Investigating the use of the PERMA theory of wellbeing in the New Zealand General Social Survey

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Jared Campbell Viljoen

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Abstract

In recent years governments have become increasingly interested in measuring the overall wellbeing of their populations. This is a significant shift away from the traditional focus on economic metrics. With the development of its General Social Survey, the New Zealand government has followed this trend. A popular wellbeing measure used by many, including in the New Zealand General Social Survey, is the single satisfaction with life question. There are challenges with relying on life satisfaction to measuring subjective wellbeing. This research investigates the use of Martin Seligman's PERMA theory of wellbeing as a potential alternative for the life satisfaction question, as it provides extra information about wellbeing while potentially also not losing information gained through measuring life satisfaction. It also may help understand better cross-cultural differences in wellbeing. 100 New Zealand European and New Zealand Māori participants aged 55-64 years old responded to a postal survey asking them about their wellbeing. The life satisfaction question and the questions from the PERMA theory were asked. Statistical correlation was used to analyse the data. Results indicated that PERMA questions do potentially provide and enhanced understanding of wellbeing, both within and across cultures, without losing information gained through use of the life satisfaction question. Using PERMA in a survey like the New Zealand General Social Survey could potentially provide an increased understanding of not only whether people are 'happy', but *why* they are 'happy', and how different cultures experience that 'happiness'.

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Section 1: Introduction

In recent years, the term 'wellbeing' has become common, both in popular self-help usage as well as in academic literature. It has also become a term widely used in government departments both within New Zealand and around the world, with various countries seeking to understand how to improve the happiness of their populations, and how to measure it.

Search results for the term in academic databases are indicative of the rapid increase in interest in recent years. Searching for 'wellbeing/well-being/well being' on PsychINFO returned 114,959 results. Prior to 1980 there were only 4615. Google Scholar returned 813,000 hits for 'wellbeing'. Prior to 1980, there were only 10,300 results, an increase of over 7000%. A search for the more refined term 'subjective wellbeing' on Google Scholar returned 124,000 results. Narrowing the search to between 1900 to 1980 returns only 1170.[1]

As would be expected with such a large increase in usage and interest, the term has various applications and definitions, from a general term for happiness as used in the thriving self-help industry to the more focused research within the psychological and academic circles. It is a term that has become ubiquitous and as such its meaning has at times become somewhat unclear.

The term has also become common in official government literature, with governments and their many agencies around the world becoming increasingly interested in understanding the wellbeing of their populations. What exactly is meant by a population's wellbeing can change depending on who is asking the question. Nevertheless, the interest of political institutions is welcome as they have further refined their efforts to understand the concept at a population level as well as measure it with the intent that this information can inform the development of policy and how governments meet the needs of their respective populations. It is wellbeing at the macro level, whereas typically the psychological academic perspective focuses more at the individual micro level.

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[1] Searches on PsychoINFO and Google Scholar conducted on 11th January 2017. It is likely that results will have increased at time of reading.

This Thesis

Given the recent political interest in understanding and measuring wellbeing, this thesis situates itself between the purely psychological investigation at a micro level, and macro population level investigations. It is an investigation of psychological constructs and the measurement of wellbeing within a macro, population/political level context. As such this thesis intends to outline specifically how governments, in particular the New Zealand Government, measures wellbeing. It also seeks to investigate how government could possibly improve this measurement by better understanding what the concept means and what elements could be measured to more accurately reflect the 'happiness' or wellbeing of a nation, and what this may mean in a policy context, rather than a clinical or academic one.

What is meant by 'wellbeing' generally?

Wellbeing has been spoken of in various forms and is defined in multiple ways. The World Health Organization (World Health Organization, 2014) speaks of wellbeing in terms of health - physical, mental and social - pointing out that it is not merely the absence of disease and infirmity. Thus, they link health and wellbeing together into a frame where there is a *presence* of positive factors rather than simply the absence of negative ones.

Diener (1984) walked through various approaches to viewing wellbeing, from it being associated with inspired elements of virtue or holiness to whatever an individual may assess as being necessary to enjoy the 'good life'. He further identifies that the concept has also been defined by its relationship with affect, where wellbeing is achieved when an individual's predominant emotional experience is one of positive affect (rather than negative affect).

The experience of wellbeing falling largely in the personally assessed arena led to the creation of the term 'subjective wellbeing'. Diener (2006), proposed that subjective wellbeing is an "umbrella term", a global assessment that individuals make regarding all valuations related to their person, be it mental, physical, or environmental. It is important to note that while many of these valuations may be subjective, Diener does assert that it is possible for them to be measured objectively.

Easterlin (2003), proposed to use wellbeing interchangeably with other terms such as utility, life satisfaction and happiness. This is a problematic and a very loose definition of wellbeing, which becomes apparent when one attempts to measure it. Jayawickreme, Forgeard

and Seligman (2012) identified a problem with Easterlin's approach to the term as they reviewed methods for measuring individual's wellbeing, particularly with how the term lacked definition in terms of what specific elements make up 'happiness' or wellbeing. As a result, they further sought to distinguish between different conceptions of wellbeing by outlining a framework for doing so (discussed below).

One particularly useful differentiation in understanding wellbeing is by comparing hedonistic and eudemonic perspectives. Hedonism, the pursuit of pleasure and the minimisation of pain, was articulated thousands of years ago by Aristuppus and Epicurus (Peterson, Park, & Seligman, 2005). This perspective of wellbeing gives pleasure pre-eminence as the ultimate pursuit of the personal experience and behaviours, and pain as the opposing experience that is to be most avoided (Jayawickreme et al., 2012, p. 331). This perspective places an emphasis on the personal, placing wellbeing firmly within the realm of the individual, an internally focused experience.

Conversely, a eudemonic perspective of wellbeing shifts away from merely assessing whether or not someone 'feels' good, but is also interested in whether one is 'doing' good (Jayawickreme et al., 2012). In this regard there as an external element that is added to the experience of the individual, where the world around them and their interaction and impact upon it plays an integral part to the defining of whether one experiences wellbeing. As noted by Peterson, Park and Seligman (2005), according to Aristotle's eudemonic perspective, happiness is the result of individuals living in accordance with their virtues, and the pursuit of purely sensual pleasure was seen as vulgar. They also note that this perspective of wellbeing falls more in line with Carl Rogers' concept of the fully-functioning person, Maslow's self-actualization, Ryff and Singer's vision of psychological wellbeing, and Deci and Ryan's self-determination theory.

A related approach to viewing wellbeing is the combined 'Liking/Needing/Wanting' framework as outlined by Jayawickreme, Forgeard and Seligman (2012, pp. 330–335). Similar to the hedonic view, 'Liking' is a combination of hedonic experiences and cognitive evaluations and focuses on subjective reports of people's satisfaction with their life, their positive emotions, and their assessments of how they feel and think about their lives. 'Liking' is considered to be the main focus of what is meant when talking about subjective wellbeing perspective.

'Needing' is focused on wellbeing being influenced by whether or not a set of 'objective' needs have been acquired, and it holds that some things are good or bad for people regardless of whether or not they lead to pleasure. These things will often generally include access to economic resources, political freedom, health, etc. As such, the needing perspective of wellbeing is a familiar one within government circles, where certain things are generally deemed important for everyone in society (e.g., sufficient income) whether or not there is a subjective validation of this.

The 'Wanting' perspective of wellbeing dominates economic theories of wellbeing and is not focused on the subjective aspects of wellbeing. Instead, it is interested in satisfying preferences, regardless of whether or not satisfying those preferences lead to increased satisfaction. Money is seen as an appropriate indicator of preference, as it increases individual choice in achieving preferences. Thus, this perspective is focused more on an individual's ability to achieve what they want in life, whether or not they have achieved it, and is separate to their rating of subjective emotional states.

These contrasting perspectives of wellbeing are important to note as they naturally lead to the measurement of different aspects of wellbeing. Given that hedonic perspectives are focused on the experience of pleasure, a useful proxy would be to investigate the affective measures and affective states, or rather simply whether people are experiencing physical or emotional pleasure. Contrastingly, a eudemonic perspective would require measures that investigate affective states along with other aspects of 'doing well', through constructs such as meaning, purpose and engagement to name a few (Jayawickreme et al., 2012, p. 328). Measuring more 'Wanting' or 'Needing' approaches to wellbeing would alternatively focus on the resources that are available for people to meet needs. Given the preference of governments to focus on economics it is not surprising that most efforts at measuring the wellbeing of nations largely falls within the 'Wanting' and 'Needing' domains of wellbeing. However, there has been some effort in recent times to move away from this focus and understand and measure wellbeing from a more nuanced and personal perspective.

Subjective wellbeing

As noted above, 'subjective wellbeing' has been articulated as an "umbrella term" that encompasses all the evaluations people make about their lives, including their experiences, their bodies and their minds (Diener, 2006). In earlier work, Diener (1984, pp. 543–544) identified that there were three hallmark requirements to investigating subjective wellbeing:

1. It is subjective – i.e. within the experience of the individual.
2. Subjective wellbeing must include positive measures, not just the absence of negative factors.
3. Subjective wellbeing measures typically involve a global life assessment of some kind (e.g., a life satisfaction rating).

The nature of wellbeing being subjective is important to identify as, when wellbeing is measured, particularly at national levels, there is a preference to measure and analyse more objective indicators, determinants, or contributing factors (e.g., income, education levels, health status, etc.), preferring to focus on the resources available to individuals and families, and the more objectively observable outcomes associated with those resources (increased health, better paying job, etc.). While it is understandable that governments wish to measure something that they can observe more objectively, and likely influence more directly, it is argued that a full accounting of wellbeing cannot be separated out from the subjective experience, and that any efforts to measure wellbeing fully must also take into account the more subjective elements and evaluations. A natural reason for governments and its agencies to measure objective factors is that there is a clearer relationship between such things and their ability to impact on this factors through government policies. For example, it is much easier to influence the education levels of individuals through education policy and programs than it is to first understand and then impact on the more elusive emotional experience one might have with the education system. However, understanding the subjective experience of people's lives can provide an important triangulating factor in helping governments understand whether or not the policies and programs they are instituting are leading to the ultimate outcome of having a flourishing population where there are high levels of wellbeing. Thankfully, in recent years many governments have been attempting to understand such things in more depth.

National Accounts of Wellbeing

Governments around the world have recently become interested in understanding and measuring the happiness of their populations. This interest has arisen for a variety of reasons, one of the major ones being a dissatisfaction with solely economic measures, such as gross domestic product. One potential argument for this is the oft-cited 'Easterlin Paradox' (R. a. Easterlin, 1995) which observes that, while the income levels of many nations' populaces has been steadily increasing, this has not been followed by a comparable overall rise in that population's happiness levels (R. a. Easterlin, 1995; R. a Easterlin, McVey, Switek, Sawangfa, & Zweig, 2010), a clear suggestion that the relationship between income and wellbeing is

complicated. Such research suggests that wellbeing is not solely a corollary of economic variables, and that governments may also benefit from understanding the construct of wellbeing more fully and what the wider variables might be.

The paragraphs below provide a brief overview of how the measurement of wellbeing has been adopted by various countries around the world.

UK

In 2010, David Cameron, then the Prime Minister of the United Kingdom, announced that the UK government would begin to measure the wellbeing of its population. He indicated that this was in part due to the belief that measuring Gross Domestic Product (GDP) was not an adequate measure of how well a country was doing, referring to observations that, while the GDP may have been increasing in many nations, the satisfaction of their populace had not followed the trend (Winnett, 2010). This in turn led to The Office for National Statistics (ONS) launching a program of work to measure national wellbeing, the aim of which was to provide a set of statistics that were trusted to help monitor and increase the understanding of national wellbeing. These measures could then be combined with traditional measures of national economic factors (Office for National Statistics, 2011). Since that time, ONS has continued to gather and measure multiple variables related to wellbeing, including life satisfaction and happiness[2].

US

As early as the 1930s to 1940s, the question of what to focus on to measure a nation's wellbeing was being raised in the United States. Economist Simon Kuznets questioned whether a sole focus on national economic output would be detrimental to other variables impacting on the welfare of a nation (Kuznets, 1948). Since that time, the US has continued to grapple with the question of whether a broader focus on wellbeing would be useful, despite the general trend to largely rely on economic measures. In recent years, the United States government continues to focus on largely economic variables: upon investigating the latest US Census 2011, under wellbeing the census focuses on largely material wellbeing as supplementary to economic measures. It particularly focuses on objective measures such as material goods, education, housing, and access to help in times of need. There is a noticeable absence of focus on

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[2] See https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing. Accessed 26-01-2016.

sociological and psychological subjective constructs of wellbeing (Siebens, 2013). However, recently there has been a considerable push from leading academics for the use of psychological constructs in measuring wellbeing at the national level and for use in policy development (for example, Diener, 2006; Forgeard, Jayawickreme, Kern, & Seligman, 2011).

