alternative approach which is described in Section 7.2.3.

Finally, in contrast to the MODA approach of using correlations to inform the choice of indicators within dimensions (De Neubourg et al., 2013), we rely on the participatory wellbeing framework to drive choices on the placing of indicators within dimensions. Given that this study developed an indicator set for multiple waves in the LSAC data, this approach also avoids arbitrary aggregation of indicators to one dimension at one time point and then another dimension at another time point. Furthermore, it is well established that different dimensions of wellbeing are highly correlated, mutually reinforcing, and synergistic (e.g. Navarro et al., 2019).

The rest of this section will describe each of the steps taken to develop an indicator set to measure the wellbeing of children and young people over time using an existing dataset. Firstly, we will outline the participatory wellbeing framework that was used to guide the development of the measurement tool before describing how this framework was operationalised to guide indicator selection to measure wellbeing. Thirdly, the available data will be described. Fourthly, the approach to guide indicator selection and identify indicator thresholds with the available data will be outlined. We also describe how missing data was dealt with. Finally, the approach used to aggregate dimensions and identify dimension thresholds will be articulated, before summarising the analysis approach.

7.2.1 Applying an Australian participatory wellbeing framework

There are a number of child participatory wellbeing frameworks that have been developed in the Australian context (e.g. ARACY, 2012; Fane et al., 2020; Fattore et al., 2007; Foley et al., 2012; Redmond et al., 2016). Given that this project sought to develop an indicator set to measure child wellbeing at the national level throughout the life course, the Nest framework, developed by ARACY (2012), was seen as the most appropriate framework to apply for this study. This is due to it being reflective of wellbeing at the national level, as well as children and young people from the ages of 4–24 being included in the consultation process. The motivation for the framework was primarily driven from a child rights perspective, to amplify the voices of children and young people in setting future priorities.

The consultation process for the Nest framework comprised activities with children and young people themselves, as well as parents. In total, 557 children and young people and 28

parents were included in consultation activities in various locations across Australia. These workshops were predominantly run in partnership with organisations across the country, including early childcare centres and service providers (including those providing services to children with disability). Consultations with younger children involved creative activities and role play, while consultations with young people included forums, discussion sessions, and engagement with individuals in public spaces such as local shopping malls and skate parks. The consultations highlighted five key wellbeing areas children and young people identified as important to their wellbeing: being loved and safe, having material basics, being healthy, learning, and participating[37]. Being loved and safe was comprised of connections and relationships, friendships, being in an environment with nurture, safety, and support, and being safe through a stable, secure home and school environment, and the absence of conflict, abuse, and harm. Material basics consisted of the provision of food and water, housing and shelter, sanitation, service provision, and other material goods. Healthy included physical health (nutrition and exercise), and mental health (state of mind and sense of self), as well as mental stimulation. Learning included access to and participation in formal education, self-learning and development, participation and satisfaction with school, exposure to different environments and situations, and having social connections and interactions. Finally, the Participating dimension consisted of having a say, engaging in community, sense of belonging, a network of support and provision, and activities/leisure pursuits (ARACY, 2012).

In order to measure the wellbeing of children and young people based on the Nest framework, each dimension was operationalised by the author into four sub-domains based on the detailed description provided in the consultation document (ARACY, 2012, pp. 27-32), outlined in Table 7-1. A consistent number of four sub-domains (which go on to guide indicator selection) was chosen to ensure conciseness, while also allowing for breadth in reflecting the key areas of wellbeing raised by children and young people. As noted in the MODA guidelines, it is important to keep the number of sub-domains within each dimension consistent so as not to distort the probability of a child being more likely to meet the

[37] Having a positive sense of identity and culture was later added as a sixth dimension (ARACY, 2014); however, this dimension is not included in the analysis as it was not drawn out of the participatory process. Furthermore, recent research suggests this dimension has high overlap with the other Nest dimensions (Renshaw, 2019).

wellbeing threshold for a particular dimension simply due to that dimension having fewer sub-domains (De Neubourg et al., 2013). These sub-domains comprehensively reflect the key areas highlighted by the children and young people through the consultation process. However, one area, "the provision of basic services such as health, education, and welfare", was not able to be incorporated into the "Material Basics" dimension, given the importance of maintaining only four sub-domains in each dimension. While this is a limitation in the methodology, this area is proxied elsewhere within the indicator set, through "Attending school" within the Learning dimension and "Financial security of family" within the Material Basics dimension.

Table 7-1 Sub-domains to reflect each Nest dimension

Nest dimension	Sub-domains	Description of sub-domain in consultation report
Loved and Safe	Relationship with friends	Connections and relationships that children and young people have, as well as friendships, were frequently mentioned (p. 27).
	Relationship with parents	Immediate family relationships (parents and siblings) were identified to be the most important (p. 27).
	Safe home environment	Perceptions of safety were noted to be "underpinned by being in a stable, secure home environment with care and provision from those around you" (p. 28).
	Safe school environment	Young people in particular discussed "safety in relation to the school environment and the issue of bullying" (p. 28).
Material Basics	Financial security of family	This sub-domain was identified to broadly capture the various aspects of material basics identified, such as "food and water, housing and shelter, health, and sanitation, as well as provision of services such as health, education, and welfare" (p. 32).
	Access to basic goods (e.g. toys, clothes, computer)	Access to material goods, such as "toys, phones, and computers/access to the internet" (p. 32).
	Food security	Access to food and water (p. 32).
	Access to adequate shelter and sanitation	Access to housing and shelter (p. 32).
Healthy	Exercising regularly	Being healthy was commonly linked to exercise, which was expressed by children and young people through "participation in sports, both in and out of school", as well as leisure activities such as "skateboarding and surfing" (p. 28).
	Healthy diet	The notion of nutrition was frequently raised in relation to being healthy, with participants talking of eating well, tied closely to mentions of fresh fruit and vegetables, and eating less "fast food" or "junk food" (pp. 28–29).
	Good mental health	Mental health was raised less frequently than physical health. For some, healthiness was seen as an absence of depression, anxiety, and self-harm (p. 29).

	Good state of mind	Participants also noted a "positive, happy state-of-mind and sense of self-worth" in relation to health (p. 29).
Learning	Attending school	Access to formal education were noted as important to learn and develop (p. 29).
	Satisfied at school	Participants noted that participation in school, including enjoyment and engagement, was crucial to learning and overall wellbeing (p. 29).
	Learning at home	The opportunity for self-learning and development, as well as learning in different environments, were strongly emphasised in the consultations (p. 29).
	Participating in cultural activities	Being exposed to different environments and situations, as well as interactions with peers in the community, were seen as important learning and development opportunities (p. 30).
Participating	Having a say in family decisions	Children and young people highlighted the importance of having a say, including being both listened to and taken seriously. This was "driven primarily by a sense that their opinion is not taken seriously because they are young" (p. 30).
	Having a network of support	A "network of support and provision" was noted as being vital to community belonging and engagement. This was of particular importance for those with less support in their immediate home environment (p. 31).
	Involvement in community	Engagement in communal events and activities, and contributing toward these, were seen as important aspects of being part of a community, as well as activities and leisure pursuits (p. 31),
	Sense of belonging	Community was also described as being more internalised, through connection with others and a sense of belonging in their community (p. 31).

Note: Page numbers of relevant sections in the consultation document (ARACY, 2012) listed in brackets.

7.2.2 Using the Longitudinal Study of Australian Children (LSAC)

LSAC was identified as the most appropriate data source for this study, given that it collects in-depth information on various aspects of children's wellbeing over time. Its theoretical framework is grounded in the ecological model of child development established by Bronfenbrenner (1979). LSAC surveys two nationally representative cohorts of children, who were randomly selected in 2004. The Babies (B) cohort were aged 0–1, while the Kindergarten (K) cohort were aged 4–5 (Australian Institute of Family Studies, 2018). The most recent available wave at the time of writing was wave 7, which was conducted in 2016 when the B cohort were aged 12–13, and the K cohort were aged 16–17. The B cohort was chosen as the population of interest, to allow for analysis of the impact of experiences in the early years on later wellbeing outcomes. Waves 4–7 were used for the analysis, which corresponds to an age range of age 6–7 in 2010 to 12–13 in 2016.

Each wave of LSAC includes questions relevant to the wellbeing of the study child, which are responded to either by the child themselves, both parents (if the child has two parents), the child's teacher, and a parent living elsewhere (if applicable) (Australian Institute of Family Studies, 2018). The questions vary by wave to reflect any societal changes, as well as to account for the changing nature of wellbeing throughout the life course. As the cohorts of children get older, the number of questions that they themselves respond to increases.

The attrition rate in LSAC is relatively low. The wave 4 B cohort sample was 4,242 children with a response rate of 82% with respect to the starting sample. The sample size decreased to 4,085 in wave 5, 3,764 in wave 6, and 3,381 in wave 7 (Australian Institute of Family Studies, 2018). Both cross-sectional and longitudinal weights are available in the data, both of which were utilised in this analysis. Indicators for the study are driven predominantly through an expert advisory committee[38].

7.2.3 Indicator selection and determining indicator thresholds

By using the framework outlined in Table 7-1, indicators in waves 4, 5, 6, and 7 of the B cohort in LSAC that most closely represented each sub-domain were identified. Given the changing nature of wellbeing throughout the life course, indicators were not intentionally sought to be consistent over time. Rather, the most applicable data item at each wave, which was the closest representation to that sub-domain, was chosen. This means that some caution needs to be taken in comparing changes across time for those indicators that are not consistent. To avoid skewing of results, a sub-domain was represented through data items only if it was available in more than one wave. This resulted in the "exercising regularly" sub-domain not being measured in any wave due to a relevant data item being available only at wave 7 (days of 60min+ exercise per week).

Two principles guided the selection of indicators. Firstly, all survey questions incorporated within a sub-domain must be asked of all study children (or their parents/teachers, where applicable). Secondly, recognising the importance of hearing the voices of children, items answered by the study child were prioritised over items answered by parents or teachers. Where no appropriate child-responded data item was available, items from parents and/or

[38] https://growingupinaustralia.gov.au/about-study/research-team

teachers were used. It should be noted that around half of the indicators were responded to by children themselves, with the number of child-responded indicators growing as the waves progressed (as noted above). The relatively high proportion of indicators that are based on parent/teacher responses reflects the challenges in engaging directly with young children through surveys, with ethical guidelines ensuring that children are protected from potential harms of participation, and that young children have the ability or aptitude to answer certain questions (Powell et al., 2020). A broad literature base highlights the value and necessity of parental-proxy reports for certain questions related to young children (e.g. Butten et al., 2021; Ghysels & Van Vlasselaer, 2008; Varni et al., 2007), which explains the large proportion of proxy indicators collected in the LSAC study for children at younger waves. Finally, if no indicator was available that adequately reflected (in at least some form) the sub-domain, that sub-domain was left as missing for a given wave.

A summary of the indicators selected at each wave is shown in Table 7-2. When contrasting these indicators with the sub-domains described in Table 7-1, we can see that the vast majority of selected indicators closely reflect the conceptualisations of wellbeing reported by children and young people.

Table 7-2: Summary of indicators by wave

Nest dimension	Sub-domain	Wave 4 indicator	Wave 5 indicator	Wave 6 indicator	Wave 7 indicator
Loved and Safe	Relationship with friends	Strengths & Difficulties Questionnaire Peer Problems Scale (P1, P2, PLE, T)	Marsh Peer Relations Scale (C)	Marsh Peer Relations Scale (C)	Inventory of Peer Attachment (C)
	Relationship with parents	Fun with family at weekends (C)	Enjoyment of time with parents and seeking help (C)	Trust and Communication Scale (C)	Trust and Communication Scale (C)
	Safe home environment	Anger/hostility, violence between parents or feeling afraid of other parent (P1, P2, PLE)	Anger/hostility, violence between parents or feeling afraid of other parent (P1, P2, PLE)	Anger/hostility, violence between parents or feeling afraid of other parent (P1, P2, PLE)	Anger/hostility, violence between parents or feeling afraid of other parent (P1, P2, PLE)
	Safe school environment	Peers scale (C)	Bullying and Social Exclusion (C)	Bullying and Social Exclusion (C)	Bullying and Social Exclusion (C)
Material Basics	Financial security of family	Hardship scale (P1)	Hardship scale (P1)	Hardship scale (P1)	Hardship scale (P1)
	Access to basic goods	Computer access (P1)	Internet access (P1)	Internet access (P1)	Internet access (P1)
	Food security	-	Ate breakfast today (P1)	Ate breakfast today (C)	Ate breakfast today (C)
	Access to adequate shelter[39]	Overcrowding (P1) and condition of dwelling (I)	Experience of homelessness (P1), overcrowding (P1), and condition of dwelling (I)	Experience of homelessness (P1), overcrowding (P1), and condition of dwelling (I)	Experience of homelessness (P1), overcrowding (P1), and condition of dwelling (I)
Healthy	Exercising regularly[40]	-	-	-	-
	Healthy diet	Food diary (P1)	Food diary (P1)	Food diary (C)	Food diary (C)
	Good mental health	Social Emotional Problems Scale (C)	Social Emotional Problems Scale (C)	Strengths & Difficulties Questionnaire Emotional Problems Scale (C)	Short Mood and Feelings Scale, Spence Anxiety Scale (C)
	Good state of mind	-	Marsh General-Self Scale (C)	Marsh General-Self Scale (C)	Life Satisfaction (C)
Learning	Attending school	Number of days absent (P)	Number of days absent (P)	Number of days absent (P)	Number of days absent (P), Truanting (C)
	Satisfied at school	School Liking and Avoidance Scale (C)	School Liking and Avoidance Scale (C)	School Adjustment Scale (C)	School Adjustment Scale (C)

[39] Due to a lack of information in LSAC on sanitation, this sub-domain has been amended to "Access to adequate shelter" only.

[40] While a data item for exercising regularly (days of 60min+ exercise per week) was available at wave 7, it was not used in the analysis to circumvent skewing of results due to it only being available at one wave.

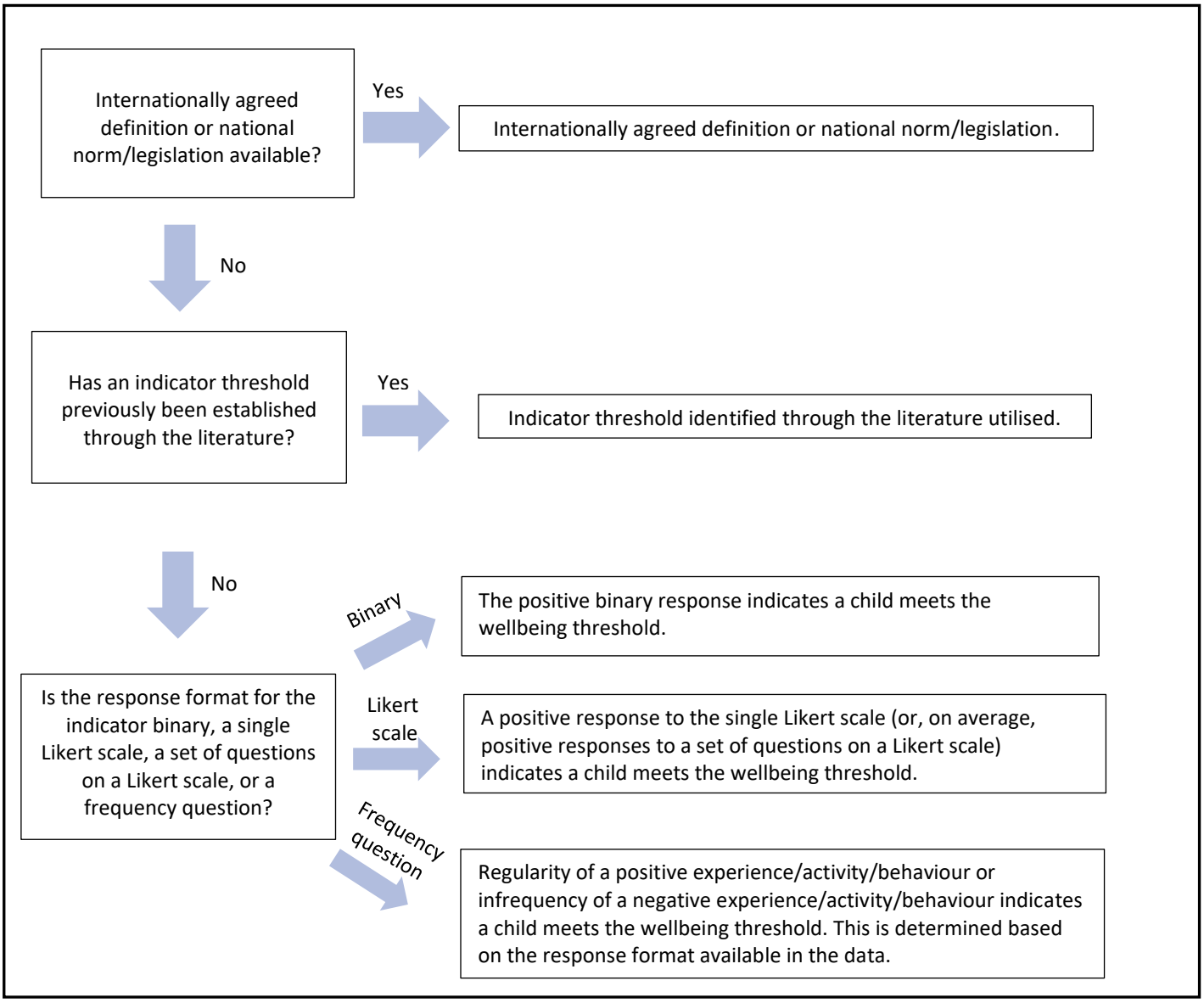
	Opportunity to learn at home	Home Activities Index (P1)	Books in home, discussion about school activities, help with homework (P1, P2, PLE)	Books in home, discussion about school activities, help with homework (P1, P2, PLE)	Parental interest in learning and education (C)
	Participating in cultural activities	Out of Home Activities Index (P1)	Out of Home Activities Index (P1)	Out of Home Activities Index (P1)	Out of Home Activities Index (P1)
Participating	Having a say in family decisions	-	-	Having a say in family decisions (C)	Having a say in family decisions (C)
	Having a network of support	Emotional, informational & tangible support (P1, P2)	Emotional, informational & tangible support (P1, P2)	Emotional, informational & tangible support (P1, P2), Child social support (C)	Emotional, informational & tangible support (P1, P2), Child social support (C)
	Involvement in community	Extracurricular activities (P1)	Extracurricular activities (P1)	Extracurricular activities (P1)	Extracurricular activities, volunteering (C)
	Sense of belonging	Neighbourhood safety (P1, P2), sense of belonging in community (P1, P2)	Neighbourhood safety (P1), sense of belonging in community (P1, P2)	Neighbourhood safety (P1, P2), sense of belonging in community (P1, P2)	Experience of discrimination (C)

Note: C = Child responded, P1 = Parent 1 responded, P2 = Parent 2 responded, PLE = Parent living elsewhere responded, T = Teacher responded, I = Interviewer responded.

In order to determine the threshold for a child achieving wellbeing according to a particular indicator, indicator thresholds were established. The MODA methodology suggests using either internationally agreed definitions, national norms or legislation, or a relative approach to identify indicator thresholds (De Neubourg et al., 2013). Figure 7-1 documents how we addressed these guidelines for item selection. Firstly, internationally agreed definitions or national norms and legislation were used where they were available. Where no such guidelines or norms were available for a given indicator, the literature was examined to identify whether an appropriate threshold had already been established.

In the absence of any of these guidelines, an indicator threshold was determined which aligned with the strengths-based approach emphasised within this study. Namely, to meet the threshold for wellbeing in a given indicator, a child should respond positively to an item (or respond positively on average to a set of items within a scale), or report engaging frequently in positive experiences/activities (or infrequently in negative experiences/activities). Figure 7-1 illustrates how indicator thresholds were established based on the available information, and the indicator's response format. Information about each indicator threshold for each sub-domain at each wave is illustrated in Appendix C1.

Figure 7-1: Flowchart for how indicator thresholds were determined



While the MODA guidelines suggest using a relative approach to measuring wellbeing where international guidelines or national norms are not available, this could result in developing indicator thresholds that are at odds with the strengths-based approach used within this study. For example, if many children have high wellbeing in a certain area, a relative approach may still claim that a proportion of these children are not meeting the wellbeing threshold. Similarly, if many children have low wellbeing in a given area, a relative approach could claim that a proportion of these children are meeting the wellbeing threshold. The pragmatic approach we applied to identifying indicator thresholds presents an important balance between robustness and making use of the data available. Furthermore, it provides a useful framework to guide the identification of indicator thresholds for future studies.

Where relevant data items were missing for a child, that respective sub-domain was coded to a missing value. This was seen as the most robust way to handle missing data, given that information on siblings is not collected (i.e. there is only one study child in each family in LSAC) which can be an approach used to overcome missing data items (De Neubourg et al., 2013). Imputation based on other data from the study child was not used to avoid inflating correlations between different indicators.

Where scales were applied, the respective indicator was coded to missing if greater than one-third of scale items were missing. Similarly, a child was completely removed from the analysis for a wave if more than one-third of sub-domains were missing. This removed 0.28%, 1.00%, 4.65%, and 5.12% of records for waves 4, 5, 6, and 7 respectively. Analysis of the bias introduced through the removal of these records indicated that there was little significant relationship between a record being removed and the study child's sex, household income, or highest qualification of the parents, as shown in Appendix C2. After removing these records, the percentage of children with missing sub-domains was generally very close to 0%, as shown in Appendix C3.

After identifying indicators and thresholds, as well as taking into account missing data, the correlations between sub-domains were compared at each wave. This analysis was conducted for illustrative purposes, to examine the relationships between the different sub-domains. As shown in Appendix C4, there were some moderate correlations (as defined by Cohen, 1988) across different sub-domains in different dimensions, which highlights the inter-relatedness

between wellbeing dimensions. While the MODA approach suggests that the correlations between sub-domains within a given dimension should be high, and that those across different dimensions should be low (and indicators should thus be adjusted accordingly), we argue that it is of greater importance to ensure sub-domains are represented by how children themselves conceptualise their wellbeing. Furthermore, the Nest framework emphasises how the different wellbeing dimensions overlap (ARACY, 2012). We should therefore expect to see some high correlations between sub-domains in different dimensions.

A subsequent correlation check, outlined in Appendix C5, presents the correlations of sub-domains at consecutive waves. Given that the methodology resulted in inconsistent data items being used to reflect the same sub-domain (due to both the changing nature of child wellbeing over time and the availability of data items), it was important to assess the degree to which these inconsistent indicators correlate over time. The analysis indicated that while consistent indicators between waves (unsurprisingly) tended to be higher, the majority of correlations calculated using inconsistent indicators were significantly greater than zero. This analysis of correlations at the indicator level provides further credibility to the selection of indicators and their comparability over time.

7.2.4 Aggregation and determining dimension thresholds

The aggregation technique used the union approach, which is encouraged by the MODA methodology. The union approach dictates that a child is automatically flagged as not meeting the threshold for wellbeing within a dimension if they are lacking wellbeing in any sub-domain within that dimension (De Neubourg et al., 2013). This approach was used given that it aligns closely with the theoretical basis for the Nest framework, which emphasises that children need to be having their needs met in all areas to be said to have high wellbeing.

7.2.5 Analysis approach

The indicator set was firstly used to produce descriptive statistics at the dimension level (with results at the sub-domain level presented in Appendix C6). This included examining the rate of children meeting the wellbeing threshold at each dimension by wave, the distribution of the number of dimensions where children meet the wellbeing threshold for each wave, a

longitudinal analysis exploring the persistence in meeting wellbeing thresholds over time, and a correlational analysis to assess the overlap in different dimensions.

The value of the approach was then further assessed by conducting a longitudinal analysis exploring the long-term wellbeing implications of being born into monetary poverty. This firstly involved developing a poverty flag for children when they were aged 0–1 based on wave 1 data, collected in 2004. A poverty line of $304.29 for families where at least one parent was in the workforce and $246.74 for families where no parent was in the workforce (based on a single person living alone) was applied based on the poverty lines reported by the Melbourne Institute of Applied Economic and Social Research (2004). Equivalence scales were applied using the modified OECD equivalence scale, which assigns a value of 1.0 to the first adult, 0.5 to each subsequent adult, and 0.3 to each dependent child (Australian Bureau of Statistics, 2006). When applying weights in LSAC, this resulted in a monetary poverty rate of 13.89% of children aged 0–1, which is roughly comparable to the 15% child poverty rate (for those aged 0–15) for the same period as reported by Davidson et al. (2018) when using data from the Australian Bureau of Statistics Survey of Income and Housing. While the poverty rate tends to be higher for families with children in their early years (Cassells et al., 2020), this lower rate may be influenced by greater non-response from those in more disadvantaged households (Soloff et al., 2006), which may not have been fully captured in the weighting strategy.

Several logit models were used to examine the implications of being born into poverty on all wellbeing dimensions at waves 4, 5, 6, and 7. Each dimension at each wave was used as a dependent variable, with poverty status at birth used as the independent variable. Additional models were also developed using current equivalised household income as a control variable.

7.3 Results

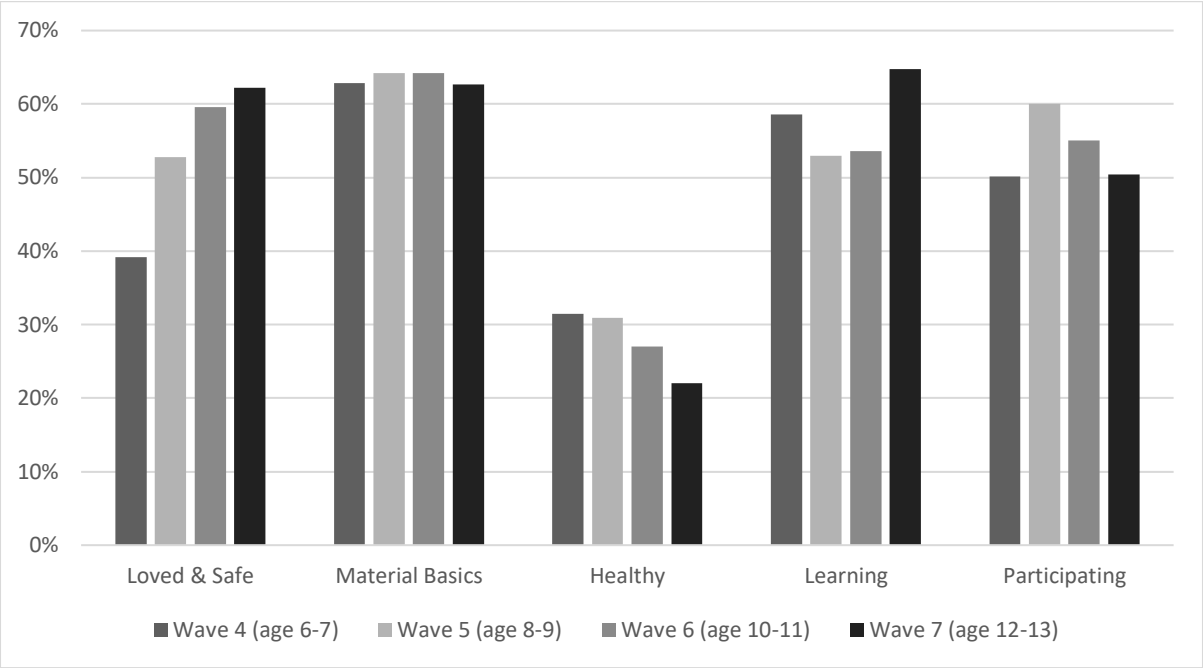
This section will firstly outline the descriptive statistics from the indicator set before going on to highlight the value of the value of this approach by analysing the long-term wellbeing associations of being born into monetary poverty.

7.3.1 Descriptive statistics

The rate of children and young people achieving the threshold for wellbeing in each dimension at each wave is illustrated in Figure 7-2. As outlined in the methodology section, sub-domains were aggregated into dimensions by applying the union approach, which specifies that a child does not meet the threshold for wellbeing in a dimension if they do not meet the threshold for *any* sub-domain within a given dimension. Of all dimensions, Healthy had the lowest proportion of children meeting the wellbeing threshold, with only around 20%–30% of children meeting the wellbeing threshold at each wave. This was predominantly driven by poor diet at each wave (see Appendix C6 for sub-domain breakdowns).

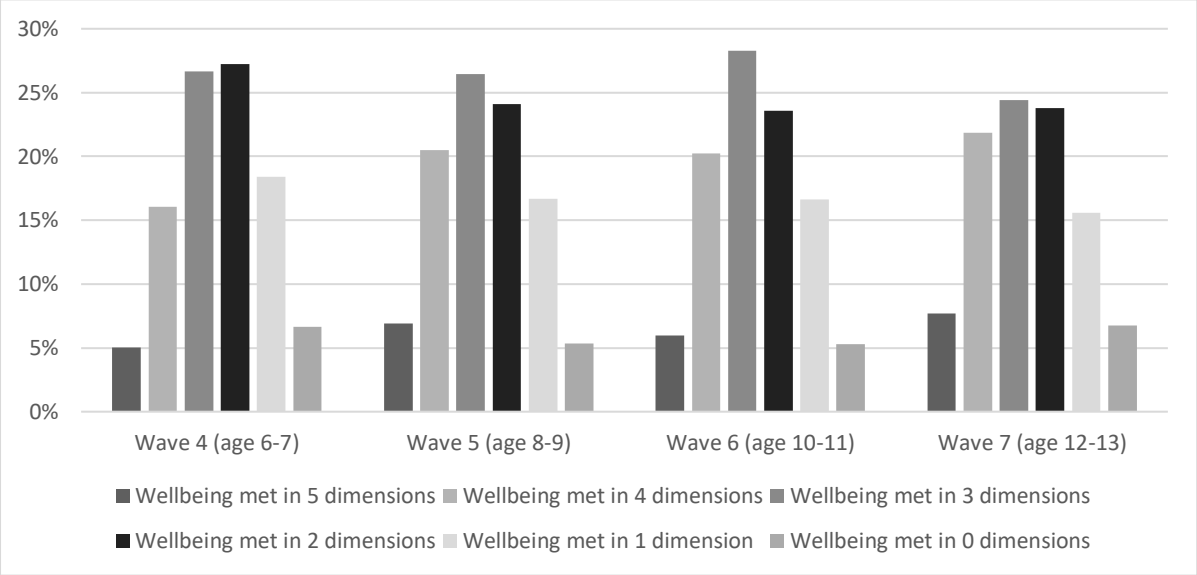
The findings also illustrate that for some dimensions, such as Material Basics, Learning, and Participating, there was less variation in the percentage of children meeting the wellbeing threshold over time. On the other hand, the percentage of children meeting the threshold for wellbeing in Loved and Safe improved over time, predominantly driven by improvements in children being safe at school (see Appendix C6). It should be noted that the substantial increase from age 6–7 to age 8–9 for this dimension may be driven by inconsistent indicators being used to reflect the safe at school sub-domain. The decline in the percentage of children meeting the threshold for Healthy at ages 10–11 and 12–13 is a result of poorer levels of mental health and having a “good state of mind” in these waves (keeping in mind that these sub-domains used inconsistent indicators). The decline in wellbeing for the Participating dimension from ages 8–9 to 12–13 may have been influenced by the inclusion of the “having a say” indicator at age 10–11 and by a worsening sense of belonging between waves 6 and 7 (which may have been impacted by use of inconsistent indicators).

Figure 7-2: Percentage of children meeting wellbeing threshold in each dimension, by wave (unbalanced panel)



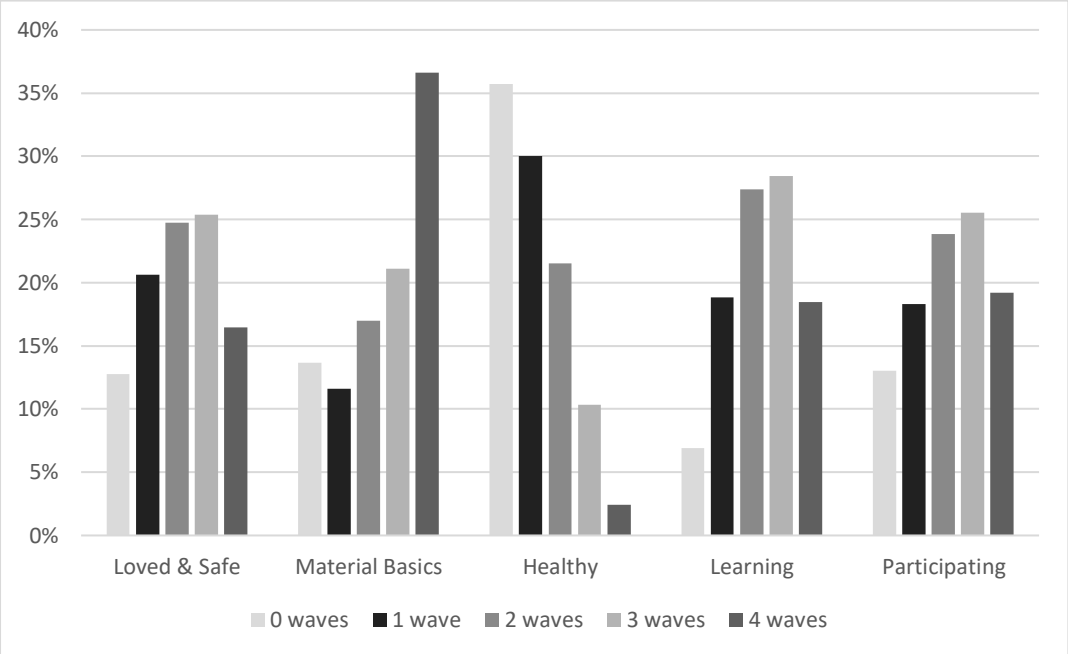
In examining the achievement of wellbeing in multiple dimensions at each of the four waves, Figure 7-3 shows that each wave follows a relatively normal distribution, with the distribution peaking at meeting the wellbeing threshold in two or three dimensions.

Figure 7-3: Distribution of number of dimensions where children meet wellbeing threshold (%) (unbalanced panel)



Longitudinally, we can also determine the persistence of not having wellbeing needs met in the same dimension over time, as shown in Figure 7-4. The results indicate that the dimensions of Loved and Safe, Learning, and Participating follow similar distributions, with the rate of children not meeting the threshold for wellbeing in any wave being particularly low for Learning, at 6.9%. A relatively large proportion of children (36.6%) have their wellbeing needs met at all waves in the Material Basics dimension, however a sizeable minority (13.7%) are not meeting the threshold for wellbeing at any wave on this dimension. This indicates a relatively higher degree of inequality over time within the Material Basics dimension compared to the other dimensions. Finally, the distribution for the Healthy dimension shows a concerning positive skew, with only 2.4% of children meeting the threshold for wellbeing at all waves, and 35.7% not meeting the threshold for wellbeing at *any* wave. This is predominantly driven by poor diet at all waves.

Figure 7-4: Percentage of children meeting wellbeing threshold in given number of waves, by dimension (balanced panel)



Finally, a correlation analysis can provide some interesting insights into the way the different dimensions overlap. Table 7-3 shows significant weak positive correlations between all dimensions at all waves. While there is a high level of interconnection between the different dimensions, all of these correlations are considered to be small (Cohen, 1988).