Bhutan

One nation that has taken the effort to attain an increase in national happiness and measure it seriously, is the small nation of Bhutan. In 1972 the 4th Druk Gyalpo, the head of state of the Kingdom of Bhutan, declared that instead of GNP, Gross National Happiness (GNH) should be the principle measure by which the nation should measure progress. Efforts to develop measures for GNH have been underway since 2008 (Gross National Happiness Commission, 2013). These efforts have led to the establishment of the Gross National Happiness Commission. Heading the commission is the Prime Minister. While the commission measures traditional demographics such as education and health, the formal domains of GNH also include 'cultural diversity & resilience', 'community vitality', 'time use', and notably 'psychological wellbeing' (Gross National Happiness Commission, 2013). The psychological wellbeing domain focuses itself on how the nation's people experience quality of life. Indicators in this domain include: life satisfaction, positive emotion, negative emotion, and spirituality (Gross National Happiness Commission, 2016). The GNH domains are embedded into the nation's 'Five Year Plans', which provides key indicators and helps guide policy development (Royal Government of Bhutan, 2016).

United Arab Emirates, Venezuela, Ecuador

Perhaps a somewhat surprising entry into national efforts to account for their population's happiness at the national level is the United Arab Emirates. In 2016 the Prime Minister announced that Her Excellency Ohood bint Kalfan Al Roumi would be the UAE's new Minister for State Happiness (Mckenzie, 2016). While details are limited, the ministry that H.E Al Roumi will oversee is tasked with promoting "the UAE's plans, programmes and policies to promote the happiness of the UAE society" (Ministry of Cabinet Affairs & The Future, 2017). The appointment of a government official to oversee the nation's happiness is not new, with Venezuela and Ecuador beating the UAE by a few years. In 2013 President Nicolas Madure of Venezuela appointed Rafael Rios as the vice minister for happiness. In Ecuador a former television star, Freddy Ehlers, was similarly appointed as the state secretary of 'buen vivir' or wellbeing (Taylor, 2016).

France and the OECD

In 2008, then President of France Nicholas Sarkozy called for the creation of The Commission on Measurement of Economic Performance and Social Progress. The purpose of the commission, led by notable figures Joseph Stiglitz, Amartya Sen and Jean Paul Fitoussi, was to "identify the limits of GDP as an indicator of economic performance and social progress" (Stiglitz, Sen, & Fotoussi, 2009, p. 7). Alongside calling for better measures of economic performance, the commission also recommended a shift from solely measuring economic production to also measuring people's wellbeing, with a starting point being focused on living standards and quality of life, including both subjective and objective experiences. Since then, France and the Organisation for Economic Co-operation and Development (OECD), which made significant contributions to the commission, have continued to investigate and measure wellbeing. The OECD in particular has played a significant role in working to improve the metrics of wellbeing around the world, publishing multiple reports on various nations and the wellbeing of their populations. The OECD framework for measuring wellbeing, in an effort to look beyond macro-economic statistics, includes such psychological domains as subjective wellbeing, social connections, and work-life balance. These fall under their 'Qualify of Life' measures (OECD, 2013).

Australia

Since 2002, the Australian Bureau of Statistics has conducted the General Social Survey. The survey conducted four times (2002, 2006, 2010, and 2014) aims to investigate the various aspects of life considered important for human wellbeing. Domains investigated include social relationships, health, income, personal stressors, and general demographic variables. Overall life satisfaction was also investigated in later iterations (2010 and 2014) of the survey (Australian Bureau of Statistics, 2015). However, in the National Survey of Mental Health and Wellbeing, the bureau has investigated individual's ratings of life satisfaction since as early as 1997 (Australian Bureau of Statistics, 2008).

While not an exhaustive review of what has been taking place around the world in recent years, the above paragraphs represent the growing interest across the globe for governments to understand and measure the happiness or wellbeing of their people. Such measurements, while necessarily including demographic variables such as education, health, and income, have also in some areas sought to understand more subjective experiences of individuals. This is often done through ratings of life satisfaction, as in the Australian measure. Whatever metric may be used, the recent rise in understanding the richer social and

psychological outcomes of national policies beyond economic outputs leads researchers and government departments to grapple with what exactly should be measured when one is considering such broad concepts as 'wellbeing' and 'happiness', and then what is an appropriate metric to capture that concept.

New Zealand and the measurement of wellbeing

Similar to other nations, New Zealand has also fairly recently become interested in seeking to understand the wellbeing of its population beyond the usual focus of economic and demographic factors. The paragraphs below review the New Zealand governments official approach to measuring wellbeing.

Treasury

As one of New Zealand's oldest institutions, the Treasury exerts arguably some of the greatest influence over the lives of New Zealanders and their wellbeing. Founded in 1840, the same year that Te Tiriti o Waitangi/the Treaty of Waitangi was signed, the Treasury is the "Government's lead advisor on economic, financial and regulatory policy" (The Treasury, 2015). This incredibly important department of state monitors and manages the financial concerns of the government, and also fills a leadership and monitoring role across the entire breadth of the state sector. It is hard to underestimate the influence this single department has on how government impacts the country.

Typically, the Treasury has focused its efforts on influencing and monitoring national economic levers of success, such as Gross Domestic Product (GDP). Given their role in managing the finances of the government, this is not surprising. However, in recent years, there has been a shift away from purely economic metrics to incorporate a more holistic view of national wellbeing. The Treasury's vision now is to be "a world class Treasury working for higher living standards for New Zealanders" (as cited in Gleisner, Llewellyn-Fowler, & McAlister, 2011, p. 1). This shift in language to include words such as 'living standards' suggests a more holistic perspective of national success and is notable.

After 18 months of research to understand living standards, in 2011 the Treasury developed their 'Living Standards Framework' (LSF). This framework is intended to guide treasury in providing evidence-based advice to government ministers seeking to improve New Zealander's lives (Gleisner et al., 2011). The LSF signals a significant shift in language and

focus towards broader determinants of a population's happiness, rather than solely economic ones. The fact that this direction is coming from New Zealand's foremost authority on the economy is significant. In outlining what they mean when aiming to raise living standards, treasury states: "By living standards we mean much more than just income or GDP: It includes a broad range of material and non-material factors which impact on well-being" (The Treasury, 2016). Further, Treasury has signalled that higher living standards encompasses everything that falls within the intent and purpose of the state sector, a broad remit. Thus, Treasury is placing wellbeing at the heart of their role and function and indeed the role and function of government in general.

In recognition of this, the LSF is guided by various theoretical approaches including welfare-based economic theories, capability theories and the sustainability approach (Gleisner et al., 2011, p. 2).

Treasury's LSF recognises the following elements (Gleisner et al., 2011):

- Living standards are determined by a broad range of material and non-material variables
- Freedoms, rights and capabilities are important
- Distribution of living standards across society and its varied groups is an important factor, and
- Sustainability of living standards overtime is crucial.

Alongside these approaches, and of particular note to the world of psychological research and measurement, is Treasury's inclusion in their framework of measuring subjective wellbeing. Treasury has situated subjective wellbeing as an important piece of the puzzle in any effort to measure and monitor the progress of delivering greater national wellbeing. The LSF uses subjective measures of wellbeing to triangulate whether or not the more objective measures are correct and whether the information they provide is aligning with what individuals are saying about their personal experience (Gleisner et al., 2011).

The reasons for the New Zealand Treasury including subjective wellbeing as worthy of measurement and consideration are insightful. In their report on higher living standards, Gleisner et al. (2011) indicated that subjective wellbeing provided a means to compare wellbeing both within and across societies. It also provided a check against which to test specific policy theories. It was also noted that the internal subjective experience of wellbeing was sometimes a better predictor of outcomes than more objective measures. For example,

Singh-Manoux, Marmot, and Adler (2005) found that health status was better predicted by subjective socio-economic status than by more objective measures of socio-economic outcomes. Further to this, and of particular relevance to the Treasury, is the somewhat paradoxical relationship between income and happiness, a relationship that has been shown to be non-linear and one of diminishing returns, both in developed and developing countries (e.g., Easterlin, 1995; Easterlin et al., 2010). Hence, Treasury notes that the research into happiness requires that national accounts of wellbeing must include psychological domains such as subjective wellbeing, social connections, mental health, and work-life balance, rather than simply fiscal and economic metrics.

The New Zealand Treasury's focus on improving wellbeing and its efforts to measure it to inform policy provides further impetus for assessing how wellbeing is officially measured and whether or not the metrics used can be improved. This is especially important given the relatively recent advent of government interest in measuring wellbeing.

Superu

The Social Policy Evaluation and Research Unit, Superu for short (formerly known as the Families Commission), is an independent Crown entity that serves as the New Zealand government's chief advisor on what will improve the lives of families, whānau and children in New Zealand[3]. Superu generates evidence to assist decision-makers on social issues, shares best evidence of what works, and supports decision-makers on how to use evidence. They also develop standards of evidence and good practice, and promote the use of evidence and evaluation within the social sector (Social Policy Evaluation and Research Unit, 2017b). One of Superu's programmes of work includes the Families and Whānau Wellbeing Research programme, with Superu publishing an annual report that seeks to measure how families and Whānau in New Zealand are doing across a range of wellbeing indicators (Social Policy Evaluation and Research Unit, 2017a). The publication of this report fulfils Superu's legislated function as found in the Families Commission Amendment Act 2014, which states that Superu is to "prepare and publish an annual Families Status Report that measures and monitors the well-being of New Zealand families" (Families Commission Amendment Act, 2014).

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[3] Recently it has been announced that unfortunately Superu will be disestablished in 2018 with some functions passing to the Ministry of Social Development. It is not known what impact this will have on Superu's work mentioned in this paper.

As part of the 2015 Families and Whānau Status Report, Superu developed a Family Wellbeing Framework and a Whānau Rangatiratanga Framework to help measure and understand family and Whānau wellbeing.

The Family Wellbeing Framework

The Family Wellbeing Framework sought to provide an overall picture of families in New Zealand, and those things that contribute to families being able to meet their core functions. It was also intended as a tool that could help identify those things affecting families experiencing hardships that may need to be addressed by public policy. The Families Commission also pointed out that the framework was not intended as a diagnostic tool at the individual family level, nor was it intended to predict or track effects of policy changes on families (Families Commission, 2014).

The Family Wellbeing Framework (Social Policy Evaluation and Research Unit, 2015, pp. 35–36) incorporated four components:

- Family wellbeing domains:
  - physical, material, emotional, and social;
- Family functions:
  - care, nurture and support; manage resources; provide socialisation and guidance; and provide identity and sense of belonging;
- Influential and contributing factors:
  - Health; Relationships and Connections; Economic security and housing; Safety and environment; Skills, learning and development; and Identity and sense of belonging; and
- Contextual settings:
  - Economic, Social, Cultural, Environmental, Political, and Demographic.

Whānau Wellbeing Framework / Whānau Rangatiratanga Framework

Similarly, the Whānau Wellbeing Framework was developed as an instrument that could help measure and monitor whānau wellbeing, and changes to that wellbeing overtime. However, distinct from the Family Wellbeing Framework, the Whānau Wellbeing Framework incorporated a Māori lens, drawing on principles that reflected Te Ao Māori (the Māori world) (Families Commission, 2014).

The refined Whānau Rangatiratanga Framework (Social Policy Evaluation and Research Unit, 2015, pp. 37–38) sought to conceptually depict Māori whānau wellbeing

through more specifically focusing on Māori-specific domains, indicators and measures. It also sought to address a data gap where, at the population level, New Zealand households are often used as a proxy to measure aspects of whānau, even though the concept of whānau and family are not inter-changeable (Baker, 2016). The framework adopted a capabilities approach when deciding on how to measure whānau wellbeing, an approach which focuses on the opportunities, potential and capabilities (Sen, 2001) of whānau to realise their aspirations and live how they want to live . The framework itself is made up of:

- Whānau Rangatiratanga Principles:
    - Whakapapa (descent, genealogy), Manaakitanga (duties of care and responsibility), Rangatiratanga (governance, leadership, self-determination), Kotahitanga (collective unity), and Wairuatanga (spirituality) and
- Capability Dimensions:
    - Sustainability of te ao Māori, Social capability, Economic, and Human resource capital.

Superu's development of frameworks specifically aiming to measure the wellbeing of families and whānau is an important addition to the measurement literature as typically measurement has been focused on individuals or, at the population level, households. Their work specifically acknowledges the social nature of wellbeing and the importance of relationships. Further, Superu's work to develop a framework that addresses cultural concepts and understandings of defining both the targeted group (whānau) as well as the concept (wellbeing) is an important acknowledgement that wellbeing is a socio-cultural concept, with the variables of measurement being likely to change depending on the cultural context and group being studied. This becomes increasingly important when attempting to measure the overall wellbeing of societies that are made up of multiple ethnicities and cultures. It becomes important to identify and understand that 'wellbeing' is understood differently and thus, while a single instrument may be used to measure the variety of cultures, the meaning of the findings would undoubtedly be different depending on the culture in question. This would likely play out more obviously when attempting to identify the determinants of wellbeing.

Underlying data sources

It is important to note that, while Superu refined and developed the frameworks themselves, much of the underlying data that is used to assess family and whānau wellbeing is sourced elsewhere. Specifically, Statistics New Zealand's General Social Surveys and the Māori survey of wellbeing, Te Kupenga, have been heavily used (e.g., Families Commission, 2014; Social Policy Evaluation and Research Unit, 2016) in measuring and monitoring the

wellbeing of families and whānau. These data sources are of particular interest to this study and further discussion on them is included below.

Local Government

In addition to central government agencies seeking to understand and measure New Zealander's wellbeing, local governments have also become interested in measuring the concept as a supplement to typical surveys of service satisfaction.

In 1999 The Quality of Life Project (2016) was initiated by various city councils across New Zealand. The project aimed to help decision-makers to improve the quality of life of the major New Zealand urban areas by providing information separate from opinion surveys or satisfaction with council services surveys. Due to significant changes in council make-ups, the delay in the 2013 Census, and the Canterbury earthquake, the project was drawn to a close. However, the councils of Auckland, Wellington, Christchurch and Dunedin agreed to continue to collaborate on the 2014 and 2016 Quality of Life Survey. One of the purposes cited to continue with the survey was that councils used the results to monitor the wellbeing of their citizens.

Originally the Quality of Life Survey attempted to investigate the growing pressures that urbanisation was having on residents and their wellbeing (Colmar Brunton, 2016). The 2016 survey measured residents' perceptions across several domains including: overall quality of life; health and wellbeing; community, culture and social networks; council decision-making processes; environment (built and natural); public transport; economic wellbeing; and housing. A total of 7155 New Zealanders completed the survey.

The 2016 (Colmar Brunton, 2016) survey removed a question asking about life satisfaction. Amongst many other things, the survey asked respondents to rate their overall quality of life. They were also then asked to describe, in their own words, their quality of life. Further variables investigated in the survey included asking respondents about their personal stress levels.

Statistics New Zealand

Statistics New Zealand is the home of New Zealand's official statistics. It delivers the New Zealand Census, a range of smaller proportionally representative surveys such as the Household Economic Survey, business statistics, and it also hosts large data sources gathered through other government agencies. It has also been instrumental in gathering together and

integrating the administrative data (data gathered through the use of agency services such as welfare data or tax data) into a comprehensive and joined up data set. As such, the importance of Statistics New Zealand in understanding the nation as a whole cannot be underestimated. The data they collect through their various surveys provides the quantitative foundation for the policies of many other national agencies, as well as serving as the data source of many academic and private institutional research.

New Zealand General Social Survey

Like Australia, Statistics New Zealand has conducted a General Social Survey (GSS) since 2008. Upon releasing the first GSS, then Acting Government Statistician Cathryn Ashely-Jones (Statistics NZ, 2009, p. 1) stated:

> "The NZGSS acts as a policy-monitoring tool, enables international comparisons to be made, shows the impact of social changes, allows for new topics to be investigated, and tells us what New Zealanders think and feel about their lives."

Since 2008, there have been four General Social Surveys: 2008, 2010, 2012, 2014, and 2016. Along with asking multiple questions around economic living standards, subjective and objective modules on mental and physical health, and other demographic questions (e.g., age, sex, household size, tenure, education, etc.) each survey has also asked respondents a subjective wellbeing question through rating how satisfied they were with their lives on a Likert scale. They also rate their social relationships, including questions around how available help is in times of need, and how often they see their family. The survey covers a broad sweep of variables and provides rich insight into the lived experience of everyday New Zealanders and allows for in-depth analysis of how these variables relate to each other.

In this survey, the life satisfaction question is used to provide a broad explanation for how New Zealanders view their lives overall. One of the major findings of the inaugural survey was that the majority of New Zealanders (86 percent) were satisfied or very satisfied with their lives. This was comparable with other OECD countries (Ashley-Jones, 2009). In subsequent years, the life satisfaction of New Zealanders remained practically the same, with most indicating they were 'satisfied' or 'very satisfied': 87 percent in 2010 (Ashley-Jones, 2011), 87 percent in 2012 (Welch, 2013), and 8 out of 10 people in 2014 (MacPherson, 2015). It is important to note that Statistics New Zealand changed the life satisfaction question in 2014 from a 5-point Likert scale to an 11-point scale. In 2014, Statistics New Zealand also introduced a question asking respondents to rate their sense of purpose, which provides a further

psychological insight into the overall wellbeing of New Zealanders. The GSS provides a rich source of data to complement New Zealand's official statistics which are often focused on economic outputs (e.g., Household Economic Survey, Gross Domestic Product, and specific industry reports).

Te Kupenga

Statistics New Zealand has also recently sought to investigate the wellbeing of the New Zealand Māori population. With support and funding from Te Puni Kokiri (the Ministry for Māori Development), in 2013 Statistics NZ carried out Te Kupenga, the first survey of Māori wellbeing (Statistics NZ, 2016). Over 5000 respondents were representatively sampled from individuals that had ticked Māori descent or ethnicity in the 2013 Census form. The survey was based on the GSS, and looked at four aspects of wellbeing: Subjective, social, cultural and economic. However, markedly different to the GSS, Te Kupenga also included various questions that focused on Māori culture such as knowledge of iwi, engagement in Māori culture, and Māori language ability (Statistics NZ, 2012). This culturally specific survey is a welcome addition to the official wellbeing metrics, an acknowledgement that wellbeing is also a socio-cultural construct and as such cannot be fully separated from cultural perspectives if one has any hope of understanding findings.

The above review highlights that New Zealand is interested in measuring the wellbeing of its population, and is attempting through various channels to understand wellbeing and how that understanding might inform the development of public policies and programs. Such a development is welcome, and provides a rich opportunity for psychological research to find its way into the broad remit of the public sector, and hence into the lives of the population at large. However, given the increased interested in measuring and using subjective wellbeing to improve governments understanding of the population, it becomes increasingly important to investigate the specific metrics used to measure wellbeing and seek to find opportunities to improve it.

Overall Life Satisfaction

Of particular relevance to this research is how Statistics New Zealand chose to measure subjective global perceptions of life, namely through life satisfaction. This measure is a global, subjective measurement of wellbeing, and attempts to assess how individuals view their life as a whole. It is generally framed from a positive perspective and hence this approach to

subjective wellbeing has been termed life satisfaction (as opposed to dissatisfaction), and it relies upon the individual to make this global assessment based on any number of the not fully known variables individuals may use to assess their life (Diener, 1984, p. 543). The findings of this single measure are then correlated and analysed against the other variables within the survey to understand the relationship between more objective variables (e.g., educational level) and life satisfaction. Regression analysis also provides a means to seek to understand which variables may predict life satisfaction outcomes, e.g., does higher education predict an increase in satisfaction levels?

At this point it is useful to look more closely at the life satisfaction question in the General Social Survey, used as a proxy measure for overall wellbeing. It is important to understand the strengths and limitations of this approach.

The positive subjective evaluations people gave their lives was identified, in the 1970s, as a 'global assessment' of one's quality of life using whatever personal criteria may be chosen by the individual at the time (Diener, 1984). This assessment of 'quality of life' was often focused on external factors (e.g., education or income) and was interested in understanding to what degree individuals viewed their lives as desirable versus undesirable, with some debate around whether it is a purely subjective or objective evaluation (Diener, 2006, pp. 401–402). One approach to measuring that quality of life, or the global assessment of an individual's life is by measuring life satisfaction. It is an assessment that assumes the individuals are including *all* areas of their life in the evaluation and making an "integrative judgement" across the entirety of their lives (Diener, 2006, p. 401). Such assessments are an attempt at a single overall assessment and places an emphasis upon the subjective evaluation of overall individual wellbeing (Tay, Chan, & Diener, 2013).

However, there are some challenges when attempting to get individuals to make overall judgements of life with a single-item measure like 'life satisfaction'. As pointed out by Jayawickreme et al. (2012, p. 332), more interesting than knowing that someone is satisfied with their life is *why* they are satisfied with their life. Life satisfaction, often held up as a gold standard measurement of wellbeing (Jayawickreme et al., 2012) becomes problematic because it does not provide much of the 'why' behind the response, whether or not someone is satisfied with their life. As Diener (1984) had previously pointed out, there is a lot of information lost when single-items scales are used to assess wellbeing, a fact especially important when considering that subjective wellbeing is likely made up of multiple factors and that we are

relying on individuals to make a single integrated assessment across all these factors. Diener also indicated that variance as a result of specific wording in the questions cannot be averaged out when using a single item measure such as a life satisfaction question.

Another issue specifically with the life satisfaction metric has been identified by Cummins (2003). His research suggested that life satisfaction is actually homeostatic in that, regardless of the conditions of any country, life satisfaction scores will adjust to a particular set point. He points to the fact that, despite many countries having very different standards of living and environments, surprisingly the world's nations have an average level of life satisfaction that actually varies by only around twenty percent. This, Cummins asserts, points to the fact the life satisfaction is not free to range through the complete range of the scale, questioning its utility in truly measuring the wellbeing of populations. This becomes particularly important in a policy setting, where part of the role of government is to help increase the wellbeing of its people. Yet, if those levels, as measured through life satisfaction, will largely remain static, or reset, then it becomes difficult to assert any impact between policy and wellbeing. Perhaps then, a more nuanced, or refined suite of metrics would be beneficial.

When limited time or space is available, Diener (1984) suggests that single-item measures such as life satisfaction are fairly good if required. However, when more time and space is available, multiple item metrics are preferable. Statistics New Zealand's use of life satisfaction as the pre-eminent scale for assessing global wellbeing is then, perhaps, not the most useful or insightful metric that could be used, given that it may not actually shift much as a result of the contextual changes of the nation, and that it cannot provide much in the way of describing the *why* behind any responses. For example, while we now know through the GSS that the majority of New Zealanders are satisfied or very satisfied with their lives, we don't really know why, in a subjective psychological sense. Given the number of questions asked in the GSS, it is argued that there is space sufficient, and time sufficient, to investigate the use of a potentially more meaningful measure.

Summary of New Zealand Accounts/Approaches

With the Treasury's re-emphasis on overall wellbeing through its Living Standards Framework, and Statistics New Zealand's efforts to understand global assessments of wellbeing through the General Social Survey, New Zealand has placed wellbeing as an important focus of government policy and functions. Such an effort is to be applauded and it is hoped that such efforts will continue to be refined. As part of this effort to improve how New

Zealand investigates wellbeing, this thesis specifically proposes that the life satisfaction metric used in the General Social Survey could be potentially improved by replacing it with an alternative measure of wellbeing, as outlined below.

The PERMA theory of wellbeing

Since its creation as a formal pursuit of research and practise, much of psychological theory and research has focused itself on understanding abnormalities or what has gone wrong with individuals in their psychological and social functioning, albeit with an intention to make things better. Positive psychology on the other hand, seeks to understand what works, what is going well for people, and what leads to feelings of happiness and flourishing within individuals lives. It has been a much-needed area of focus, rounding out the fuller experience of people's lives.

A key proponent of the positive psychology movement, and considered by some to be the father of positive psychology, is Martin Seligman, a former president of the American Psychological Association.

Originally, Seligman proposed a view of wellbeing in line with Aristotle's view that all things that humans do are focused on making themselves happy. However, Seligman, like many, was dissatisfied with the term happiness, as it had become a term that was ubiquitous and particularly unhelpful when scientifically trying to understand what it is that makes people 'happy'. It is a problem not dissimilar to the challenge with the term 'wellbeing'.

In his book *Authentic Happiness* (2002), Seligman had proposed a particular theory of happiness that sought to break the generic 'happy' term down into facets that could be identified and then studied. His theory focused on three particular elements: positive emotion, engagement, and meaning. Positive emotion was focused, as its name indicates, on what the individual personally experiences through the emotions – joy, ecstasy, etc. It is an area similar to the hedonic view of wellbeing with its focus on pleasurable experience. The second element is interested in the state elucidated by Mihaly Csikszentmihalyi (1990) – the state of flow. This state is where individuals get immersed in their work, where they lose their sense of time, and it is a state where the experience of pleasure associated with it is only identified in retrospect as when in a state of flow we are not aware of our own feelings. It is a state of absorption in the activity or life one is pursuing. It is an all-consuming state to be in, with Seligman identifying that it requires all the individual's powers of cognition and thought and emotion

and effort, all things being bent into the service of the activity or task at hand. Flow and positive emotion are not the same thing, as the effort required to get into a state of flow is different to the effort to experience positive emotion of some kind. There is no shortcut to the flow state, whereas there are multiple routes to feeling positive emotion – shopping, watching television, reading, talking with friends, eating, etc. Flow, or being engaged, requires a focused effort of mind and body.

Seligman's third element was meaning. This element, unlike engagement and pleasure, is more linked with the world around us, and incorporates a more hedonic view of wellbeing. Where engagement and pleasure can be largely pursued in a solitary and individualistic fashion, the creation of meaning is largely related to how we interact and impact on the world around us, including the people around us. Where someone can experience both positive emotion and engagement internally, meaning requires a broadening of the perspective, to connect the internal with the external in some way – a connection with something that is bigger than the internal world of the self.

However, Seligman became dissatisfied (Seligman, 2011) with his theory of authentic happiness for various reasons:

1. It was too focused on mood, and specifically a 'cheerful mood'. Seligman considered this the most basic level of what it means to be 'happy', and is another reason why the term 'happiness' is not useful, because it focuses predominantly on the emotional state.

2. There was too much emphasis on the 'gold standard' of measurement for happiness – that of life satisfaction. Seligman argued that this was too limited a measure, and was often largely influenced by the particular emotional state of the respondents at the time of being asked. A measure that was largely focused on measuring the 'cheerful mood' was too limited to be useful, and also did not capture the experience of many on the planet, indicating, if life satisfaction is the measure of wellbeing, then many on the planet were not experiencing it.