Table 7-3 Correlation matrix for Nest dimensions by wave

	Loved and Safe	Material Basics	Healthy	Learning
Material Basics				
Age 6–7	0.09***			
Age 8–9	0.10***			
Age 10–11	0.11***			
Age 12–13	0.11***			
Healthy				
Age 6–7	0.09***	0.08***		
Age 8–9	0.10***	0.12***		
Age 10–11	0.12***	0.11***		
Age 12–13	0.16***	0.11***		
Learning				
Age 6–7	0.12***	0.08***	0.11***	
Age 8–9	0.13***	0.13***	0.10***	
Age 10–11	0.07***	0.11***	0.09***	
Age 12–13	0.15***	0.15***	0.16***	
Participating				
Age 6–7	0.09***	0.12***	0.07***	0.03**
Age 8–9	0.11***	0.14***	0.06***	0.11***
Age 10–11	0.14***	0.14***	0.07***	0.09***
Age 12–13	0.23***	0.17***	0.14***	0.17***

***Significant at the 1% level, **significant at the 5% level, *significant at the 10% level.

While these descriptive statistics bring to light some important findings, such as the large proportion of children not having their wellbeing needs met in the Healthy dimension and the relatively higher level of inequality within the Material Basics dimension, the real value of this approach lies in being able to examine the long-term impacts of early life experiences. This will be explored in the following section.

7.3.2 Exploring the long-term wellbeing impacts of being born into monetary poverty

To provide an exemplar of how this approach can be applied to gain deeper insights into the wellbeing outcomes of children and young people, the indicator set was used to better understand the long-term wellbeing associations of being born into poverty. This particular analysis was chosen given that child poverty is well known to have long-term detrimental impacts on a range of outcomes (e.g. Lesner, 2018; Warren, 2017; Wickham et al., 2016). This analysis thus contributes to this body of evidence through better understanding the long-term impacts of being born into poverty on the outcomes that matter to children and young people themselves.

A range of logit models were produced to examine these impacts, with each dimension used as dependent variables, and poverty status at birth used as an independent variable. Current equivalised household income was used as a control variable. Table 7-4 shows that after controlling for current income, being born into poverty had a significant negative association with almost all wellbeing dimensions up to 8–9 years of age. The exceptions were the Healthy dimension at 6–7 years, and Loved and Safe and Learning at 8–9 years. However, some of these associations diminish over time, with only the dimensions of Material Basics and Participating showing significant associations (at the 5% and 10% level respectively) when children reach the ages of 10–11 and 12–13 (after controlling for current income). The results of the modelling by sub-domain are presented in Appendix C7, showing that these findings are driven by poorer outcomes through the adequate shelter and sense of belonging sub-domains at age 11–12, and the food security, adequate shelter, and involvement in community sub-domains at age 12–13. Overall, these results indicate that, even when controlling for current household income, being born into poverty has long-term associations with poorer outcomes on almost all wellbeing dimensions. While some of these associations diminish over time, young people born into poverty were less likely to achieve their wellbeing needs in the dimensions of Material Basics and Participating at all time points from the ages of 6 to 13. Further research would need to examine whether these associations continue throughout adolescence and young adulthood.

Table 7-4 Odds ratios for logit models exploring long-term wellbeing impacts of being born into monetary poverty

Dimensions	Wave 4 (age 6–7) odds ratio		Wave 5 (age 8–9) odds ratio		Wave 6 (age 10–11) odds ratio		Wave 7 (age 12–13) odds ratio	
	No controls	Controlling for current income	No controls	Controlling for current income	No controls	Controlling for current income	No controls	Controlling for current income
Loved and safe models								
Loved and safe	0.73***	0.75**	0.80**	0.92	1.11	1.19	0.93	1.01
Income		1.00*		1.00***		1.00***		1.00***
Material Basics models								
Material Basics	0.49***	0.77**	0.42***	0.69***	0.49***	0.73**	0.54***	0.70**
Income		1.00***		1.00***		1.00***		1.00***
Healthy models								
Healthy	0.78**	0.94	0.67***	0.74**	0.74**	0.83	0.66**	0.77
Income		1.00***		1.00***		1.00***		1.00***
Learning models								
Learning	0.76**	0.77**	0.76***	0.93	0.71***	0.90	0.76*	0.82
Income		1.00**		1.00***		1.00***		1.00***
Participating models								
Participating	0.63***	0.65***	0.62***	0.70***	0.66***	0.78*	0.58***	0.76*
Income		1.00***		1.00***		1.00***		1.00***

***Significant at the 1% level, **significant at the 5% level, *significant at the 10% level.
Note: Each logit model uses dimension as the dependent variable and a flag indicating poverty status at birth as the independent variable. Household equivalised income is used as a control variable.

7.4 Discussion

To the best of the authors' knowledge, this study is the first attempt to draw on an existing participatory wellbeing framework to measure child wellbeing over time using existing data. Doing so has firstly provided a deeper insight into the extent to which children and young people in Australia are having their wellbeing needs (as defined by them) met. Secondly, the measurement framework has allowed for an examination of early life experiences on later wellbeing outcomes. In this chapter, we explored the long-term implications of being born into monetary poverty. This section will emphasise the value of this analysis, before outlining some key limitations and challenges of the process.

7.4.1 Benefits and value of study for research and policy

The results have highlighted three key benefits to applying an existing participatory wellbeing framework to the analysis and reporting of child wellbeing over time. Firstly, by definition, a participatory wellbeing framework will provide a multidimensional lens through which wellbeing can be examined from various dimensions. Doing this ensures that a more holistic

representation of child wellbeing is examined, enabling policy measures to target key areas of concern more easily. For example, the findings highlighted that the majority of children are not having their needs met in the Healthy dimension, with poor diet prevalent amongst the sample. Furthermore, while the sub-domain of "regular exercise" could not be incorporated into the indicator set, existing research indicates that only around 23% of children aged 5–14 are undertaking the recommended 60 minutes of physical activity every day (Australian Institute of Health and Welfare, 2020). Thus, if this data item were available, the rates of having wellbeing needs met in this dimension would likely be even lower. These findings align with previous research on multidimensional child wellbeing in Australia. For example, Mishra et al. (2017) found that health and emotional wellbeing were key dimensions of concern for children and young people in Australia.

Examining wellbeing multidimensionally also allowed us to analyse the degree to which children and young people are having their needs met in multiple dimensions. The results showed that, at most, only 7.7% of children and young people had their wellbeing needs met in all dimensions. Furthermore, the longitudinal analysis allowed us to examine the persistence of not having wellbeing needs met in the same dimension over time. Our analysis highlighted that while a relatively large proportion (36.6%) of children had their wellbeing needs met in Material Basics at all waves, a sizeable minority (13.7%) did not meet the wellbeing threshold for this dimension at any wave, indicating a degree of inequality within this dimension. These results again highlighted concerns for children and young people having their wellbeing needs met in the Healthy dimension, with only 2.4% of children and young people meeting the wellbeing threshold for Healthy over all waves.

Secondly, an indicator set based on a participatory wellbeing framework allowed us to examine the associations between early life experiences and later wellbeing outcomes based on what matters to children and young people in Australia. Our results highlighted that when controlling for current income, being born into poverty was significantly negatively associated with almost all wellbeing dimensions from 6–9 years of age. However, some of these negative associations of being born into poverty diminish over time, indicating that a family coming out of poverty can counteract some of the impacts of disadvantage in the early years. It also illustrates there are likely longer-lasting implications for some dimensions of wellbeing, with

children and young people born into poverty being significantly less likely to have their wellbeing needs met in the Material Basics and Participating dimensions at all time points. These findings are consistent with the findings of other studies (that have not used participatory frameworks) of the deleterious impacts of poverty on various aspects of wellbeing (Chaudry & Wimer, 2016; Lesner, 2018; Warren, 2017). By using a participatory wellbeing framework, our findings have highlighted the long-term implications of child poverty for later participation in society, an aspect of wellbeing raised as important for children. Data from the OECD (2019) shows that while Australia's child poverty rate was slightly below the OECD average, there was still a sizeable 13% of children and young people aged 0–17 in poverty in 2016. While poverty's capacity to rob children of the opportunity of being able to participate fully in society has been well documented in qualitative and cross-sectional studies (e.g. Skattebol & Redmond, 2018), our study is the first to document the long-term implications for this dimension of wellbeing.

Finally, by applying a participatory wellbeing framework we can have greater confidence that we are measuring aspects of wellbeing that matter to children. The dimensions, sub-domains, and indicators used within this indicator set capture a nuanced collection of wellbeing areas that are tailored to the experiences of children and young people in Australia, determined through consultation with a large number of children and young people (ARACY, 2012). Utilising a different approach for indicator selection would have resulted in a set of indicators that were less meaningful for children and young people, thereby diverting the attention of policymakers to areas of wellbeing that are less relevant to this group. Previous research contrasting participatory wellbeing frameworks to global frameworks has highlighted that generic, global frameworks often miss elements of wellbeing important to the group, and also miss nuances in how wellbeing is conceptualised (Greco et al., 2015; Kinghorn et al., 2015; Scott, 2012). Therefore, applying a participatory wellbeing framework thus ensures that any policy changes made to address issues identified in this chapter are going to have a measurable and meaningful impact for children and young people in Australia.

7.4.2 Challenges and limitations

While this study has highlighted the great value of applying a participatory wellbeing framework to develop a longitudinal wellbeing indicator set for children in Australia based on

existing data, there were a number of challenges in doing so. Highlighting such challenges, and emphasising how they were dealt with in this study, can help researchers, practitioners, and policymakers better understand these limitations and adopt strategies to overcome them.

Firstly, while a participatory lens was used to select indicators and to measure child wellbeing, the study was not truly participatory, as children and young people were not included as research partners in the study to help identify relevant indicators. This study pioneers an alternative approach for circumstances in which the required funding and resourcing is not available to undertake a participatory study, or where it is not practical or feasible to do so. Given the reported benefits of participatory approaches outlined in Chapter 2, the utilisation of participatory approaches within such a study could be highly beneficial to participants, if an appropriate participatory approach were used. However, the approach outlined in this chapter provides an illustration of how an existing data source can be used to measure closely what matters to the population of interest in cases where resources do not allow for higher levels of participation.

Secondly, the framework used to select indicators, as shown in Table 7-1, is a simplification of the sub-domains within each dimension that were raised by children through consultations (ARACY, 2012). To ensure consistency between dimensions, and to avoid an overwhelming number of indicators, each dimension was limited to four sub-domains, which did over-simplify some of the areas raised by children and young people. This highlights that when developing a measurement tool some level of pragmatism is required, ensuring a balance between adequately reflecting the conceptualisations of wellbeing for a population, while ensuring the robustness and useability of the measurement tool. Furthermore, it should be noted that as this framework was developed in 2012, the conceptualisations of wellbeing articulated through these consultations may be different to how wellbeing was truly conceptualised during the years of survey enumeration. Given the amount of time that can elapse between data collection and publication for both participatory wellbeing frameworks and nationally representative data sources, this is a common challenge in applying participatory wellbeing frameworks using existing data.

Thirdly, while the majority of sub-domains were able to be represented through indicators in LSAC, there were some gaps for the sub-domains of “food security” and “good state of mind” at wave 4, “having a say in the family” at waves 4–5, and “exercising regularly” at all waves (while this was available at wave 7, it was not included in the analysis to avoid skewing of results). At a conceptual level, this means that we are not fully conveying all aspects of what matters to children and young people through the measurement tool. At a technical level, this also means that children may be more likely to be meeting the wellbeing threshold in dimensions where not all four sub-domains were available. This should be considered when analysing the results by dimension.

Fourthly, item non-response resulted in some children being excluded from the analysis, which may result in bias if some population groups are more likely to not respond to particular data items (as outlined in Appendix C2, there was no bias found by family socioeconomic characteristics; however, there may be other unobservable characteristics associated with non-response which could result in bias). This is a universal challenge, not unique to the application of participatory wellbeing frameworks. The use of longitudinal weights has helped to reduce the bias introduced by attrition.

Finally, there was variation in the relevance of an indicator to the sub-domain it was intending to reflect. While some indicators closely represent a sub-domain, others may only partially reflect a sub-domain if a better indicator was not available. This is a challenge unique to the application of participatory wellbeing frameworks using existing data. While there is huge value (resource-wise) in using existing data, a drawback is that the researcher loses some control regarding how the participatory wellbeing framework is operationalised. When conducting analysis using such approaches, care should be taken to ensure that the indicators are well-understood. Furthermore, the longitudinal nature of this study did mean that indicators varied by wave to reflect the changing nature of wellbeing, as well as a change in the available data. Thus, consideration of whether an indicator has been consistently used over time is important when analysing the results of this study.

7.5 Conclusion

Participatory wellbeing frameworks are a valuable resource that can help to guide the measurement of wellbeing throughout the world. This study has applied a wellbeing framework developed in consultation with children and young people in Australia to guide indicator selection for an existing, nationally representative longitudinal dataset to measure child wellbeing over time. Not only does this ensure that the indicators are appropriate and valid for the target population, but it also ensures that wellbeing is measured in a holistic, multidimensional, and age-appropriate way.

This chapter has provided an initial insight into the extent to which children and young people in Australia are living a good life, as defined by them. The analysis highlighted some key areas of concern, such as the relatively low proportion of children and young people having their wellbeing needs met in the Healthy dimension, and the degree of inequality in relation to meeting the threshold for wellbeing in the Material Basics dimension over time. Perhaps more importantly, the approach provides a valuable means to examine the later impacts of early life experiences. This was demonstrated by examining the later wellbeing associations of being born into monetary poverty, finding a significant relationship in almost all dimensions in the shorter term, with some of these associations dissipating over time.

The analysis also provided the opportunity to highlight some challenges and limitations in applying a child participatory wellbeing framework to an existing, nationally representative data source. These relate to the absence of participation of the population of interest (however, greater levels of participation could be incorporated given available resources), ensuring the selected indicators adequately reflect the wellbeing framework, and missing indicators. Despite these challenges, this case study still provides valuable analysis that can help support research and policy.

In sum, this chapter provides the first illustration of how a child participatory wellbeing framework can be applied to an existing longitudinal dataset to measure wellbeing over time. Participatory wellbeing frameworks are an under-utilised resource. They have been developed in a number of countries where longitudinal studies of children exist, including Ireland, where a wellbeing framework developed by Gabhainn and Sixsmith (2005) could be

applied to the Growing up in Ireland study, and the United Kingdom, where a framework developed by The Children's Society (2006) could be applied to the Millennium Cohort Study (Connelly & Platt, 2014). Thus, the approach taken in this chapter can be used as an exemplar to guide the analysis of wellbeing over time within other contexts, helping to ensure that wellbeing is measured in a holistic, relevant, and meaningful way for children, and for other population groups, throughout the world.

Chapter 8 Case study 2: Applying a measurement tool to analyse migrant status and the wellbeing gap in Papua, Indonesia[41]

8.1 Introduction and background

This chapter outlines the findings of a second case study which utilised a measurement tool that drew on a participatory wellbeing framework developed with individuals in Indonesia (Maulana et al., 2019; Maulana et al., 2018) to assess the migrant status and the wellbeing gap in Papua, Indonesia. While the previous chapter predominantly focused on the process of developing a measurement tool using existing data, case study 2 focuses on how such measurement tools can be used for analysis through the collection of primary data. This section will outline the value of conducting this analysis for research and policy purposes, and provide some detail on the Papuan context, before outlining the structure of the chapter.

High levels of migration can result in substantial social, cultural, and economic impacts to the receiving communities. Such impacts can be both positive and negative, and largely depend on the contexts of both the sending and receiving areas. Benefits for the receiving area can include increases in labour supply resulting in economic growth, while negative effects can consist of job loss for the local population, heavier burdens on public services, and increased social tensions (Klugman, 2009; Ratha et al., 2011). Unsurprisingly, the effects of migration tend to be different for the migrant, compared to the local, population (Hendriks, 2021). One way to assess variation in the experiences of non-migrants and migrants is to evaluate and contrast their levels of health and wellbeing. A range of studies have previously explored this in various contexts, using measures of mortality, physical health, mental health, economic wellbeing, and subjective wellbeing (Feranil, 2006; Landale et al., 2000; Newbold & Danforth, 2003). However, an important gap exists in contrasting the wellbeing of internal migrants and the local population in a high-conflict, ethnically diverse region.

A systematic review of studies examining the native-immigrant wellbeing gap has found that immigrants tend to have poorer levels of subjective wellbeing or happiness than the native

[41] This chapter was co-authored with Budy Resosudarmo, Firman Witoelar, Riswandi Riswandi, and Julius A. Mollet.

population (Hendriks, 2015). In explaining the smaller proportion of studies that did show the immigrant population attaining native-level wellbeing, the authors suggest that this may be influenced by a pre-migration wellbeing gap, low sample sizes, or a true acculturation in wellbeing. The "happy migrant hypothesis", whereby those who choose to migrate have characteristics which predispose them to having better health and greater wellbeing, is also commonly referred to in the literature to explain higher wellbeing amongst migrants (Kennedy et al., 2015; Lu, 2008; Palloni & Morenoff, 2001). Existing studies have predominantly focused on international migration in the European context (e.g. Bárcena-Martín & Pérez-Moreno, 2017; Hadjar & Backes, 2013; Sand & Gruber, 2018). The few studies examining internal migration have found similar effects to those most often reported in the international migration literature, with internal migrants generally reporting lower levels of happiness than the native population, attributed to poor social capital, lower self-esteem, stress, and lower engagement in activities (Ek et al., 2008; Hendriks et al., 2016). The vast majority of studies on both internal and international migration have focused on European and other Western countries, highlighting a gap regarding internal migration within lower-income countries.

This chapter fills this gap by using a culturally adapted wellbeing measurement tool to examine the wellbeing gap between migrants and non-migrants in the province of Papua, Indonesia. In doing so we make three important contributions to the literature. From a research and policy perspective, this case study provides a deeper insight into the wellbeing gap between migrant and local population groups in a high-conflict, ethnically diverse region. It also contributes to the existing evidence base regarding wellbeing and migration in Indonesia. Finally, by using a culturally adapted wellbeing measurement tool, we contribute to the wellbeing literature more generally by highlighting the value, challenges, and limitations in using a context-specific tool rather than global wellbeing measurement tools.

Papua, a province in Indonesia, provides an interesting context to examine the wellbeing gap between internal migrants and the native population, as it is an ethnically diverse, high-conflict area with a strong independence movement. Papua has had a complicated history regarding independence and conflict. Papua was under largely Dutch colonial rule from the mid 1800s to the 1940s, until the region was transferred to Indonesia in 1963 with a promise

of a plebiscite for independence (McGibbon, 2006). The plebiscite, which was widely seen as questionable and suspect, led to Indonesia retaining rule of the region. Perceiving this as a continuation of colonial rule, Papua has since had a strong independence movement through *Organisasi Papua Merdeka* (the Free Papua movement), with high levels of conflict seen in the region (Gault-Williams, 1987; McGibbon, 2006; Resosudarmo et al., 2009). Papua also has a high level of ethnic diversity, with at least 261 ethnic groups living in both West Papua and Papua (Ananta et al., 2016; Resosudarmo et al., 2009). Those living in Papua experience relatively high levels of poverty compared to elsewhere in Indonesia, and are generally reported to have the lowest levels of wellbeing amongst all Indonesian provinces when using global measurement tools (Badan Pusat Statistik, 2021; Sujarwoto, 2021).

This chapter also provides an important input to the literature base on migration in Indonesia. Indonesia is an interesting context to examine due to its long-running internal migration policy, *Transmigrasi*. The policy has a long history, commencing well before Indonesian independence from the Dutch (e.g. Fearnside, 1997). While it has existed in various different forms, transmigration is today still a key component of Indonesia's economic policy (Human Rights Watch, 2021). A core aim of *Transmigrasi* is to reduce population density on the island of Java and create a unified "Indonesian" identity by incentivising migration to the outer islands of Indonesia, including Papua (Fearnside, 1997). While numerous papers have previously discussed the social and environmental impacts of the *Transmigrasi* scheme in Indonesia (e.g. Fearnside, 1997; Hardjono, 1986, 1988; Potter, 2012), there are very few studies exploring the association between migrant status and wellbeing outcomes. In an analysis of social exclusion and wellbeing, Seda et al. (2018) contrasted the outcomes of the native and migrant population in West Papua using a subjective wellbeing index comprising the dimensions of education, economic wellbeing, and health. Seda found that Indigenous Papuans had a higher overall wellbeing score than both the migrant Papuan and non-Papuan population groups and scored higher than the non-Papuan group on all dimensions. Lu (2008; 2010a; 2010b) has explored the impacts of internal migration in certain regions of Indonesia (Papua being excluded), finding that the process of migration resulted in increased risk of psychological disorder and reduced levels of social support in the receiving community.

Finally, this study contributes to the literature on the use of context-specific measurement tools, regarding both the broader literature base and in relation to migration studies specifically. As shown in Chapter 6, while a relatively large number of participatory wellbeing frameworks have been used to develop measurement tools, there are very few examples of these being applied (e.g. Mitchell et al., 2015). Furthermore, while measurement tools to assess the wellbeing of Papuans, and Indonesians more generally, have been applied extensively (Badan Pusat Statistik, 2021; Sujarwoto, 2021), these are generally Western-developed tools which have not been adapted to suit the cultural context. Within the field of migration, while some migration studies have used multidimensional wellbeing measures to explore migration and wellbeing (e.g. Kuschminder et al., 2018), to the authors' best knowledge, this study represents the first example of a culturally adapted wellbeing measurement tool, developed in consultation with the community, being applied in migration analysis. The adoption of this approach provides more confidence that we are truly measuring what matters to participants in the study.

This chapter will firstly outline the methodology and data for the study before presenting the results. The limitations of the study are then described, followed by a more detailed discussion of the results and their implications. The chapter will then conclude with some final remarks.

8.2 Methodology

8.2.1 Data

This study uses primary data from a household survey undertaken in Jayapura, Papua (in the sub-districts of Abepura and Hedam) in January 2020. The key purpose of the survey was to better understand the long-term health, educational, and wellbeing impacts of contracting malaria as a child. However, given the detailed information in the survey regarding respondents' migration history, the relatively high proportion of individuals who were migrants, and the inclusion of a wellbeing scale tailored to the Indonesian context, the data from this survey can also be used to explore the relationship between migration status and wellbeing. While this same survey was also undertaken in Ambon, Maluku, this sample was

excluded from the analysis as there were only 20 individuals in Ambon who were not born on the island.

A stratified spatial random sampling technique was used to select households into the survey. This involved randomly selecting 18 geospatial units of inhabited land in both the Abepura and Hedam sub-districts in Jayapura. From each of these 18 geospatial units, a point was randomly selected from which 10 households within a radius of 200 metres from the point were randomly selected for the survey. All individuals aged 15–60 years in these households were invited to take part in the survey. Overall, 313 households were randomly selected, with 12 declining to participate. Following this, three households were removed from the analysis as there were no respondents in the target age range (15–60). This left 298 households to be used for analysis, with a total of 694 respondents agreeing to complete the survey.

To determine the migrant status of individuals, four categories were identified: Non-migrant, Migrant from Papua, Migrant from West Papua, and Migrant from another Indonesian province. A non-migrant was defined as someone who was born in Jayapura, and a migrant from Papua was defined as someone who was born in Papua but not in Jayapura. The sample characteristics of individuals with each of these migrant statuses are highlighted in Table 8-1.

Table 8-1 Sample characteristics

	Full sample		Non-migrant		Migrant from Papua		Migrant from West Papua		Migrant from other Indonesian province	
	N (%) or Mean	Std. error	N (%) or Mean	Std. error	N (%) or Mean	Std. error	N (%) or Mean	Std. error	N (%) or Mean	Std. error
	694 (100%)		398 (57.3%)	1.89%	101 (14.6%)	0.13%	14 (2.0%)	0.53%	181 (26.1%)	1.7%
Gender										
Male	314 (45.2%)	1.9%	187 (59.6%)	2.8%	40 (12.7%)	1.9%	5 (1.6%)	0.7%	82 (26.1%)	2.5%
Female	380 (54.8%)	1.9%	211 (55.5%)	2.6%	61 (16.1%)	1.9%	9 (2.4%)	0.8%	99 (26.1%)	2.3%
Religion										
Islam	220 (31.7%)	1.8%	108 (49.1%)	3.4%	6 (2.7%)	1.1%	2 (0.9%)	0.6%	104 (47.3%)	3.4%
Christian	411 (59.2%)	1.9%	256 (62.3%)	2.4%	91 (22.1%)	2.1%	12 (2.9%)	0.8%	52 (12.7%)	1.6%
Catholic	63 (9.1%)	1.1%	34 (54.0%)	6.3%	4 (6.4%)	3.1%	0 (0.0%)	0.0%	25 (39.7%)	6.2%
Village										
Hedam	322 (46.4%)	1.9%	182 (56.5%)	2.8%	69 (21.4%)	2.3%	8 (2.5%)	0.9%	63 (19.6%)	2.2%
Kota Baru	372 (53.6%)	1.9%	216 (58.1%)	2.6%	32 (8.6%)	1.5%	6 (1.6%)	0.7%	118 (31.8%)	2.4%
Married	472 (68.0%)	1.8%	216 (45.8%)	2.3%	80 (17.0%)	1.7%	11 (2.3%)	0.7%	165 (35.0%)	2.2%
Age	36.2	0.47	32.1	0.61	39.4	1.15	45.4	1.91	42.8	0.75
Body Mass Index (BMI)	24.4	0.14	23.9	0.17	25.1	0.43	25.8	1.10	25.0	0.27
Highest level of education										
Primary school (*Sekolah dasar)*	53 (7.6%)	1.0%	23 (43.4%)	6.9%	7 (13.2%)	4.7%	2 (3.8%)	2.6%	21 (39.6%)	6.8%
Junior High School (*SMP)*	97 (14.0%)	1.3%	52 (53.6%)	5.1%	15 (15.5%)	3.7%	0 (0.0%)	0.0%	30 (30.9%)	4.7%
Senior High School (*SMA)*	318 (45.9%)	1.9%	180 (56.6%)	2.8%	41 (12.9%)	1.9%	8 (2.5%)	0.9%	89 (28.0%)	2.5%
Diploma (*Akademi D)*	50 (7.2%)	1.0%	39 (78.0%)	5.9%	2 (4.0%)	2.8%	0 (0.0%)	0.0%	9 (18.0%)	5.5%
University	175 (25.3%)	1.7%	104 (59.4%)	3.7%	35 (20.0%)	3.0%	4 (2.3%)	1.1%	32 (18.3%)	2.9%
Monthly salary (IDR)										
No salary	377 (54.5%)	1.9%	241 (63.9%)	2.5%	52 (13.8%)	1.8%	9 (2.4%)	7.9%	75 (19.9%)	2.1%
Less than 500.000	50 (7.2%)	1.0%	25 (50.0%)	7.1%	7 (14.0%)	5.0%	0 (0.0%)	0.0%	18 (36.0%)	6.9%
500.000 – 999.999	34 (4.9%)	0.8%	16 (47.1%)	8.7%	5 (14.7%)	6.2%	2 (5.9%)	4.1%	11 (32.4%)	8.1%
1.000.000 – 2.499.999	54 (7.8%)	1.0%	28 (51.9%)	6.9%	9 (16.7%)	5.1%	1 (1.9%)	1.9%	16 (29.6%)	6.3%
2.500.000 – 3.999.999	82 (11.9%)	1.2%	43 (52.4%)	5.5%	10 (12.2%)	3.6%	1 (1.2%)	1.2%	28 (34.2%)	5.3%
4.000.000 – 5.499.999	61 (8.8%)	1.1%	29 (47.5%)	6.4%	9 (14.8%)	4.6%	1 (1.6%)	1.6%	22 (36.1%)	6.2%
5.500.000 or more	34 (4.9%)	0.8%	16 (47.1%)	8.7%	8 (23.5%)	7.4%	0 (0.0%)	0.0%	10 (29.4%)	7.9%
Number of bedrooms	2.5	0.04	2.7	0.06	2.5	0.10	2.5	0.29	2.3	0.07
Land ownership										
Owns land	434 (62.5%)	1.8%	271 (62.4%)	2.3%	64 (14.8%)	1.7%	7 (1.6%)	0.6%	92 (21.2%)	2.0%
Doesn’t own land	260 (37.5%)	1.8%	127 (48.9%)	3.1%	37 (14.2%)	2.2%	7 (2.7%)	1.0%	89 (34.2%)	2.9%

The survey consisted of a household questionnaire, which was responded to by the household head on behalf of the household, as well as individual questionnaires for all household members aged 15–60. The household questionnaire included a household roster detailing sex, age, marital status, religion, and educational level of each household member, housing conditions, household expenditure, household assets, food security, trust and social capital, and history of malaria in the household. The individual questionnaires included questions on migration history, malaria history, childhood conditions, physical health, education history, employment history, subjective wellbeing (the Indonesian Wellbeing Scale), life satisfaction, happiness, mental health, and a cognition test. The subjective wellbeing, life satisfaction, and happiness questions were spaced apart in the survey to prevent context effects influencing the way individuals responded. Furthermore, the ordering of the four dimensions of the Indonesian Wellbeing Scale (discussed further below) was randomised to measure and control for any context effects created through priming from previous questions.

8.2.2 Measuring wellbeing: The Indonesian Wellbeing Scale, life satisfaction, and happiness

The primary outcome measure used in this study is the Indonesian Wellbeing Scale (IWS), developed and validated by Maulana et al. (2019). The scale is comprised of four dimensions specific to the Indonesian context: spirituality, social relations, basic needs, and self-acceptance (see Maulana et al., 2019 for the full scale and validation process). These dimensions were identified through qualitative research with individuals in Indonesia, in which participants were asked what "wellbeing" meant to them (Maulana et al., 2018), ensuring that the tool is culturally relevant for analysis in Indonesia. Final items within the scale were generated through a Delphi approach, as well as Exploratory and Confirmatory Factor Analysis with a sample of 1,028 individuals in Indonesia (Maulana et al., 2019). It should be noted that these two phases of research had a relative over-representation of individuals in Java. While further qualitative research would need to be conducted to confirm the appropriateness of this scale for use in Papua, we contend that this is the most relevant scale available, having been developed for use in the Indonesian context. To provide indicative evidence as to whether this scale is suitable for this sample, Confirmatory Factor Analysis was undertaken. The output is shown in Appendix D1, illustrating high factor loadings for all variables and an overall good model fit.

Participants responded to the 20 items of the IWS scale on a 5-point Likert scale, with a higher score indicating a higher level of agreement (and subsequently a higher wellbeing score). An average of scores within each dimension was taken to calculate the wellbeing score for each of the four dimensions. These dimension scores were then averaged to calculate the overall IWS score. This means that all dimensions are weighted equally. The histograms for the IWS score, and each of the dimension scores, are displayed in Appendix D2.

Two standard life satisfaction and happiness scales were used as secondary outcome variables, both of which have been widely used by Indonesia's national statistics agency (*Badan Pusat Statisik)*, as well as in other established surveys in Indonesia, such as the Indonesia Family Life Survey (e.g. Anna et al., 2019; Sutawi et al., 2021). The life satisfaction scale asks the question "Please think about your life as a whole. How satisfied are you with it?" Responses to this scale are on a 5-point scale from "completely satisfied" to "not at all satisfied". The happiness scale asks "Taking all things together, how would you say things are these days?" This scale has four possible response options from "very happy" to "very unhappy". Given that one key purpose of this chapter is to assess the value and benefit of using a context-specific wellbeing measurement tool, these secondary outcome variables were incorporated into the analysis to compare the findings of these outcome variables in contrast to the IWS scale. The distributions of responses for these scales are outlined in Appendix D3.

8.2.3 Analysis approach

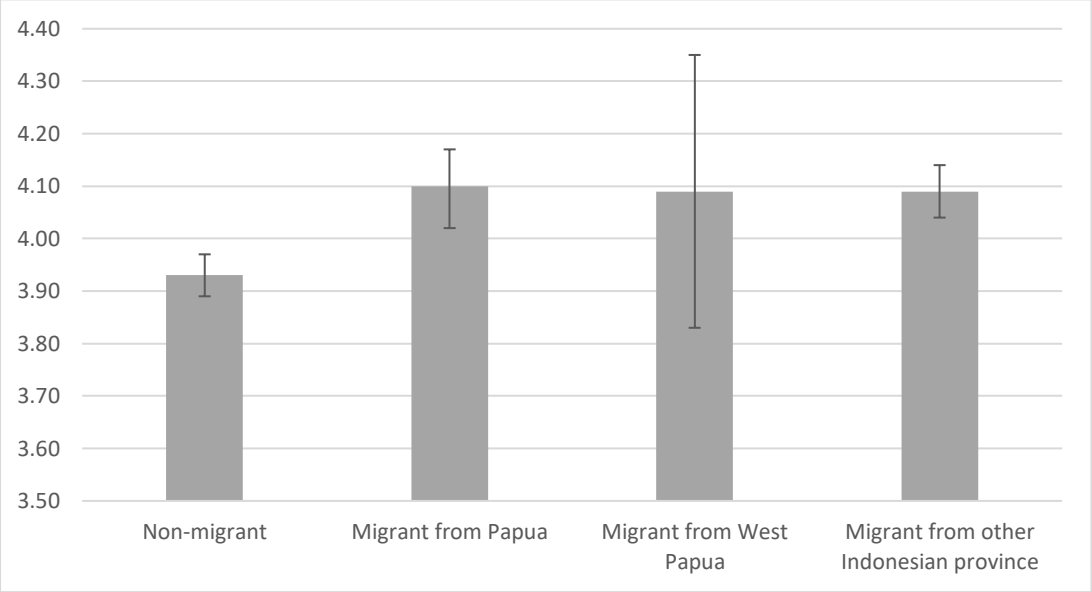
The analysis approach entailed using regression techniques to determine whether migrant status was associated with subjective wellbeing after controlling for a number of socio-demographic characteristics. Ordinary Least Squares regression was conducted for the primary outcome variable, while Ordered Logit Regression was conducted for the two secondary outcome variables. These results were also disaggregated further to determine any differential impacts by gender, geographic area of origin, or whether the individual migrated to Papua before or after the age of 12. Models were also developed with the scores for each of the four dimensions used as outcome variables.

A number of variables were incorporated into the model to control for other factors that may influence subjective wellbeing. These included village, gender, religion, marital status, age, health (BMI), highest level of education, income, number of bedrooms in the house, and housing quality (an average of responses related to quality of the floor, walls, roof, and toilet).

8.3 Results

Figure 8-1 firstly illustrates the IWS score by migration status, with a higher score indicating higher wellbeing. The results show that non-migrants report significantly lower wellbeing than migrants at the 5% significance level (except for migrants from West Papua, for which the confidence interval is relatively wide due to the small sample size). No significant differences were observed based on whether the migrant was from elsewhere in Papua, or another Indonesian province.

Figure 8-1 IWS score by migrant status



Note: Error bars display 95% confidence interval.

Given that these results may be influenced by migrants having differing socio-demographic characteristics to non-migrants, such as income and health, it is important to control for such information.