3. Thirdly, Seligman identified that the three elements he had put forward did not explore all the elements of what individual's pursue for *'its own sake'*. That is, there are many things of a flourishing life that are pursued simply because they have their own inherent value. For example, achievement could be argued to be pursued simply for its own sake. Seligman argues that any wellbeing theory must account for each

element being pursued for its own sake, and not for any other end, although they may also be pursued for other elements also.

Hence, in his book *Flourish*, Seligman (2011) put forward a revised theory of wellbeing. His new theory rejected the idea that there was a *thing* called happiness that could be measured using a single metric like life satisfaction. Instead, his new theory of wellbeing supported a construct view of wellbeing where wellbeing is made up of several elements, but each individual element does not define what wellbeing is, rather each element contributes to wellbeing.

This new theory identifies three requirements for the elements of the wellbeing construct:

- It contributes to wellbeing
- It is pursued for its own sake, rather than that it is only there as it contributes to the other elements of wellbeing
- It is measured, and defined, separate to the other elements.

There are five elements in Seligman's revised theory of wellbeing: positive emotion, engagement, positive relationships, meaning and accomplishment. Each is discussed briefly below.

Positive Emotion

Positive emotion is the same as that espoused by the Authentic Happiness theory put forward earlier by Seligman. It is the hedonic element of wellbeing. However, while it is focused on the pleasurable experience of individuals, and it is often measured through life satisfaction questions, it has lost its place of pre-eminence as the sole focus of wellbeing metrics. Instead, it is one of multiple elements. It is important to note this element is assessed subjectively. This element satisfies Seligman's 3 requirements – it contributes to wellbeing, pleasurable experience is often pursued for its own ends, and it can be measured separately to the other elements.

Engagement

Engagement has remained an element in Seligman's Theory of Wellbeing. Like positive emotion, engagement is assessed subjectively through such questions as 'Did time stop

for you' and 'Were you completely absorbed by the task'. Unlike positive emotion, however, engagement is subjectively measured only in retrospect, as individuals must look back at the previous experience of absorption in order to provide a rating of it. Engagement also satisfies the three requirements as it also is often pursued for its own sake, not necessarily because it leads to the other elements (although it may also do that).

Positive Relationships

A new addition to the theory is that of positive relationships. Seligman argues that much that is positively experienced in life is related to other people. Much research has supported the beneficial effects of positive relationships on many wellbeing indicators (e.g., Chopik & O'Brien, 2017; Diener & Seligman, 2002; Stuart & Jose, 2014). Relatedly, those that are the loneliest are often those that identify that they are the least happy (Statistics New Zealand, 2015), supporting the idea that positive relationships are hugely important for humans to experience wellbeing, whatever the theoretical construction. Seligman argues that positive relationships, while inherently linked with the other elements of wellbeing such as positive emotion and meaning, are not necessarily pursued simply for these reasons. One piece of evidence he points to is that evolution seems to have given the human brain incredibly complex social computing power, designed to enable positive human relationships. This is supported by the evolutionary adaptation necessary to interact in groups and to enable the continuation of groups to the degree that humans do. Such an emphasis indicates that human relationships are paramount and the experience of pleasure and meaning is perhaps a support to these relationships, rather than being the purpose of them. Thus, relationships are pursued for their own ends. This element can also be measured both objectively and subjectively – thus, it is possible for individuals to assess relationships as being positive when more objective observation indicates that their relationship is destructive and could in no way be described as positive.

Meaning

Meaning is similarly retained in Seligman's revised theory of wellbeing. Meaning can be measured subjectively, however, Seligman argues that there is an aspect of meaning that is not purely subjective. While individual's may look at a single instance in their life as meaningful or meaningless, a retrospective, and somewhat objective perspective can also be applied to those same experiences and, with the application of logic and historical perspective, can provide an alternate construction of events. For example, while staying out with friends drinking alcohol the night before an exam may be constructed as meaningful to an individual

in the moment, a longer term view and the hindsight of experience may apply a different evaluation of such an enterprise. Such judgements are often applied to historical figures, whose perspectives of meaning associated with their behaviours at any given moment do not convey the full extent of 'meaning' applied to those same behaviours when a broader and later view of history is applied.

Meaning also satisfies Seligman's three requirements. Firstly, it contributes to the overall picture of wellbeing. Secondly, it can be pursued for its own sake, even though it may actually decrease some of the other elements. For example, an individual's pursuit of racial equality may be detrimental to their social relationships, it may be bringing no pleasure in itself because of the hardships experienced, and it may not be granting any great sense of achievement that is visible. And yet, people still pursue something that has great meaning for them, even though it may be in conflict with the other elements of wellbeing. Thirdly, meaning can be measured independent of the other elements.

Accomplishment / Achievement

The final addition to Seligman's original theory is that of accomplishment. This element is focused on the desire to pursue achievement, or accomplishment, for its own ends, acknowledging that some people pursue mastery over something for its own end, not necessarily because it creates a sense of pleasure or a sense of engagement. Nor is it about developing a sense of meaning, as the pursuit of some 'accomplishments' are difficult to find meaning in (e.g., the drive to succeed at a video game, or become a great card player). In this sense, Seligman argues that people seem to pursue accomplishment in some areas of activity just for the sense of accomplishment, or to win, as a goal in and of itself. This aspect of wellbeing can be focused on the sense of accomplishment in the shorter term aspect (e.g., the desire to win, or gain wealth for no other end than to attain it and continue accumulating it), as well as the sense of accomplishment in the longer sense where individuals pursue accomplishment over the course of their lives. While Seligman acknowledges that this sense of accomplishment is hardly ever seen in its pure state, separate from an accompanying sense of engagement, meaning, or pleasure, he still argues that it is a unique aspect of human wellbeing and as such makes up a unique element of his theory of wellbeing.

Thus, Seligman proposes a five-part model of wellbeing, where each element, unique and separate does not define wellbeing, and yet is necessary in order to attempt to understand the concept more completely.

It should be emphasised that something that makes many of these elements particularly important is that each is pursued for its own ends, and that humans, when acting under their own free-will, without coercion, will likely seek to fulfil these various dimensions of wellbeing if possible. The model, identified by the acronym PERMA (positive emotion, engagement, relationships, meaning, and accomplishment), seeks to describe what people do when seeking a sense of 'wellbeing', however they may term it. As such, Seligman argues that the purpose of the model is descriptive in nature, falling in line with the goal of positive psychology and its effort to *describe* what people do, rather than *prescribe* a particular course of action or a particular way of life.

PERMA and New Zealand

New Zealand's official statistics place an emphasis on using life satisfaction to measure the level of wellbeing in people's lives. As noted by Seligman, and discussed above, the use of life satisfaction as a sole measure is problematic. It focuses too much on the subjective hedonistic and emotional aspects of wellbeing, denying a richer understanding and descriptive opportunity of what it is that people do to experience wellbeing. Given that there is little else in the official statistics system in New Zealand that seeks to tease apart an understanding of wellbeing at the personal and subjective levels, it becomes important to closely scrutinise the particular metric that is used (in this case life satisfaction) and explore whether better metrics are available. As outlined above, the PERMA theory of wellbeing could well be a more useful metric to use, providing us with a richer understanding of individual experience and behaviour, and providing a richer source of triangulation for understanding how public policy is affecting that experience.

Thesis Investigation Questions

The purpose of this thesis then is to explore the use of the PERMA theory of wellbeing in place of the life satisfaction question currently used by Statistics New Zealand. Specifically, this thesis seeks to explore the following questions:

1. Is PERMA overall a comparable measure to life satisfaction and thus could be used as a replacement.
   This question seeks to not fully replace the life satisfaction question as that question does tap into specific aspects of wellbeing and has been well researched. However, if there is a measure that highly correlates with the results of life satisfaction, while also providing extra information, it could be a useful alternative.

2. What extra information could PERMA provide in understanding how people rate their overall well-being?

3. Is PERMA useful in detecting any differences in how different ethnicities rate their overall wellbeing.

   This is particularly important in the New Zealand context. As noted above, Statistics New Zealand already attempts to understand how Māori rate their wellbeing with associated cultural measures. However, given the exclusionary focus of a single metric like life satisfaction, it is likely that there is rich information lost, particularly when investigating the wellbeing of different cultures. It is conceivable that different aspects of wellbeing may be important for one culture over another. A measure that would allow us to compare an overall wellbeing score, while still delving into specific elements would help provide this richer source of data both within and between cultures.

4. What differences does PERMA suggest between Māori and European New Zealanders?

   This is a follow-on from question three. This thesis will focus on Māori and New Zealand Europeans, however the same study and questions could be asked of any ethnicity. This thesis chooses to focus on these two groups as the New Zealand government has a particular responsibility, through its obligations under the Treaty of Waitangi/Te Tiriti o Waitangi, to ensure that the wellbeing of Māori are incorporated into public policy development. Given that Māori experience many poor socio-economic outcomes, there is a multitude of work that is undertaken in government to understand the Māori population. However, policy is not always effective at meeting their needs. This could be a result of unsatisfactory metrics that are not sufficiently culturally sensitive. A metric like PERMA may provide further insight into what Māori place as more important above that of New Zealand Europeans.

5. Finally, this thesis seeks to find out whether PERMA can better help articulate the impact of mood on overall wellbeing ratings.

   As mentioned above, it is often argued that life satisfaction scores are simply a proxy for the current emotional state of respondents. If this is the case, then life satisfaction

is merely a 'cheerful mood' metric, and doesn't delve deeper into the experience of wellbeing. PERMA might be able to retain the information of the life satisfaction question while also providing further insight into how different elements of the model relate to the emotional state of participants. This information would prove useful when seeking to explain or understand the scores that individuals report when rating their overall wellbeing.

Section 2: Method

Participants

Five hundred potential participants were recruited through a random sample of 54 to 65 year olds drawn from the New Zealand Electoral Roll. The sampling frame was selected based on analysis of the New Zealand General Social Survey 2008, 2010, and 2012 which revealed that 50-60 year olds showed the greatest disparity in terms of life satisfaction between Māori and Non-Māori. This was used as a sampling criteria in order to assess a real group disparity, rather than a group where little to no disparity was present. This would allow the measures a greater chance of detecting a difference, if one was present. There was not sufficient data available to detect a geographical discrepancy for this group so participants were sampled from the Wellington region in the North Island of New Zealand, for convenience of sampling.

Participants were sent a 2-page paper survey through the post, with an invitation to participate in the research and outlining the purposes of the research. They were provided with a postage paid return-addressed envelope for sending their responses. On the Information Sheet, participants were informed that they could receive an electronic summary of the findings by emailing the author at an email address provided on the sheet. They were also informed that there would be a delay of some months between the author receiving the data and publication of results.

One hundred respondents returned completed surveys, providing a 20% response rate. Of these, 1 was excluded due to insufficient data for analysis. Participants were given 3 months to return surveys in time for inclusion in this analysis. Participants did not receive remuneration for their time.

Table 1: Participant Information

Ethnicity	N
Māori	22
European	58

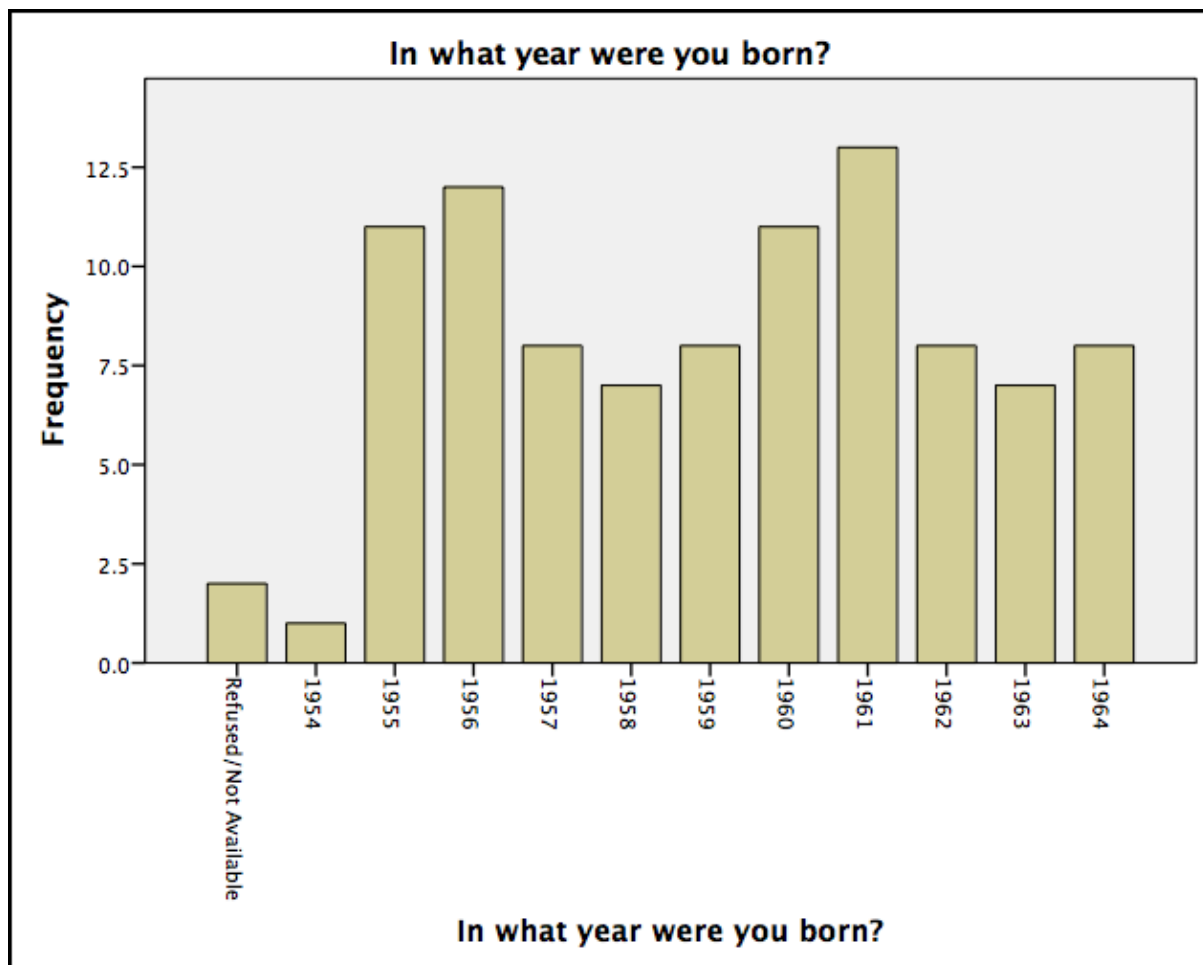| Other	10
Gender	
Male	43
Female	53

Figure 1. Age distribution of survey participants

Procedure

The study questionnaire asked participants several demographic questions (e.g., ethnicity, education level, income level, etc.). They were also asked about their level of life satisfaction as well as the various aspects of the PERMA profile and the current mood state as outlined below:

Measures

Life satisfaction.