Table 8-2 illustrates the model output, using the primary outcome variable, the IWS scale, as a dependent variable, as well as the two secondary outcome variables: a life satisfaction scale

and a standard happiness scale. Model 1 indicates that when controlling for a number of socio-demographic variables, migrants to Jayapura from elsewhere in Papua and migrants from outside of Papua and West Papua have significantly higher wellbeing compared to non-migrants (at the 5% and 1% level respectively). No difference is found for migrants from West Papua, although it should be noted that a relatively large standard error is associated with this estimate. Given the high level of geographical and cultural disparity in migrants from elsewhere in Papua, Appendix D4 presents additional analysis to distinguish the differential impact for those who come from island, coastal, and mountain regions. The results suggest that the higher wellbeing of migrants from Papua may predominantly be driven by those coming from the mountain regions, which is significant at the 10% level. It is also important to note that income and education have significant positive associations with wellbeing, with those local to Papua tending to have lower levels of education and income. Thus, within the community, this wellbeing gap may be even more observable.

Interestingly, when using life satisfaction and happiness as outcome variables (Model 2 and Model 3), no significant differences are found based on migrant status, indicating that these more standard measures of wellbeing may lack sensitivity. This is further confirmed in Appendix D3, which illustrates that there is very little variation in how participants responded to these measures. The tendency to respond positively to these items may be influenced by cultural norms, where being grateful for what one has is viewed as important (Maulana et al., 2018). This indicates that such scales may not always be culturally appropriate for use in the Indonesian context.

Table 8-2 Full IWS, life satisfaction and happiness models

	Model 1 – IWS		Model 2 – Life satisfaction		Model 3 – Happiness	
	Coeff.	Standard error	Coeff.	Standard error	Coeff.	Standard error
Migration status						
Migrant from Papua	0.084**	0.041	0.063	0.286	-0.059	0.351
Migrant from West Papua	0.128	0.095	0.084	0.701	0.152	0.824
Migrant from other Indonesian province	0.124***	0.036	-0.281	0.245	-0.361	0.333
Male	-0.047	0.032	-0.263	0.22	-0.085	0.281
Religion						
Christian	-0.032	0.033	-0.391*	0.23	0.266	0.316
Catholic	-0.103**	0.051	-0.073	0.349	0.943**	0.422
Village (lives in Hedam)	0.062**	0.028	0.03	0.194	0.31	0.247
Married	0.133***	0.041	0.793***	0.286	0.847**	0.406
Age	-0.002	0.009	-0.087	0.06	-0.163**	0.077
Age-squared	0	0	0.001*	0.001	0.002**	0.001
BMI	-0.015	0.034	0.165	0.227	-0.237	0.275
BMI-squared	0	0.001	-0.003	0.004	0.005	0.005
Education						
Junior High School (*SMP)*	0.046	0.059	-0.385	0.393	1.307	0.814
Senior High School (*SMA)*	0.155***	0.053	0.42	0.364	1.21	0.764
Diploma (*Akademi D)*	0.121*	0.073	0.247	0.495	1.346	0.874
University	0.269***	0.059	0.529	0.406	1.338*	0.786
Monthly salary (IDR)						
No salary	-0.12**	0.058	-0.601	0.379	-1.103	0.786
Less than 500.000	-0.173**	0.068	-0.191	0.456	-0.644	0.808
500.000 – 999.999	0.009	0.055	-0.443	0.377	-0.917	0.657
1.000.000 – 2.499.999	0.134***	0.048	0.309	0.34	0.321	0.399
2.500.000 – 3.999.999	0.21***	0.055	0.818**	0.396	0.148	0.449
4.000.000 – 5.499.999	0.409***	0.066	1.105**	0.465	1.444***	0.456
Owns land	0.042	0.03	-0.313	0.209	-0.006	0.284
Number of bedrooms	0.049***	0.015	0.207**	0.104	0.067	0.123
Housing quality index	0.055*	0.03	1.248***	0.228	0.705***	0.239
Constant	3.524***	0.431				
Cut point 1			-1.04	3.087	0.936	3.597
Cut point 2			0.579	2.955		
Cut point 3			4.112	2.927		
Cut point 4			8.853	2.951		
Pseudo/Adjusted R-squared	0.3064		0.1102		0.1146	
Sample size	684		684		684	

*Significant at 10% level, **significant at 5% level, ***significant at 1% level.

Note: Model 1 is an Ordinary Least Squares model. Models 2–3 are Ordered Logit Regression models. Base case is born in Jayapura, female, Muslim, lives in Kota Baru village, not married, has completed primary school only, reports no monthly salary, and does not own land.

Table 8-3 explores these results in greater detail to better understand what demographic groups might be driving this wellbeing gap between migrants and non-migrants. Model 1 and Model 2 show that the wellbeing gap is driven by both males and females. Model 3 illustrates that when examining the origin of migrants, the wellbeing gap between migrants and non-migrants is driven by individuals originating from Sulawesi (significant at the 1% level), Java (significant at the 5% level), and Maluku (significant at the 10% level). It should be noted, however, that this may be driven by the relatively low standard error for these areas of origin in comparison to the standard errors for the other geographic areas. This is due to the relatively larger sample sizes for these groups. Finally, the age at which individuals migrated to Jayapura was examined in Model 4. The findings suggest that there are no significant differences in wellbeing between individuals who migrated to Jayapura when they were 12 years or younger compared to those who migrated when they were older than 12 years.

Table 8-3 IWS results by sub-groups

	Model 1 – Females only		Model 2 – Males only		Model 3 – Province of origin		Model 4 – Age of migration	
	Coeff.	Standard error	Coeff.	Standard error	Coeff.	Standard error	Coeff.	Standard error
Migration status								
Migrant from Papua	0.068	0.053	0.096	0.067	0.083**	0.041		
Migrant from West Papua	0.106	0.117	0.111	0.164	0.128	0.095		
Migrant from other Indonesian province	0.147***	0.047	0.102*	0.056				
(Java)					0.102**	0.05		
(Lesser Sunda Islands)					0.057	0.093		
(Sumatra)					-0.022	0.124		
(Kalimantan)					0.28	0.2		
(Sulawesi)					0.166***	0.048		
(Maluku)					0.168*	0.095		
Age of migration								
Born in Jayapura							-0.081**	0.034
Migrated after 12 years old							0.073	0.045
Male					-0.044	0.032	-0.045	0.032
Religion								
Christian	-0.027	0.044	-0.056	0.053	-0.034	0.034	-0.043	0.031
Catholic	-0.033	0.067	-0.183**	0.079	-0.098*	0.054	-0.107**	0.05
Village (lives in Hedam)	0.05	0.037	0.068	0.044	0.065**	0.028	0.063**	0.028
Married	0.116**	0.053	0.173**	0.079	0.133***	0.041	0.13***	0.041
Age	-0.01	0.011	0.011	0.015	-0.002	0.009	-0.001	0.009
Age-squared	0	0	0	0	0	0	0	0
BMI	0.02	0.037	-0.098	0.076	-0.014	0.034	-0.013	0.034
BMI-squared	0	0.001	0.002	0.001	0	0.001	0	0.001
Education								
Junior High School (*SMP)*	0.018	0.074	0.127	0.105	0.037	0.06	0.044	0.059
Senior High School (*SMA)*	0.154**	0.065	0.169*	0.098	0.146***	0.054	0.159***	0.053
Diploma (*Akademi D)*	0.102	0.094	0.149	0.125	0.113	0.074	0.124*	0.073
University	0.238***	0.074	0.314***	0.107	0.266***	0.059	0.272***	0.059
Monthly salary (IDR)								
No salary	-0.11	0.089	-0.181*	0.102	-0.121**	0.058	-0.114**	0.058
Less than 500.000	0.105	0.143	-0.305***	0.105	-0.173**	0.069	-0.18***	0.068
500.000 – 999.999	0.061	0.101	-0.059	0.092	0.007	0.055	0.004	0.055
1.000.000 – 2.499.999	0.063	0.076	0.102	0.088	0.13***	0.048	0.137***	0.047

2.500.000 – 3.999.999	0.083	0.105	0.2**	0.087	0.21***	0.055	0.204***	0.055
4.000.000 – 5.499.999	0.346***	0.097	0.443***	0.106	0.408***	0.066	0.384***	0.067
Owns land	0.054	0.04	0.011	0.049	0.042	0.03	0.036	0.03
Number of bedrooms	0.067***	0.02	0.035	0.023	0.049***	0.015	0.051***	0.015
Housing quality index	0.028	0.041	0.092**	0.047	0.05	0.031	0.046	0.031
Constant	3.284***	0.496	4.221***	0.921	3.527***	0.433	3.588***	0.428
Adjusted R-squared	0.2136		0.3815		0.3055		0.3094	
Sample size	374		310		684		684	

*Significant at 10% level, **significant at 5% level, ***significant at 1% level.

Note: All models are Ordinary Least Squares.

Models 1–2: Base case is born in Jayapura, Muslim, lives in Kota Baru village, not married, has completed primary school only, reports no monthly salary, and does not own land. Model 3: Base case is born in Jayapura, female, Muslim, lives in Kota Baru village, not married, has completed primary school only, reports no monthly salary, and does not own land. Model 4: Base case migrated before 12 years old, is female, Muslim, lives in Kota Baru village, not married, has completed primary school only, reports no monthly salary, and does not own land.

Finally, it is important to examine which wellbeing dimensions in particular are driving this wellbeing gap. Table 8-4 disaggregates the findings by the four IWS sub-scales: spirituality, social relations, basic needs, and self-acceptance. We find that the wellbeing gap is driven by all four dimensions. It is interesting to note that for the basic needs dimension this association holds even when controlling for a number of economic variables. This may indicate either that, all else being equal, migrants simply have better self-perceptions of their material needs when compared to non-migrants. On the other hand, this may simply indicate omitted variable bias. For example, migrants may have a greater sense of financial security through informal networks.

Table 8-4 IWS sub-scales

	Model 1 – Spirituality		Model 2 – Social relations		Model 3 – Basic needs		Model 4 – Self-acceptance	
	Coeff.	Standard error	Coeff.	Standard error	Coeff.	Standard error	Coeff.	Standard error
Migrant status								
Migrant from Papua	0.146**	0.061	0.031	0.055	0.025	0.065	0.132***	0.051
Migrant from West Papua	0.17	0.141	0.074	0.127	0.163	0.15	0.106	0.117
Migrant from other Indonesian province	0.128**	0.053	0.111**	0.048	0.133**	0.056	0.126***	0.044
Male	-0.04	0.048	-0.041	0.043	-0.046	0.051	-0.062	0.04
Religion								
Christian	-0.108**	0.049	-0.008	0.045	0.015	0.053	-0.026	0.041
Catholic	-0.177**	0.075	-0.111	0.068	-0.003	0.08	-0.122*	0.063
Village (lives in Hedam)	0.049	0.042	0.067*	0.038	-0.006	0.044	0.136***	0.035
Married	0.1	0.061	0.081	0.055	0.261***	0.065	0.09*	0.051
Age	-0.024*	0.013	-0.025**	0.012	0.049***	0.014	-0.007	0.011
Age-squared	0*	0	0**	0	0***	0	0	0
BMI	-0.038	0.05	-0.052	0.045	0.037	0.053	-0.007	0.042
BMI-squared	0.001	0.001	0.001	0.001	-0.001	0.001	0	0.001
Education								
Junior High School (*SMP)*	0.046	0.089	0.111	0.08	0	0.094	0.027	0.074
Senior High School (*SMA)*	0.112	0.079	0.204***	0.071	0.17**	0.084	0.133**	0.066
Diploma (*Akademi D)*	0.168	0.109	0.209**	0.098	-0.034	0.116	0.143	0.091
University	0.249***	0.088	0.313***	0.079	0.303***	0.093	0.212***	0.073
Monthly salary (IDR)								
No salary	-0.248***	0.087	-0.137*	0.078	0.009	0.092	-0.102	0.072
Less than 500.000	-0.293***	0.102	-0.199**	0.092	-0.01	0.108	-0.191**	0.085
500.000 – 999.999	-0.06	0.082	-0.04	0.074	0.216**	0.087	-0.078	0.068
1.000.000 – 2.499.999	0.07	0.071	-0.003	0.064	0.391***	0.075	0.079	0.059
2.500.000 – 3.999.999	0.118	0.081	0.115	0.073	0.422***	0.087	0.185***	0.068
4.000.000 – 5.499.999	0.313***	0.099	0.297***	0.089	0.625***	0.105	0.4***	0.082
Owns land	0.003	0.045	0.092**	0.041	0.056	0.048	0.018	0.038
Number of bedrooms	0.039*	0.022	0.035*	0.02	0.038	0.023	0.083***	0.018
Housing quality index	0.199***	0.045	0.003	0.041	-0.013	0.048	0.029	0.038
Constant	4.481***	0.642	4.657***	0.579	1.393**	0.682	3.563***	0.534
Adjusted R-squared	0.1482		0.1286		0.4107		0.2015	
Sample size	684		684		684		684	

*Significant at 10% level, **significant at 5% level, ***significant at 1% level.

Note: Models are Ordinary Least Squares. Base case is born in Jayapura, female, Muslim, lives in Kota Baru village, not married, has completed primary school only, reports no monthly salary, and does not own land

8.4 Discussion

Through using a context-specific measurement tool developed in consultation with individuals in Indonesia, the results of this study highlighted a significant and substantial wellbeing gap, which cut across all dimensions of wellbeing noted as important for people in Indonesia. These findings have important implications for both policy and research regarding wellbeing in Papua and migration more broadly. The case study also brought to light some particular challenges and limitations in conducting such analysis. This section will firstly discuss the value of the study in identifying policy- and research-relevant findings. It will then go on to highlight the benefits of using a context-specific measurement tool, as well as consider some of the study's limitations.

8.4.1 Importance of findings for research and policy

This section will firstly provide some explanations as to why there may be a wellbeing gap before highlighting the broader implications of the findings for migration policy.

Why the wellbeing gap?

There are a number of potential explanations for the wellbeing gap identified in the results section. Firstly, it is important to acknowledge the "happy migrant hypothesis", which has been studied comprehensively within the migration literature (e.g. Kennedy et al., 2015; Lu, 2008; Palloni & Morenoff, 2001). As noted earlier, the happy migrant hypothesis suggests that those who choose to migrate have characteristics distinct from those who choose to stay in their place of origin. This can come in the form of greater levels of physical health, with migrants likely having greater levels of physical mobility and having fewer concerns over access to health care in the destination location (Riosmena et al., 2017). It can also come in the form of financial security, with migrants requiring greater financial resources to migrate in the first place (de Haas, 2010). The behavioural characteristics of migrants may also differ from those who choose to remain in their place of origin, with individuals choosing to migrate having a greater propensity for risk-taking, with possible associations with mental health (Brockerhoff & Biddlecom, 1999). While the happy migrant hypothesis has not been tested specifically using measures of wellbeing, it is likely that this same effect exists for subjective wellbeing. It should be noted that while we controlled for some of these measures, such as

physical health, there could be unobserved characteristics resulting in “happier” migrants. Thus, in short, the wellbeing gap identified in this study may simply be caused by migrants, on average and when controlling for other factors, having higher levels of wellbeing than non-migrants in general.

Closely related to this is also the fact that those who have migrated to Jayapura have one distinct characteristic from those born in Jayapura. That is, they were born in, and spent some or many years growing up in, a different area. In analysing the multidimensional wellbeing of individuals in different provinces throughout Indonesia, Sujarwoto (2021) showed that the wellbeing of individuals in Papua is significantly and substantially lower than most other provinces in Indonesia. While this analysis used a different measure of wellbeing based on the OECD subjective wellbeing indicators (OECD, 2013), it does suggest that those born in provinces outside of Papua tend to have higher levels of wellbeing. Thus, in our analysis, individuals who have moved to Papua may “export” their higher levels of wellbeing with them to Papua. In our study, this could be through the form of greater financial security (such as more expansive informal networks in the sending region) or higher levels of mental health. It should be noted, however, that we did also see a wellbeing gap in the spirituality and self-acceptance dimensions for those who had migrated within Papua to Jayapura, likely driven by those living in the mountainous regions of Papua. Furthermore, additional analysis based on data from the current study was able to utilise the supplementary data collected in Ambon (not otherwise used in the current chapter) to compare the wellbeing of those who lived in Jayapura and Ambon. This analysis, presented in Appendix D5, found that there is no significant difference in wellbeing, according to the IWS scale, for individuals who are based in Ambon compared to those in Jayapura. While this only contrasts two cities in two different provinces, it does provide some further indication that the wellbeing gap may be influenced by more than just the exportation of higher wellbeing from different areas of Indonesia.

Interestingly, it should be noted that we did not find any evidence of acculturation, with some previous studies finding that the health and wellbeing of migrants assimilates to the native population over time (Antecol & Bedard, 2006; Biddle et al., 2007). Finally, it is important to note that our results suggest that the social wellbeing of migrants is significantly greater than non-migrants in Jayapura, which is largely at odds with the literature base which highlights

that migrants tend to be affected by poor levels of social connection in the receiving region (Bhugra, 2004). Possible explanations for this are that migrants in this region are well connected due to the high level of ethnic diversity and their ability to connect with other migrants (Ryan, 2011). Another possibility is that those born in Jayapura may have poor levels of connection due to this high proportion of migrants, as well as the fact that Papuans themselves are highly ethnically diverse (Ananta et al., 2016). This finding would need to be examined more deeply through further research.

A final possible, although unlikely, explanation for the wellbeing gap is that the wellbeing of migrants has improved as a result of the migration process. Some research has suggested the migration process might result in improved wellbeing. For example, Anson (2004) examined the mortality rates of migrants to Belgium, finding that the happy migrant hypothesis by itself was insufficient to explain lower levels of mortality amongst migrants, suggesting that the meaning of migration and the hope that it stimulates may be part of the explanation. However, research conducted in other provinces of Indonesia does not align with this, finding that migration is significantly detrimental to both physical and mental health (data on Papua and other areas of Eastern Indonesia were not available for this analysis) (Lu, 2010a, 2010b). While it is plausible that the impacts of migrating specifically to Papua are distinct from migration to other areas of Indonesia, given previous literature highlighting the influence of conditions in the receiving region on migration impacts (de Haas, 2010), it is unlikely that the migration process itself has resulted in significant improvements to wellbeing.

The broader implications for migration to a high-conflict, ethnically diverse region

While the data used in this study cannot shed light on the drivers and explanations for the wellbeing gap, the fact that such a gap exists has important implications for Papua, as well as for understanding the impacts of migration to high-conflict, ethnically diverse regions more generally.

Firstly, it is important to note that the wellbeing gap may be influenced, and further exacerbated, by high levels of migration to the region. Indonesia's transmigration policy, *Transmigrasi,* which incentivises out-migration from Java into the outer islands, is a key driver

of this high level of migration. The negative social and environmental impacts of *Transmigrasi* have been well documented, including deforestation, elimination of cultures, and the violation of human rights, including land rights for local populations (Fearnside, 1997; Human Rights Watch, 2021). This is no less true in Papua, where migration has resulted in hostility between groups and inter-group tensions (Anderson, 2015; Chauvel, 2005). While Indigenous peoples in Papua were also included in the transmigration program, this was only partially successful due to Indigenous people's reliance on subsistence agriculture. Thus, the mere presence of migrants in Jayapura may be contributing to the wellbeing gap.

Secondly, the wellbeing gap identified indicates a level of "wellbeing inequality" between migrants and non-migrants in Jayapura. Inequality more generally has been found to be associated with lower levels of wellbeing. For example, income inequality has been found to be associated with social disfunction (Wilkinson & Pickett, 2009), poorer health (Kawachi & Kennedy, 1999), and lower levels of wellbeing (Oishi & Kesebir, 2015). In fact, Oshio and Urakawa (2014) found that perceived levels of income inequality were associated with lower levels of subjective wellbeing. Given that inequality (or perceived inequality) in other measures, such as income, leads to lower levels of wellbeing, it is not unreasonable to suggest that wellbeing inequality within society may beget further reductions in individual wellbeing. Thus, if this wellbeing gap is acknowledged and identified by non-migrants in Jayapura, recognising that on average migrants have higher levels of wellbeing in relation to spirituality, social relations, basic needs, and self-acceptance, this may lead to higher levels of tension and conflict, exacerbating even further this wellbeing gap.

Furthermore, it should be noted that both education and income are significantly associated with wellbeing. Non-migrants in Papua typically have lower levels of education and income compared to the migrant population (Seda et al., 2018), meaning that to individuals within the community, this wellbeing gap may be particularly evident. With migrants having greater capacity to earn additional income and invest in their children's education, this may result in exacerbated intergenerational inequalities in both education and income, and subsequently wellbeing.

These findings, and their potential implications, have important consequences for migration policies throughout the world, and within Indonesia. It has been found that a wellbeing gap

exists between migrants and non-migrants in Papua, which may be found in other regions throughout the world with similar levels of conflict and ethnic diversity. When putting forward policies to encourage and incentivise migration to such regions, governments may wish to consider the potential social and wellbeing impacts that this may have for the local population groups.

8.4.2 The value, challenges, and limitations of using a culturally adapted wellbeing measurement tool

This section will firstly highlight the value in using a culturally adapted, multidimensional wellbeing measurement tool, which was developed in consultation with individuals in Indonesia. While the use of context-specific wellbeing measurement tools has been growing over the past decade (e.g. Collomb et al., 2012; Greco, 2018; Manuela & Sibley, 2012), quantitative analysis tends to rely on context-neutral, global measures to evaluate wellbeing, such as the OECD subjective wellbeing measure (OECD, 2013), and the Personal Wellbeing Index (PWI) (International Wellbeing Group, 2013). Utilising a culturally adapted, multidimensional wellbeing measurement tool has two clear benefits. Firstly, by measuring wellbeing multidimensionally, we can better understand what dimensions of wellbeing are driving the wellbeing gap. Secondly, we can have confidence that the dimensions of wellbeing measured are relevant to the population of interest.

The findings of this study indicated the presence of a wellbeing gap between migrants and non-migrants, and this is driven by all four wellbeing dimensions: spirituality, social relations, basic needs, and self-acceptance. It should be noted that this significant gap in wellbeing was not identified when using two standard, unidimensional measures of life satisfaction and happiness. The distribution in responses to these unidimensional tools indicated very low variation in how these questions were responded to, which suggests that these tools may lack the sensitivity to identify differences in wellbeing. However, even if significant differences had been identified through these tools, we would have little information as to what was driving this difference. While unidimensional measures may be quicker to implement within a survey, by using a multidimensional measure we have greater clarity about what specific dimensions of wellbeing are driving the wellbeing gap.

Further to this, by using a measurement tool that was developed in consultation with the population of interest, we have greater certainty that the tool truly reflects the meaning of wellbeing for individuals in Indonesia. While there are limitations in using this tool with the Papuan population, as will be discussed below, it presents an important shift forward, moving away from global measures of wellbeing or those developed for use with Western population groups. Thus, in our analysis, we can have greater confidence that the wellbeing gap is being driven by areas of wellbeing that truly matter to individuals in Indonesia.

However, it should be noted that while the wellbeing scale applied in this study is based on an Indonesian perspective of wellbeing, it was predominantly developed through research with individuals in Western Indonesia. Given the high level of cultural diversity throughout Indonesia, and especially between those people living in Eastern Indonesia and other provinces, it is likely that Papuans may conceptualise wellbeing slightly differently compared to other areas of Indonesia. However, the use of the IWS for this study represents an important shift toward ensuring the wellbeing is measured in a more culturally adaptive way. Furthermore, Confirmatory Factor Analysis indicated that the scale represents a good model fit to the data. Thus, it is proposed that while "scaling down" measurement tools to smaller contexts than those in which they were developed should not be avoided, care should be taken when doing so to ensure the measurement tool is culturally appropriate.

8.5 Conclusion

This study has made a valuable contribution to the existing literature by analysing the wellbeing gap between migrants and non-migrants in Jayapura, Papua, using a culturally adapted wellbeing measurement tool developed in consultation with individuals in Indonesia. We have shown that a significant wellbeing gap exists between migrants and non-migrants, with migrants having significantly higher levels of wellbeing. This result was driven by both males and females, and may have been influenced more predominantly by individuals who have migrated from Java, Sulawesi, and Maluku. When examining the wellbeing dimensions individually, we found that this wellbeing gap exists for all four wellbeing dimensions: spirituality, social relations, material needs, and self-acceptance.

The study highlights that the use of a context-specific measurement tool has important implications for both research and policy. Through undertaking this case study, we have also highlighted the value, challenges, and limitations in using a multidimensional, culturally adaptive measurement tool for analysis. We show that more global, unidimensional measures of wellbeing lacked the sensitivity and heterogeneity to discern any differences in wellbeing, in contrast to the multidimensional IWS. It is hoped that the findings of this study can help support research and policy to improve the collective wellbeing of migrants and native populations going forward, as well as providing useful guidance for researchers seeking to conduct analysis based on context-specific measurement tools.

Part 4 Research and policy impact

Chapter 9 Participatory wellbeing frameworks and the secret to impact

9.1 Introduction

The previous chapters have examined the value of participatory wellbeing studies in eliciting culturally nuanced understandings of wellbeing, and how they can be applied in a number of ways for research and policy purposes. However, such findings simply convey the potential of participatory wellbeing frameworks, rather than provide concrete, empirical evidence on how they have impacted research processes, research outputs, and the development or adaptation of programs and policies. Such an endeavour requires deeper investigation into the frameworks that have been developed, and the extent to which they have been utilised for decision-making at community, organisational, governmental, and international levels. This chapter fills this gap through a key informant study with 16 individuals who have undertaken participatory wellbeing studies in different contexts with various population groups to better understand if and what impacts these studies have had, and the key barriers and enablers in achieving impact.

While a vast literature exists on research and policy impact in various disciplines, including the social and health sciences (e.g. Newson et al., 2021; Sumner et al., 2011), there is very limited research on the impact of wellbeing measures (e.g. see Corlet Walker et al., 2020; Whitby, Seaford, & Berry, 2014) and scant literature on the impact (in terms of both research and policy) of participatory wellbeing studies (e.g. Hall & Rickard, 2013; Scott, 2012). With universities, funders, and philanthropists increasingly requiring academics and practitioners to demonstrate impact from research studies, the focus of the literature has primarily been on understanding the extent of impacts and the type of impacts reported. This key informant study will add to this evidence base by drawing on a large number of participatory research studies, which use varying degrees of participation, to further examine the benefit of participatory approaches for achieving impact.

Building off previous research, this study makes an important contribution to the literature in three key ways. Firstly, this will be the first study to examine the achieved impact of a large number of wellbeing frameworks that have been developed purely through participatory

approaches. Secondly, the study will examine the reported value of utilising participatory approaches for wellbeing measurement from the perspective of those who have conducted such studies. Finally, the study will contribute to the small body of literature regarding barriers to and enablers for achieving impact for participatory and wellbeing studies. Using both instrumental and conceptual definitions of impact, as well as considering the ways in which participatory wellbeing studies can achieve impact beyond just decision-making, this study will help support academics, practitioners, and decision-makers to achieve greater impact through participatory wellbeing studies at the community, organisational, national, and international level.

9.2 A definition for research and policy impact

An important question when examining policy and research impact is, "How is impact defined?" Definitions of policy and research impact within the literature are highly inconsistent, being used to refer to different things, with measurement approaches varying considerably (Alla et al., 2017; Boaz et al., 2009; Penfield et al., 2014; Weiss, 1979). In regard to policy impact, there is a distinction between those who consider impact as only achievable through instrumental, direct, and demonstrable influence on policy, and those who acknowledge the complex, non-linear nature of decision-making, recognising the more indirect ways that research can impact policy, such as policymakers simply being aware of research findings (Alla et al., 2017; Corlet Walker et al., 2020; Sébastien et al., 2014; Weiss, 1977, 1979). Weiss (1977), for example, argues that decision-making processes are so complex that one cannot easily discern impact from research. This has been noted to be of particular importance within participatory research (Cook et al., 2017).

Thus, it is important to adopt a broader definition of impact, incorporating both indirect and direct components. As highlighted in Chapter 2 (Section 2.4.1), this study delineates between research impact and policy impact, with research impact defined as "impacts achieved throughout the research process, and directly from research outputs", which can take the form of benefits to participants through the research process or advancement of knowledge within the author's field of research. Policy impact is defined as "impacts achieved through either the enlightenment of decision-makers (at any level), or instrumental changes to programs or policy (at any level). The clarification of "at any level" refers to any decision-

making that is influenced by research outputs. This could include decision-making by the community, organisations, or jurisdictional/national governments.

In the context of indicators and wellbeing measurement, a number of scholars have applied this less restrictive definition when examining impact (e.g. Corlet Walker et al., 2020; Lehtonen et al., 2016; Sébastien et al., 2014; te Lintelo et al., 2020; Turnhout, 2009). In delineating between different types of impact that can be achieved through the use of indicators, Bauler (2012) identifies three uses of indicators by policymakers: (1) instrumental, defined as directly using information expressed in indicators to inform policy decisions; (2) conceptual, defined as indirect use, whereby information cannot be translated directly into policy decisions due to complexity, varied opinions, conflicting views, and lack of opportunity; and (3) political, whereby indicators are used as ammunition to promote a particular political agenda. As highlighted above, this study applies these broader understandings to define the wide range of policy impacts.

9.3 The literature base on wellbeing measures, participatory approaches, and impact

While the use of wellbeing frameworks is often touted by proponents as a more effective and meaningful way to develop and evaluate policy and progress compared to more traditional and conventional assessment tools and frameworks (Adler & Seligman, 2016; Dalziel et al., 2019; Dolan et al., 2011; Durand & Exton, 2019; Forgeard et al., 2011; Gruen & Spender, 2012; Stiglitz et al., 2009; Ura & Galay, 2004), such assertions are largely speculative given the relative dearth of research examining the impacts of wellbeing frameworks. Some limited research does exist, however, which examines the factors that can enable wellbeing indicator usage. For example, in the context of government-level wellbeing frameworks, strong leadership, engagement across government, mainstreaming of frameworks across government departments, perceived salience of indicators, and incentivising decision-makers to act on information put forward by progress indicators have been proposed as important enabling factors (Exton & Shinwell, 2018; Scrivens & Iasiello, 2010; Whitby, Seaford, & Berry, 2014).

As well as contributing to the literature on wellbeing measures and impact, this study also provides a needed insight into the literature on participatory approaches and impact. While there is a large literature base examining the positive research impacts of participatory approaches, including drawing on expert knowledge of those with lived experience (e.g. MacAulay et al., 1999; Moser & Stein, 2013; White & Pettit, 2004), the value of participants as co-researchers (e.g. Brown & Tandon, 1983; Jagosh et al., 2012; Lundy et al., 2011; O'Fallon & Dearry, 2002; Pope, 2020), empowerment of communities (e.g. Chambers, 1994b; Travers, 1997), and utilising culturally appropriate research methods (Jagosh et al., 2012), there has been much less attention given to policy impacts as a pathway for improving the lives of individuals and communities.

While there has been some previous research conducted regarding participatory approaches and policy impact, this has largely been from either a theoretical perspective or has involved using a small number of case studies (e.g. Armstrong & Alsop, 2010; Greenhalgh et al., 2016; Pain & Francis, 2003). The consensus from this literature base is that, when conducted appropriately, participatory approaches have high potential to achieve policy impact. Important aspects of a study for achieving policy impact include ensuring high-quality relationships, appropriate governance structures, involving participants and decision-makers in all stages of the research process, and wide dissemination of results (Armstrong & Alsop, 2010; Greenhalgh et al., 2016; Pain & Francis, 2003).

Furthermore, this study will make a substantial contribution to the scant literature examining the impact of participatory wellbeing studies. The literature predominantly has been focused on the value of participatory processes in developing wellbeing frameworks. For example, through an ethnographic study examining the process a local council in the United Kingdom underwent to develop a wellbeing framework, Scott (2012) highlights the importance of dimensions and indicators having meaning for, and resonating with, both decision-makers and the general public. In-depth consultation with both citizens and decision-makers is therefore vital to ensure the relevance and useability of wellbeing frameworks. In examining how indicators were selected for a number of government wellbeing frameworks, Kroll (2011) argues that participatory approaches were highly valuable in ensuring the ideas and opinions

of citizens were adequately captured, and ensured a sense of procedural justice and a greater understanding of societal issues amongst citizens.

Through interviews with civil servants from a number of governments who had developed wellbeing frameworks, Hall and Rickard (2013) highlight that consultation processes with the public to develop indicators are highly beneficial in three ways. Firstly, they argue that a consultation process can "strengthen the machinery of government" by ensuring democratic practices are embedded into the process. Secondly, they contend that consultation processes can "make the business of government easier" through the public gaining a greater awareness of viewpoints from across the political spectrum. Finally, they maintain that consultation can help "build capacity and resilience" through greater community empowerment. Similar findings have also been put forward by Wallace and Schmuecker (2012), with consultation processes being found to improve the legitimacy of wellbeing frameworks.

To the author's best knowledge, the only study which has previously examined successful strategies to enhance impact for a participatory wellbeing study is a case study by Williams et al. (2008), who examined the success of a community-university partnership to develop quality of life indicators in Saskatoon. They found that four knowledge translation strategies helped to enhance impact: (1) engaging with local media, (2) conducting community engagement forums, (3) developing appropriate governance structures, and (4) employing an action researcher to act as a policy entrepreneur.

Thus, this chapter makes an important contribution to a scant literature base on policy and research impact, participatory approaches, and wellbeing measurement.

9.4 Methodology

This study undertook participatory, qualitative research with authors or developers of participatory wellbeing frameworks throughout the world to develop a deeper understanding of how their frameworks have been applied and how they have impacted research and policy. Using the systematic review presented in Chapter 4 as a sampling frame, first authors or organisations were contacted to seek their interest in being involved in the study. A consultative approach was taken within the study, with two rounds of data collection

employed. Stage 1 involved interviews and stage 2 was comprised of focus groups and interviews. Participants in stage 2 were the same individuals as those who participated in stage 1. This section will detail the recruitment, data collection, and data analysis strategy applied.

9.4.1 Recruitment and sample characteristics

Using the results of the systematic review, a total of 28 first authors, selected to represent a broad range of research methodologies, contexts, and age cohorts of interest, were invited to take part in the study. Authors were contacted using email via publicly available information. In total, 12 informants/research teams agreed to participate. One research team included three individuals and two research teams included two individuals, with the rest consisting of only one individual. Overall, nine interviews were with an academic (or academics), one interview was with a representative from an NGO, and two interviews were with multiple individuals from both academia and NGOs[42]. An attempt was made to also recruit third parties, who had applied the results of authors' studies, through snowball sampling from the interviewed authors. While a small number of informants did identify appropriate third parties to be involved in the study and invited them to take part, no third parties agreed to participate. Given that this study utilised a case study-type approach, with the unit of analysis being the participatory wellbeing study, snowball sampling was the only appropriate methodology for the recruitment of these third parties. Given these unsuccessful attempts, unfortunately no third parties were recruited into the study.

In the systematic review presented in Chapter 4, the eligible participatory studies covered five regions (Europe, Americas, Asia, Africa, and Oceania), engaged with population groups at various life stages (from children to older adults), utilised a range of participatory approaches (from those that conducted more standard qualitative research with participants to those that incorporated more participatory practices), and identified a number of theoretical justifications for the study, including health-related quality of life, subjective wellbeing, and the capability approach. The sample of informants in this study collectively represented the

[42] While some interviews included more than one individual from the same research team, for the remainder of the chapter the term "informant" will be used to describe both an individual informant and a research team.

breadth and depth of the systematic review in terms of geography, life stage, and data collection methodologies. The applications of frameworks developed by informants covered all categories identified in Chapter 6, such as the development of a measurement tool, advocacy, and monitoring and evaluation, and the studies ranged from those which had not been applied at all to those which had been applied more extensively.

9.4.2 Stage 1: Initial interviews

Twelve semi-structured interviews were undertaken with informants, which were conducted between March and June 2021. Each interview was tailored to the purpose and applications of the informant's participatory wellbeing framework/s. At the start of each interview, informants were provided with background information regarding the study and a clear description of the meaning of policy impact, including that it can be achieved through many avenues, such as decision-making at the community, organisational, or government level[43]. The interviews focused on the development of the participatory wellbeing framework/s, the applications produced from the framework/s, the research and policy impact of the framework/s, and the barriers and enablers to achieving impact. A summary of the interview guide is presented in Appendix E1.

At the end of each interview, informants were invited to provide feedback on the methodology of the study, which resulted in minor adaptations to the study design and interview guide for upcoming interviews. All interviews were recorded and transcribed[44], with each interview lasting 75 minutes on average.

The transcripts were thematically analysed using NVivo. A familiarisation process was employed as a first step, with all 12 transcripts read in detail by the author, with a preliminary set of thematic codes developed. One-quarter (3) of transcripts were then cross-coded to check for reliability. This process resulted in a weighted Kappa coefficient of 0.57, indicating a fair to good strength of agreement according to Fleiss et al. (2003). Following this, all transcripts were coded to the preliminary thematic structure, with minor adaptations made

[43] This explanation was further refined and made clearer following initial feedback from informants.
[44] Due to a technical error, one interview was not recorded. Informants in this interview contributed to detailed notes of interview responses to account for the lack of a transcription.

as necessary throughout the process. Following the coding of all transcripts, a final check was made to ensure that all transcripts were coded according to any changes/additions made to the final thematic structure.

9.4.3 Stage 2: Follow-up focus groups and interviews

Following stage 1 of data collection and the analysis of this data, a second round of data collection was conducted with the same informants. Stage 2 sought to consult with informants on the preliminary findings, with feedback, comments, and additional input incorporated into the analysis process to form a final set of results. In total, seven informants were involved in stage 2, with two focus groups of three individuals each as well as one one-on-one interview. All were conducted in October 2021.

The format for stage 2 consisted of a debrief of the methodology applied and a presentation of the preliminary results, alongside targeted questions to validate the findings and develop richer insights. An activity was also prepared, through which informants identified how different actors are impacted through the different impact spaces (which were identified through the preliminary analysis). Data collected in stage 2 was transcribed, with each focus group/interview lasting an average of 96 minutes.

Transcripts of the three focus groups/interviews were analysed, again using NVivo. The second consultative process did not result in any major changes to the thematic structure, with the transcripts therefore analysed according to the coding structure identified through stage 1 of analysis, with additional themes incorporated as necessary. An iterative process was then undertaken, with the transcripts from stage 1 coded to additional themes raised in stage 2.

Relevant quotes were identified through both stage 1 and stage 2 of data collection, which reflect and highlight the themes and sentiments of informants based on the analyses undertaken. In this chapter, when attributing quotes to informants who had conducted more than one relevant study, the study with the highest level of participation is used as the attributed methodology, as described in Chapter 4 and Appendix A2.

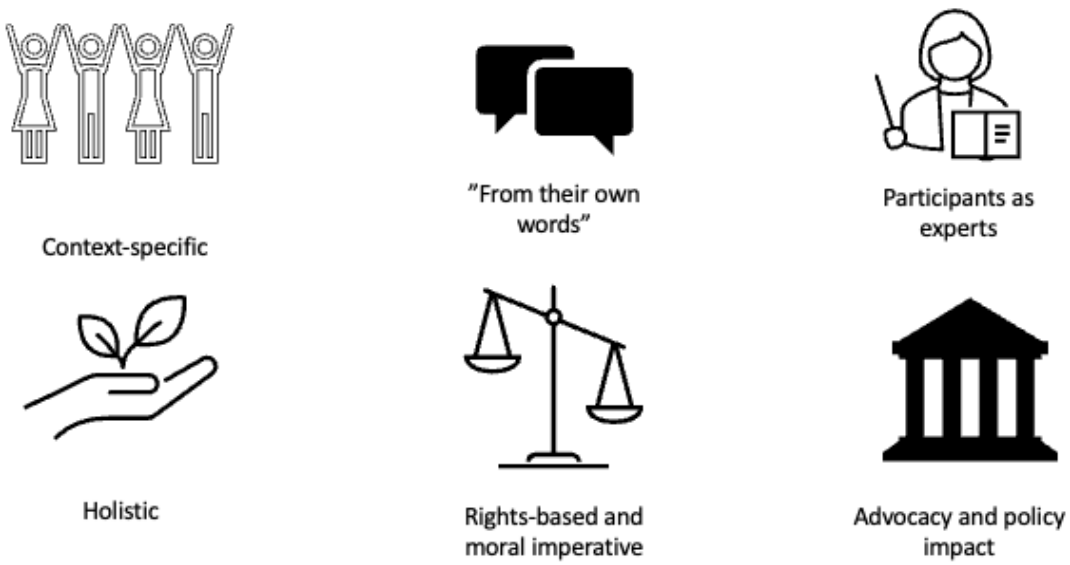
9.5 Results

9.5.1 Motivations for using participatory approaches to measure wellbeing

Participants noted a range of motivations for using participatory approaches to measure wellbeing, which are summarised in Figure 9-1. One of the most commonly raised motivations was to develop a context-specific understanding of wellbeing for a particular population group. For example, as raised by one informant:

> Because the problems inherent within quality of life measures, they're so…The very idea of a quality of life measure is inherently culture bound. [Informant 5, Consult methodology]

Figure 9-1 Motivations for using participatory approaches to measure wellbeing



Informants also noted the value of participatory approaches largely resulting in a holistic understanding of wellbeing, going beyond unidimensional understandings of wellbeing and touching on wellbeing dimensions less visible or common within the literature. This was predominantly raised by informants who noted that researchers and parties within their discipline traditionally take a more unidimensional focus on wellbeing (for example, focusing solely on health-related measures within the health sciences discipline).

Given this reported motivation of using participatory approaches to obtain a context-specific and holistic understanding of wellbeing, it was worth examining whether, from the

perspective of the informants, there were any unexpected wellbeing dimensions or themes raised. Interestingly, the vast majority of informants noted that, on the whole, the results from their studies were not so surprising (however, most noted one or two small unexpected findings). Informants highlighted that that the participatory process was therefore not necessarily integral in identifying the key dimensions of wellbeing. It was rather the fact that themes and dimensions came from the words of participants that was important. For example, as noted by two informants:

> I think we should ask people because we are all capable of understanding what is a good life, what is a bad life. [Informant 3, Consult methodology]
>
> It was kind of like validating the literature and making sure that what came out as definitions and conceptualisations of wellbeing were contextualised. And in their own words, as well, rather than the global, technocratic words. [Informant 6, Inform methodology]

Closely related to this was a rights-based and moral imperative to seek the views of individuals in the community, which also came through as a strong theme. For example, one informant noted that:

> I wanted to give the chance to everyone to participate. It felt right. [Informant 3, Consult methodology]

Some informants, especially those whose studies sat on the higher end of the participatory scale, noted the value of participants as experts. Examples included participants being involved in interviewing other participants, the validation of measurement tools, and dissemination of the findings. For example, as noted by one informant in the context of a study with children:

> …very often, I feel that if they are interviewed by other children…they were able to understand the issues of children…They were able to be accepted by them. And they were able to say things to them that they would never tell to us. [Informant 9, Involve methodology]

This informant also emphasised that participants will inevitably understand and experience wellbeing from a very different point of view from the research team, highlighting the

importance of incorporating participants' perspectives in analysis, not just in the data collection process.

Finally, a few informants noted that participatory approaches themselves are a useful mechanism for advocacy and to achieve policy impact. For example, referring to the value of evidence for policymaking, one informant noted that:

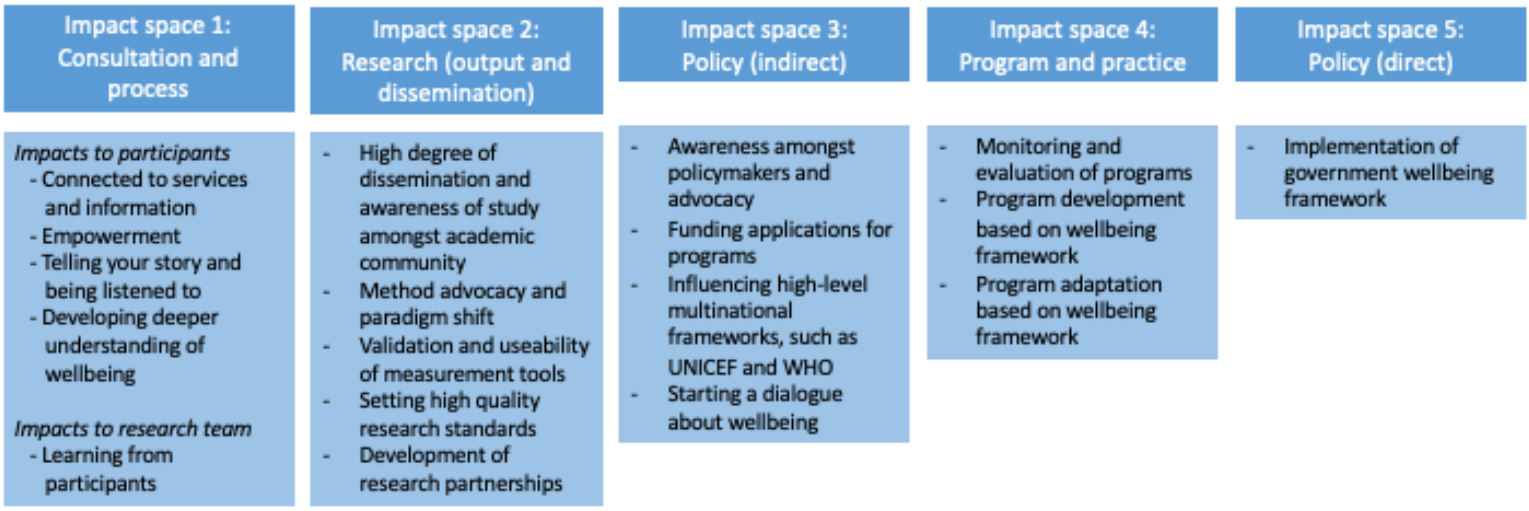
> I think I can sum up all of my work and arguments into the participatory and the qualitative matters, and policymakers know it does. [Informant 11, Inform methodology]

9.5.2 Reported impacts of participatory wellbeing studies

Overall, impact was observed to occur in five different spaces: the consultation space, or the actual process of data collection; the research space, being the impact of the study to research and knowledge production more generally; the indirect policy space (influencing policy through, for example, advocacy and awareness); the program and practice space; and the direct policy space (e.g. developing policies directly based on the findings of the study). These impacts were not linear; a high degree of interconnectedness was noted between the five spaces, with each influencing the others. For example, the research space can impact the direct policy space, with policy also potentially impacting what type of research is conducted.

Few informants reported that they were aware of program/practice or direct policy impacts (some suggested that impacts may have occurred, but without their knowledge). However, all informants noted at least one indirect policy impact (such as policymaker awareness, advocacy targeted at policymakers, or the commencement of a dialogue within the community). A summary of the study impacts is outlined in detail in Figure 9-2, with the remainder of this section describing these spaces in greater detail.

Figure 9-2 Summary of the five impacts of participatory wellbeing studies



Consultation and process space

Within the consultation space, informants overwhelmingly reported positive impacts to participants from their studies. Some informants suggested that the positive impacts experienced were comparable to participation in qualitative research more generally, through participants being listened to and having the opportunity to tell their story:

> In qualitative interviews, in my experience, it's been pretty consistent that people enjoy the actual session because people like to sit and talk to people who are listening to them. [Informant 11, Inform methodology]
>
> One man, he had a lot to say, and he was very sad that I had to go after one and a half hours. He thought I should be there the whole day. [Informant 4, Inform methodology]

Informants who conducted studies at the higher end of the participatory scale reported benefits that went beyond what one would expect from qualitative research more generally. Two informants reported that participants experienced tangible impacts from participation, such as being connected to services or information. For example, one informant noted that

> …there were some sort of immediate impacts as well, like if they bring up that they needed swags and blankets…we were able to respond very immediately. [Informant 12, Collaborate methodology]

Many informants for studies with (generally) higher levels of participation reported increased empowerment of participants:

> …no way to prove it, but I would like to think that maybe villagers who got involved in more participatory discussions about wellbeing may speak more. Once you have had an experience of being listened to, then you're more likely to want to have that experience again and ask for it again. [Informant 6, Inform methodology]

> I think people call it bearing witness. I think more about solidarity and accompaniment that having somebody on your side listening to what you're seeing and what you want, and your aspirations is tremendously validating for people. And it helps them to go on in the face of tremendous odds. [Informant 7, Consult methodology]

In a focus group discussion, one informant further elaborated on this, noting that:

> …in the consultation and process space, in our experience, one of the key benefits there is actually being recognised and acknowledged as experts on this matter. And a direct benefit, in some ways…is also being remunerated as experts, especially in cases where participants are paid to share their knowledge. [Informant 10, Collaborate methodology]

While all informants reported no known negative impacts from their study, some informants who conducted studies with lower levels of participation explicitly noted that participants would not have experienced increased empowerment from their study due to low levels of involvement.

Informants also emphasised the positive impacts on themselves through engagement in the research, as noted by one informant:

> So in this process I can tell you that I have learned much more than I was able to give back to children. [Informant 9, Involve methodology]

Research space

Almost all informants reported notable impacts to the research community from their studies. These came in the form of dissemination of research findings to the academic community, validation of measurement tools and improving their useability for analysis, setting high-quality research standards, and the development of research partnerships emerging as a direct consequence of their study. In particular, informants noted the importance of using their study as a mechanism to promote this type of methodology and paradigm for others to apply. As mentioned by one informant:

> …there are a lot more people taking note of how to do this participatory research approach which is great. I think it's been very successful. [Informant 10, Collaborate methodology]

Indirect policy space

All informants reported having achieved indirect policy impact. Many informants highlighted the value of using the findings from their wellbeing study for advocacy or for creating awareness amongst policymakers. For example, as noted by one informant:

> I believe that this research will have an impact and we will continue at every opportunity to raise the findings of the research and remind people that it's there. And to keep doing advocacy around the findings. [Informant 12, Collaborate methodology]

Some informants also noted that the study findings have been helpful in grant applications for programs, while others reported that their studies have had some influence on high-level multinational frameworks, such as those of WHO and UNICEF. Importantly, it was noted by three informants that the study had started a dialogue within the community. As one informant noted:

> I think it's opened up a dialogue because many people who do work with [this community], they can't ignore the fact that there's been something put out there already. So, in some way, it's created a way of opening the conversation that isn't putting [this community] on the back foot. [Informant 10, Collaborate methodology]

Program and practice space

In total, seven of the 12 informants demonstrated that they had achieved impact in the program and practice space. Five achieved this through applying their framework for monitoring and evaluation purposes for either further research or directly for program adaptation, while four informants achieved impact through program development or adaptation based on the participatory wellbeing framework study. Furthermore, one additional informant noted that their study may have achieved impact through policy change at the local level, although they could not verify this themselves.

Focusing on the four informants who achieved impact through program development/adaptation, two of these were in the form of program adaptation following an evaluation based on the participatory wellbeing framework. The remaining two informants noted that programs had been developed or adapted simply based on the wellbeing themes and dimensions raised. It should be noted that of the four informants who demonstrated tangible impact through program development/adaptation, all were either developed by, or in partnership with, the organisation developing/adapting the program. This suggests that program and practice impact is substantially more achievable when researchers and organisations have a clear purpose and agenda for the study, and the means or partnerships to create instrumental change.

Direct policy space

Direct policy impact was achieved by one informant, through their framework being utilised as a government-level wellbeing framework. While it is not clear whether any policy changes can be attributed to the framework being implemented within government, this achievement is noted as an impact in the direct policy space, given that it has the potential to create systems-level change.

In achieving direct policy impact, one informant noted that the lack of a clear purpose is a particular challenge for participatory wellbeing studies, stating:

> So that's a problem that's built into wellbeing studies, because obviously you go out to look holistically at the whole of wellbeing. And you would discover, of course, it's complex and multifactorial and shaped by gender, age, and all sorts of other factors…And this is all quite interesting on an academic level, but it doesn't necessarily give you good points for intervention. [Informant 5, Consult methodology]

A large proportion of informants noted the challenges in achieving instrumental policy impact, or the difficulty in attributing any policy changes to their study. For example, this same informant noted:

> …for me, that was the frustration with participatory wellbeing studies. That I didn't feel I was able to make a difference with them. Or if I did, the difference I made was not the difference I particularly wanted to make. [Informant 5, Consult methodology]

9.5.3 Impacts felt across different actors

During stage 2 of data collection, informants were asked to discuss how each impact space affects the various actors involved in participatory wellbeing frameworks: participants, the wider community, the research team, the wider research community, and program developers/practitioners/policymakers. While there was consensus amongst informants that all actors are impacted to varying degrees across the different spaces, there was also agreement that some of the impacts are more salient across particular spaces. In particular, those directly involved in the research (research participants and the research team) engage more closely with impact spaces 1 and 2, while the policy and program spaces have greater associations with external decision-makers. The findings are outlined in Table 9-1, with the following sections outlining these results in greater detail.

Table 9-1 Impacts felt across different actors

Actors	**Impact spaces**				
	Impact space 1: Consultation and process	Impact space 2: Research (output and dissemination)	Impact space 3: Indirect policy	Impact space 4: Program and practice	Impact space 5: Direct policy
Research participants	XXX	XX	X	X	X
Wider community	XXX	X	X	X	X
Research team	XXX	XXX	XX	XX	XX
Wider research community	XXX	XXX	XX	X	X
Policymakers, practitioners, and program developers	XX	X	XXX	XXX	XXX

Note: Each X indicates a focus group discussion or interview highlighting this actor as being impacted in the specified space.

Participants

Participants were noted to be predominantly impacted through the consultation and process space. As highlighted earlier, this is through the participatory process enabling a greater sense of empowerment, but also a greater understanding of their own and their community's wellbeing. Furthermore, being acknowledged and recognised as experts, as well as being remunerated for their expertise, was noted as an important benefit.

Within the research space, the key impact for participants was the elevated importance of the consultation process. This was generally achieved through participants recognising that a published study, which is disseminated widely, makes an important contribution to the research community. Within the indirect policy space, the program/practice space, and the direct policy space, participants may benefit through an improvement in their wellbeing, according to their own definition of wellbeing, through the development or adaptation of policies or programs.

Wider community

The wider community, defined as those who are part of the population of interest but did not actually participate in the study, were generally noted to be impacted equally across the different spaces. Through the consultation and process space, members of the wider community will develop a greater understanding of their own, and their community's, wellbeing. Within the research space, dissemination of material allows the wider community to be better informed when negotiating outcomes with government or community bodies, and may also assist in preparing funding applications. Throughout the indirect, program/practice, and direct policy spaces, the wider community may be impacted through an improvement in their wellbeing, based on the community's definition, as well as the increased dialogue amongst the community and others working with the community regarding the community's wellbeing.

Research team

The research team were impacted largely through the consultation and process space, as well as the research space. Many participants highlighted that they learned a lot through their engagement with participants and obtained a greater awareness of the diverse understandings of wellbeing. Through achieving impact in the research space, the research team gain credibility during the dissemination process and in engagement with other academics. Within the indirect, program/practice, and direct policy spaces, the research team gain further credibility and validation that their work is recognised and is making a difference.

Wider research community

The wider research community were noted to be predominantly impacted in the research space, through exposure to these approaches, being able to replicate a method and paradigm, and through gaining better understanding of the diverse range of wellbeing conceptualisations. The wider research community is also impacted through better appreciating the perspectives of those with lived experience, which can help enrich their work and their understanding of wellbeing.

Policymakers/practitioners/program developers

Policymakers, practitioners, and those developing programs were found to be largely impacted through the research, indirect policy, program/practice, and direct policy spaces. They are impacted through the research and indirect policy space by obtaining a greater understanding of the population of interest and their wellbeing. Additional impacts within the research space include these participatory studies providing a basis for evidence-based decision-making grounded in the voices of community members, which flows on to impacts in the program/practice and direct policy spaces.

9.5.4 Enablers and barriers to achieving research and policy impact

Table 9-2 outlines the enablers and barriers to achieving research and policy impact that were noted by informants. They have been categorised by the actor most responsible for the barrier/enabler. The table also notes whether each factor was highlighted as enabling or hindering impact in the various spaces, using data from both the interviews and focus groups.

Table 9-2 Barriers and enablers for impact in each space and the actor responsible

Barrier/enabler by actor responsible	Enabler	Barrier	Impact spaces affected
Research participants			
Participant mindset		X	Impact space 1
Wider community			
Relevance of topic to community	X		All impact spaces
Community readiness	X		All impact spaces
Community ownership & support	X		All impact spaces
Data sovereignty movement	X	X	Impact spaces 2, 3, 4, & 5
Research team			
Characteristics of research team			
Researcher mindset	X	X	Impact space 1
Skills & experience in participatory techniques	X	X	Impact space 1
Existing networks	X		Impact spaces 2, 3, 4, & 5
Credibility	X		Impact spaces 2, 3, 4, & 5
Confidence (or lack thereof)	X	X	Impact spaces 2, 3, 4, & 5
Patience & persistence	X		Impact spaces 3, 4, & 5
Study characteristics			
Level of participation in study	X		Impact space 1
Relationship building & trust with participants	X		Impact space 1
Clear agenda & purpose	X		Impact spaces 3, 4, & 5
Resources & research process			
Amount of time allocated for consultation process	X	X	Impact space 1
Amount of resources & funding	X	X	All impact spaces
Research partnerships & institutional embeddedness	X		Impact spaces 2, 3, 4, & 5
Wide dissemination	X		Impact spaces 2, 3, 4, & 5
Stakeholder relationships	X		Impact spaces 3, 4, & 5
Accessibility & useability of research	X	X	Impact spaces 3, 4, & 5
Policy window & timing	X		Impact spaces 3, 4, & 5
Policymakers, practitioners, & program developers			
Political will	X	X	Impact spaces 3, 4, & 5
Evidence & knowledge bias		X	Impact spaces 3, 4, & 5
Awareness & skills of decision-makers regarding participatory approaches	X	X	Impact spaces 3, 4, & 5
Silos in government		X	Impact spaces 3, 4, & 5
Changing actors		X	Impact spaces 3, 4, & 5

Many of these barriers and enablers align with existing findings regarding policy and research impact. For example, as outlined in Chapter 2 (Section 2.4.2), research team characteristics such as existing networks, credibility, confidence, and patience have all been found to be beneficial in achieving impact (Evans & Cvitanovic, 2018; Weible et al., 2012). Aspects related to the research process, such as institutional embeddedness, wide dissemination, stakeholder relationships, accessibility and useability of the research, and waiting for a policy window are

also aspects noted frequently in the literature (Bache, 2019; Bauler, 2012; Cairney & Oliver, 2018; Evans & Cvitanovic, 2018; Farmer, 2010; Innes, 2019; Kingdon & Thurber, 1984; Oliver & Cairney, 2019; Oliver et al., 2014; Sumner et al., 2011). Political will is also a frequently cited barrier (or enabler) to policy impact, with decision-makers often balancing competing priorities and pressures (Oliver et al., 2014; Sumner et al., 2011).

However, discussions with the informants also brought to light enablers and barriers that are unique to the context of participatory wellbeing frameworks. For example, the mindset of participants was noted as a potential barrier to achieving impact through the consultation and process space. As expressed by one informant:

> A barrier that comes to mind immediately is the mindset of participants, or potential participants, that they don't have anything of value to add. They don't see themselves as experts, or "why would you want to be talking to me?" [Informant 1, Inform methodology]

This speaks to the value of higher levels of participation, as more comprehensive approaches to participation help participants recognise that they are experts in their own right, and help them understand their value in being involved in the study.

Within the participatory context, it was also noted that community relevance, ownership and support, and readiness for change were important enablers to achieving impact in a number of impact spaces. The value of this was noted in the context of a research partnership:

> It really made the difference to know that there was a local person on the ground…connecting community and the research. [Informant 10, Collaborate methodology]

This also speaks to the level of participation in the study, with research partnerships (which implicitly come under the "Collaborate" participatory methodology) inherently having greater connection to community, which is an enabling factor for community support.

However, despite there being a large number of enablers which a research team can draw on to expand the policy and research impact of a study, there are barriers out of their control that sit with policymakers, practitioners, and program developers. These include political will (noted as particularly relevant for groups marginalised by mainstream policy), a lack of

awareness and skills regarding participatory research, silos in government, and changing actors. One barrier that is particularly pertinent for participatory wellbeing frameworks, and participatory research in general, is an evidence and knowledge bias held by decision-makers. This was noted by a number of participants, who perceived that quantitative evidence is held in higher regard for policymaking. Given that participatory wellbeing frameworks often rely on qualitative research, this form of evidence can be overlooked by policymakers:

> There's still a huge lag in terms of how policymakers understand and collect qualitative data…Particularly the wellbeing stuff is very quantitative still. It's very much dominated by quants. And there are good reasons for that…but there are a lot of gaps. [Informant 11, Inform methodology]

It was also noted that in specific policy areas randomised controlled trials (RCTs), in particular, are often seen as the only form of evidence, which can be incompatible with participatory approaches:

> …up until now, if there hasn't been an RCT whose results are recorded in peer reviewed international journals, then it is said that there is no evidence. RCTs, however, are expensive, and are not appropriate for all situations, as they require a very narrow focus of practice, not often that chosen by local people. Therefore, few locally sourced, participatory interventions…have RCTs associated with them. [Informant 7, Consult methodology]

9.6 Limitations

Before going on to discuss the results in greater detail, it is important to note a few limitations of this study. Firstly, as already noted previously, this study did not hear from third parties (separate from the research team) who have applied participatory wellbeing frameworks. The involvement of third parties may have helped to develop richer insights into why a participatory wellbeing framework was chosen as a valuable source of evidence, how participatory wellbeing frameworks have been applied by third parties, and eventual research and policy impacts. One possible reason that no third party agreed to participate in the study is that they felt their application of the framework has resulted in limited impact. Given the challenges in recruiting third parties into the study, a method to consider in the future is to utilise a case-study approach, whereby one or two participatory frameworks are examined in greater detail.

A second limitation to note is potential sample selection bias. The study found that while there were fewer instances of direct policy/program/practice impacts, all informants achieved impact through the consultation and process space, the research space, and the indirect policy space. While the informants who participated in the study came from a wide range of disciplines and contexts, and utilised varying participatory approaches, it is possible that those who agreed to participate were more motivated to achieve impacts through their research in contrast to those who declined to participate (or failed to respond to the invitation). Thus, we cannot be certain that the findings regarding the extent of impact can be generalised to all participatory wellbeing frameworks. However, these findings do provide some indicative evidence on the extent of impact. Furthermore, the results regarding barriers and enablers align closely with existing research (as well as providing some findings unique to participatory wellbeing research), and can be used more widely to help foster greater impact of studies into the future.

Thirdly, the fact that this study did not hear from participants in participatory wellbeing studies is one of its limitations. This was due to both ethical and logistical constraints. Hearing the voices of participants of studies, and how involvement in the study impacted them, would be highly beneficial in better understanding the impacts of participation. Instead, this study relied on the assessment of researchers, which, while beneficial, may not provide a complete picture of these impacts. Given the ethical challenges in seeking participants' views, an approach that could be used in future to better understand participant perspectives could be to incorporate an ethnographic or case-study component into the process of developing a participatory wellbeing framework to directly hear from participants.

Finally, this study did not hear from the counterfactual – that is, developers of wellbeing frameworks who did not use a participatory approach. Doing so could be the focus of further research to better understand the additional benefit of incorporating participatory methods.

9.7 Discussion

The results from the study highlight some important insights in relation to participatory wellbeing frameworks and the potential of these frameworks to achieve research and policy impact. This section will discuss three significant findings from the study. Firstly, the study

highlighted the importance of *process* to achieve impact from participatory wellbeing frameworks. Secondly, a wide range of impacts were evident from participatory wellbeing studies. In particular, research impacts (through either the process or outputs) and indirect policy impacts were commonplace. Direct impacts on programs, policy, and practice, on the other hand, were scarcer. Finally, in examining the barriers to and enablers of impact, the results indicate that the research team has a relatively high level of control in achieving both research and policy impact. While substantial barriers may be present, researchers can take steps to try and expand the impact of their studies on research and policy.

9.7.1 The process matters

Informants indicated the importance of process in a number of ways throughout the study. Firstly, while the importance of using participatory approaches to identify a context-specific, holistic set of dimensions was a key theme raised by many informants, the value of dimensions and indicators emerging from participants' own words, as well as the importance from a rights-based, moral standpoint of including the voices of participants, was also strongly emphasised. Secondly, many of the impacts observed within the "process and consultation" space were reliant on genuine efforts by the research team to incorporate authentic participatory components into their studies. Greater empowerment of participants through the participatory process, participants being connected to services and information, providing a space for participants to tell their story and be listened to, and allowing for the research team themselves to learn from participants are all reliant on a robust, authentic, and comprehensive participatory process. Finally, many enablers to research and policy impact put forward by informants were closely related to process. For example, researcher mindset, skills and experience in participatory techniques, level of participation in the study, relationship building and trust with participants, a clear agenda and purpose, time allocated for consultation, and the development of research partnerships were all noted as important enablers to achieving impact. These are central aspects of the participatory process.

These findings align closely with existing literature regarding the benefits of participatory approaches to participants and the importance of research partnerships in achieving impact. Increased empowerment of communities has long been a central tenet of participatory research (Chambers, 1994b), and a number of studies have shown that participatory

approaches can result in increased empowerment of individuals, greater community cohesion, and capacity building of participants and co-researchers (e.g. Rambaldi, 2013; Travers, 1997). These benefits have also been noted in the context of the Capability Approach (Frediani et al., 2019). Furthermore, in the context of wellbeing studies, the consultation process has been shown to be greatly beneficial in ensuring benefits to participants and society, increased legitimacy of the framework, and wider usage and impact (Hall & Rickard, 2013; Kroll, 2011; Scott, 2012; Wallace & Schmuecker, 2012; Williams et al., 2008). However, such benefits are reliant on the use of genuine, non-tokenistic participatory techniques (Hayward et al., 2004; Holland et al., 2010; Mohan & Stokke, 2000).

In addition, the value of research partnerships and institutional embeddedness in achieving impact is widely recognised within existing literature. For example, in reviewing a number of studies which have applied participatory techniques, MacAulay et al. (1999) emphasise the value of collaboration and research partnerships in the success of such projects. Gentry et al. (2020) stress that achieving policy impact is not as straightforward as some may think, with research impact being a complex, cyclical process rather than a linear one, as it is sometimes construed. To overcome this complexity, Gentry et al. (2020) argue for greater collaboration and partnerships between local policymakers and researchers. They highlight that this can help to build a bridge between research and policy, ensuring that research is more policy-oriented, and that policymakers are more supported in translating knowledge to policy and take a greater interest in studies of this nature.

This study has therefore highlighted that when seeking to achieve impact from wellbeing studies, researchers should carefully consider the process and methodology being used. Taking the time in the initial planning and consulting phases within a research study to ensure that appropriate processes are in place may be highly beneficial in achieving greater impact later.

9.7.2 Wide-ranging research and indirect policy impacts, but barriers in impacting policy directly

Instances of participatory wellbeing studies achieving research and indirect policy impacts were commonplace. As outlined in the previous section, the consultation process adopted

within studies resulted in substantial benefits to both participants and the research team. Through using their studies to advocate for a paradigm shift toward participatory approaches, through implementing a high degree of dissemination, ensuring the useability of measurement tools through validation processes, and developing partnerships with other research teams, informants also achieved substantial impacts from research outputs. Indirect policy impacts were also widespread, with all informants indicating either a high level of awareness of their study amongst policymakers, the use of their study for program funding applications, their study's influence on high-level multinational frameworks, or the opening of a dialogue in the community about wellbeing. When contrasting these findings with previous studies, the extent of indirect impacts is relatively large. For example, in a review by Newson et al. (2021) of the impact of 148 child obesity studies, only 19% were found to have an indirect impact on policy (with an additional 16% having direct impact). While the widespread nature of the research and indirect policy impacts found in the current study may be partly due to sample selection bias, as noted in the Limitations section, this finding does still suggest that such impacts are relatively common, and practical to achieve.

On the other hand, while some direct impacts on programs, practice, and policy were noted, these were rarer. Making use of research partnerships and ensuring institutional embeddedness (so that the institutions in which impact is seeking to be achieved are actively involved in the study), however, were found to be valuable enablers in achieving direct impacts. Many informants did note the challenges in achieving direct impacts, with a number of barriers in place. These lie predominantly with practitioners, program developers, and policymakers, with key barriers being political will, an evidence and knowledge bias, awareness of participatory approaches, silos within government, and changing actors.

These findings are not unexpected, given the extensive literature base highlighting the challenges in achieving direct impacts from research (Bache, 2019; Gentry et al., 2020; Head, 2010; Newson et al., 2021). These challenges have also been noted specifically in the wellbeing measurement space (Barrington-Leigh & Escande, 2018; Wallace & Schmuecker, 2012; Whitby, Seaford, & Berry, 2014). However, it should be noted that given the complex nature of decision-making, it is entirely plausible that the indirect impacts demonstrated by informants may have actually gone on to influence direct impacts to programs, practice, and

policy. Indeed, Weiss (1977) argues that seeking to demonstrate instrumental impact from research is futile, given the complex nature of policymaking. Thus, it may be more beneficial for researchers developing participatory wellbeing frameworks to focus their efforts, and reported achievements, on the more attainable research and indirect policy impacts which can help to enlighten and influence the mindset of key decision-makers. While the researcher may never fully comprehend the extent of their impact, such efforts may prove to be fruitful in the long run.

9.7.3 Researchers have a high level of control in achieving impact

Finally, the results highlighted the level of control researchers have in their participatory wellbeing studies achieving impact. There are a number of enablers researchers can draw on to enhance their level of impact. These include skills and experience in participatory techniques, drawing on existing networks, and credibility within the research and policy spheres. As highlighted in Section 9.5.4, the research team can also ensure appropriate processes are in place within the research design to maximise impact, with wide dissemination and ensuring accessibility and useability of research to policymakers also being integral. One particularly strong theme that was emphasised by informants in enabling policy impact was time. Patience and persistence in allowing time for impact to occur is integral. This will allow a researcher to develop the skills, relationships, networks, and credibility highly valuable in achieving impact.

This is not to overlook the barriers that are in place, many of which are out of the control of a research team, as discussed in the previous section. It is hoped that by communicating the barriers in place, such as political will, evidence and knowledge bias, awareness and skills of policymakers regarding participatory techniques, silos in government, and changing actors, researchers can consider ways to overcome these by leveraging the enablers that they *do* have control over.