Life Satisfaction was assessed using the question asked in the New Zealand General Social Survey ("How do you feel about your life as a whole right now?"). The 2008, 2010, and 2012 versions of this question used a 5-point Likert scale. However, in this research the 2014 version of the question was asked as it provided an 11-point rating scale with 2 anchors (0 = Dissatisfied to 10 = Satisfied), allowing for meaningful comparison with the PERMA Profiler scale.

PERMA

The PERMA questions come from the 23-item PERMA Profiler Questionnaire (Butler & Kern, 2013). The PERMA Profiler asks 3 questions relating to each one of the PERMA elements, all on an 11-point scale, each with 2 anchors. There are other questions included in the PERMA Profiler relating to happiness and loneliness and negative emotions, however, only the relevant questions relating to the specific PERMA elements and the overall PERMA score were included in the survey as follows:

P = Positive Emotion (α = -.328):

1. In general, how often do you feel joyful (0 = never, 10 = always)
2. In general, how often do you feel positive (0 = never, 10 = always)
3. In general, to what extend do you feel contented (0 = not at all, 10 = completely)

E = Engagement (α = .479):

1. How often do you become absorbed in what you are doing? (0 = never, 10 = always)
2. In general, to what extend do you feel excited and interested in things? (0 = not at all, 10 = completely)
3. How often do you lose track of time while doing something you enjoy? (0 = never, 10 = always)

R = Relationships (Positive) (α = .380):

1. To what extend do you receive help and support from others when you need it? (0 = not at all, 10 = completely)
2. To what extend do you feel loved? (0 = not at all, 10 = completely)

3. How satisfied are you with your personal relationships? (0 = not at all, 10 = completely)

M = Meaning (α = .923):

1. In general, to what extent do you lead a purposeful and meaningful life? (0 = not at all, 10 = completely)
2. In general, to what extent do you feel that what you do in your life is valuable and worthwhile? (0 = not at all, 10 = completely)
3. To what extent do you generally feel you have a sense of direction in your life? (0 = not at all, 10 = completely)

A = Achievement (α = .816):

1. How much of the time do you feel you are making progress towards accomplishing your goals? (0 = never, 10 = always)
2. How often do you achieve the important goals you have set for yourself? (0 = never, 10 = always)
3. How often are you able to handle your responsibilities? (0 = never, 10 = always)

The PERMA Profiler also asks a question related to overall happiness:

- Taking all things together, how happy would you say you are? (0 = not at all, 10 = completely).

A single score for each element of the PERMA Profiler is attained by summing up the result of each question for that particular element and dividing by 3.

The overall PERMA score is attained by summing all PERMA specific questions as well as the happiness question and dividing by 16.

The overall PERMA score (utilizing all PERMA questions and the "happy" question) had a Cronbach's alpha 0.522 raising some questions around internal consistency.

Mood

A single question has been used to assess the participants emotional state over the past day. However, normally this would be asked over a period of time, unlike this survey which is a single-moment response. This question can be correlated with life satisfaction and elements of PERMA to assess how whether one is merely a proxy for the other, and thus identify how well it taps into various aspects of wellbeing, or merely emotional state:

- Thinking about yesterday, would you say you experienced more negative feelings (e.g., sadness, anger, worry, depression) or more positive feelings (e.g.,

enjoyment, laughter)? (Response options were "Negative" or "Positive".)

Analysis

Spearman's rank order correlations were run to investigate the relationship between the New Zealand General Social Survey's life satisfaction question and the overall PERMA score. Similarly, correlations were used to assess the relationship between life satisfaction and each of the five PERMA elements to identify if they revealed different information to the life satisfaction question. A high correlation would suggest that they are largely measuring the same thing. Investigating the average differences between the life satisfaction and PERMA overall scores for each ethnicity (Māori and New Zealand European) was used to observe if there was a difference between the two measures and whether they supplied different average results. The average score of each ethnicity and how they rated in each element of PERMA was then used to investigate the different overall PERMA profile for that ethnicity (i.e. how did New Zealand Europeans rate engagement compared with New Zealand Māori?). This was done to investigate if there was any observable difference that PERMA identified in how ethnicities responded with each element. Finally, Spearman's correlation was run between the mood question and each element of PERMA to investigate whether PERMA can tease apart the relationship between emotional state and individual responses to different wellbeing metrics.

Ethical Concerns

Two steps were taken to ensure that this questionnaire was ethically appropriate and would cause no undue harm to participants. First, this research was assessed for ethical concerns using Massey University's *"Screening questionnaire"*. This questionnaire assessed the project as being of low ethical risk and thus not requiring a full ethics approval. The survey was then also discussed with the author's supervisor, Dr. Michael Philipp from the School of Psychology at Massey University. Secondly, the survey was given to the Manager of the Research, Information and Monitoring at Te Puni Kokiri (Ministry for Māori Development). They advised that the ethnicity question should include an option for "other", not just "European" or "Māori". This change was made. The manager had no other ethical or cultural concerns with the questionnaire.

Upon receipt of completed surveys, data was entered into SPSS for statistical analysis.

Section 3: Results

The analysis of results in the following section will follow the thesis investigation questions (as outlined in the Introduction). Each investigation question will appear in bold font prior to the relevant results analysis for ease of comprehension, and will be briefly described again for the reader.

Question 1: Is PERMA a comparable measure to overall life satisfaction, and thus could be used as a replacement?

This analysis seeks to investigate the level of correlation between the overall life satisfaction question used in the General Social Survey and the overall PERMA score.

A Spearman's rank-order correlation was run to assess the relationship between overall life satisfaction scores and overall PERMA scores. Preliminary analysis indicated a positive monotonic relationship through visual inspection of a scatterplot (refer Figure 2). An increase in overall life satisfaction scores was strongly positively correlated with an increase in overall PERMA scores, $r_s(97) = .833, p < .01$.
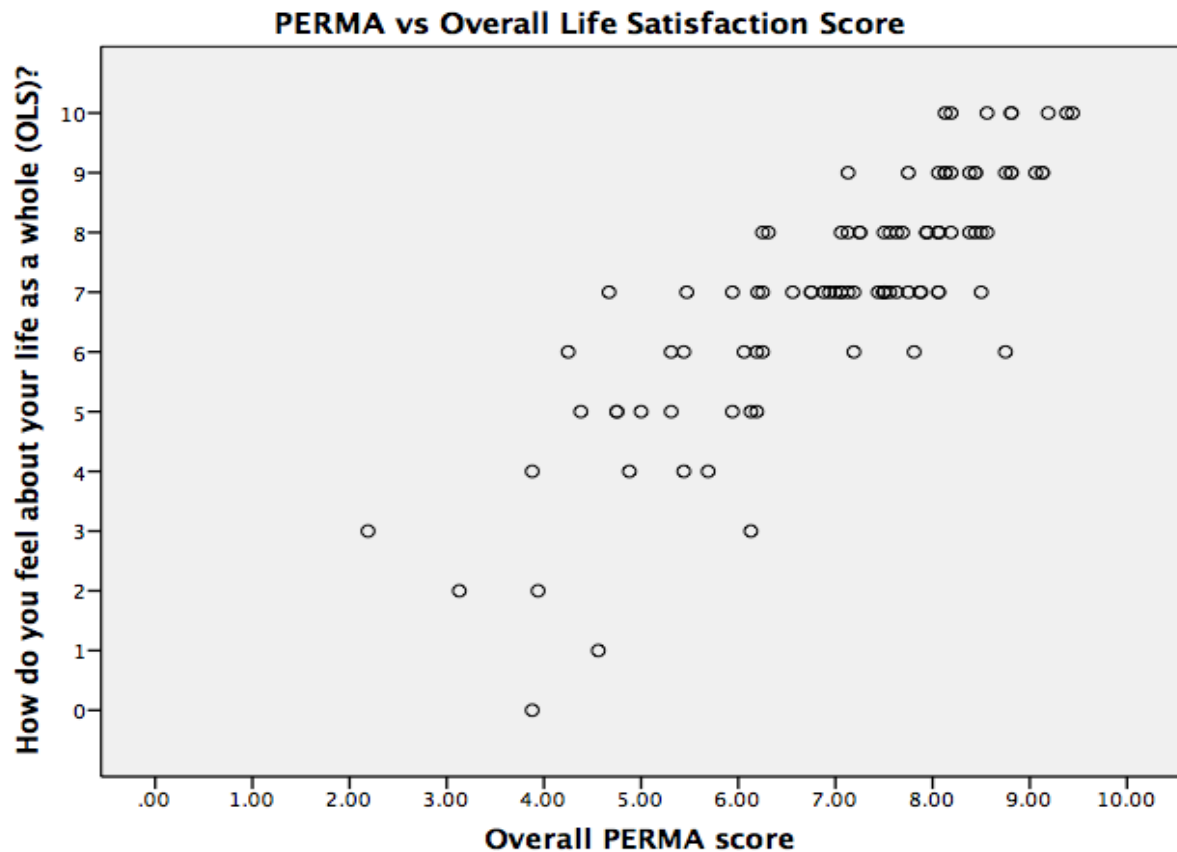
Figure 2. Correlation of overall PERMA score by overall life satisfaction

Question 2: What extra information could PERMA provide in understanding how people rate their overall life satisfaction?

To analyse whether the PERMA measures of wellbeing could provide increased understanding to how people rate their overall life satisfaction, the summed individual PERMA element scores were correlated against overall life satisfaction. This would help assess whether the individual elements of PERMA were simply proxies for overall life satisfaction or whether they were investigating something else.