9.8 Conclusion

Through undertaking a key informant study with developers of participatory wellbeing frameworks, this chapter has provided a substantial contribution to the literature by linking participatory approaches, wellbeing measurement, and impact. The results highlight that

participatory wellbeing frameworks have the potential to achieve wide-ranging research and indirect policy impacts. While direct impacts are more challenging to achieve, employing research partnerships and ensuring institutional embeddedness have been shown to be highly beneficial in achieving direct impacts. However, to achieve such impacts, appropriate process is vital. Researchers should ensure that appropriate consultation processes are in place, and they should draw on the assets and characteristics of the research team and dedicate time and resources to dissemination and engagement to maximise the impact of their study. While there are significant barriers in place on the side of program developers, practitioners, and policymakers, researchers conducting work in this space can draw upon the reported enablers to achieve greater impact into the future.

Part 5 Bringing it all together

Chapter 10 Implications for research and policy

This chapter will bring together the key findings of the six studies undertaken within this thesis, highlighting their implications for research and policy. The results of the thesis can be summarised into four key points. Firstly, the findings in this thesis have highlighted that there is indeed diversity in how wellbeing is conceptualised throughout the world. Secondly, the value in using participatory approaches for wellbeing measurement has been emphasised. Thirdly, participatory wellbeing frameworks have been used extensively for further applications, however a number of challenges are present. Finally, participatory wellbeing frameworks have high potential for impact, but important barriers should be kept in mind. These points will be discussed in greater detail, with a final section outlining limitations of the thesis and proposed future directions.

10.1 Key finding 1: Wellbeing conceptualisations are culturally and contextually diverse

This thesis has demonstrated in a number of ways that there is a high degree of diversity in how wellbeing is conceptualised throughout the world. Firstly, the systematic review discussed in Chapter 4 identified 30 diverse, overarching wellbeing areas that reflect at a broad level how wellbeing is understood throughout the world. While there were some wellbeing areas which appeared to be largely universal, with areas such as relationships, emotional wellbeing, and physical health being commonly noted as important in participatory wellbeing studies, more novel wellbeing areas were also raised, such as connection to culture, mobility, and civic engagement. Such novel areas commonly appear within participatory wellbeing frameworks, with the results showing that when taking the six least-raised areas of a group, at least one of these areas is raised in two-thirds of studies.

These findings were further reinforced through the meta-analysis conducted in Chapter 5. Regression techniques confirmed that when grouping the population groups from studies in the systematic review, there was a degree of universality alongside cultural diversity. For example, there were no significant differences in the propensity for population groups to raise areas such as physical and mental health, independence and work, and relationships inside the family. However, diversity was still apparent. This could be seen through population

groups in low-income countries being more likely than those in high-income countries to raise wellbeing areas related to living in the community; personal growth, behaviours, and knowledge; material needs; spirituality and aspirations; and connection to culture. Furthermore, variation was also present when examining cultural groupings.

The fact that wellbeing conceptualisations are context-specific was noted as a strong motivation for conducting participatory wellbeing studies, as outlined by informants in Chapter 9. Informants also noted the value in participatory wellbeing frameworks being reflected through a holistic set of dimensions, as well as the fact that they come directly from the words of participants.

These findings help substantiate claims made by proponents of participatory wellbeing frameworks that wellbeing conceptualisations are indeed unique across different population groups (e.g. Camfield et al., 2008; Greco et al., 2015; Maulana et al., 2018; White & Pettit, 2004; Yap & Yu, 2016). The findings also support assertions and inform debates across disciplines, such as the view put forward by anthropologists that wellbeing is context-specific (Ferraro & Barletti, 2016; Mathews & Izquierdo, 2009) and the universal versus relativist debate within psychology regarding how wellbeing is understood throughout the world. The findings align with the thesis put forward by Lomas (2015) that there are both universal and relativist notions of how individuals experience wellbeing, and the results also correspond with the findings of a small number of empirical studies that compare wellbeing conceptualisations across a small number of study sites (e.g. Exenberger et al., 2019; Galati et al., 2006; Tafarodi et al., 2012).

The fact that wellbeing conceptualisations have been found to vary by context has important implications for how we should understand and measure wellbeing. In particular, those developing wellbeing frameworks and measurement tools should take care in ensuring the conceptualisations of wellbeing that they are drawing on are appropriate for the population of interest. It is enticing for governments, organisations, and researchers to turn to existing frameworks and tools which have been widely used or validated. Global policy frameworks, such as the OECD wellbeing framework (OECD, 2011), which have been widely applied throughout the world (such as New Zealand, see Dalziel et al., 2019) may be appropriate for

certain contexts. However, it is important to verify (ideally through participatory approaches) whether the framework aligns with the conceptualisations of wellbeing within a community, and to make adjustments where necessary, similar to work being done in Israel which adapts the OECD wellbeing framework to suit the Israeli context (OECD, 2015).

In the context of wellbeing measurement, seemingly neutral tools such as widely used hedonic and subjective wellbeing instruments (e.g. Bjørnskov, 2010; Cummins et al., 2003; Diener, Wirtz, et al., 2010; Huppert et al., 2009) can be prone to Western bias (Christopher, 1999; Joshanloo, 2014), resulting in findings that are potentially incompatible and irrelevant to the population of interest. While validation using statistical techniques is often touted as an approach to ensure that such tools are valid in different contexts, these approaches only deal with a narrow aspect of validity and fail to engage with individuals in the community to ensure that the constructs of wellbeing being used are meaningful and relevant. Therefore, if researchers are looking to undertake meaningful analyses using wellbeing instruments, it is important to assess the validity of applying a measurement tool within a certain context and to justify its appropriateness for use with the population group.

Governments, organisations, practitioners, and researchers exploring, researching, and analysing wellbeing are predominantly motivated by the intent of improving the lives of individuals. Given that this thesis has highlighted the diversity in how wellbeing is conceptualised throughout the world, if their intent is to do this in a meaningful way, it is vital that wellbeing frameworks and instruments align as closely as possible with how the population group understands wellbeing. Recognising this will help ensure that policy decisions and results from research studies create more meaningful change for individuals throughout the world.

10.2 Key finding 2: There is great value in using participatory approaches for wellbeing research

Participatory approaches have been found to be highly valuable for wellbeing measurement in two key ways. Firstly, given that there is great diversity in how wellbeing is conceptualised throughout the world, participatory approaches are a valid and reliable way of identifying

what those wellbeing conceptualisations are. Furthermore, informants noted in Chapter 9 that the incorporation of participatory approaches into wellbeing measurement can add credibility and validity to one's framework, as the constructs of wellbeing come directly from the population of interest. The value of participatory approaches in developing wellbeing frameworks was also illustrated in Chapters 7 and 8, through applications coming to more meaningful and relevant findings and policy recommendations for the population of interest.

Secondly, the thesis has highlighted the value of participatory approaches in achieving both research and policy impacts. As noted through the key informant study in Chapter 9, research impacts were achieved through participatory processes that ensured participants in a study had a voice in how their wellbeing was conceptualised. Furthermore, informants noted that the incorporation of authentic participatory processes resulted in greater empowerment of participants, and also helped participants to become connected to services and information and provided a space for participants to be listened to. Informants also noted that they themselves benefited through the research process, by learning from participants. These findings are closely aligned with the literature regarding the benefits to the community of participatory methods when implemented appropriately (Chambers, 1994b; Rambaldi, 2013; Travers, 1997).

As well as research impacts, the key informant study highlighted that various ways of operationalising participatory approaches resulted in greater policy impact. In particular, wellbeing frameworks that were developed through research partnerships in collaboration with the community were found to have much greater success in achieving direct impacts. Important enablers to achieving impact also related closely to participatory processes, such as research skills and experience in participatory techniques, level of participation in the study, relationship building and trust with participants, and time allocated for consultation. These findings help provide a stronger evidence base for the already existing literature regarding policy impact and both participatory approaches (Gentry et al., 2020; Jagosh et al., 2012; MacAulay et al., 1999) and wellbeing measurement specifically (Hall & Rickard, 2013; Kroll, 2011; Scott, 2012; Wallace & Schmuecker, 2012; Williams et al., 2008).

Despite the benefits of participatory approaches observed throughout the thesis, it is important to note that the vast majority of studies that appeared in the systematic review in Chapter 4 sat on the lower end of the participatory scale, utilising more standard qualitative research methods. Thus, if developers of wellbeing frameworks are seeking to achieve impact from their studies (which many report to be doing), they may wish to consider ways to increase the level of participation in their studies, and look to research partnerships, to maximise their impact. The list of studies identified in the systematic review provides a valuable resource for researchers and practitioners to draw upon methodologies for achieving higher levels of participation.

This thesis has also provided some guidance to support methodology development for participatory wellbeing frameworks. In particular, those undertaking work in this space can utilise the 30 wellbeing areas identified in the systematic review to shape interview questions, helping to ensure that participants consider a wide range of wellbeing areas, not just those salient to them, when responding to questions. Furthermore, the systematic review identified varied questions which can be used to elicit wellbeing conceptualisations. Researchers may wish to carefully consider the way in which they engage with participants. Further research can examine this issue more deeply.

10.3 Key finding 3: Participatory wellbeing frameworks have been applied extensively, but challenges are present

The data collected through the systematic review provides a valuable opportunity to assess the degree to which participatory wellbeing frameworks have been applied for research, program, and policy purposes. The findings indicated that they have been applied extensively, with only around one-third of participatory wellbeing frameworks not being applied for any additional purpose. The development of a measurement tool was the most common application, followed by validation purposes, comparing wellbeing conceptualisations between groups, conducting analysis based on a measurement tool, indicator development, and advocacy/policy recommendations.

With such wide usage of participatory wellbeing frameworks, especially for the development of a measurement tool (which 30% of frameworks were used for), it is important to examine both the value and challenges in applying participatory wellbeing frameworks in this way. Such analysis can help support researchers to consider whether the development of a measurement tool based on a participatory wellbeing framework is appropriate for their research study and can help overcome challenges and limitations. The value, limitations, and challenges of participatory wellbeing frameworks were illustrated through two case studies. The first study (Chapter 7) entailed a measurement tool being both developed using existing data based on a participatory wellbeing framework developed by ARACY (2012) and applied to assess the longitudinal wellbeing of children and young people in Australia. The second case study (Chapter 8) involved using an existing measurement tool developed by Maulana et al. (2019) to analyse the migrant wellbeing gap in Papua, Indonesia.

10.3.1 The value of participatory wellbeing frameworks for use as measurement tools

The value of applying participatory wellbeing frameworks as measurement tools was demonstrated in a number of ways through these case studies. Firstly, the Papua case study further reinforced concerns regarding the use of global wellbeing instruments. Compared to the Indonesian Wellbeing Scale (which was developed through a participatory wellbeing framework), the more standard measures of life satisfaction and happiness showed little variation amongst respondents, who tended to respond positively to these items, resulting in non-significant findings. In contrast, the Indonesian Wellbeing Scale (IWS) demonstrated a higher degree of variation and greater sensitivity in contrasting the wellbeing of migrants and the non-migrant population. The lack of variation may be influenced by cultural norms in Indonesia, where being grateful for and accepting what one has is viewed as important for wellbeing (Maulana et al., 2018). This therefore highlights the value of ensuring measurement tools are culturally appropriate for the population of interest, which can be facilitated through the use of participatory wellbeing frameworks.

Secondly, both case studies highlighted the value of using a multidimensional wellbeing measurement tool for analysis. Drawing on participatory wellbeing frameworks inherently

results in a multidimensional lens through which to examine wellbeing. Defining wellbeing multidimensionally results in a more holistic measure of wellbeing and can better facilitate more appropriate policy measures to target key areas of concern, in contrast to unidimensional measures. For example, case study 1 highlighted that out of five dimensions, the Healthy wellbeing dimension was a particular concern for children and young people in Australia, with poor diet and lack of exercise widespread. This was also illustrated in case study 2, which showed that migrants have higher levels of wellbeing in all dimensions according to the IWS, with this finding being somewhat surprising for the social relations sub-scale. Furthermore, the multidimensional model allows us to assess the degree to which individuals have their needs met in multiple dimensions, permitting more detailed assessment of those who are deprived in multiple wellbeing dimensions.

Thirdly, case study 1 illustrated the value in participatory wellbeing frameworks being applied for analysis using existing data (in this case, data from LSAC). While this also comes with a number of limitations (as will be discussed further below), the use of existing quantitative data is highly cost-effective and can help to ensure a high level of sample representation. In particular, the use of existing data provided the opportunity to analyse wellbeing using a long-running longitudinal data source, which has been shown to be particularly pertinent in analysing the wellbeing of children and young people given the rapid developmental changes that occur during childhood (Edwards, 2012; Elder et al., 1993; Morris et al., 2005; Sroufe, 1979). Longitudinal surveys are notoriously costly and time-consuming to implement, meaning that the collection of primary quantitative data for such analysis is generally infeasible.

Finally, both case studies demonstrated the value in measurement tools more closely measuring what matters. Through the use of participatory wellbeing frameworks, we can have greater confidence that the results produced from our analysis are more closely aligned with and have relevance for the population of interest, and thus any policy recommendations arising from the studies should help to create changes in outcomes that are more meaningful for the community.

10.3.2 Limitations and challenges

While both case studies indicated a number of benefits of using participatory wellbeing frameworks as measurement tools, some limitations and challenges were also noted. It is important to recognise these, to help support scholars in this space to have greater awareness of these limitations and be able to circumvent them where possible.

Firstly, while there is value in terms of cost-effectiveness and sample representation for the use of existing quantitative data, this also comes with a number of drawbacks. Case study 1 highlighted that the use of existing data can undermine the value of the participatory wellbeing framework to some extent. For example, certain sub-domains within the framework simply could not be represented due to lack of relevant data items in LSAC. Furthermore, even for those sub-domains for which data items were available, these were not always perfect operationalisations of the sub-domain. In short, if primary data had been collected, indicators would have been developed which reflected all the relevant dimensions and more closely represented the constructs. Additionally, the technical requirements of developing measurement tools, such as reducing indicators to a small, manageable number, can also affect the utility of drawing on participatory wellbeing frameworks.

Secondly, case study 2 presented challenges in the "scaling down" of measurement tools to smaller contexts. The IWS was based on a national-level framework, which was applied within this thesis to one province, Papua, within Indonesia. While Confirmatory Factor Analysis was undertaken to provide an indication of the validity of using this scale within Papua, it was highlighted that this in itself does not provide complete evidence that the scale is valid within this population group. Ideally, a consultation process would be conducted specifically with individuals in Papua to ensure that the conceptualisations of wellbeing used for the tool, which were drawn from the overall Indonesian population, align with understandings of wellbeing in Papua specifically. However, given that context-specific measurement tools are rare, the use of the IWS represented an important shift away from the use of more global measurement tools, which are likely even more distinct from Papuan conceptualisations of wellbeing. Thus, scholars should not avoid the scaling down of measurement tools to smaller contexts, as this would substantially reduce the usefulness and utility of measurement tools

based on participatory wellbeing frameworks. But rather researchers in this space should be aware of the potential shortcomings in doing so.

A final limitation highlighted is the fact that neither case study was undertaken using participatory approaches. Given that this thesis highlighted the value of utilising participatory processes in achieving both research and policy impacts, this could be a lost opportunity. While it would be perfectly feasible to have included participants in the research process, such as support with data collection, indicator selection, and analysis, the reality is that very few measurement tools based on participatory wellbeing frameworks have been developed using such approaches. Thus, scholars may wish to incorporate greater levels of participation beyond just the development of the framework itself, to enhance the research and policy impacts even further.

10.4 Key finding 4: Participatory wellbeing frameworks have high potential for impact, but barriers exist

The extent to which participatory wellbeing frameworks have actually achieved impact, through a number of avenues, was explored through the key informant study, finding firstly that research and indirect policy impacts were widespread. As described in the literature review and highlighted in Section 10.2, participants benefited greatly through the consultation process. Furthermore, research impacts were also reported by all informants, with informants advocating for a paradigm shift toward participatory approaches, achieving a high degree of dissemination of research outputs, and developing partnerships with other research teams. Indirect impacts were again reported by all informants (to varying degrees), with key decision-makers being aware of studies, the use of findings for program funding applications, and the study starting a dialogue in the community about wellbeing. While sample selection bias may be driving the high degree of indirect impacts observed, this is still substantially higher than indirect impacts reported through other reviews on impact from research studies (e.g. Newson et al., 2021).

While there were some instances of direct impact on programs or policy being achieved, these were rarer. Many informants noted the challenges of achieving direct impacts, with barriers

such as political will, an evidence and knowledge bias among policymakers, silos within government, and changing actors being largely out of their control. These findings are not surprising, with a large literature base stressing the challenges in achieving direct impacts from research, and from wellbeing studies specifically (Bache, 2019; Gentry et al., 2020; Head, 2010; Newson et al., 2021; Wallace & Schmuecker, 2012; Whitby, Seaford, & Berry, 2014). Despite this, however, the high degree of indirect impacts in itself is a promising finding, with scholars such as Weiss (1977) arguing, as noted earlier, that identifying discernible impact from research studies is a futile exercise, given the complex nature of decision-making. It may well be that the indirect impacts reported by informants have gone on to achieve instrumental impact, without their knowledge or awareness. Thus, scholars within this space may want to focus both their efforts and success in achieving impact on indirect impacts, such as engagement with decision-makers, and advocating for shifts toward participatory paradigms.

A final optimistic finding from the thesis is that despite a number of barriers being out of the researcher's control in achieving impact, there are a number of enablers of impact which the research team has greater control over. Such enablers include having skills and experience in participatory techniques, drawing on existing networks, having credibility amongst researchers and decision-makers, ensuring robust consultation processes, utilising research partnerships, disseminating widely, and ensuring the accessibility and useability of research findings. Thus, with the benefit of time, researchers can build their capacities and capabilities in these spaces to help ensure they have greater impact into the future.

10.5 Limitations

While this thesis brings to light a number of important findings, there are some limitations which should be noted within each of the studies. Firstly, the foundation of this thesis is based on the systematic review presented in Chapter 4. With certain population groups over-represented in participatory wellbeing studies, such as those living in higher-income countries, this may lead to biases in the wellbeing areas identified through this systematic review. Similarly, the over-representation of papers from certain disciplines, such as the HRQoL field, may have resulted in some bias in the wellbeing areas that were identified. Furthermore, studies which have not been published, or that are not easily searchable

through databases, could not be examined, which may leave gaps in the types of frameworks assessed. The analysis of wellbeing areas is also reliant on authors' interpretation and description of wellbeing areas.

The analysis in the thesis is also limited by the sample size of participatory wellbeing frameworks. The meta-analysis presented in Chapter 5 examined 126 participatory wellbeing frameworks, and while this undertaking did identify some significant differences, a larger sample size of frameworks would enable more in-depth and robust analysis. It is hoped that this sample can grow into the future with further studies being conducted. Limitations were also present in the meta-analysis through clustering countries based on broad-level cultural and economic attributes, which may result in inherent generalisations about these population groups.

The key informant study could have benefited from the recruitment of third parties who had applied participatory wellbeing frameworks. Their involvement would have provided a deeper insight into why participatory wellbeing frameworks were chosen as a valuable source of information, and further details on overall impacts. While attempts were made to recruit third parties, there were unfortunately challenges in securing their involvement. Sample selection bias may also have been present through the recruitment process, with those who agreed to participate potentially being more motivated to achieve impacts than those who declined or did not respond to the invitation. Thus, it is unclear whether the findings relating to the extent of impact for frameworks analysed in the key informant study are generalisable to all participatory wellbeing studies. Finally, this study did not engage with those who had developed wellbeing frameworks utilising other non-participatory approaches, which may have helped get a clearer indication of the additional benefits participatory approaches bring about.

10.6 Research gaps and future directions

The findings from this thesis have identified a number of possible avenues for further opportunities within this space.

Firstly, while this thesis comprehensively assessed cross-cultural variation in wellbeing conceptualisations, further analysis on other population groupings would be of value. In particular, given the strong child rights movement and the assertion by many scholars that how children conceptualise wellbeing themselves is often overlooked (Biggeri & Anich, 2009; Carrillo et al., 2021; Exenberger et al., 2019; Thoilliez, 2011), it would be of great value to contrast how wellbeing is conceptualised by different age cohorts. Such analysis would provide further evidence on the extent to which wellbeing conceptualisations vary by different population groups.

Secondly, the systematic review and meta-analysis outlined a number of potential sources of method biases in the development of participatory wellbeing frameworks. In particular, the way the data is collected, how the participatory approach is utilised, and the question used to elicit wellbeing conceptualisations may influence the way in which participants respond. Further analysis of the data collected in the systematic review can provide a useful initial insight into this issue. Furthermore, qualitative research could be employed to better understand the impact of salience on how participants engage with participatory wellbeing studies. For example, data collected from an open-ended question could be compared to that collected from wellbeing rankings based on a predefined list to examine areas missed from an open-ended question. Such analyses would help support researchers ensure greater robustness in their approaches to developing participatory wellbeing frameworks.

Thirdly, while the key informant study provided some valuable insights into the value of process in achieving research and policy impacts, this could be explored more deeply through ethnographic approaches. Conducting an in-depth case study would help to further assess the value of process in developing a participatory wellbeing framework. Furthermore, interviews with participants in these studies would help to better understand research impact. Such analysis would complement existing research by Scott (2012) and would help to gain a more comprehensive assessment of the challenges present in the development of participatory wellbeing frameworks.

Finally, the predominant focus of this thesis was participatory wellbeing frameworks that have been developed in the research space. Given that government-developed wellbeing

frameworks are less likely to have a well-documented methodology, they were largely excluded from the systematic review. A more in-depth examination into government wellbeing frameworks would make a substantial contribution to the literature by providing greater insight into the methodologies applied, whether non-participatory wellbeing frameworks do actually measure what matters to the population group, and the extent to which government frameworks achieve impact, given the more direct link between who develops and who uses the framework. Given the influence of the Beyond GDP movement (Stiglitz et al., 2009) in supporting governments throughout the world to move to wellbeing measures to assess progress, such analysis would have important policy implications.

Chapter 11 Concluding remarks

Asking the question, “What does wellbeing mean to you?” is a straightforward exercise, which almost all of us have the capacity to respond to. With this thesis supporting theoretical assertions that wellbeing is culturally and contextually specific, this question should be asked more often of communities. This will help to ensure that we are assessing and measuring wellbeing accurately and adequately. Furthermore, such an exercise can support decision-making on programs and policy to help create more meaningful change.

The findings in this thesis also support existing research on participatory approaches, showing that engaging in higher levels of participation and partnering with local communities can result in benefits that go beyond the research itself. This includes greater levels of impact to the community, as well as benefits to participants through having their voices heard. The systematic review identified that participatory wellbeing frameworks sit on a scale of participation. Researchers and practitioners can use these findings to consider ways they may wish to increase the level of participation in their projects.

Using the responses from the question, “What does wellbeing mean to you?” can help researchers to develop and use measurement tools that are relevant to the population of interest. While there are some challenges in doing so, this thesis has highlighted how these challenges can be overcome, and the value in using context-specific measurement tools.

Finally, through this thesis I have shown that existing participatory wellbeing frameworks have already had wide-ranging impacts on research and indirect impacts on policy. Given the potential for indirect impacts to transform into instrumental policy change, researchers in the space may want to focus, and gauge their success, on the achievement of indirect impacts, such as awareness of their study amongst policymakers. Optimistically, the thesis has identified a number of enablers that researchers can draw on to enhance impact from their studies.

In summary, this thesis has demonstrated that asking such a simple question can have high impact. By drawing on these findings, researchers, policymakers, and practitioners will be able

to achieve greater impact and more meaningful change for population groups throughout the world going forward.

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Appendices

Appendix A1 Search strategies by database

Database	Search terms
ASSIA	(“quality of life” OR “well-being” OR wellbeing OR “HRQOL” OR capability OR capabilities OR “good life”) AND framework AND (dimension OR indicator OR domain OR theme) AND (“participatory method” OR “participatory technique” OR “participatory research” OR “participatory framework” OR “participatory approach” OR “participatory process” OR “participatory wellbeing” OR “participatory well-being” OR “participatory assessment” OR “participatory mechanism” OR “participatory exercise” OR “participatory study” OR “participatory studies” OR “participatory activity” OR “participatory activities” OR “participatory evaluation” OR “self rate” OR “self-rate” OR “self-perceive” OR “self perceive” OR “self assess” OR “self-assess” OR “self generate” OR “self-generate” OR “person generate” OR “person-generate”)
PubMed	(“quality of life” OR “well-being” OR wellbeing OR “HRQOL” OR capability OR capabilities OR “good life”) AND framework AND (dimension OR indicator OR domain OR theme) AND (“participatory method” OR “participatory technique” OR “participatory research” OR “participatory framework” OR “participatory approach” OR “participatory process” OR “participatory wellbeing” OR “participatory well-being” OR “participatory assessment” OR “participatory mechanism” OR “participatory exercise” OR “participatory study” OR “participatory studies” OR “participatory activity” OR “participatory activities” OR “participatory evaluation” OR “self rate” OR “self-rate” OR “self-perceive” OR “self perceive” OR “self assess” OR “self-assess” OR “self generate” OR “self-generate” OR “person generate” OR “person-generate”)
PsycInfo	((quality adj2 life) OR well-being OR wellbeing OR HRQOL OR capability OR capabilities OR (good adj life)) AND framework AND (dimension OR indicator OR domain theme) AND ((participatory adj (method OR technique OR research OR framework OR approach OR process OR wellbeing OR well-being OR assessment OR mechanism OR study OR studies OR exercise OR activity OR activities OR evaluation)) OR self-perceive OR (self adj perceive) OR self-rate OR (self adj rate) OR self-assess OR (self adj assess) OR self-generate OR (self adj generate) OR person-generate OR (person adj generate))
Social Sciences Citation Index	(“quality of life” OR “well-being” OR wellbeing OR “HRQOL” OR capability OR capabilities OR “good life”) AND framework AND (dimension OR indicator OR domain OR theme) AND (“participatory method” OR “participatory technique” OR “participatory research” OR “participatory framework” OR “participatory approach” OR “participatory process” OR “participatory wellbeing” OR “participatory well-being” OR “participatory assessment” OR “participatory mechanism” OR “participatory exercise” OR “participatory study” OR “participatory studies” OR “participatory activity” OR “participatory activities” OR “participatory evaluation” OR “self rate” OR “self-rate” OR “self-perceive” OR “self perceive” OR “self assess” OR “self-assess” OR “self generate” OR “self-generate” OR “person generate” OR “person-generate”)
EconLit	(“quality of life” OR “well-being” OR wellbeing OR “HRQOL” OR capability OR capabilities OR “good life”) AND framework AND (dimension OR indicator OR domain OR theme) AND (“participatory method” OR “participatory technique” OR “participatory research” OR “participatory framework” OR “participatory approach” OR “participatory process” OR “participatory wellbeing” OR “participatory well-being” OR “participatory assessment” OR “participatory mechanism” OR “participatory exercise” OR “participatory study” OR “participatory studies” OR “participatory activity” OR “participatory activities” OR “participatory evaluation” OR “self rate” OR “self-rate” OR “self-perceive” OR “self perceive” OR “self assess” OR “self-assess” OR “self generate” OR “self-generate” OR “person generate” OR “person-generate”)

IBSS	(“quality of life” OR “well-being” OR wellbeing OR “HRQOL” OR capability OR capabilities OR “good life”) AND framework AND (dimension OR indicator OR domain OR theme) AND (“participatory method” OR “participatory technique” OR “participatory research” OR “participatory framework” OR “participatory approach” OR “participatory process” OR “participatory wellbeing” OR “participatory well-being” OR “participatory assessment” OR “participatory mechanism” OR “participatory exercise” OR “participatory study” OR “participatory studies” OR “participatory activity” OR “participatory activities” OR “participatory evaluation” OR “self rate” OR “self-rate” OR “self-perceive” OR “self perceive” OR “self assess” OR “self-assess” OR “self generate” OR “self-generate” OR “person generate” OR “person-generate”)
Sociological Abstracts	(“quality of life” OR “well-being” OR wellbeing OR “HRQOL” OR capability OR capabilities OR “good life”) AND framework AND (dimension OR indicator OR domain OR theme) AND (“participatory method” OR “participatory technique” OR “participatory research” OR “participatory framework” OR “participatory approach” OR “participatory process” OR “participatory wellbeing” OR “participatory well-being” OR “participatory assessment” OR “participatory mechanism” OR “participatory exercise” OR “participatory study” OR “participatory studies” OR “participatory activity” OR “participatory activities” OR “participatory evaluation” OR “self rate” OR “self-rate” OR “self-perceive” OR “self perceive” OR “self assess” OR “self-assess” OR “self generate” OR “self-generate” OR “person generate” OR “person-generate”)
Google	(“quality of life” OR “well-being” OR wellbeing OR “HRQOL” OR capability OR capabilities OR “good life”) AND framework AND (dimension OR indicator OR domain OR theme) AND (“participatory method” OR “participatory technique” OR “participatory research” OR “participatory framework” OR “participatory approach” OR “participatory process” OR “participatory wellbeing” OR “participatory well-being” OR “participatory assessment” OR “participatory mechanism” OR “participatory exercise” OR “participatory study” OR “participatory studies” OR “participatory activity” OR “participatory activities” OR “participatory evaluation” OR “self rate” OR “self-rate” OR “self-perceive” OR “self perceive” OR “self assess” OR “self-assess” OR “self generate” OR “self-generate” OR “person generate” OR “person-generate”)
Google Scholar	(“quality of life” OR “well-being” OR wellbeing OR “HRQOL” OR capability OR capabilities OR “good life”) AND framework AND (dimension OR indicator OR domain OR theme) AND (“participatory method” OR “participatory technique” OR “participatory research” OR “participatory framework” OR “participatory approach” OR “participatory process” OR “participatory wellbeing” OR “participatory well-being” OR “participatory assessment” OR “participatory mechanism” OR “participatory exercise” OR “participatory study” OR “participatory studies” OR “participatory activity” OR “participatory activities” OR “participatory evaluation” OR “self rate” OR “self-rate” OR “self-perceive” OR “self perceive” OR “self assess” OR “self-assess” OR “self generate” OR “self-generate” OR “person generate” OR “person-generate”)

Appendix A2 Data extraction categories

Life stage	
Children and young people	Studies that focus on children and/or young people, aged 0–18.
Young adults	Studies that focus on young adults, aged over 18. The exact range is undefined, and is left for authors to define, however a rough guideline is those younger than 29.
Adults	Studies for which the population group is targeted toward adults only (i.e. studies that exclusively do not focus on children, young people, young adults, or older adults).
Older adults	Studies which articulate a focus on older adults, with no strict age range applied.
General community	This is for studies that do not necessarily focus on a specific life stage, but rather a general community. This is predominantly for studies that are focused on a geographic community (which may or may not include children or young people as participants) and those with a specific health condition.
Theoretical justifications	
Capability approach	Studies that highlight the Capability Approach as a key theory.
Quality of life (QoL)	Studies that use the frame/terminology of "quality of life".
Health-related quality of life (HRQoL)	Studies that use QoL within a health context. Studies that focus on QoL for a specific illness should be classed as HRQoL, not QoL. As noted by Phillips (2006), many definitions of HRQoL are not dissimilar to QoL. Thus, for that reason, studies that define QoL within the health context are considered HRQoL.
Subjective wellbeing	Studies that highlight subjective wellbeing or life satisfaction as a theoretical basis. Note that while there is a strong crossover between subjective wellbeing and happiness, these were coded separately.
Happiness	Studies that cite happiness as a theoretical basis. Note that while there is a strong crossover between subjective wellbeing and happiness, these were coded separately.
Psychosocial wellbeing	Studies that use psychosocial wellbeing, mental health, or trauma as a theoretical basis.
Sustainability	Studies which draw on theories of sustainability, environment, or ecology as a motivator for measuring human wellbeing.
Indigenous wellbeing	Studies framed through an Indigenous lens. The motivation for such studies is often that wellbeing is perceived differently by an Indigenous community, in contrast to non-Indigenous conceptions of wellbeing.
Children's voice	Studies that cite the child rights movement and note the importance of hearing the views of children themselves. Being a participatory child wellbeing study does not necessarily mean that it will be coded to this theoretical justification, as they must highlight child rights/voice as a theoretical motivation.
General wellbeing	Studies that note the importance of measuring wellbeing more generally, without reference to a specific theory.
Type of participation	
Inform	Participants inform the researchers regarding perceptions of wellbeing through a single-stage process. Researchers do not seek to further clarify wellbeing meanings following the original data collection. No participants are involved in the research design/analysis/planning process.
Enrich	Greater effort is made on the part of the researcher to reduce power imbalances between participants and researchers. Data is generally collected through multiple stages. Participants may also go through a more rigorous data collection process.

	Participants are not asked for feedback on the resulting framework or themes arising from the analysis.
Consult	Development of the framework is a two-way process, whereby researchers further clarify wellbeing meanings with participants. This could include studies utilising focus groups, in which groups are asked to come to a final consensus on wellbeing meanings. Participants usually have some involvement in the analysis phase of the research (i.e. helping to develop final wellbeing dimensions/themes), but they are not included as part of the research team.
Involve	Individuals in the community or population group of interest are directly involved in the research design/analysis/planning process. The study is researcher-led.
Collaborate	The study is co-led by researchers external to the community alongside people within the community, as equals.
Empower	The study is led entirely by those in the community. The community may contract external researchers to assist.
Approach for dimension/sub-domain derivation	
Data-driven	The final set of wellbeing dimensions is developed solely through analysis of the data and is not influenced by any predefined framework.
Framework validation/data-driven	Study seeks to collect data to validate a predefined framework. However, to be eligible for the study, dimensions and/or sub-domains must be derived through a data-driven approach.

Appendix A3 Included studies

Study reference	Theoretical justification	Purpose	Country of data collection	Geographic level	Life stage	Special population group
Abunge, C., Coulthard, S., & Daw, T. M. (2013). Connecting marine ecosystem services to human well-being: Insights from participatory well-being assessment in Kenya. *Ambio*, *42*(8), 1010–1021. https://doi.org/10.1007/s13280-013-0456-9	Capability Approach/Sustainability	Ecosystem and wellbeing	Kenya	Place-based	General community	-
Al-Janabi, H., Flynn, T. N., & Coast, J. (2012). Development of a self-report measure of capability wellbeing for adults: The ICECAP-A. *Quality of Life Research, 21*(1), 167–176. https://doi.org/10.1007/s11136-011-9927-2	Capability Approach	Measurement tool	United Kingdom	Subnational	Adults	-
Alfaro-Inzunza, J., Lorena Ramírez-Casas Del, V., & Varela, J. J. (2019). Notions of life satisfaction and dissatisfaction in children and adolescents of low socioeconomic status in Chile. *Child Indicators Research*, *12*(6), 1897–1913. https://doi.org/http://dx.doi.org/10.1007/s12187-018-9618-4	Subjective wellbeing	Define wellbeing	Chile	National	Children and young people	Disadvantage
Amazonas, I. T., Kawa, N. C., Zanetti, V., Linke, I., & Sinisgalli, P. A. (2019). Using rich pictures to model the "good life" in Indigenous communities of the Tumucumaque Complex in Brazilian Amazonia. *Human Ecology*, *47*(3), 341–354. https://doi.org/10.1007/s10745-019-0076-5	Indigenous wellbeing/Sustainability	Methodology piloting and validation	Brazil	Place-based	Young adults	Indigenous
Andresen, S., & Fegter, S. (2011). Children growing up in poverty and their ideas on what constitutes a good life: Childhood studies in Germany. *Child Indicators Research, 4*, 1–19. https://doi.org/10.1007/s12187-010-9073-3	Children's voice/Capability Approach	Define wellbeing	Germany	National	Children and young people	Disadvantage
Andresen, E. M., Fried-Oken, M., Peters, B., & Patrick, D. L. (2016). Initial constructs for patient-centered outcome measures to evaluate brain-computer interfaces. *Disabiity andl Rehabilitation: Assistive Technology*, *11*(7), 548–557. https://doi.org/10.3109/17483107.2015.1027298	HRQoL	Measurement tool	USA	Non-geographic	Adults	Illness
Angermeyer, M. C., Holzinger, A., Kilian, R., & Matschinger, H. (2001). Quality of life – As defined by schizophrenic patients and psychiatrists. *International Journal of Social Psychiatry*, *47*(2), 34–42. https://doi.org/10.1177/002076400104700203	HRQoL	Define wellbeing	Germany	Non-geographic	Adults	Illness
ARACY. (2012). *The Nest consultation*. https://www.aracy.org.au/publications-resources/command/download_file/id/313/filename/The-Nest-consultation-report-Findings-from-consultation.pdf	Children's voice/General wellbeing	Policy framework	Australia	National	Children and young people; Young adults	-
Armstrong, M., Boyden, J., Galappatti, A., & Hart, J. (2004). *Piloting methods for the evaluation of psychosocial programme impact in Eastern Sri Lanka: Final report for USAID*. Save the Children. https://resourcecentre.savethechildren.net/sites/default/files/documents/2685.pdf	Psychosocial wellbeing	Methodology piloting and validation	Sri Lanka	Place-based	Children and young people	Conflict/displacement
Banerjee, S., Willis, R., Graham, N., & Gurland, B. J. (2010). The Stroud/ADI dementia quality framework: A cross-national population-level framework for assessing the quality of life impacts of services and policies for people with dementia and their family carers. *International Journal of Geriatric Psychiatry*, *25*(3), 249–257. https://doi.org/10.1002/gps.2330	HRQoL	Policy framework	USA, Dominican Republic, New Zealand, Spain, Japan, Turkey	Non-geographic	Adults	Illness
Bartlett, J. G. (2005). Health and well-being for Metis women in Manitoba. *Canadian Journal of Public Health*, *96 Suppl 1*, S22–27. https://doi.org/10.1007/BF03405312	Indigenous wellbeing	Monitoring & evaluation	Canada	Subnational	Adults	Indigenous/women

Study reference	Theoretical justification	Purpose	Country of data collection	Geographic level	Life stage	Special population group
Bayle, B., Kemoun, G., Migaud, H., & Thevenon, A. (2000). Comparison of two modes of administration of a personalized quality of life scale in a longitudinal study of total hip arthroplasty. *Joint, Bone, Spine: Revue du rhumatisme*, *67*, 101–106.	HRQoL	Methodology piloting and validation	France	Non-geographic	Adults	Illness
Beauchamp, E., Woodhouse, E., Clements, T., & Milner-Gulland, E. J. (2018). "Living a good life": Conceptualizations of well-being in a conservation context in Cambodia. *Ecology and Society*, *23*(2), Article 28. https://doi.org/10.5751/ES-10049-230228	General wellbeing/Sustainability	Ecosystem and wellbeing	Cambodia	Subnational	General community	-
Biggeri, M., Libanora, R., Mariani, S., & Menchini, L. (2006). Children conceptualizing their capabilities: Results of a survey conducted during the First Children's World Congress on Child Labour. *Journal of Human Development*, *7*(1), 59–83. https://doi.org/10.1080/14649880500501179	Children's voice/Capability Approach	Define wellbeing	Global	International	Children and young people	-
Biggeri, M., & Anich, R. (2009). The deprivation of street children in Kampala: Can the Capability Approach and participatory methods unlock a new perspective in research and decision making? *Mondes en développement*, *146(2),* 73–93. https://doi.org/10.3917/med.146.0073	Children's voice/Capability Approach	Define wellbeing	Uganda	Place-based	Children and young people	Homeless
Biggeri, M., & Ferrannini, A. (2014). Opportunity gap analysis: Procedures and methods for applying the Capability Approach in development initiatives. *Journal of Human Development and Capabilities*, *15*(1), 60–78. https://doi.org/10.1080/19452829.2013.837036	Capability Approach	Monitoring & evaluation	Uganda	Place-based	Young adults	Disability
Bintliff, A., Stark, C., Brown, L., & Alonso, A. (2018). Lifelong wellbeing for survivors of sex trafficking: Collaborative perspectives from survivors, researchers, and service providers. *Dignity: A Journal on Sexual Exploitation and Violence*, *3(3),* Article 3. https://doi.org/10.23860/dignity.2018.03.03.03	General wellbeing/Psychosocial wellbeing/Capability Approach	Policy framework	Global	Non-geographic	Adults	Trauma
Borglin, G., Edberg, A.-K., & Rahm Hallberg, I. (2005). The experience of quality of life among older people. *Journal of Aging Studies*, *19*(2), 201–220. https://doi.org/10.1016/j.jaging.2004.04.001	QoL	Define wellbeing	Sweden	Place-based	Older adults	-
Bourke, L., & Geldens, P. M. (2007). Subjective wellbeing and its meaning for young people in a rural Australian center. *Social Indicators Research*, *82*(1), 165–187. https://doi.org/10.1007/s11205-006-9031-0 Bourke, L., & Geldens, P. (2007). What does wellbeing mean? Perspectives of wellbeing among young people and youth workers in rural Victoria. *Youth Studies Australia*, *26*(1), 41–49. https://researchbank.swinburne.edu.au/file/e26d5194-af49-413c-85f1-90c4074f3de1/1/PDF%20(Published%20version).pdf	Subjective wellbeing/General wellbeing	Define wellbeing	Australia	Place-based	Young adults	-
Bowling, A., & Gabriel, Z. (2007). Lay theories of quality of life in older age. *Ageing and Society*, *27*(6), 827–848. https://doi.org/10.1017/S0144686X07006423 Bowling, A., Gabriel, Z., Dykes, J., Dowding, L. M., Evans, O., Fleissig, A., Banister, D., & Sutton, S. (2003). Let's ask them: A national survey of definitions of quality of life and its enhancement among people aged 65 and over. *The International Journal of Aging and Human Development*, *56*(4), 269–306. https://doi.org/10.2190/BF8G-5J8L-YTRF-6404 Bowling, A., & Gabriel, Z. (2004). An integrational model of quality of life in older age. Results	QoL	Define wellbeing	United Kingdom	National	Older adults	-

Study reference	Theoretical justification	Purpose	Country of data collection	Geographic level	Life stage	Special population group
from the ESRC/MRC HSRC Quality of Life Survey in Britain. *Social Indicators Research*, *69*(1), 1–36. https://doi.org/10.1023/B:SOCI.0000032656.01524.07 Gabriel, Z., & Bowling, A. N. N. (2004). Quality of life from the perspectives of older people. *Ageing and Society*, *24*(5), 675–691. https://doi.org/10.1017/S0144686X03001582						
Bragin, M., Onta, K., Janepher, T., Nzeyimana, G., & Eibs, T. (2014). To be well at heart: Women's perceptions of psychosocial wellbeing in three conflict affected countries. *Intervention*, *12*, 187–209. https://doi.org/10.1097/WTF.0000000000000030	Psychosocial wellbeing	Monitoring & evaluation	Burundi, Nepal	International	Adults	Conflict/displacement
Bragin, M., Taaka, J., Adolphs, K., Gray, H., & Eibs, T. (2015). Measuring difficult-to-measure concepts in clinical social work practice operationalizing psychosocial well-being among war-affected women: A case study in Northern Uganda. *Clinical Social Work Journal*, *43*(4), 348–361. https://doi.org/http://dx.doi.org/10.1007/s10615-014-0507-0	Psychosocial wellbeing	Monitoring & evaluation	Uganda	Subnational	Adults	Conflict/displacement
Britton, E., & Coulthard, S. (2013). Assessing the social wellbeing of Northern Ireland's fishing society using a three-dimensional approach. *Marine Policy*, *37*(1), 28–36. https://doi.org/10.1016/j.marpol.2012.04.011	Sustainability/General wellbeing	Ecosystem and wellbeing	Ireland	Subnational	General community	-
Bromberg, M. B., & Forshew, D. A. (2002). Comparison of instruments addressing quality of life in patients with ALS and their caregivers. *Neurology*, *58*(2), 320–322. https://doi.org/10.1212/WNL.58.2.320	HRQoL	Methodology piloting and validation	USA	Non-geographic	Adults	Illness
Camfield, L. (2006). *The why and how of understanding 'subjective' wellbeing: Exploratory work by the WeD group in four developing countries* (WeD Working Paper 26). University of Bath. http://www.bath.ac.uk/soc-pol/welldev/research/workingpaperpdf/wed26.pdf	QoL/General wellbeing	Define wellbeing	Bangladesh, Ethiopia, Peru, Thailand	International	General community	-
Camfield, L., & Ruta, D. (2007). "Translation is not enough": Using the Global Person Generated Index (GPGI) to assess individual quality of life in Bangladesh, Thailand, and Ethiopia. *Quality of Life Research*, *16*(6), 1039–1051. https://doi.org/10.1007/s11136-007-9182-8	QoL/General wellbeing	Methodology piloting and validation	Bangladesh, Thailand, Ethiopia	International	General community	-
Camfield, L., & Tafere, Y. (2009). *"Children with a good life have to have school bags": Diverse understandings of well-being among older children in three Ethiopian communities*. Young Lives. https://www.younglives.org.uk/sites/www.younglives.org.uk/files/YL-WP37-Camfield-WellbeingInEthiopia.pdf	General wellbeing/Children's voice	Define wellbeing	Ethiopia	International	Children and young people	-
Carlquist, E., Ulleberg, P., Delle Fave, A., Nafstad, H. E., & Blakar, R. M. (2017). Everyday understandings of happiness, good life, and satisfaction: Three different facets of well-being. *Applied Research in Quality of Life*, *12*, 481–505. https://doi.org/10.1007/s11482-016-9472-9	Happiness/Subjective wellbeing/General wellbeing	Define wellbeing	Norway	National	Adults	-
Carlson, L. E., Bultz, B. D., & Morris, D. G. (2005). Individualized quality of life, standardized quality of life, and distress in patients undergoing a phase I trial of the novel therapeutic Reolysin (reovirus). *Health and Quality of Life Outcomes*, *3*(1), Article 7. https://doi.org/10.1186/1477-7525-3-7	HRQoL	Methodology piloting and validation	Canada	Non-geographic	Adults	Illness
Chaplin, L. N. (2009). Please may I have a bike? Better yet, may I have a hug? An examination of children's and adolescents' happiness. *Journal of Happiness Studies*, *10*, 541-562. https://doi.org/10.1007/s10902-008-9108-3	Happiness	Measurement tool	USA	National	Children and young people	-
Cheyne, A., & Kinn, S. (2001). A pilot study for a randomised controlled trial of the use of the schedule for the evaluation of individual quality of life (Seiqol) in an alcohol counselling	HRQoL	Monitoring & evaluation	United Kingdom	Non-geographic	Adults	Illness

Study reference	Theoretical justification	Purpose	Country of data collection	Geographic level	Life stage	Special population group
setting. *Addiction Research & Theory*, *9*(2), 165–178. https://doi.org/10.3109/16066350109141747						
Clark, D. A. (2003). Concepts and perceptions of human well-being: Some evidence from South Africa. *Oxford Development Studies*, *31*(2), 173-196. https://doi.org/10.1080/13600810307428	Capability Approach	Policy framework	South Africa	Subnational	General community	Disadvantage
Collomb, J.-G. E., Alavalapati, J. R., & Fik, T. (2012). Building a multidimensional wellbeing index for rural populations in northeastern Namibia. *Journal of Human Development and Capabilities*, *13*(2), 227–246. https://doi.org/10.1080/19452829.2011.645532	General wellbeing	Measurement tool	Namibia	Subnational	General community	-
Corring, D., & Cook, J. (2007). Use of qualitative methods to explore the quality-of-life construct from a consumer perspective. *Psychiatric Services*, *58*, 240–244. https://doi.org/10.1176/appi.ps.58.2.240	HRQoL	Define wellbeing	Canada	Non-geographic	Adults	Illness
Costantini, M., Mencaglia, E., Giulio, P. D., Cortesi, E., Roila, F., Ballatori, E., Tamburini, M., Casali, P., Licitra, L., Candis, D. D., Massidda, B., Luzzani, M., Campora, E., Placido, S. D., Palmeri, S., Angela, P. M., Baracco, G., Gareri, R., Martignetti, A., Ragosa, S., Zoda, L., Ionta, M. T., Bulletti, S., & Pastore, L. (2000). Cancer patients as "experts" in defining quality of life domains. A multicentre survey by the Italian Group for the Evaluation of Outcomes in Oncology (IGEO). *Quality of Life Research*, *9*(2), 151–159. https://doi.org/10.1023/a:1008967104082	HRQoL/QoL	Monitoring & evaluation	Italy	Non-geographic	Adults	Illness
Crivello, G., Camfield, L., & Woodhead, M. (2009). How can children tell us about their wellbeing? Exploring the potential of participatory research approaches within young lives. *Social Indicators Research*, *90*(1), 51–72. https://doi.org/10.1007/s11205-008-9312-x	Children's voice/General wellbeing	Methodology piloting and validation	India	Place-based	Children and young people	Boys
De Berry, J., Fazili, A., Farhad, S., Nasiry, F., Hashemi, S., & Hakimi, M. (2003). *The children of Kabul: Discussions with Afghan families*. Save the Children. https://resourcecentre.savethechildren.net/library/children-kabul-discussions-afghan-families	Psychosocial wellbeing/General wellbeing	Policy framework	Afghanistan	Place-based	Children and young people	Conflict/displacement
de la Rie, S., Noordenbos, G., Donker, M., & van Furth, E. (2007). The patient's view on quality of life and eating disorders. *International Journal of Eating Disorders*, *40*(1), 13–20. https://doi.org/10.1002/eat.20338	HRQoL	Define wellbeing	Netherlands	Non-geographic	Adults	Illness
Delle Fave, A., Brdar, I., Wissing, M. P., Araujo, U., Castro Solano, A., Freire, T., Hernández-Pozo, M. D. R., Jose, P., Martos, T., Nafstad, H. E., Nakamura, J., Singh, K., & Soosai-Nathan, L. (2016). Lay definitions of happiness across nations: The primacy of inner harmony and relational connectedness. *Frontiers in Psychology*, *7*, Article 30. https://doi.org/10.3389/fpsyg.2016.00030	Happiness	Define wellbeing	Argentina, Brazil, Croatia, Hungary, India, Italy, Mexico, New Zealand, Norway, Portugal, South Africa, USA	International	Adults	-
Dew, A., Barton, R., Gilroy, J., Ryall, L., Lincoln, M., Jensen, H., Flood, V., Taylor, K., & McCrae, K. (2019). Importance of Land, family and culture for a good life: Remote Aboriginal people with disability and carers. *Australian Journal of Social Issues*. https://doi.org/10.1002/ajs4.96	General wellbeing	Policy framework	Australia	Place-based	Adults	Indigenous/disability
Douma, L., Steverdink, N., & Hutter, I. (2017). Exploring subjective well-being in older age by using participant-generated word clouds. *Gerontologist*, *57*(2), 229–239. https://doi.org/10.1093/geront/gnv119	Subjective wellbeing	Define wellbeing	Netherlands	Non-geographic	Older adults	-

Study reference	Theoretical justification	Purpose	Country of data collection	Geographic level	Life stage	Special population group
Dunkel, F. V., Hansen, L. M., Halvorson, S. J., & Bangert, A. (2017). Women's perceptions of health, quality of life, and malaria management in Kakamega County, Western Province, Kenya. *GeoJournal*, *82*(4), 841–865. https://doi.org/http://dx.doi.org/10.1007/s10708-016-9701-7	HRQoL/QoL	Community and human development	Kenya	Place-based	Adults	Women
Exenberger, S., Banzer, R., Jayakumar, C., Höfer, S., & Juen, B. (2019). Eastern and Western children's voices on their well-being. *Child Indicators Research*, *12*(3), 747–768. https://doi.org/10.1007/s12187-018-9541-8	Subjective wellbeing/Happiness/Children's voice	Define wellbeing	Austria, Germany, India	International	Children and young people	Out-of-home-care
Fattore, T., Mason, J., & Watson, E. (2009). When children are asked about their well-being: Towards a framework for guiding policy. *Child Indicators Research*, *2*(1), 57–77. https://doi.org/10.1007/s12187-008-9025-3 Fattore, T., Mason, J., & Watson, E. (2007). Children's conceptualisation(s) of their well-being. *Social Indicators Research*, *80*(1), 5–29. https://doi.org/10.1007/s11205-006-9019-9	Children's voice/General wellbeing	Monitoring & Evaluation	Australia	Subnational	Children and young people	-
Foley, K. R., Blackmore, A. M., Girdler, S., O'Donnell, M., Glauert, R., Llewellyn, G., & Leonard, H. (2012). To feel belonged: The voices of children and youth with disabilities on the meaning of wellbeing. *Child Indicators Research*, *5*(2), 375–391. https://doi.org/10.1007/s12187-011-9134-2	Children's voice/General wellbeing	Define wellbeing	Australia	Non-geographic	Children and young people	Disability
Fossas, A. (2019). Psychological maturity predicts different forms of happiness. *Journal of Happiness Studies*, *20*(6), 1933–1952. https://doi.org/10.1007/s10902-018-0033-9	Happiness	Monitoring & evaluation	Not specified	Non-geographic	Adults	-
Fry, P. S. (2000). Whose quality of life is it anyway? Why not ask seniors to tell US about IT? *The International Journal of Aging and Human Development*, *50*(4), 361–383. https://doi.org/10.2190/DD41-W8F4-W6LK-FY8Q	QoL	Define wellbeing	Canada	Subnational	Older adults	-
Gabhainn, S., & Sixsmith, J. (2005). *Children's understandings of well-being*. Centre for Health Promotion Studies, Department of Health Promotion, National University of Ireland, Galway and the The National Children's Office. https://www.researchgate.net/profile/Saoirse-Gabhainn/publication/235642816_Children%27s_Understandings_of_Well-being/links/0c960528cf4b7d2624000000/Childrens-Understandings-of-Well-being.pdf	General wellbeing	Monitoring & evaluation	Ireland	Subnational	Children and young people	-
Galati, D., Manzano, M., & Sotgiu, I. (2006). The subjective components of happiness and their attainment: A cross-cultural comparison between Italy and Cuba. *Social Science Information*, *45*(4), 601–630. https://doi.org/10.1177/0539018406069594 Sotgiu, I., Galati, D., Manzano, M., & Rognoni, E. (2011). Happiness components and their attainment in old age: A cross-cultural comparison between Italy and Cuba. *Journal of Happiness Studies*, *12*(3), 353–371. https://doi.org/10.1007/s10902-010-9198-6	Happiness	Define wellbeing	Italy, Cuba	International	General community	-
Giacomoni, C., Souza, L., & Hutz, C. (2014). O conceito de felicidade em crianças [The concept of happiness in children]. *Psico-USF (Bragança Paulista)*, *19*, 143–153. https://doi.org/10.1590/S1413-82712014000100014	Happiness	Define wellbeing	Brazil	Place-based	Children and young people	-
Graham Beaumont, J., & Kenealy, P. M. (2004). Quality of life perceptions and social comparisons in healthy old age. *Ageing and Society*, *24*(5), 755–769. https://doi.org/10.1017/S0144686X04002399	HRQoL	Monitoring & evaluation	United Kingdom	Place-based	Older adults	-

Study reference	Theoretical justification	Purpose	Country of data collection	Geographic level	Life stage	Special population group
Granerud, A., Imingen, I., & Eriksson, B. (2017). Everyday Life and Wellbeing among the Oldest Elderly in Norway—A Qualitative Study. *Open Journal of Social Sciences*, *5*(7), 97-111. https://doi.org/10.4236/jss.2017.57007	QoL/General wellbeing	Define wellbeing	Norway	National	Older adults	-
Greco, G., Skordis-Worrall, J., Mkandawire, B., & Mills, A. (2015). What is a good life? Selecting capabilities to assess women's quality of life in rural Malawi. *Social Science & Medicine*, *130*, 69–78. https://doi.org/10.1016/j.socscimed.2015.01.042	Capability Approach	Monitoring & evaluation	Malawi	Place-based	General community	Women
Greiner, R., Larson, S., Herr, A., & Bligh, V. (2005). *Wellbeing of Nywaigi traditional owners: The contribution of country to wellbeing and the role of natural resource management*. CSIRO Sustainable Ecosystems. https://publications.csiro.au/rpr/download?pid=procite:a3fd9102-b143-4058-a1c0-2972b017c60a&dsid=DS1	Indigenous wellbeing/Sustainability/ General wellbeing	Define wellbeing	Australia	Place-based	General community	Indigenous
Grewal, I., Lewis, J., Flynn, T., Brown, J., Bond, J., & Coast, J. (2006). Developing attributes for a generic quality of life measure for older people: Preferences or capabilities? *Social Science & Medicine*, *62*(8), 1891–1901. https://doi.org/10.1016/j.socscimed.2005.08.023	QoL/Capability Approach	Measurement tool	United Kingdom	National	Older adults	-
Gribbin, G. M., Kenny, R. A., McCue, P., Toff, W. D., Bexton, R. S., & McComb, J. M. (2004). Individualised quality of life after pacing. Does mode matter? *EP Europace*, *6*(6), 552–560. https://doi.org/10.1016/j.eupc.2004.07.011	HRQoL	Monitoring & evaluation	United Kingdom	Non-geographic	Adults	Illness
Hsu, H.-C. (2007). Exploring elderly people's perspectives on successful ageing in Taiwan. *Ageing and Society*, *27*(1), 87–102. https://doi.org/10.1017/S0144686X06005137	General wellbeing	Define wellbeing	Taiwan	National	Older adults	-
Jayasinghe, & de Silva, N. (2015). Calculating the Global Person Generated Index to identify the impacts of remittances on the wellbeing of families left behind by migrants. *International Journal of Advancements in Computing Technology*, *4*, 40–42. https://www.researchgate.net/publication/284158577_Calculating_the_Global_Person_Generated_Index_to_identify_the_impacts_of_remittances_on_the_wellbeing_of_families_left_behind_by_migrants	General wellbeing	Monitoring & evaluation	Sri Lanka	Place-based	General community	-
Jongudomkarn, D., & Camfield, L. (2005). *Exploring the quality of life of people in north eastern and southern Thailand* (WeD Working Paper 11. University of Bath. http://www.bath.ac.uk/soc-pol/welldev/research/workingpaperpdf/wed11.pdf	QoL	Define wellbeing	Thailand	National	General community	-
Kim, M. S., Kim, H. W., Cha, K. H., & Lim, J. (2007). What makes Koreans happy?: Exploration on the structure of happy life among Korean adults. *Social Indicators Research*, *82*(2), 265–286. https://doi.org/10.1007/s11205-006-9033-y	Happiness/Subjective wellbeing	Measurement tool	South Korea	National	Adults	-
Kinghorn, P., Robinson, A., & Smith, R. D. (2015). Developing a capability-based questionnaire for assessing well-being in patients with chronic pain. *Social Indicators Research*, *120*(3), 897–916. https://doi.org/10.1007/s11205-014-0625-7	Capability Approach	Measurement tool	United Kingdom	Non-geographic	Adults	Illness
Kono, S., & Walker, G. J. (2020). Theorizing Ikigai or life worth living among Japanese university students: A mixed-methods approach. *Journal of Happiness Studies*, *21*(1), 327–355. https://doi.org/10.1007/s10902-019-00086-x	Subjective wellbeing	Define wellbeing	Japan	National	Young adults	University students
Kral, M. J., Idlout, L., Minore, J. B., Dyck, R. J., & Kirmayer, L. J. (2011). Unikkaartuit: Meanings of well-being, unhappiness, health, and community change among Inuit in Nunavut, Canada. *American Journal of Community Psychology*, *48*(3-4), 426–438. https://doi.org/http://dx.doi.org/10.1007/s10464-011-9431-4	Indigenous wellbeing	Community and human development	Canada	Place-based	General community	Indigenous

Study reference	Theoretical justification	Purpose	Country of data collection	Geographic level	Life stage	Special population group
Kühhas, B., Taaka, J., & Bragin, M. (2018). *Participatory indicators of psychosocial well-being with internally displaced persons in Wau, South Sudan*. International Organization for Migration. https://southsudan.iom.int/sites/default/files/2018%20-%20Study%20to%20Develop%20Participatory%20Indicators%20of%20PS%20Wellbeing%20In%20Wau%20South%20Sudan_Final.pdf	Psychosocial wellbeing	Monitoring & evaluation	South Sudan	Place-based	Young adults; Adults	Conflict/displacement
Laliberte Rudman, D., Yu, B., Scott, E., & Pajouhandeh, P. (2000). Exploration of the perspectives of persons with schizophrenia regarding quality of life. *American Journal of Occupational Therapy*, *54*, 137–147. https://doi.org/10.5014/ajot.54.2.137	HRQoL	Measurement tool	Canada	Non-geographic	Adults	Illness
Lara, E., Martín-María, N., Forsman, A. K., Cresswell-Smith, J., Donisi, V., Ådnanes, M., Kaasbøll, J., Melby, L., Nordmyr, J., Nyholm, L., Rabbi, L., Amaddeo, F., & Miret, M. (2019). Understanding the Multi-Dimensional Mental Well-Being in Late Life: Evidence from the Perspective of the Oldest Old Population. *Journal of Happiness Studies*, *21*, 465-484. https://doi.org/http://dx.doi.org/10.1007/s10902-019-00090-1	Psychosocial wellbeing	Define wellbeing	Finland, Italy, Norway, Spain	International	Older adults	-
Lee, M. A., Walker, R. W., Hildreth, A. J., & Prentice, W. M. (2006). Individualized assessment of quality of life in idiopathic Parkinson's disease. *Movement Disorders*, *21*(11), 1929–1934. https://doi.org/10.1002/mds.21099	HRQoL	Methodology piloting and validation	United Kingdom	Non-geographic	Adults	Illness
Leung, K.-K., Wu, E.-C., Lue, B.-H., & Tang, L.-Y. (2004). The use of focus groups in evaluating quality of life components among elderly Chinese people. *Quality of Life Research*, *13*(1), 179–190. https://doi.org/10.1023/B:QURE.0000015291.79826.a8	QoL	Measurement tool	Taiwan	Subnational	Older adults	-
LeVasseur, S. A., Green, S., & Talman, P. (2005). The SEIQoL-DW is a valid method for measuring individual quality of life in stroke survivors attending a secondary prevention clinic. *Quality of Life Research*, *14*(3), 779–788. https://doi.org/10.1007/s11136-004-0795-x	HRQoL	Methodology piloting and validation	Australia	Non-geographic	Adults	Illness
Lhussier, M., Watson, B., Reed, J., & Clarke, C. L. (2005). The SEIQoL and functional status: How do they relate? *Scandinavian Journal of Caring Sciences*, *19*(4), 403–409. https://doi.org/10.1111/j.1471-6712.2005.00362.x	HRQoL	Methodology piloting and validation	United Kingdom	Non-geographic	Older adults; Adults	Illness
López-Pérez, B., Sánchez, J., & Gummerum, M. (2016). Children's and adolescents' conceptions of happiness. *Journal of Happiness Studies*, *17*(6), 2431–2455. https://doi.org/10.1007/s10902-015-9701-1	Happiness	Define wellbeing	Spain	National	Children and young people	-
Lu, L. (2001). Understanding happiness: A look into the Chinese folk psychology. *Journal of Happiness Studies*, *2*, 407–432. https://doi.org/10.1023/A:1013944228205	Happiness	Define wellbeing	Taiwan	National	Young adults	University students
Lu, L., & Gilmour, R. (2004). Culture and conceptions of happiness: Individual oriented and social oriented SWB. *Journal of Happiness Studies*, *5*(3), 269–291. https://doi.org/10.1007/s10902-004-8789-5	Happiness/Subjective wellbeing	Define wellbeing	USA	National	Young adults	University students
Martin, F., Rodham, K., Camfield, L., & Ruta, D. (2010). Reliability and validity of the Thai "Global Person Generated Index", an individualised measure of quality of life. *Applied Research in Quality of Life*, *5*(3), 219–232. https://doi.org/10.1007/s11482-010-9106-6	QoL	Methodology piloting and validation	Thailand	Subnational	General community	-
Maulana, H., Obst, P., & Khawaja, N. (2018). Indonesian perspective of wellbeing: A qualitative study. *The Qualitative Report*, *23*(12), 3136-3152. https://doi.org/10.46743/2160-3715/2018.3508	General wellbeing	Define wellbeing	Indonesia	National	Adults	-

Study reference	Theoretical justification	Purpose	Country of data collection	Geographic level	Life stage	Special population group
Mountain, L. A., Campbell, S. E., Seymour, D. G., Primrose, W. R., & Whyte, M. I. (2004). Assessment of individual quality of life using the SEIQoL-DW in older medical patients. *QJM: An International Journal of Medicine*, *97*(8), 519–524. https://doi.org/10.1093/qjmed/hch081	HRQoL	Methodology piloting and validation	United Kingdom	Non-geographic	Older adults	Illness
Navarro, D., Montserrat, C., Malo, S., González, M., Casas, F., & Crous, G. (2017). Subjective well-being: What do adolescents say? *Child & Family Social Work*, *22*(1), 175–184. https://doi.org/10.1111/cfs.12215 González-Carrasco, M., Vaqué, C., Malo, S., Crous, G., Casas, F., & Figuer, C. (2019). A qualitative longitudinal study on the well-being of children and adolescents. *Child Indicators Research*, *12*(2), 479–499. https://doi.org/10.1007/s12187-018-9534-7	Subjective wellbeing/Children's voice	Define wellbeing	Spain	National	Children and young people	-
Navarro, R., Seung-ha, L., Jiménez, A., & Cañamares, C. (2019). Cross-cultural children's subjective perceptions of well-being: Insights from focus group discussions with children aged under 9 years in Spain, South Korea and Mexico. *Child Indicators Research*, *12*(1), 115–140. https://doi.org/10.1007/s12187-017-9502-7	Subjective wellbeing/Children's voice/General wellbeing	Define wellbeing	Spain, South Korea, Mexico	International	Children and young people	-
Neudert, C., Wasner, M., & Borasio, G. D. (2001). Patients' assessment of quality of life instruments: A randomised study of SIP, SF-36 and SEIQoL-DW in patients with amyotrophic lateral sclerosis. *Journal of the Neurological Sciences*, *191*(1), 103–109. https://doi.org/10.1016/S0022-510X(01)00612-8	HRQoL	Methodology piloting and validation	Germany	Non-geographic	Adults	Illness
Newton, J., & Ponting, C. (2013). Eliciting young people's views on wellbeing through contemporary science debates in Wales. *Child Indicators Research*, *6*(1), 71–95. https://doi.org/http://dx.doi.org/10.1007/s12187-012-9159-1	Children's voice/ General wellbeing	Monitoring & evaluation	United Kingdom	National	Children and young people; Young adults	-
Nic Gabhainn, S., & Sixsmith, J. (2006). Children photographing well-being: Facilitating participation in research. *Children & Society*, *20*, 249–259. https://doi.org/10.1111/j.1099-0860.2005.00002.x Sixsmith, J., Nic Gabhainn, S., Fleming, C., & O'Higgins, S. (2007). Childrens', parents' and teachers' perceptions of child wellbeing. *Health Education*, *107*(6), 511–523. https://doi.org/10.1108/09654280710827911	Children's voice/ General wellbeing	Define wellbeing	Ireland	National	Children and young people	-
Nott, B. D., & Vuchinich, S. (2016). Homeless adolescents' perceptions of positive development: A comparative study. *Child & Youth Care Forum*, *45*(6), 865–886. https://doi.org/http://dx.doi.org/10.1007/s10566-016-9361-2	General wellbeing/ Children's voice	Community and human development	USA	Place-based	Children and young people	Homeless
O'Higgins, S., Sixsmith, J., & Saoirse Nic, G. (2010). Adolescents' perceptions of the words "health" and "happy". *Health Education*, *110*(5), 367–381. https://doi.org/http://dx.doi.org/10.1108/09654281011068522	General wellbeing	Define wellbeing	Ireland	National	Children and young people	-
Oranga Tamariki (Ministry for Children), & Children's Commissioner. (2019). *What makes a good life? Children and young people's views of wellbeing*. https://www.occ.org.nz/assets/Uploads/What-makes-a-good-life-report-OCC-OT-2019-WEB2.pdf	General wellbeing/ Children's voice	Policy framework	New Zealand	National	Children and young people	-