Results indicate that the individual elements of PERMA are not simply proxies of overall life satisfaction, as none were as strong as the overall PERMA score, with some showing a marked difference. Preliminary visual analysis of scatterplots indicated that all relationships were monotonic.
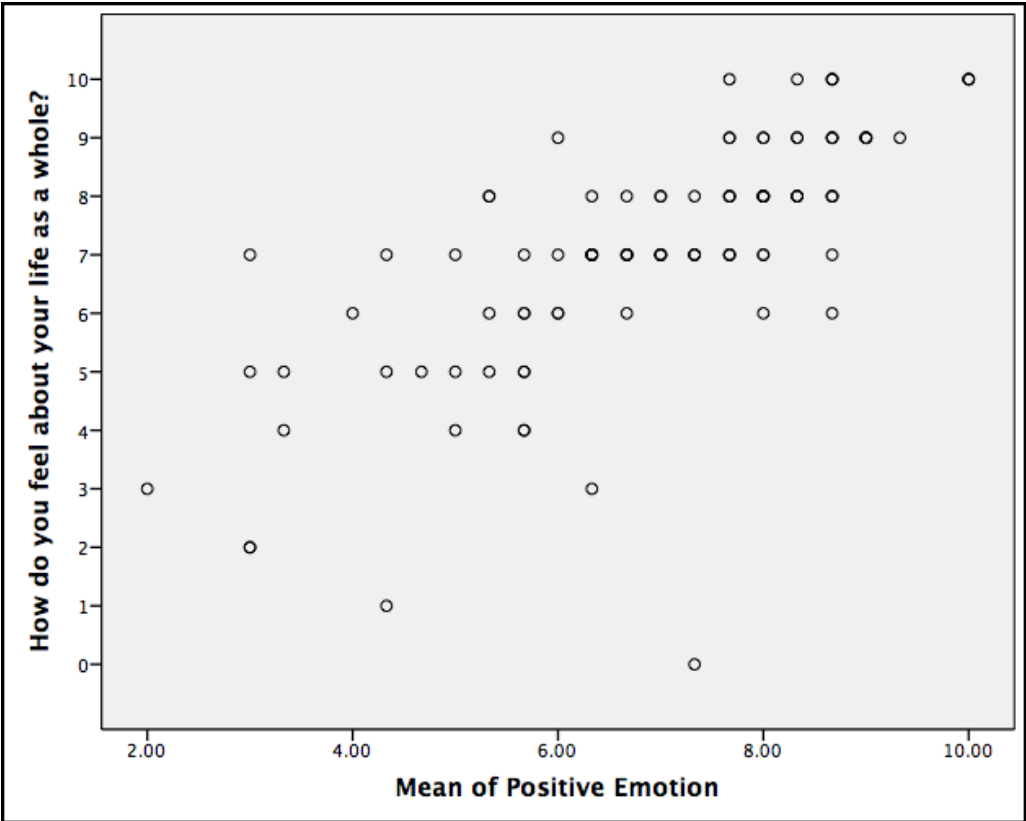
Figure 3. Correlation of mean of positive emotion score by overall life satisfaction
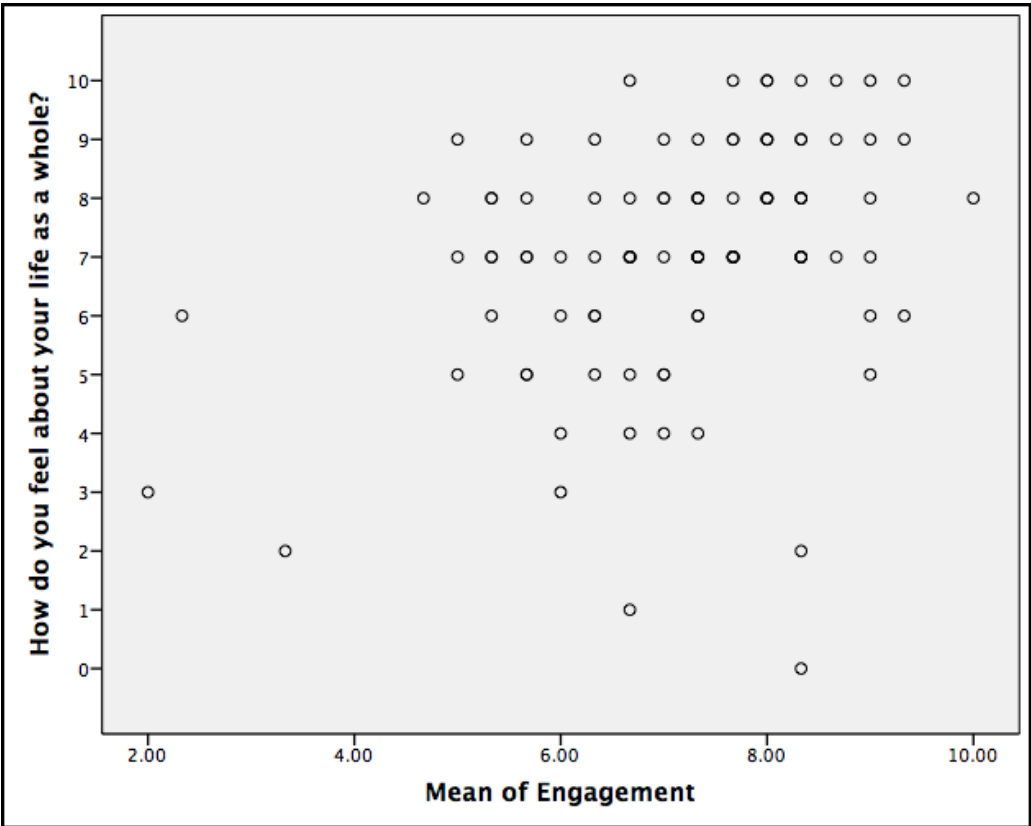

Figure 4. Correlation of mean of engagement by overall life satisfaction
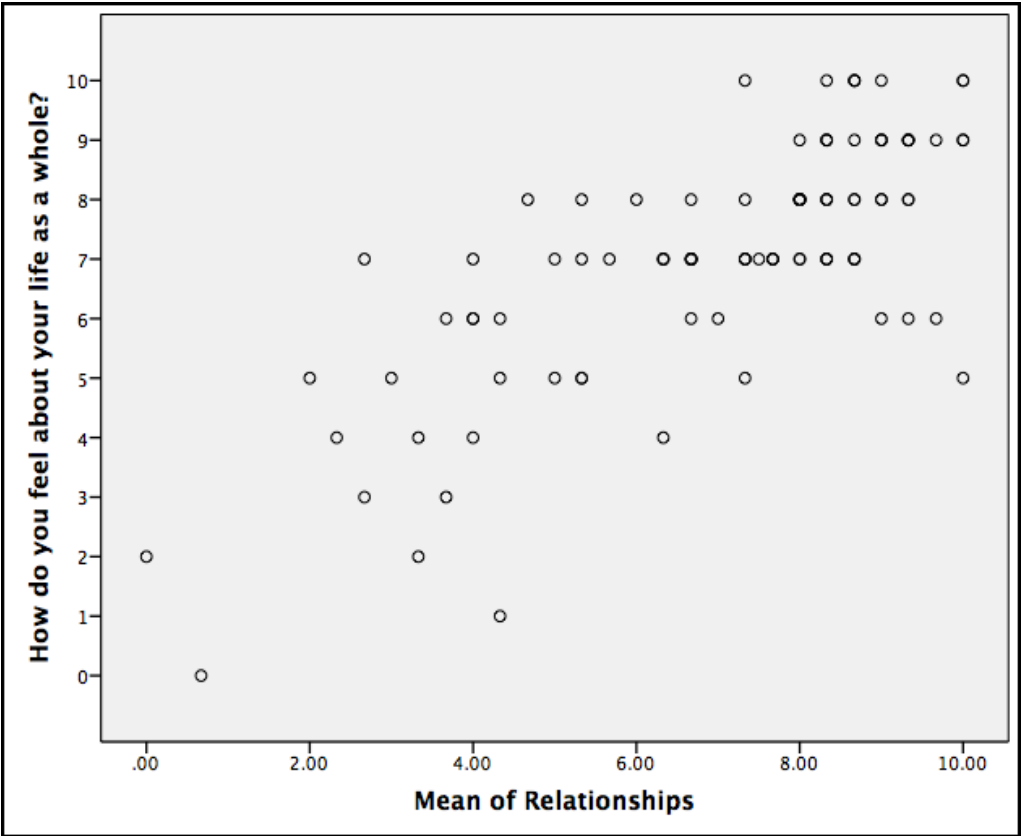
Figure 5. Correlation of mean of relationships by overall life satisfaction.
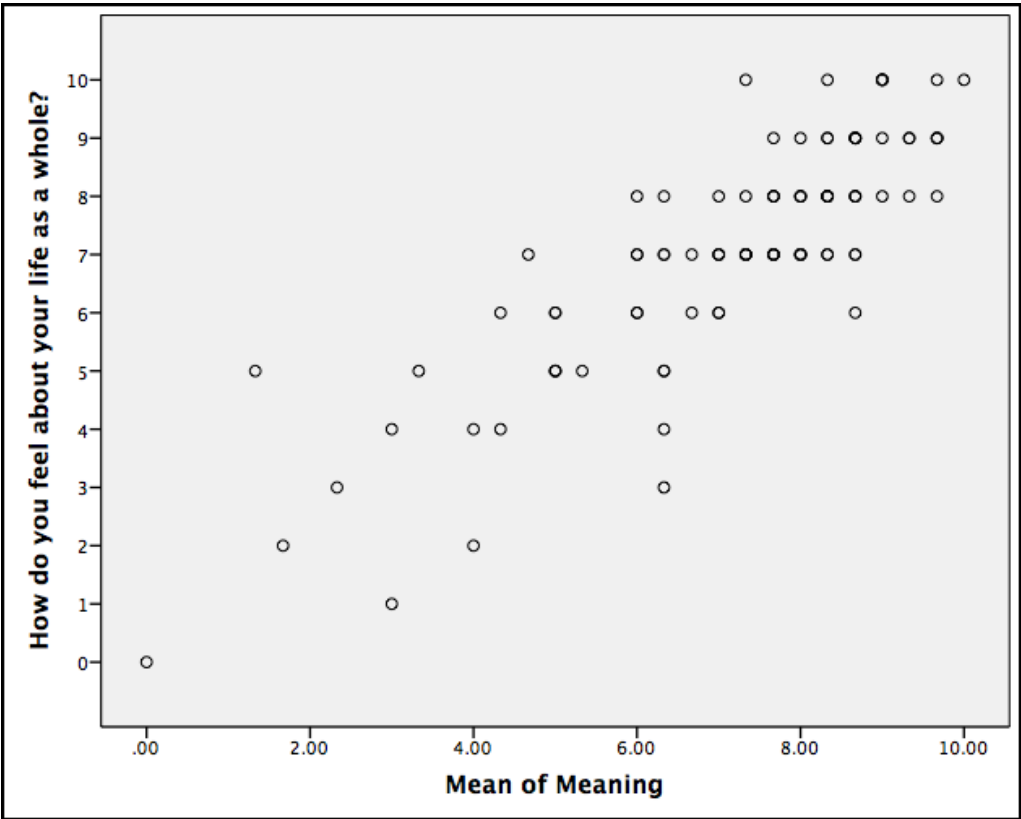
Figure 6. Correlation of mean of meaning by overall life satisfaction.
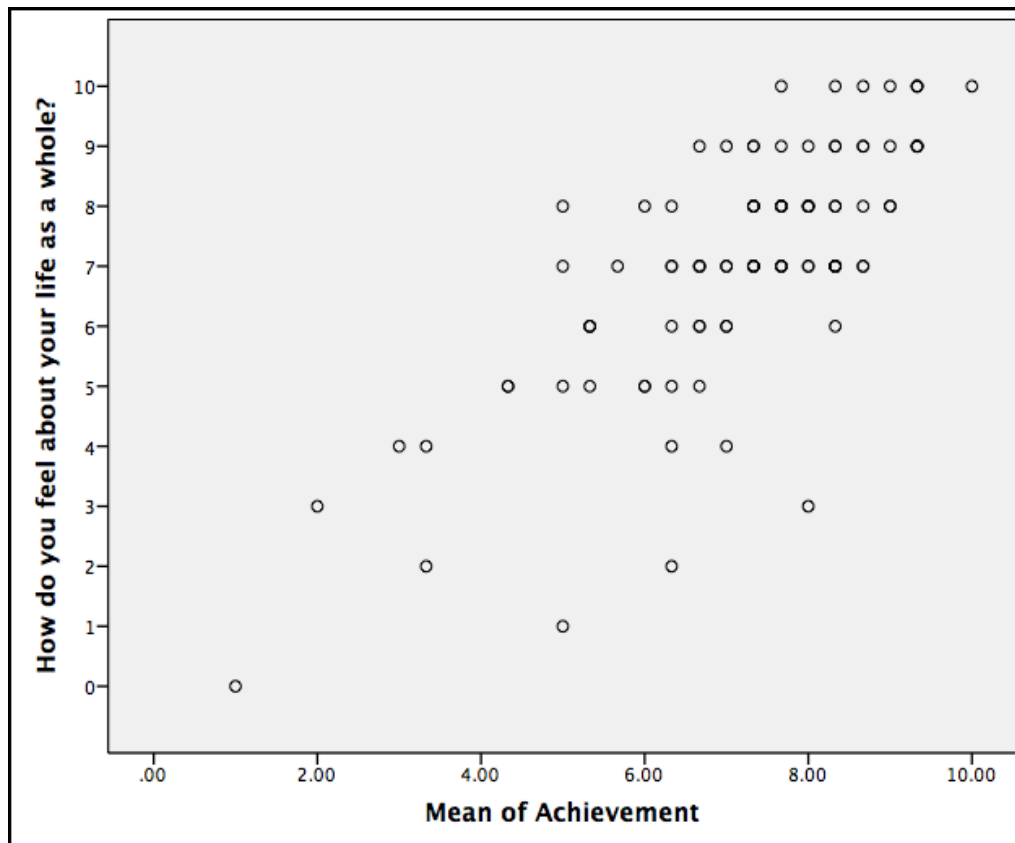
Figure 7. Correlation of mean of achievement by overall life satisfaction.

Elements of PERMA that demonstrated a strong positive correlation with OLS included positive emotion (P), $r_s(97) = .770$, $p < .01$, and meaning (M), $r_s(97) = .818$, $p < .01$.

Moderate to strong positive relationships between PERMA elements and OLS were found between relationships (R), $r_s(97) = .691$, $p < .01$, and achievement (A), $r_s(97) = .697$, $p < .01$.

The relationship between engagement and OLS was somewhat weaker than the other elements, while still having a significant positive relationship, $r_s(97) = .356$, $p < .01$.

As expected the individual elements of PERMA do positively correlate with OLS. However, the results also suggest that PERMA elements are tapping into extra information that a single OLS score could possibly miss.

Question 3: Is PERMA useful in detecting any differences in how different ethnicities rate their overall well-being?

Analysis of the difference between Māori respondents and European respondents was done by comparing the average PERMA and OLS scores for each ethnicity.