Study reference	Theoretical justification	Purpose	Country of data collection	Geographic level	Life stage	Special population group
Parry, O., Warren, E., Madoc-Jones, I., Baker, S.-A., Hughes, C., Pithouse, A., & Crowley, A. (2010). *Voices of children and young people in Wales*. Welsh Assembly Government Social Research. https://dera.ioe.ac.uk/3725/1/110328voicescyp.pdf	Children's voice/General wellbeing	Policy framework	United Kingdom	National	Children and young people; Young adults	-
Paschoal, S. M., Filho, W. J., & Litvoc, J. (2007). Development of elderly quality of life index – EQOLI: Theoretical-conceptual framework, chosen methodology, and relevant items generation. *Clinics (Sao Paulo)*, *62*(3), 279–288. https://doi.org/10.1590/s1807-59322007000300012	QoL	Measurement tool	Brazil	Non-geographic	Older adults	-
Percy, M. S. (2003). Feeling loved, having friends to count on, and taking care of myself: Minority children living in poverty describe what is "special" to them. *Journal of Children and Poverty*, *9*(1), 55–70. https://doi.org/10.1080/1079612022000052724	General wellbeing/ Children's voice	Define wellbeing	USA	Place-based	Children and young people	Disadvantage
Pereira, E., Queiroz, C., Pereira, H. M., & Vicente, L. (2005). Ecosystem services and human well-being: A participatory study in a mountain community in Portugal. *Ecology and Society*, *10*(2), Article 14. https://doi.org/10.5751/ES-01353-100214	Sustainability/General wellbeing	Ecosystem and wellbeing	Portugal	Place-based	General community	-
Pflug, J. (2009). Folk theories of happiness: A cross-cultural comparison of conceptions of happiness in Germany and South Africa. *Social Indicators Research*, *92*, 551–563. https://doi.org/10.1007/s11205-008-9306-8	Happiness	Define wellbeing	Germany, South Africa	International	Adults	University students
Pitkänen, A., Hätönen, H., Kuosmanen, L., & Välimäki, M. (2009). Individual quality of life of people with severe mental disorders. *Journal of Psychiatric and Mental Health Nursing*, *16*(1), 3–9. https://doi.org/10.1111/j.1365-2850.2008.01308.x	HRQoL	Define wellbeing	Finland	Non-geographic	Adults	Illness
Prince, P. N., & Gerber, G. J. (2001). Measuring subjective quality of life in people with serious mental illness using the SEIQoL-DW. *Quality of Life Research*, *10*(2), 117–122. https://doi.org/10.1023/a:1016742628834	HRQoL	Methodology piloting and validation	Canada	Non-geographic	Adults	Illness
Punch, J. L., Hitt, R., & Smith, S. W. (2019). Hearing loss and quality of life. *Journal of Communication Disorders*, *78*, 33-45. https://doi.org/10.1016/j.jcomdis.2019.01.001	HRQoL	Measurement tool	USA	Non-geographic	Adults	Illness
Puts, M. T. E., Shekary, N., Widdershoven, G., Heldens, J., Lips, P., & Deeg, D. J. H. (2007). What does quality of life mean to older frail and non-frail community-dwelling adults in the Netherlands? *Quality of Life Research*, *16*(2), 263–277. https://doi.org/10.1007/s11136-006-9121-0	QoL	Define wellbeing	Netherlands	National	Older adults	-
Rasolofoson, R. A., Nielsen, M. R., & Jones, J. P. G. (2018). The potential of the Global Person Generated Index for evaluating the perceived impacts of conservation interventions on subjective well-being. *World Development*, *105*, 107–118. https://doi.org/https://doi.org/10.1016/j.worlddev.2017.12.032	General wellbeing/Sustainability	Monitoring & evaluation	Madagascar	Place-based	General community	-
Redmond, G., Skattebol, J., Saunders, P., Lietz, P., Zizzo, G., O'Grady, E., Tobin, M., Thomson, S., Maurici, V., Huynh, J., Moffat, A., Wong, M., Bradbury, B., & Roberts, K. (2016). *Are the kids alright? Young Australians in their middle years: Final report of the Australian Child Wellbeing Project*. Flinders University, University of New South Wales and Australian Council for Educational Research. www.australianchildwellbeing.com.au	Children's voice/General wellbeing	Define wellbeing	Australia	National	Children and young people	-
Richard, L., Laforest, S., Dufresne, F., & Sapinski, J. P. (2005). The quality of life of older adults living in an urban environment: Professional and lay perspectives. *Canadian Journal on*	QoL	Define wellbeing	Canada	Place-based	Older adults	-

Study reference	Theoretical justification	Purpose	Country of data collection	Geographic level	Life stage	Special population group
Aging/Revue canadienne du vieillissement, *24*(1), 19–30. https://doi.org/10.1353/cja.2005.0011						
Ring, L., Lindblad, Å. K., Bendtsen, P., Viklund, E., Jansson, R., & Glimelius, B. (2006). Feasibility and validity of a computer administered version of SEIQoL-DW. *Quality of Life Research*, *15*(7), 1173–1177. https://doi.org/10.1007/s11136-006-0052-6	QoL	Methodology piloting and validation	Sweden	Non-geographic	Adults	University students
Robleda, S., & Pachana, N. A. (2019). Quality of life in Australian adults aged 50 years and over: Data using the Schedule for the Evaluation of Individual Quality of Life (SEIQOL-DW). *Clinical Gerontologist*, *42*(1), 101–113. https://doi.org/10.1080/07317115.2017.1397829	QoL	Define wellbeing	Australia	National	Adults; Older adults	-
Rojas, V., & Cussianovich, A. (2013). *"Le va bien en la vida": Percepciones de bienestar de un grupo de adolescentes del Perú ["They are doing well in life: Perceptions of wellbeing in a group of adolescents in Peru]*. Ninos del Milenio. http://www.grade.org.pe/upload/publicaciones/archivo/download/pubs/dt.pdf	General wellbeing	Define wellbeing	Peru	National	Children and young people	-
Rusner, M., Carlsson, G., Brunt, D., & Nyström, M. (2010). A dependence that empowers – The meaning of the conditions that enable a good life with bipolar disorder. *International Journal of Qualitative Studies on Health and Well-Being*, *5*(1), 4653–4611. https://doi.org/10.3402/qhw.v5i1.4653	HRQoL/General wellbeing	Define wellbeing	Sweden	Non-geographic	Adults	Illness
Sargeant, J. (2010). The altruism of pre-adolescent children's perspectives on "worry" and "happiness" in Australia and England. *Childhood*, *17*, 411–425. https://doi.org/10.1177/0907568209341087	Children's voice/Happiness	Define wellbeing	Australia, United Kingdom	International	Children and young people	-
Savahl, S., Malcolm, C., Slembrouk, S., Adams, S., Willenberg, I. A., & September, R. (2015). Discourses on well-being. *Child Indicators Research*, *8*(4), 747–766. https://doi.org/http://dx.doi.org/10.1007/s12187-014-9272-4	Children's voice/ General wellbeing/ Subjective wellbeing	Define wellbeing	South Africa	Subnational	Children and young people	-
Scott, K. (2012). Chapter 8: Developing a wellbeing framework. In *Measuring wellbeing: Towards sustainability?* Routledge. https://doi.org/10.4324/9780203113622	General wellbeing/ QoL	Policy framework	United Kingdom	Place-based	General community	-
September, R., & Savahl, S. (2009). Children's perspectives on child well-being. *The Social Work Practitioner-Researcher*, *21*(1), 23-40. http://hdl.handle.net/10566/211	General wellbeing/Children's voice	Define wellbeing	South Africa	Subnational	Children and young people	-
Smith, H. J., Taylor, R., & Mitchell, A. (2000). A comparison of four quality of life instruments in cardiac patients: SF-36, QLI, QLMI, and SEIQoL. *Heart*, *84*(4), 390–394. https://doi.org/10.1136/heart.84.4.390	HRQoL	Methodology piloting and validation	United Kingdom	Non-geographic	Adults	Illness
Smith, S. C., Murray, J., Banerjee, S., Foley, B., Cook, J. C., Lamping, D. L., Prince, M., Harwood, R. H., Levin, E., & Mann, A. (2005). What constitutes health-related quality of life in dementia? Development of a conceptual framework for people with dementia and their carers. *International Journal of Geriatric Psychiatry*, *20*, 889–895. https://doi.org/10.1002/gps.1374	HRQoL	Define wellbeing	United Kingdom	Non-geographic	Older adults	Illness
Sutton, E. J., & Coast, J. (2014). Development of a supportive care measure for economic evaluation of end-of-life care using qualitative methods. *Palliative Medicine*, *28*(2), 151–157. https://doi.org/10.1177/0269216313489368	HRQoL	Monitoring & evaluation	United Kingdom	Non-geographic	Older adults	Illness
Tafarodi, R. W., Bonn, G., Liang, H., Takai, J., Moriizumi, S., Belhekar, V., & Padhye, A. (2012). What makes for a good life? A four-nation study. *Journal of Happiness Studies*, *13*(5), 783–800. https://doi.org/10.1007/s10902-011-9290-6	General wellbeing	Define wellbeing	Canada, India, Japan, China	International	Young adults; Adults	-

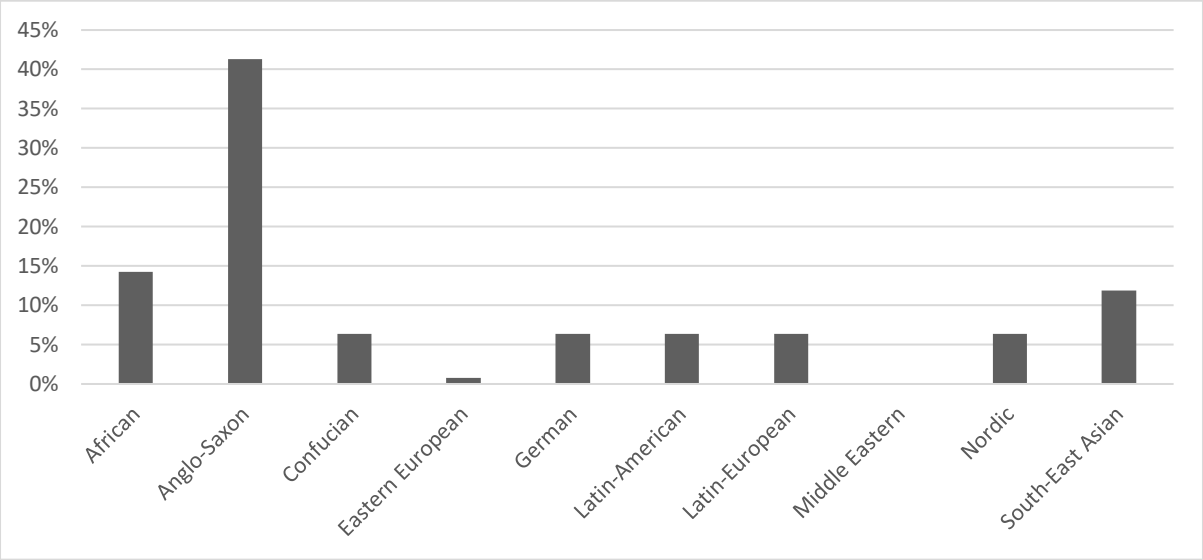
Study reference	Theoretical justification	Purpose	Country of data collection	Geographic level	Life stage	Special population group
The Children's Society. (2006). *Good childhood? A question for our times*. https://www.iser.essex.ac.uk/research/publications/512010 The Children's Society. (2008). *Happy and they know it? Developing a well-being framework based on children and young people consultation*.	General wellbeing	Define wellbeing	United Kingdom	National	Children and young people	-
Thoilliez, B. (2011). How to grow up happy: An exploratory study on the meaning of happiness from children's voices. *Child Indicators Research*, *4*(2), 323–351. https://doi.org/10.1007/s12187-011-9107-5	Happiness	Define wellbeing	Spain	National	Children and young people	-
Thomas, Y., Gray, M. A., & McGinty, S. (2012). An exploration of subjective wellbeing among people experiencing homelessness: A strengths-based approach. *Social Work in Health Care*, *51*(9), 780–797. https://doi.org/10.1080/00981389.2012.686475	Subjective wellbeing	Define wellbeing	Australia	Subnational	Adults	Homeless
Tovbin, D., Gidron, Y., Jean, T., Granovsky, R., & Schnieder, A. (2003). Relative importance and interrelations between psychosocial factors and individualized quality of life of hemodialysis patients. *Quality of Life Research*, *12*(6), 709–717. https://doi.org/10.1023/A:1025101601822	HRQoL	Define wellbeing	Israel	Non-geographic	Adults	Illness
Vujčić, M. T., Brajša-Žganec, A., & Franc, R. (2019). Children and young peoples' views on well-being: A qualitative study. *Child Indicators Research*, *12*(3), 791–819. https://doi.org/10.1007/s12187-018-9559-y	Children's voice/Subjective wellbeing/General wellbeing	Define wellbeing	Croatia	National	Children and young people; Young adults	-
Ward, L., Barnes, M., & Gahagan, B. (2012). *Well-being in old age: findings from participatory research*. University of Brighton. https://cris.brighton.ac.uk/ws/portalfiles/portal/277552/Well_being_in_old_age_findings_from_participatory_research_full_report.pdf	General wellbeing	Define wellbeing	United Kingdom	Place-based	Older adults	-
Wee, H. L., Chua, H. X., & Li, S. C. (2006). Meaning of health-related quality of life among children and adolescents in an Asian Country: A focus group approach. *Quality of Life Research*, *15*(5), 821–831. https://doi.org/10.1007/s11136-005-5092-9	HRQoL	Methodology piloting and validation	Singapore	National	Children and young people	-
Wettergren, L., Björkholm, M., Axdorph, U., Bowling, A., & Langius-Eklöf, A. (2003). Individual quality of life in long-term survivors of Hodgkin's lymphoma: A comparative study. *Quality of Life Research*, *12*(5), 545–554. https://doi.org/10.1023/A:1025024008139	HRQoL	Monitoring & evaluation	Sweden	Non-geographic	Adults	Illness
Wheeler, K. J., & Early, J. O. (2018). Using Photovoice to explore quality of life factors of adults with Crouzon Syndrome. *Qualitative Health Research*, *28*(3), 357–370. https://doi.org/10.1177/1049732317742624	HRQoL	Policy framework	USA	National	Adults	Illness
Wilhelmson, K., Andersson, C., Waern, M., & Allebeck, P. (2005). Elderly people's perspectives on quality of life. *Ageing and Society*, *25*(4), 585–600. https://doi.org/10.1017/S0144686X05003454	QoL	Define wellbeing	Sweden	Place-based	Older adults	-
Wilson Fadiji, A., Meiring, L., & Wissing, M. P. (2019). Understanding Well-Being in the Ghanaian Context: Linkages between Lay Conceptions of Well-Being and Measures of Hedonic and Eudaimonic Well-Being. *Applied Research in Quality of Life*, *16*, 649-677. https://doi.org/10.1007/s11482-019-09777-2	Subjective wellbeing	Methodology piloting and validation	Ghana	National	Adults	-

Study reference	Theoretical justification	Purpose	Country of data collection	Geographic level	Life stage	Special population group
Xavier, F. M. F., Ferraz, M. P. T., Marc, N., Escosteguy, N. U., & Moriguchi, E. H. (2003). Elderly people's definition of quality of life. *Revista brasileira de psiquiatria*, *25*(1), 31-39. https://doi.org/10.1590/S1516-44462003000100007	QoL	Define wellbeing	Brazil	Place-based	Older adults	-
Yap, M., & Yu, E. (2016). Operationalising the Capability Approach: Developing culturally relevant indicators of Indigenous wellbeing – An Australian example. *Oxford Development Studies*, *44*(3), 315–331. https://doi.org/10.1080/13600818.2016.1178223	Capability Approach/Indigenous wellbeing	Monitoring & evaluation	Australia	Place-based	General community	Indigenous

Appendix A4 List of countries by frequency

Country	Frequency	Country	Frequency
Afghanistan	1	Kenya	2
Argentina	1	Madagascar	1
Australia	12	Malawi	1
Austria	1	Mexico	2
Bangladesh	2	Namibia	1
Brazil	5	Nepal	1
Burundi	1	The Netherlands	3
Cambodia	1	New Zealand	3
Canada	9	Norway	4
Chile	1	Peru	2
China	1	Portugal	2
Croatia	2	Singapore	1
Cuba	1	South Africa	5
Dominican Republic	1	South Korea	2
Ethiopia	3	South Sudan	1
Finland	2	Spain	6
France	1	Sri Lanka	2
Germany	5	Sweden	5
Ghana	1	Taiwan	3
Hungary	1	Thailand	4
India	4	Turkey	1
Indonesia	1	Uganda	4
Ireland	4	United Kingdom	19
Israel	1	United States of America	10
Italy	4	Global	2
Japan	3	Not specified	1

Appendix B1 Distribution of initial cultural clusters based on GLOBE framework identified by Mensah & Chen (2013)



Appendix C1 Indicator and threshold by wave

Wave 4 (age 6–7) indicators

Nest dimension	Measure	Indicator or scale	Respondent	Threshold to identify wellbeing needs are met
Loved and Safe	Relationship with friends	Strengths and Difficulties Questionnaire peer problems scale	Parent 1, Parent 2, Parent living elsewhere, Teacher	All respondents report that child does not have high/very high levels of peer problems according to the Strengths and Difficulties Questionnaire scoring criteria (SDQInfo, 2015).
	Relationship with parents	How often do you have fun with your family at the weekends?	Study child	Children have fun with family at weekends "Lots of times" or "Sometimes" (frequency of positive experience).
	Safe home environment	Hostility/violence between parents and feeling afraid of other partner	Parent 1, Parent 2, Parent living elsewhere	All parents respond with "Never" to experiencing violence (national norm e.g. Australian Government Attorney-General's Department, n.d.) AND All parents respond that they never or rarely experience anger or hostility from other parent (infrequency of negative experience) AND All parents report that they do not ever feel afraid of partner (binary response).
	Safe school environment	Peers scale	Study child	Child responds "Yes" or "Sometimes" to children at school being nice to you AND Child responds "Yes" or "Sometimes" to children at school asking you to play with them AND Child responds "No" to children at school picking on you. (Regularity of a positive experience and infrequency of a negative experience).
Material Basics	Financial security of family	Hardship scale	Parent 1	No form of financial hardship in the last 12 months (binary response).

	Access to basic goods (toys, clothes, computer)	Does study child have access to a computer at home?	Parent 1	Access to a computer at home (binary response).
	Food security	Not available		
	Access to adequate shelter	External/internal condition of dwelling and overcrowding	Interviewer	Home not overcrowded (based on Canadian National Occupancy Standard and replicating a measure for LSAC developed by Maguire et al., 2011)) AND Home uncluttered (binary response) AND External condition of dwelling not badly deteriorated (national norm).
Healthy	Exercising regularly	Not available		
	Healthy diet	Food diary	Parent 1	Child eats "enough" of all healthy food groups (fruit, vegetables, water, and milk products or alternatives, and not too much of all unhealthy food groups (fatty foods, sugary foods, and sweetened drinks) according to food groupings developed by Gasser et al. (2017).
	Good mental health	Social emotional problems scale	Study child	On average, positive responses to a set of questions on a Likert scale (>2, reverse coding where necessary).
	Good state of mind	Not available		
Learning	Attending school	During the previous four weeks of school, how many days has study child been absent?	Parent 1	Missed less than one day of school per week on average in the last month (infrequency of negative experience).
	Satisfied at school	School liking and avoidance scale	Study child	On average, positive responses to the school liking scale (≤2) AND On average, positive responses to the school avoidance scale (>2).

	Learning at home	Home activities index	Parent 1	Child participated in, on average (calculated by taking mid-point of each response option), at least one of any activity per day in the last 7 days (regularity of positive experience).
	Participating in cultural activities	Out of home activities index	Parent 1	Participated in at least one activity in the past month (binary response).
Participating	Having a say in family decisions	Not available		
	Having a network of support	Emotional, informational, and tangible support for parents	Parent 1, Parent 2	Both parents report, on average, positive responses to a set of questions on a Likert scale (≥3).
	Involvement in community	Extracurricular activities	Parent 1	Participated in any activity in the last 12 months (binary response).
	Sense of belonging	Neighbourhood safety and belonging	Parent 1, Parent 2	Both parents report, on average, positive responses to a set of questions on sense of belonging in the community (≥3) AND Both parents report that it is safe to play outside in their neighbourhood (binary response).

Wave 5 (age 8–9) indicators

Nest dimension	Measure	Indicator or scale	Respondent	Threshold to identify wellbeing needs are met
Loved and Safe	Relationship with friends	Marsh peer relations scale	Study child	On average, positive responses to a set of questions on a Likert scale (≥3).
	Relationship with parents	Enjoyment of time spent with parents and ability to ask for help	Study child	On average, positive responses to a set of questions on a Likert scale (≤2.5).
	Safe home environment	Hostility/violence between parents and feeling afraid of other partner	Parent 1, Parent 2, Parent living elsewhere	All parents respond with "Never" to experiencing violence ((national norm e.g. Australian Government Attorney-General's Department, n.d.) AND All parents respond that they never or rarely experience anger or hostility from other parent (infrequency of negative experience) AND All parents report that they do not ever feel afraid of partner (binary response).
	Safe school environment	Bullying and victimisation	Study child	Has not experienced any form of bullying or social exclusion in the past week AND has not experienced 4+ different instances of bullying in the past month (infrequency of a negative experience).
Material Basics	Financial security of family	Hardship scale	Parent 1	No form of financial hardship in the last 12 months (binary response).
	Access to basic goods (toys, clothes, computer)	Access to internet	Parent 1	Access to internet at home (binary response).
	Food security	Did child eat breakfast today?	Parent 1	Ate breakfast today (binary response).
	Access to adequate shelter	Experience of no place to live, external/internal condition of dwelling, and overcrowding	Parent 1, Interviewer	Has not experienced having no place to live in past two years (binary response) AND

				Home not overcrowded (based on Canadian National Occupancy Standard and replicating a measure for LSAC developed by Maguire et al., 2011) AND Home uncluttered (binary response) AND External condition of dwelling not badly deteriorated (national norm).
Healthy	Exercising regularly	Not available		
	Healthy diet	Food diary	Parent 1	Child eats "enough" of all healthy food groups (fruit, vegetables, water, and milk products or alternatives, and not too much of all unhealthy food groups (fatty foods, sugary foods, and sweetened drinks) according to food groupings developed by Gasser et al. (2017).
	Good mental health	Social emotional problems scale	Study child	On average, positive responses to a set of questions on a Likert scale (>2, reverse coding where necessary).
	Good state of mind	Marsh General-Self Scale	Study child	On average, positive responses to a set of questions on a Likert scale (≥3).
Learning	Attending school	During the previous four weeks of school, how many days has study child been absent?	Parent 1	Missed less than one day of school per week on average in the last month (infrequency of negative experience).
	Satisfied at school	School liking and avoidance scale	Study child	On average, positive responses to the school liking scale (≤2) AND On average, positive responses to the school avoidance scale (>2).
	Learning at home	Number of books at home and parental interest in school	Parent 1, Parent 2, Parent living elsewhere	Child has 30+ books at home (threshold previously identified through the literature e.g. Araujo & Costa, 2012; Edwards & Baxter, 2013) AND

				All parents either talked to their child about school at least about once a week or helped with homework at least once a week (regularity of positive experience).
	Participating in cultural activities	Out of home activities index	Parent 1	Participated in at least one activity in the past month (binary response).
Participating	Having a say in family decisions	Not available		
	Having a network of support	Emotional, informational, and tangible support for parents	Parent 1, Parent 2	On average, both parents report positive responses to a set of questions on a Likert scale (≥3).
	Involvement in community	Extracurricular activities	Parent 1	Participated in any activity in the last 12 months (binary response).
	Sense of belonging	Neighbourhood safety and belonging	Parent 1, Parent 2	Both parents report, on average, positive responses to a set of questions on sense of belonging in the community (≥3) AND Parent 1 (Parent 2 not asked) reports that it is safe to play outside in their neighbourhood (binary response).

Wave 6 (age 10–11) indicators

Nest dimension	Measure	Indicator or scale	Respondent	Threshold to identify wellbeing needs are met
Loved and Safe	Relationship with friends	Marsh peer relations scale	Study child	On average, positive responses to a set of questions on a Likert scale (≥3).
	Relationship with parents	Trust and Communication Scale	Study child	On average, positive responses to a set of questions on a Likert scale (≥2).
	Safe home environment	Hostility/violence between parents and feeling afraid of other partner	Parent 1, Parent 2, Parent living elsewhere	All parents respond with "Never" to experiencing violence (national norm e.g. Australian Government Attorney-General's Department, n.d.) All parents respond that they never or rarely experience anger or hostility from other parent (infrequency of negative experience) AND All parents report that they do not ever feel afraid of partner (binary response).
	Safe school environment	Bullying and victimisation	Study child	Has not experienced any form of bullying or social exclusion in the past week AND has not experienced 4+ different instances of bullying in the past month (infrequency of a negative experience).
Material Basics	Financial security of family	Hardship scale	Parent 1	No form of financial hardship in the last 12 months (binary response).
	Access to basic goods (toys, clothes, computer)	Access to internet	Parent 1	Access to internet at home (binary response).
	Food security	Did you have breakfast today?	Study child	Ate breakfast today (binary response).
	Access to adequate shelter	Experience of no place to live, external/internal condition of dwelling, and overcrowding	Parent 1, Interviewer	Has not experienced having no place to live in past two years (binary response) AND

				Home not overcrowded (based on Canadian National Occupancy Standard and replicating a measure for LSAC developed by Maguire et al., 2011)) AND Home uncluttered (binary response) AND External condition of dwelling not badly deteriorated (national norm).
Healthy	Exercising regularly	Not available		
	Healthy diet	Food diary	Study child	Child eats "enough" of all healthy food groups (fruit, vegetables, water, and milk products or alternatives, and not too much of all unhealthy food groups (fatty foods, sugary foods, and sweetened drinks) according to food groupings developed by Gasser et al. (2017).
	Good mental health	Strengths and Difficulties Questionnaire Emotional Problems Scale	Study child	Child does not report high/very high levels of emotional problems according to the Strengths and Difficulties Questionnaire scoring criteria (SDQInfo, 2015).
	Good state of mind	Marsh General Self-Scale	Study child	On average, positive responses to a set of questions on a Likert scale (≥3).
Learning	Attending school	During the previous four weeks of school, how many days has study child been absent?	Parent 1	Missed less than one day of school per week on average in the last month (infrequency of negative experience).
	Satisfied at school	School adjustment scale	Study child	On average, positive responses to a set of questions on a Likert scale (≥2.5).
	Learning at home	Number of books at home and parental interest in school	Parent 1, Parent 2, Parent living elsewhere	Child has 30+ books at home AND All parents either talked to their child about school at least about once a week or helped

				with homework at least once a week (regularity of positive experience).
	Participating in cultural activities	Out of home activities index	Parent 1	Participated in at least one activity in the past month (binary response).
Participating	Having a say in family decisions	How often do you have a say in what the family does, such as what to watch on TV, what to do on the weekends, where to go on family outings or holidays?	Study child	Child sometimes, often, or always has a say in family decisions (positive response to a single Likert scale).
	Having a network of support	Emotional, informational, and tangible support for parents, child social support	Parent 1, Parent 2, Study child	On average, both parents report positive responses to a set of questions on emotional informational and tangible support (≥3) AND Child has someone to talk to if they had a problem (binary response).
	Involvement in community	Extracurricular activities	Parent 1	Participated in any activity in the last 12 months (binary response).
	Sense of belonging	Neighbourhood safety and belonging	Parent 1, Parent 2	Both parents report, on average, positive responses to a set of questions on sense of belonging in the community (≥3) AND Both parents report that it is safe to play outside in their neighbourhood (binary response).

Wave 7 (age 12–13) indicators

Nest dimension	Measure	Indicator or scale	Respondent	Threshold to identify wellbeing needs are met
Loved and Safe	Relationship with friends	Inventory of peer attachment	Study child	On average, positive responses to a set of questions on a Likert scale (≤3).
	Relationship with parents	Trust and Communication Scale	Study child	On average, positive responses to a set of questions on a Likert scale (≥2).
	Safe home environment	Hostility/violence between parents and feeling afraid of other partner	Parent 1, Parent 2, Parent living elsewhere	All parents respond with "Never" to experiencing violence (national norm e.g. Australian Government Attorney-General's Department, n.d.) AND All parents respond that they never or rarely experience anger or hostility from other parent (infrequency of negative experience) AND All parents report that they do not ever feel afraid of partner (binary response).
	Safe school environment	Bullying and victimisation	Study child	Has not experienced any form of bullying or social exclusion in the past week AND has not experienced 4+ different instances of bullying in the past month (infrequency of a negative experience).
Material Basics	Financial security of family	Hardship scale	Parent 1	No form of financial hardship in the last 12 months (binary response).
	Access to basic goods (toys, clothes, computer)	Access to internet	Parent 1	Access to internet at home (binary response).
	Food security	Did you have breakfast today?	Study child	Ate breakfast today (binary response).
	Access to adequate shelter	Experience of no place to live, external/internal condition of dwelling, and overcrowding	Parent 1, Interviewer	Has not experienced having no place to live in past two years (binary response) AND Home not overcrowded (based on Canadian National Occupancy Standard and replicating a

				measure for LSAC developed by Maguire et al., 2011)) AND Home uncluttered (binary response) AND External condition of dwelling not badly deteriorated (national norm).
Healthy	Exercising regularly	Available (frequency of 60min+ exercise per week), but not used due to data item being available only at this wave		
	Healthy diet	Food diary	Study child	Child eats "enough" of all healthy food groups (fruit, vegetables, water, and milk products or alternatives, and not too much of all unhealthy food groups (fatty foods, sugary foods, and sweetened drinks) according to food groupings developed by Gasser et al. (2017).
	Good mental health	Short Mood and Feelings Questionnaire, Spence Anxiety Scale	Study child	On average, positive responses to the Short Mood and Feelings Scale (>2) AND On average, positive responses to the Spence Anxiety Scale (<2).
	Good state of mind	Life Satisfaction	Study child	Child reports that they agree or strongly agree to them being happy with how things are for them in their life right now (positive response to a single Likert scale).
Learning	Attending school	Absent from school and skipping class/truanting	Parent 1, Study child	Missed less than one day of school per week on average in the last month (infrequency of negative experience) AND Did not skip class or truant 7+ times in the last 6 months (infrequency of negative experience).
	Satisfied at school	School adjustment scale	Study child	On average, positive responses to a set of questions on a Likert scale (≥2.5).

	Learning at home	Interest in learning	Study child	Both parents show at least some interest in child's education (positive response to single Likert scale).
	Participating in cultural activities	Out of home activities index	Parent 1	Participated in at least one activity in the past month (binary response).
Participating	Having a say in family decisions	How often do you have a say in what the family does, such as what to watch on TV, what to do on the weekends, where to go on family outings or holidays?	Study child	Child sometimes, often, or always has a say in family decisions (positive response to a single Likert scale).
	Having a network of support	Emotional, informational, and tangible support for parents, child social support	Parent 1, Study child	On average, both parents report positive responses to a set of questions on a Likert scale (≥3) AND Child has someone to talk to if they had a problem (binary response).
	Involvement in community	Extracurricular activities and volunteering	Study child	Participated in any activity or volunteered in the last 12 months (binary response).
	Sense of belonging	Experience of discrimination	Study child	Has not experienced any form of discrimination or intolerance in the last 6 months (binary response).

Appendix C2 Analysis of bias from removal of observations

	Wave 4 (age 6–7)	Wave 5 (age 8–9)	Wave 6 (age 10–11)	Wave 7 (age 12–13)
Male	0.209	-0.301	0.088	0.228
	(0.768)	(0.471)	(0.183)	(0.209)
Household income quintile				
2nd income quintile	0.965	-0.146	-0.126	0.152
	(1.184)	(0.696)	(0.284)	(0.332)
3rd income quintile	-0.121	-0.411	-0.288	-0.370
	(1.418)	(0.706)	(0.294)	(0.364)
4th income quintile	0 (empty)	0.124	-0.041	0.090
	-	(0.659)	(0.291)	(0.332)
5th (highest) income quintile	0.845	-0.754	-0.351	0.485
	(1.576)	(0.857)	(0.327)	(0.322)
Highest parental qualification				
Graduate diploma/certificate	0.662	0.930	0.580	-0.488
	(1.185)	(0.925)	(0.397)	(0.425)
Bachelor degree	-0.718	-0.444	0.652*	-0.206
	(1.455)	(1.060)	(0.349)	(0.318)
Advanced diploma/diploma	-0.098	0.107	0.678*	0.419
	(1.194)	(1.055)	(0.389)	(0.346)
Certificate	0 (omitted)	0.434	0.562	0.024
		(0.898)	(0.360)	(0.307)
Other	0 (empty)	1.589	0.827	0.993
		(1.306)	(0.783)	(0.666)
Constant	-6.475***	-5.245***	-3.655***	-3.571***
	(1.029)	(0.881)	(0.392)	(0.376)

***Significant at 1% level, **significant at 5% level, *significant at 10% level.

Note: Dependent variable is a dummy variable indicating whether the observation will be removed from the analysis. The base case individual is female, in the lowest household income quintile, and with the highest parental education level being a postgraduate degree.

Robust standard error in brackets.

Appendix C3 Percentage of records with missing indicators by each wave (unbalanced panel)

Nest dimension	Sub-domain	Wave 4 (age 6–7)	Wave 5 (age 8–9)	Wave 6 (age 10–11)	Wave 7 (age 12–13)
Loved and Safe	Relationship with friends	0.05%	1.48%	0.17%	0.09%
	Relationship with parents	1.92%	1.68%	0.59%	0.62%
	Safe home environment	3.12%	3.26%	3.15%	5.83%
	Safe school environment	1.51%	1.38%	0.42%	0.09%
Material Basics	Financial security of family	1.42%	1.85%	2.09%	3.18%
	Access to basic goods (toys, clothes, computer)	0.02%	0.17%	0.33%	0.56%
	Food security	N/A	0.35%	0.72%	0.00%
	Access to adequate shelter	0.02%	0.00%	0.00%	0.19%
Healthy	Exercising regularly	N/A	N/A	N/A	N/A
	Healthy diet	0.07%	0.25%	0.00%	0.00%
	Good mental health	1.89%	1.34%	0.22%	0.50%
	Good state of mind	N/A	1.38%	0.17%	0.31%
Learning	Attending school	0.40%	0.30%	0.56%	0.62%
	Satisfied at school	1.47%	1.24%	0.11%	0.72%
	Learning at home	0.02%	0.00%	0.00%	0.12%
	Participating in cultural activities	0.02%	0.17%	0.28%	0.56%
Participating	Having a say in family decisions	N/A	N/A	0.61%	0.69%
	Having a network of support	0.69%	0.89%	0.00%	0.00%
	Involvement in community	0.02%	0.17%	0.31%	0.34%
	Sense of belonging	0.64%	0.74%	0.61%	0.19%

Note: Table reports percentage missing after records with more than one-third of sub-domains missing have been removed.