Results indicated that New Zealand Māori reported marginally higher OLS and PERMA scores (7.38 and 7.28 respectively) compared to Europeans (6.92 and 6.95 respectively). While Māori scores decreased slightly from OLS to PERMA, and New Zealand Europeans increased, the results are marginal and further investigation with a larger sample would need to be acquired to truly assess whether there was any actual difference. These results suggest that there is really no difference between Māori and Europeans in how they rate their overall wellbeing with PERMA versus OLS. The results between metrics (OLS and PERMA) were strongly positively correlated for both ethnicities (refer Table 2).
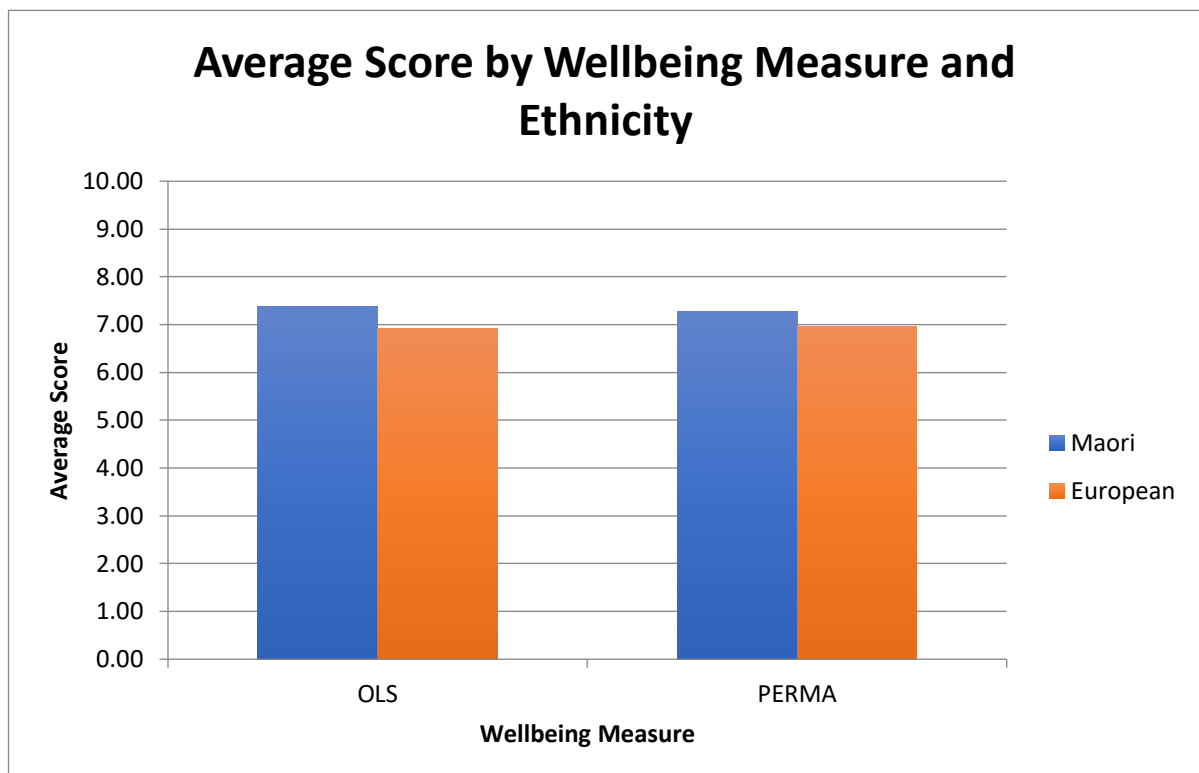
Figure 8. Average wellbeing score, by ethnicity and measure.

Question 4: What differences does PERMA suggest between Māori and European New Zealanders?

As expected, the overall scores for PERMA and OLS were largely the same between measures. However, PERMA also provides further refinement of particular elements of wellbeing.

Results indicated that there was greater difference between ethnicities, when comparing how they rated individual elements of PERMA.

Māori respondents scored higher on all elements of PERMA than Europeans (Figure 9). The greatest difference was in the engagement domain, with Māori on average scoring 7.6 and Europeans scoring 6.8. The smallest difference between ethnicities was found in the achievement element.
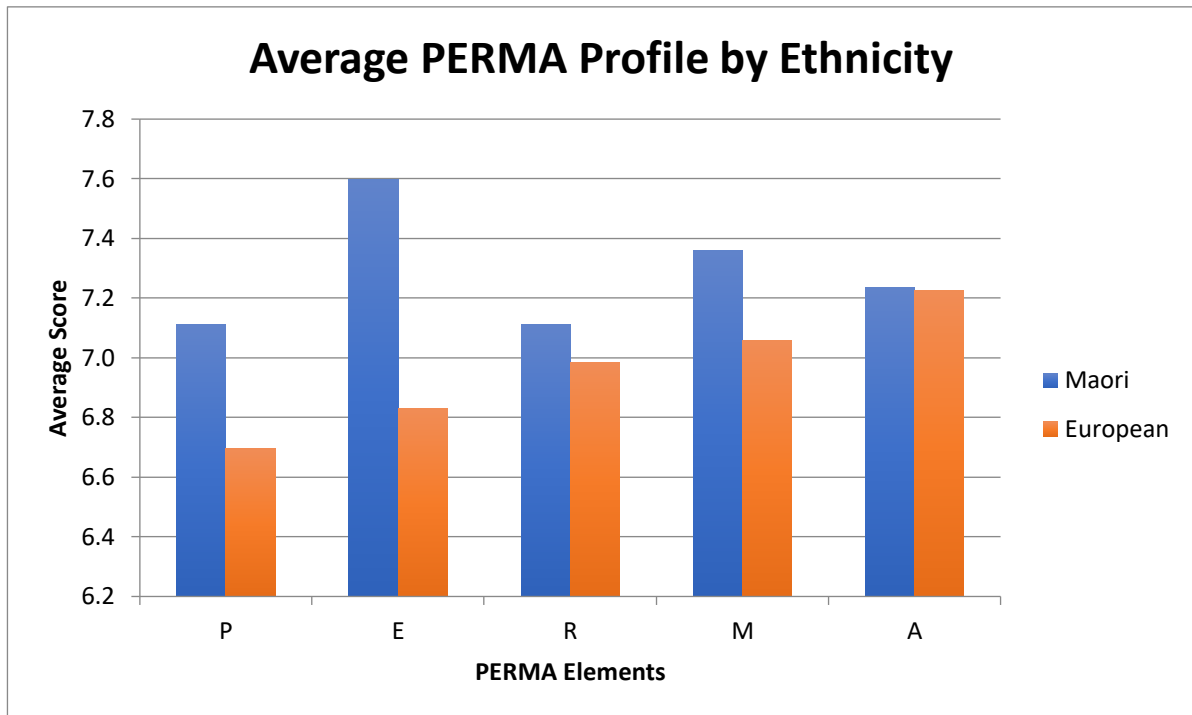
Figure 9. Individual PERMA element scores, by ethnicity.

Table 2. Correlation of PERMA with OLS by Ethnicity

Ethnicity	Spearman's Rho
Māori	.765** N = 24
European	.798** N = 59

**Correlation is significant at the 0.01 level (2-tailed)
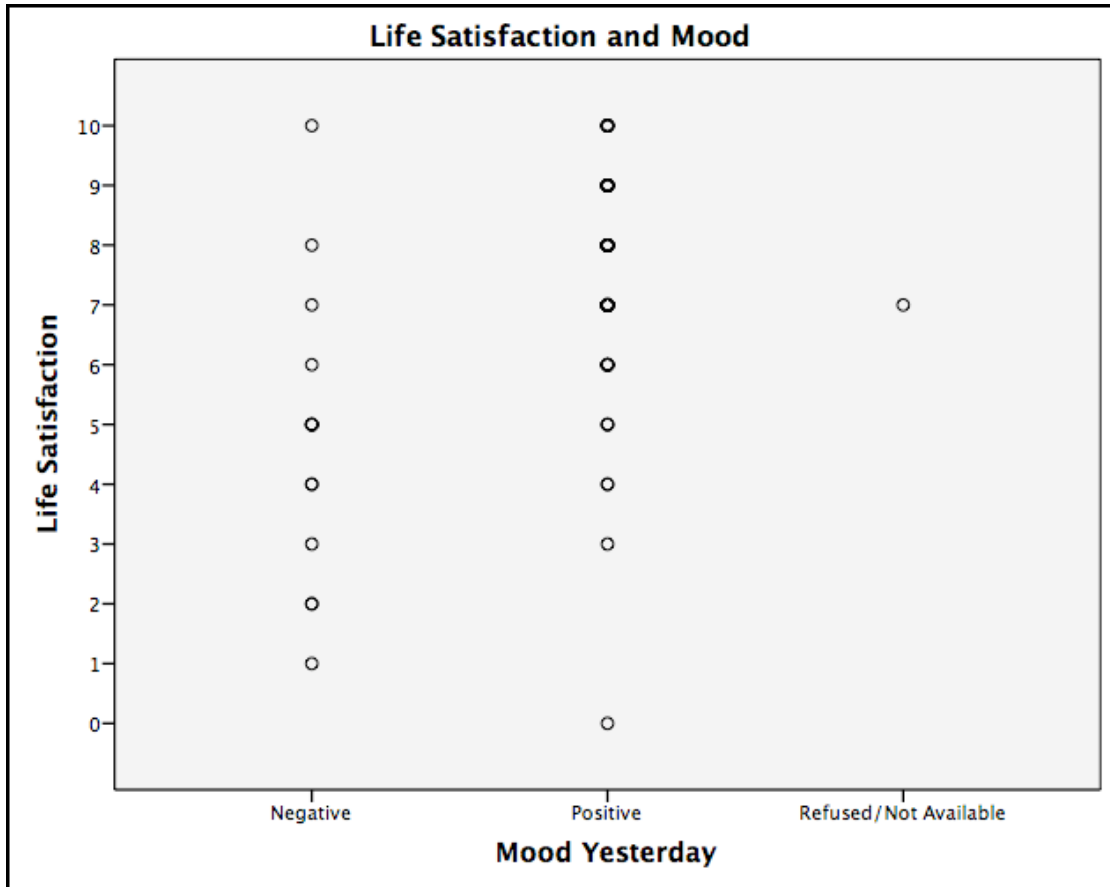
Figure 10. Correlation of mood and overall life satisfaction.

Question 5: Can PERMA help better articulate the impact of mood on overall wellbeing ratings?

While there was not a strong correlation between mood ratings and OLS, visually comparing the individual elements of PERMA on a scatterplot against mood ratings indicates that there are stronger relationships between some more than others.