Appendix C4 Correlation tables

Correlations for wave 4 (age 6–7) indicators

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 - Relationship with friends	1																			
2 - Relationship with parents	0.04	1																		
3 - Safe home environment	0.1	0.03	1																	
4 - Safe school environment	0.09	0.04	0.01	1																
5 - Financial security of family	0.09	0.05	0.13	0.05	1															
6 - Access to basic goods	0.06	0.02	0.08	0.02	0.06	1														
7 - Food security																				
8 - Access to adequate shelter	0.05	0.00	0.08	0.00	0.16	0.08		1												
9 - Exercising regularly																				
10 - Healthy diet	0.02	0.04	0.05	0.01	0.1	0.02		0.03		1										
11 - Good mental health	0.06	0.08	0.02	0.17	0.06	-0.01		0.04		0.04	1									
12 - Good state of mind																				
13 - Attending school	0.04	0.00	0.00	-0.01	0.08	0.01		0.05		0.01	0.02		1							
14 - Satisfied at school	0.04	0.09	0.03	0.17	0.06	0.02		0.03		0.03	0.19		0.02	1						
15 - Learning at home	0.04	0.03	0.03	-0.02	0.02	0.04		0.00		0.06	0.02		-0.01	0.01	1					

16 - Participating in cultural activities	0.07	0.03	-0.02	0.03	0.04	0.04		0.03		0.03	0.02		0.01	0.03	0.06	1			
17 - Having a say in family decisions																			
18 - Having a network of support	0.12	0.02	0.14	0	0.07	0.02		0.05		0.00	0.03		0.01	0.01	0.00	0.02		1	
19 - Involvement in community	0.09	0.04	0.07	0.01	0.15	0.1		0.11		0.09	0.04		0.04	0.01	0.08	0.12		0.05	1
20 - Sense of belonging	0.04	-0.03	0.06	0.00	0.06	0.03		0.03		0.03	0.00		0.04	-0.02	0.05	0.03		0.08	0.03	1

Correlations for wave 5 (age 8–9) indicators

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 - Relationship with friends	1																			
2 - Relationship with parents	0.05	1																		
3 - Safe home environment	0.00	0.01	1																	
4 - Safe school environment	0.21	0.08	0.01	1																
5 - Financial security of family	0.07	0.02	0.11	0.06	1															
6 - Access to basic goods	-0.01	0.00	0.03	0.04	0.07	1														
7 - Food security	0.00	0.03	0.03	0.04	0.06	0.04	1													
8 - Access to adequate shelter	0.06	0.06	0.05	0.05	0.16	0.08	0.08	1												
9 - Exercising regularly																				
10 - Healthy diet	0.01	0.03	0.03	0.02	0.07	0.06	0.1	0.04		1										
11 - Good mental health	0.21	0.07	0.01	0.23	0.07	0.02	0.04	0.03		0.04	1									
12 - Good state of mind	0.3	0.03	0.02	0.12	0.05	0.00	0.03	0.05		0.00	0.16	1								
13 - Attending school	0.00	-0.01	0.02	0.01	0.03	0.01	0.02	0.04		0.03	0.04	0.00	1							
14 - Satisfied at school	0.16	0.07	0.03	0.14	0.02	0.01	0.04	0.02		0.03	0.15	0.17	0.03	1						
15 - Learning at home	0.01	0.05	0.05	0.03	0.07	0.06	0.07	0.08		0.06	0.04	0.00	0.00	0.02	1					

16 - Participating in cultural activities	0.01	0.00	0.00	0.07	0.04	0.04	0.05	0.06		0.04	0.01	0.03	0.00	0.01	0.04	1			
17 - Having a say in family decisions																			
18 - Having a network of support	0.06	0.02	0.17	0.01	0.1	0.04	0.02	0.05		0.02	0.02	0.01	0.01	0.02	0.07	0.06		1	
19 - Involvement in community	0.05	0.02	0.05	0.06	0.13	0.08	0.05	0.11		0.06	0.06	0.11	0.06	0.02	0.14	0.09		0.07	1
20 - Sense of belonging	0.04	-0.03	0.05	0.03	0.07	0.02	0.03	0.06		0.01	0.04	0.04	0.02	0.02	0.04	0.01		0.11	0.06	1

Correlations for wave 6 (age 10–11) indicators

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 - Relationship with friends	1																			
2 - Relationship with parents	0.09	1																		
3 - Safe home environment	0.04	0.01	1																	
4 - Safe school environment	0.24	0.04	0.03	1																
5 - Financial security of family	0.05	0.02	0.12	0.04	1															
6 - Access to basic goods	0.02	0.01	0.02	0.07	0.06	1														
7 - Food security	0.06	0.00	0.02	0.05	0.08	0.05	1													
8 - Access to adequate shelter	0.07	0.02	0.04	0.03	0.16	0.12	0.08	1												
9 - Exercising regularly																				
10 - Healthy diet	0.05	0.02	0.03	0.07	0.08	0.04	0.07	0.06		1										
11 - Good mental health	0.23	0.04	0.05	0.22	0.06	0.02	0.04	0.09		0.08	1									
12 - Good state of mind	0.33	0.15	0.05	0.17	0.06	0.03	0.06	0.04		0.04	0.16	1								
13 - Attending school	0.05	0.04	0.02	0.05	0.08	0.04	0.03	0.07		0.01	0.05	0.07	1							
14 - Satisfied at school	0.19	0.11	-0.01	0.14	0.04	0.01	0.09	0.02		0.08	0.12	0.25	0.1	1						
15 - Learning at home	-0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.05		0.06	0.04	0.00	0.01	0.02	1					

16 - Participating in cultural activities	0.02	0.00	-0.01	-0.01	0.02	0.03	0.06	0.04		-0.02	0.00	0.00	-0.03	0.01	0.03	1			
17 - Having a say in family decisions	0.09	0.08	0.00	0.10	0.04	0.00	0.06	0.00		0.03	0.08	0.13	0.02	0.09	0.04	0.01	1		
18 - Having a network of support	0.08	0.07	0.2	0.03	0.11	0.03	0.05	0.07		0.02	0.07	0.08	0.03	0.06	0.03	0.03	0.03	1	
19 - Involvement in community	0.08	0.03	0.04	0.07	0.13	0.12	0.09	0.10		0.06	0.05	0.08	0.06	0.08	0.07	0.09	0.04	0.07	1
20 - Sense of belonging	0.01	0.02	0.01	0.03	0.03	0.00	0.02	0.03		0.04	0.03	0.03	0.00	0.00	0.01	-0.01	0.01	0.11	0.05	1

Correlations for wave 7 (age 12–13) indicators

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 - Relationship with friends	1																			
2 - Relationship with parents	0.06	1																		
3 - Safe home environment	0.02	0.02	1																	
4 - Safe school environment	0.15	0.13	0.04	1																
5 - Financial security of family	0.01	0.05	0.11	0.05	1															
6 - Access to basic goods	-0.01	0	0.04	0.02	0.07	1														
7 - Food security	0.04	0.06	0	0.06	0.07	0.03	1													
8 - Access to adequate shelter	0.02	0.02	0.03	0.06	0.12	0.09	0.06	1												
9 - Exercising regularly																				
10 - Healthy diet	0.05	0.01	-0.01	0.07	0.06	0.04	0.11	0.05		1										
11 - Good mental health	0.15	0.16	0.02	0.19	0.05	0.02	0.09	0.04		0.09	1									
12 - Good state of mind	0.18	0.15	0.08	0.18	0.03	-0.01	0.09	0.04		0.03	0.26	1								
13 - Attending school	0.02	0.01	0.01	0.04	0.07	0.01	0.08	0.02		0.05	0.07	0.07	1							
14 - Satisfied at school	0.13	0.14	0.04	0.14	0.06	-0.01	0.13	0.07		0.08	0.16	0.22	0.08	1						
15 - Learning at home	0.08	0.14	0.07	0.11	0.05	0.01	0.13	0.03		0.08	0.11	0.16	0.01	0.16	1					

16 - Participating in cultural activities	0.06	0.01	-0.02	0.03	0.04	0	0.03	0.03		0.03	0.04	0.02	0.02	0	0.04	1			
17 - Having a say in family decisions	0.09	0.12	0.04	0.04	0.03	0.02	0.09	0.02		0.03	0.11	0.07	0.03	0.1	0.12	0.02	1		
18 - Having a network of support	0.07	0.08	0.15	0.03	0.14	0	0.07	0.02		0.03	0.08	0.08	0.07	0.06	0.09	0.02	0.05	1	
19 - Involvement in community	0.03	0.02	0	-0.01	0.08	0.06	0.12	0.06		0.11	0.05	0.03	0.04	0.11	0.05	0.08	0.08	0.04	1
20 - Sense of belonging	0.13	0.12	0.02	0.33	0.09	0.02	0.06	0.08		0.04	0.22	0.2	0.06	0.09	0.12	0.01	0.06	0.08	0.01	1

Appendix C5 Correlations between indicators of consecutive waves (balanced panel)

Nest dimension	Indicator	Correlation: Wave 4–5	Correlation Wave 5–6	Correlation Wave 6–7
Loved and Safe	Relationship with friends	0.141^ (***)	0.252 (***)	0.113^ (***)
	Relationship with parents	-0.003^ (-)	0.033^ (*)	0.065 (***)
	Safe home environment	0.396 (***)	0.432 (***)	0.457 (***)
	Safe school environment$^{\Psi}$	0.181^ (***)	0.212 (***)	0.244 (***)
Material Basics	Financial security of family	0.453 (***)	0.446 (***)	0.492 (***)
	Access to basic goods (toys, clothes, computer)	0.215^ (***)	0.283 (***)	0.231 (***)
	Food security$^{\#}$	N/A	0.172 (***)	0.200 (***)
	Access to adequate shelter	0.477^ (***)	0.468 (***)	0.535 (***)
Healthy	Exercising regularly	N/A	N/A	N/A
	Healthy diet$^{\#}$	0.245 (***)	0.151 (***)	0.221 (***)
	Good mental health	0.159 (***)	0.166^ (***)	0.167^ (***)
	Good state of mind	N/A	0.171 (***)	0.153^ (***)
Learning	Attending school$^{\Psi}$	0.099 (***)	0.115 (***)	0.111 (***)
	Satisfied at school	0.208 (***)	0.191^ (***)	0.279 (***)
	Learning at home	0.111^ (***)	0.365 (***)	0.057^ (**)
	Participating in cultural activities	0.165 (***)	0.141 (***)	0.127 (***)
Participating	Having a say in family decisions	N/A	N/A	0.104 (***)
	Having a network of support	0.349 (***)	0.385^ (***)	0.386 (***)
	Involvement in community$^{\Psi}$	0.336 (***)	0.320 (***)	0.243 (***)
	Sense of belonging$^{\Psi}$	0.264^ (***)	0.354 (***)	0.020 (-)

^ indicates that indicators used in correlation calculation are not consistent.

Ψ Waves that are shown to have consistent indicators have some minor variations.

Waves that are shown to have consistent indicators have variation in whether they are parent or child reported.

***Correlation significant at 1% level, **correlation significant at 5% level, *correlation significant at 10% level.

(-) Correlation not significantly different from 0.

Appendix C6 Percentage of children meeting wellbeing threshold by sub-domain (unbalanced panel)

Nest dimension	Indicator	Wave 4 (age 6–7)	Wave 5 (age 8–9)	Wave 6 (age 10–11)	Wave 7 (age 12–13)
Loved and Safe	Relationship with friends	80.45% (0.63)	88.78%* (0.52)	83.82%* (0.64)	90.35% (0.55)
	Relationship with parents	96.69% (0.28)	98.92% (0.17)	98.01%* (0.24)	96.63%* (0.34)
	Safe home environment	84.03%* (0.58)	84.65%* (0.59)	85.65%* (0.61)	85.76%* (0.66)
	Safe school environmentΨ	54.42% (0.79)	66.42%* (0.77)	78.56%* (0.71)	78.65%* (0.76)
Material Basics	Financial security of family	79.19%* (0.65)	80.16%* (0.65)	80.73%* (0.68)	84.97%* (0.67)
	Access to basic goods (toys, clothes, computer)	90.65% (0.46)	96.35%* (0.31)	96.75%* (0.31)	97.76%* (0.28)
	Food security#	N/A	95.27%* (0.35)	93.33%* (0.43)	87.21%* (0.62)
	Access to adequate shelter	84.45% (0.58)	83.23%* (0.61)	83.91%* (0.64)	83.41%* (0.69)
Healthy	Exercising regularly	N/A	N/A	N/A	N/A
	Healthy diet#	40.76%* (0.78)	40.06%* (0.80)	30.84%* (0.80)	34.90%* (0.89)
	Good mental health	75.31%* (0.69)	76.03%* (0.70)	86.35% (0.60)	74.44% (0.81)
	Good state of mind	N/A	97.06%* (0.28)	95.13%* (0.37)	75.32% (0.80)
Learning	Attending schoolΨ	88.78%* (0.50)	89.55%* (0.50)	90.39%* (0.51)	88.11%* (0.60)
	Satisfied at school	71.30%^ (0.72)	77.86%^ (0.68)	90.08%* (0.52)	88.25%* (0.60)
	Learning at home	94.82% (0.35)	79.00%* (0.67)	67.49%* (0.81)	87.29% (0.62)
	Participating in cultural activities	97.17%* (0.26)	96.22%* (0.31)	95.85%* (0.35)	93.17%* (0.47)
Participating	Having a say in family decisions	N/A	N/A	93.82%* (0.42)	94.55%* (0.42)
	Having a network of support	80.26%* (0.63)	82.84%* (0.62)	81.76%^ (0.67)	82.87%^ (0.72)
	Involvement in communityΨ	84.41%* (0.58)	90.66%* (0.48)	91.53%* (0.48)	90.73%* (0.54)
	Sense of belongingΨ	72.38% (0.71)	76.66%* (0.69)	75.47%* (0.75)	70.79% (0.85)

* and ^ indicate that indicators for that wave were consistent with other waves with corresponding symbol.

Ψ Waves that are shown to have consistent indicators have some minor variations.

Waves that are shown to have consistent indicators have variation in whether they are parent or child reported.

Note: Standard error in parentheses.

Appendix C7 Odds ratios for logit models exploring long-term wellbeing impacts of being born into monetary poverty

Sub-domains	Wave 4 (age 6–7) odds ratio		Wave 5 (age 8–9) odds ratio		Wave 6 (age 10–11) odds ratio		Wave 7 (age 12–13) odds ratio	
	No controls	Controlling for current income	No controls	Controlling for current income	No controls	Controlling for current income	No controls	Controlling for current income
Relationship with friends models								
Relationship with friends	0.63***	0.69***	0.94	1.08	1.08	1.19	1.01	1.02
Income		1.00***		1.00		1.00		1.00*
Relationship with parents models								
Relationship with parents	0.84	0.86	1.16	1.71	1.96	2.01	1.22	1.15
Income		1.00		1.00***		1.00**		1.00**
Safe home environment models								
Safe home environment	0.57***	0.59***	0.62***	0.65***	0.79	0.85	0.72*	0.74
Income		1.00		1.00**		1.00**		1.00***
Safe school environment models								
Safe school environment	0.99	0.99	0.99	1.11	1.18	1.25	1.03	1.19
Income		1.00		1.00***		1.00*		1.00***
Financial security of family models								
Financial security of family	0.64***	0.98	0.54***	0.92	0.51***	0.80	0.57***	0.76
Income		1.00***		1.00***		1.00***		1.00***
Access to basic goods (toys, clothes, computer) models								
Access to basic goods	0.56***	0.83	0.38***	0.71	0.77	1.43	0.45**	0.77
Income		1.00***		1.00***		1.00***		1.00***
Food security models								
Food security	-	-	0.49***	0.62**	0.69	0.93	0.60***	0.70*
Income		-		1.00**		1.00***		1.00***
Access to adequate shelter models								
Access to adequate shelter	0.39***	0.54***	0.51***	0.82	0.47***	0.65***	0.43***	0.57***
Income		1.00***		1.00***		1.00***		1.00***
Exercising regularly models								
Exercising regularly	-	-	-	-	-	-	-	-

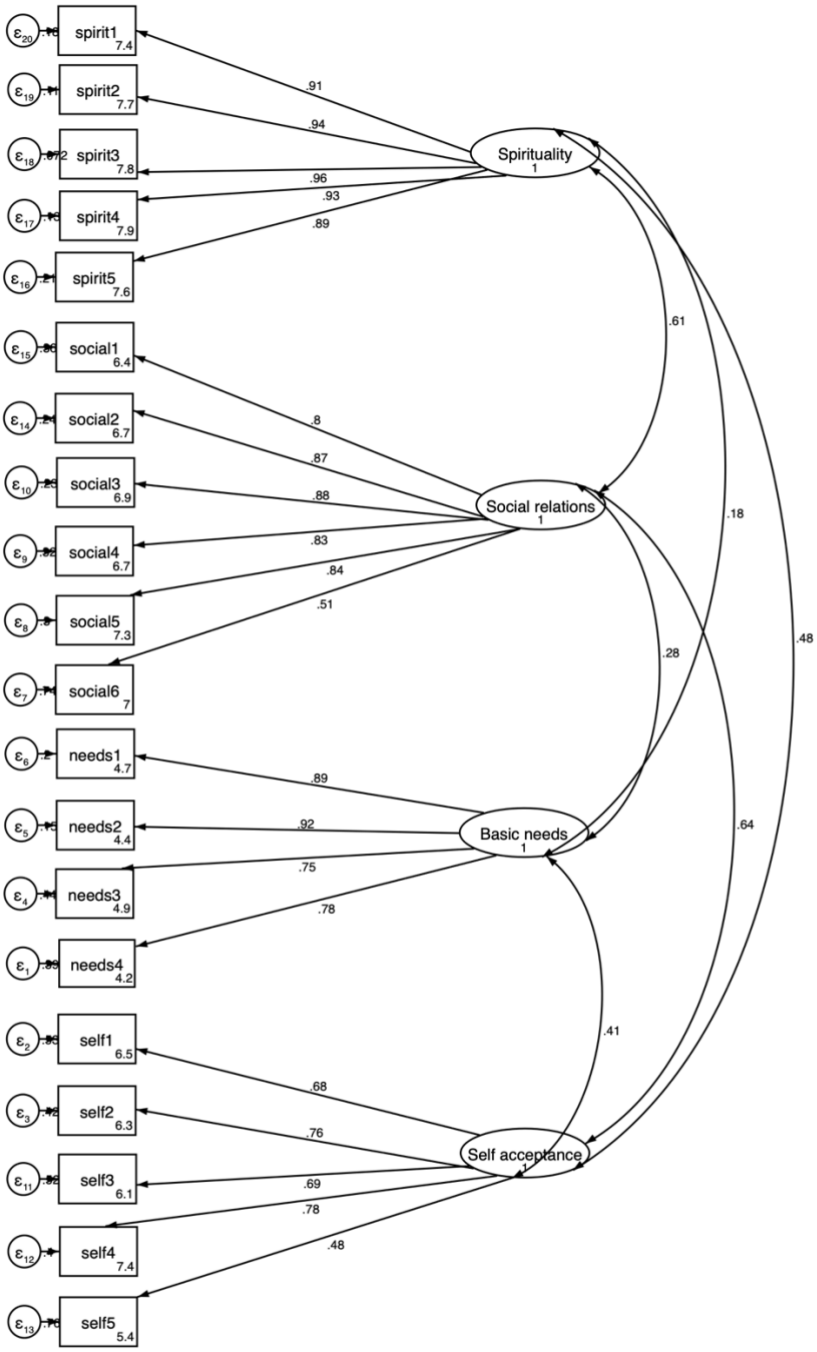
Income		-		-		-		-
Healthy diet models								
Healthy diet	0.76**	0.88	0.64***	0.68***	0.72**	0.80	0.66***	0.81
Income		1.00***		1.00***		1.00***		1.00***
Good mental health models								
Good mental health	0.85	0.97	0.75**	0.80*	0.93	1.06	0.88	0.94
Income		1.00***		1.00***		1.00***		1.00***
Good state of mind models								
Good state of mind	-	-	0.70	0.88	0.77	0.98	1.05	1.12
Income		-		1.00		1.00		1.00***
Attending school models								
Attending school	0.71**	0.74*	0.92	1.01	0.74	0.85	0.72	0.74
Income		1.00**		1.00**		1.00**		1.00**
Satisfied at school models								
Satisfied at school	1.03	1.03	1.22	1.28*	1.04	1.23	0.94	0.87
Income		1.00		1.00**		1.00		1.00*
Learning at home models								
Learning at home	0.47***	6.56*	0.46***	0.61***	0.68***	0.90	1.00	1.20
Income		1.00***		1.00***		1.00***		1.00***
Participating in cultural activities models								
Participating in cultural activities	0.41***	0.54**	0.48***	0.60*	0.75	0.99	0.63**	0.69
Income		1.00***		1.00***		1.00***		1.00**
Having a say in family decisions models								
Having a say in family decisions	-	-	-	-	1.58*	1.76*	0.82	1.00
Income		-		-		1.00		1.00*
Having a network of support models								
Having a network of support	0.70***	0.74**	0.70**	0.74**	0.68***	0.82	0.74*	0.85
Income		1.00***		1.00**		1.00***		1.00***
Involvement in community models								
Involvement in community	0.49***	0.70**	0.48***	0.82	0.71*	0.98	0.54***	0.64**
Income		1.00***		1.00***		1.00***		1.00***
Sense of belonging models								
Sense of belonging	0.73***	0.71***	0.73**	0.71**	0.60***	0.64***	0.73**	0.80
Income		1.00		1.00				1.00***

***Significant at the 1% level, **significant at the 5% level, *significant at the 10% level.

Note: Each logit model uses sub-domain as dependent variable, and flag indicating poverty status at birth as independent variable. Household equivalised income used as control variable.

Appendix D1 IWS Confirmatory Factor Analysis

Factor loadings

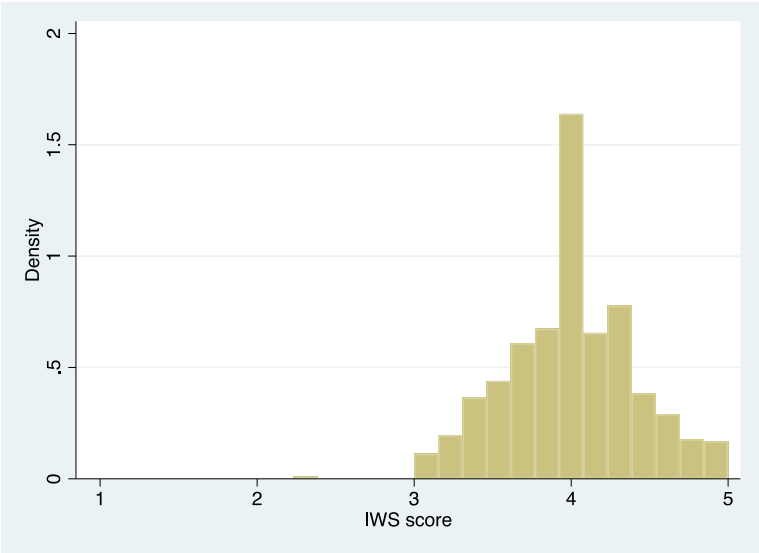


CFA fit indices

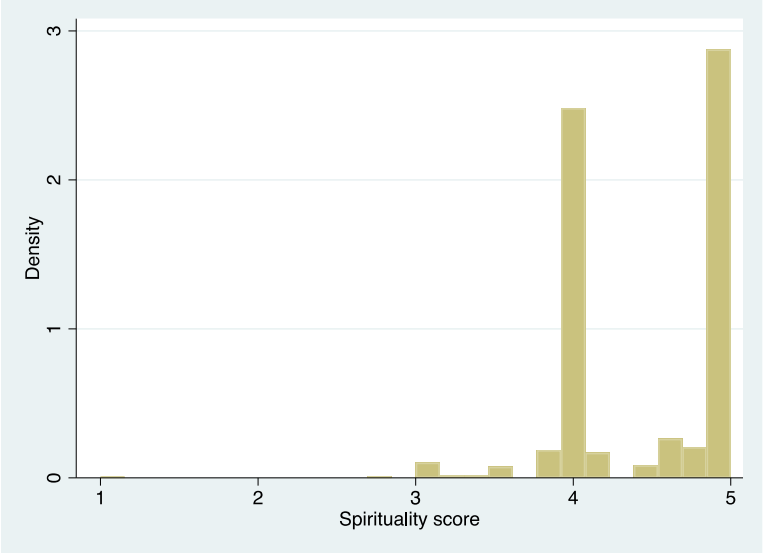
Comparative Fit Index	0.953
Tucker-Lewis Index	0.945
Standard Root Mean Residual	0.064
Root Mean Square Error of Approximation	0.069

Appendix D2 IWS graphs

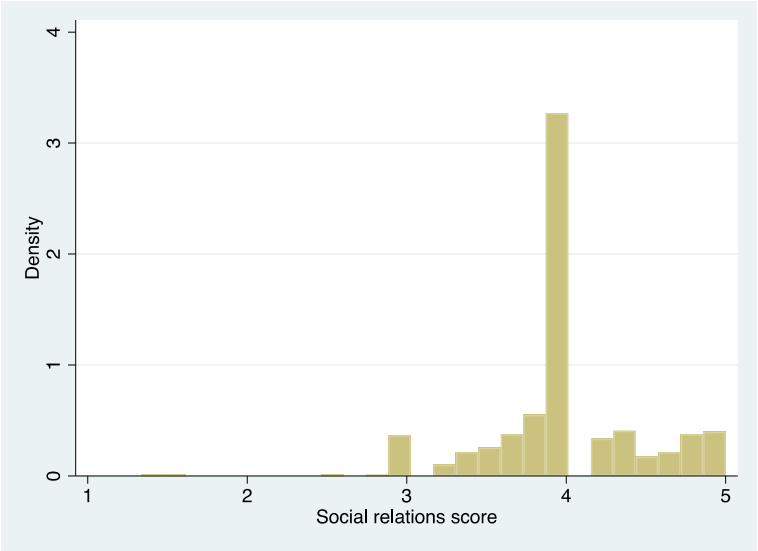
Histogram of IWS scores



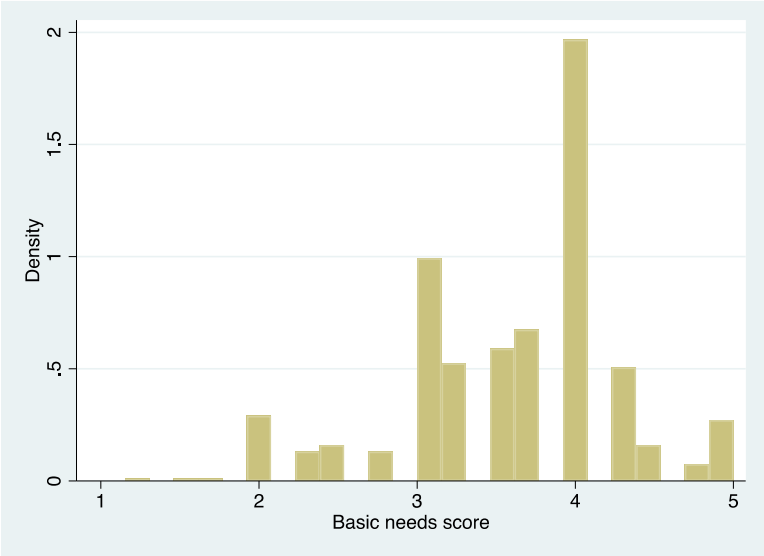
Histogram of Spirituality dimension scores



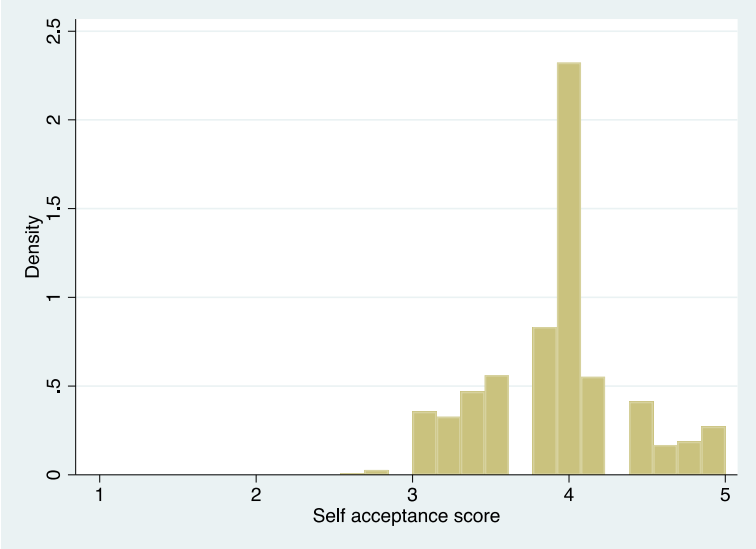
Histogram of Social Relations dimension scores



Histogram of Basic Needs dimension scores

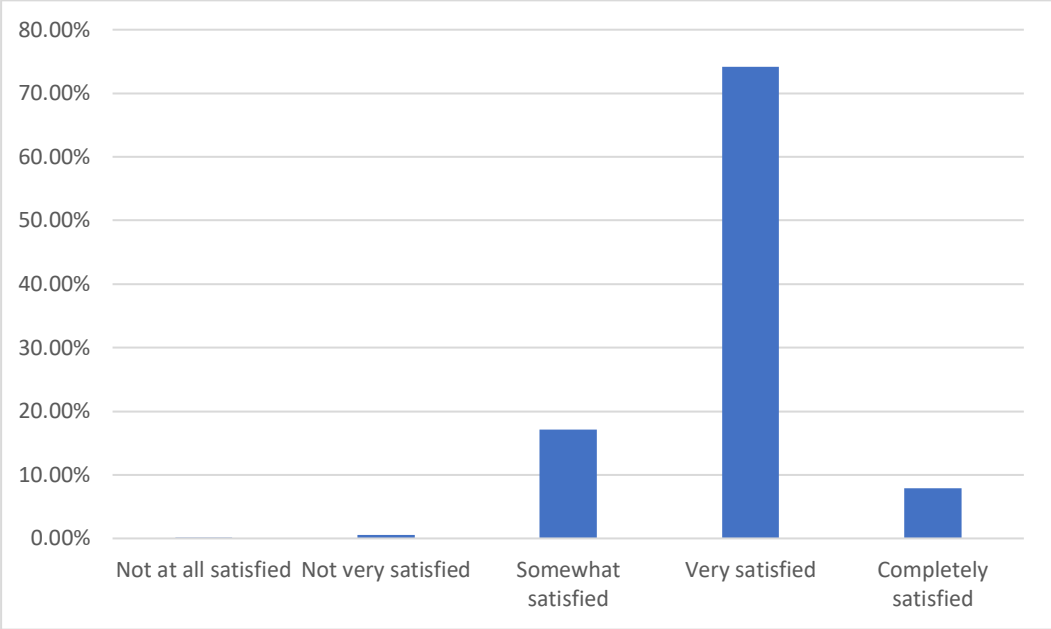


Histogram of Self-Acceptance dimension scores

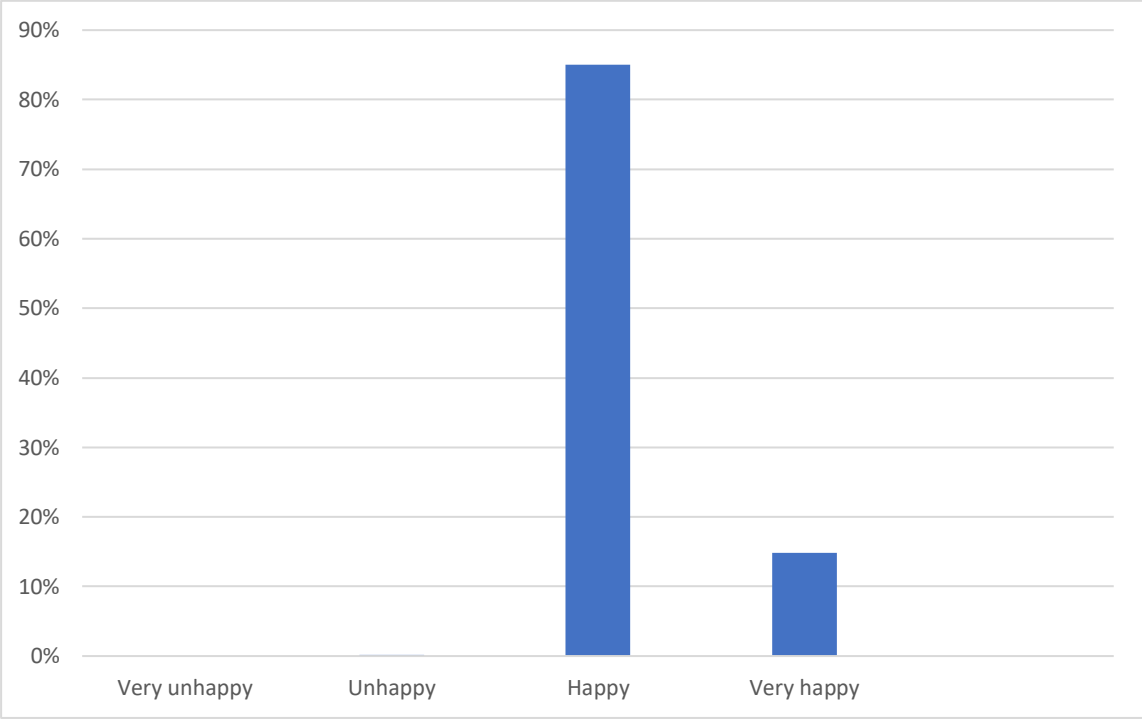


Appendix D3 Life satisfaction and happiness scale distributions

Distribution of responses to life satisfaction scale



Distribution of responses to happiness scale



Appendix D4 Analysis of Papuan migrants

	Coefficient	Standard error
Migrant status		
Migrant from island regions	0.02	0.059
Migrant from coastal regions	0.067	0.057
Migrant from mountain regions	0.181*	0.098
Male	-0.048	0.036
Religion		
Christian	-0.007	0.041
Catholic	-0.111*	0.066
Village (lives in Hedam)	0.086***	0.033
Married	0.158***	0.046
Age	-0.012	0.01
Age-squared	0	0
BMI	-0.026	0.041
BMI-squared	0.001	0.001
Education		
Junior High School (*SMP)*	0.04	0.077
Senior High School (*SMA)*	0.153**	0.07
Diploma (*Akademi D)*	0.138	0.089
University	0.291***	0.076
Monthly salary (IDR)		
No salary	-0.145**	0.071
Less than 500.000	-0.243***	0.085
500.000 - 999.999	0	0.065
1.000.000 - 2.499.999	0.197***	0.058
2.500.000 - 3.999.999	0.25***	0.065
4.000.000 - 5.499.999	0.51***	0.078
Owns land	0.094**	0.037
Number of bedrooms	0.051***	0.017
Housing quality index	0.03	0.037
Constant	3.812***	0.52
Adjusted R-squared	0.3702	
Sample size	492	

*Significant at 10% level, **significant at 5% level, ***significant at 1% level.
Note: Model is Ordinary Least Squares.
Base case is born in Jayapura, female, Muslim, lives in Kota Baru village, not married, has completed primary school only, reports no monthly salary, and does not own land.

Appendix D5 Contrasting wellbeing levels in Jayapura and Ambon

	Coefficient	Standard error
Province		
Jayapura	0.024	0.021
Male	-0.054***	0.019
Religion		
Christian	-0.01	0.027
Catholic	-0.065	0.045
Married	0.084***	0.026
Age	0.011**	0.005
Age-squared	0	0
BMI	0.029*	0.016
BMI-squared	-0.001*	0
Education		
Junior High School (*SMP)*	0.021	0.038
Senior High School (*SMA)*	0.078**	0.033
Diploma (*Akademi D)*	0.078*	0.045
University	0.176***	0.039
Monthly salary (IDR)		
No salary	0.034	0.035
Less than 500.000	-0.094**	0.045
500.000 - 999.999	0.018	0.033
1.000.000 - 2.499.999	0.106***	0.029
2.500.000 - 3.999.999	0.189***	0.036
4.000.000 - 5.499.999	0.342***	0.049
Owns land	0.06**	0.026
Number of bedrooms	0.028***	0.01
Housing quality index	0.062***	0.019
Constant	2.85***	0.226
Adjusted R-squared	0.2282	
Sample size	1,404	

*Significant at 10% level, **significant at 5% level, ***significant at 1% level.
Note: Model is Ordinary Least Squares.
Base case lives in Ambon, is female, Muslim, not married, has completed primary school only, reports no monthly salary, and does not own land.

Appendix E1 Summary of interview guide

Framework development

1. What was the motivation or purpose behind developing your framework/s?
2. How was the study commissioned?
3. Were there any surprises in the dimensions that were identified through this research?
4. How engaged do you feel participants were throughout the participatory process?
5. How do you feel that participation in the study impacted participants and the community?
6. What are some potential benefits your study has for research and policymaking?

Applications

1. Tell me about the applications that followed on from your participatory wellbeing framework/s
2. What do you feel was the benefit of utilising a participatory wellbeing framework for your application/s, as opposed to a framework that was developed through other approaches?

Policy and research impact

1. Are any key decision-makers, practitioners, or policymakers (at any level) aware of your study/ies?
2. Are you aware whether your research has been used for any kind of decision-making/program development/policymaking (at any level)?
3. What has been the response to your study/ies by individuals/researchers/policymakers?
4. What do you feel are the barriers to achieving policy and research impact? What are the enablers?