Ranking the individual elements of PERMA against mood from strongest relationship to weakest demonstrates that meaning had the strongest positive correlation, $r_s(97) = .469$, $p < .01$. This was followed by relationships, $r_s(97) = .427$, $p < .01$, positive emotion, $r_s(97) = .833$, $p < .01$, achievement, $r_s(97) = .350$, $p < .01$. The weakest relationship between was between mood and engagement, $r_s(97) = .302$, $p < .01$.
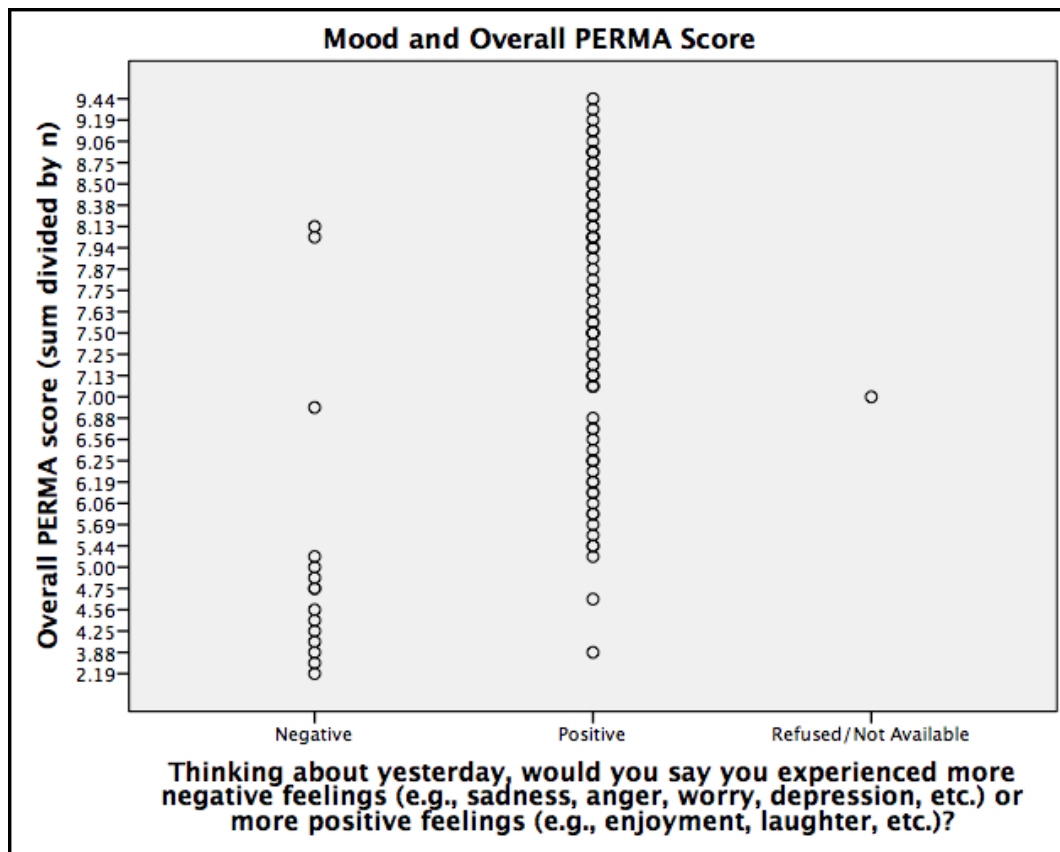
Figure 11. Correlation of mood and overall PERMA score.
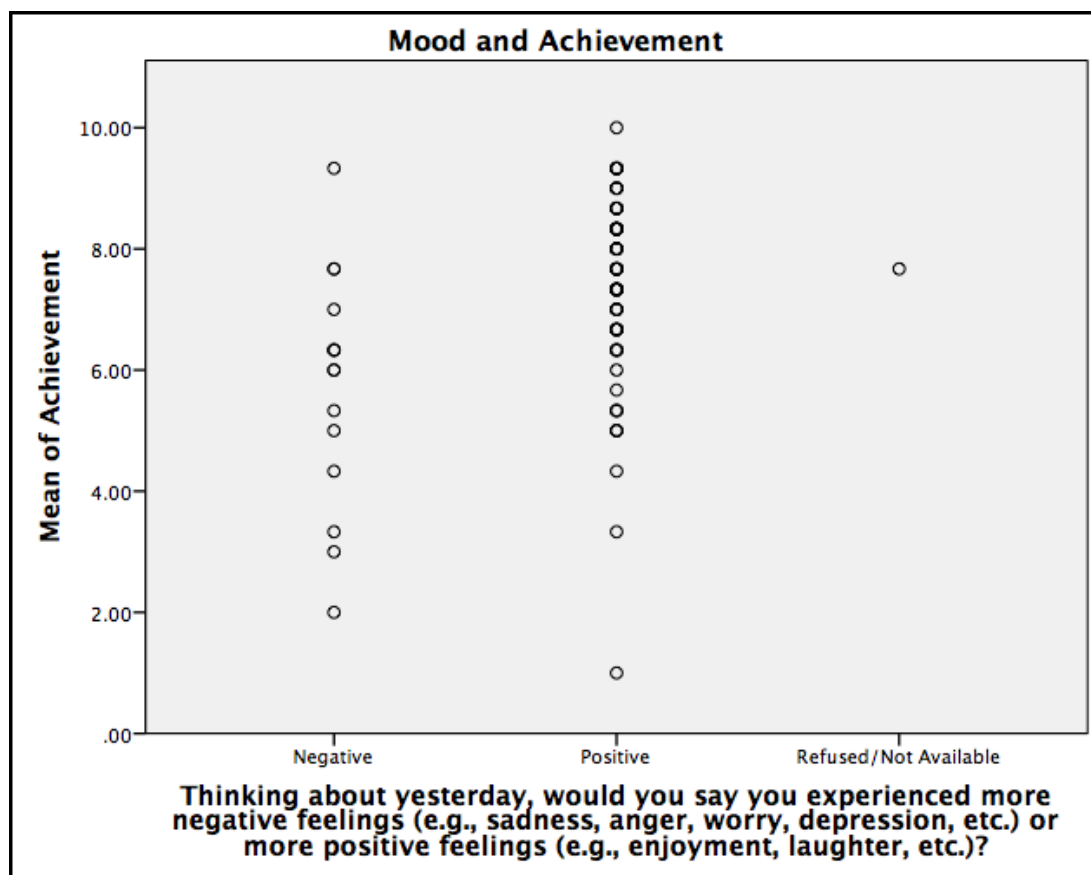
Figure 12. Correlation of mood and achievement.
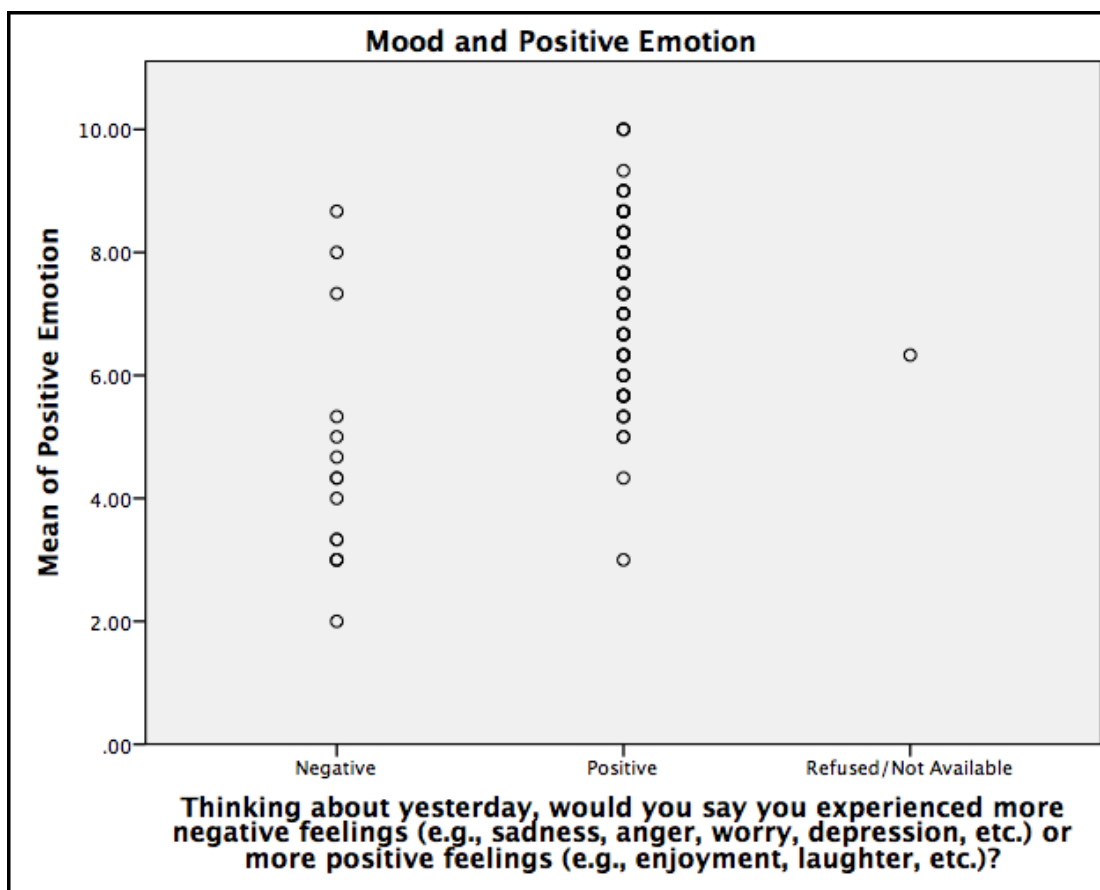
Figure 13. Correlation of mood and positive emotion.
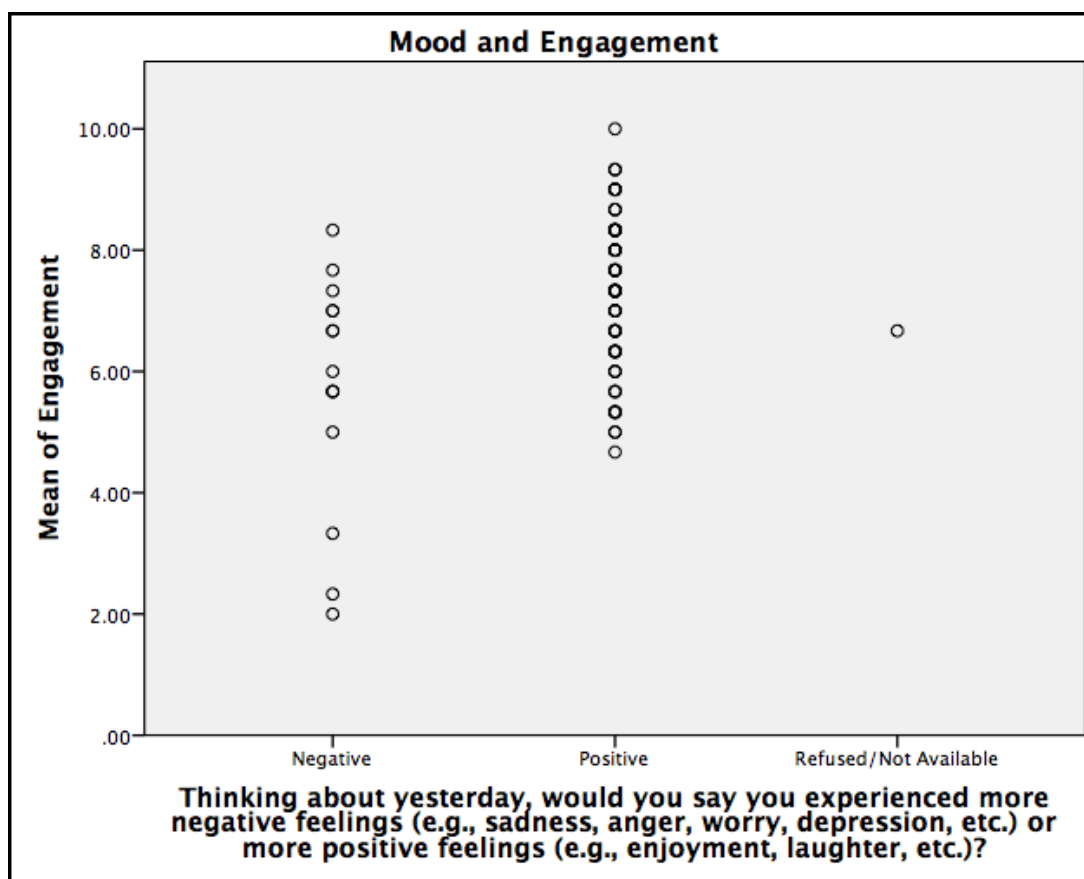
Figure 14. Correlation of mood and engagement.
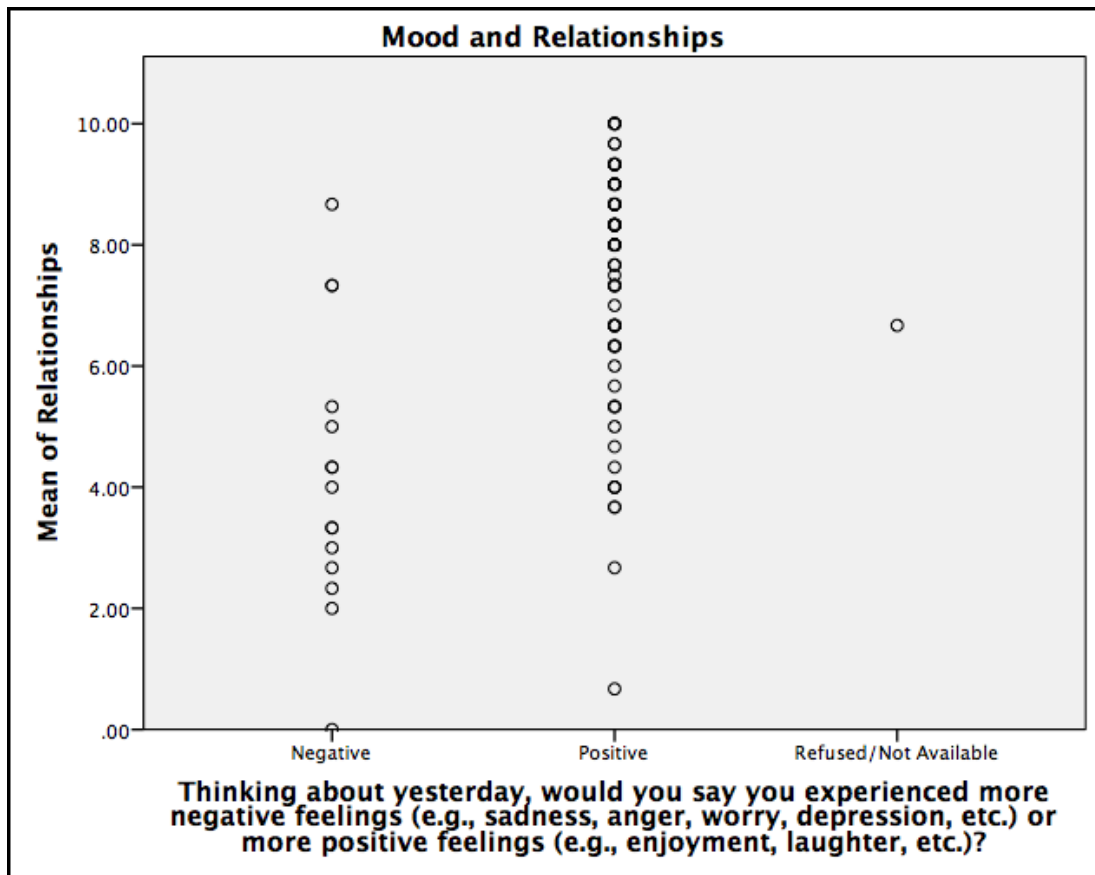
Figure 15. Correlation of mood and relationships.
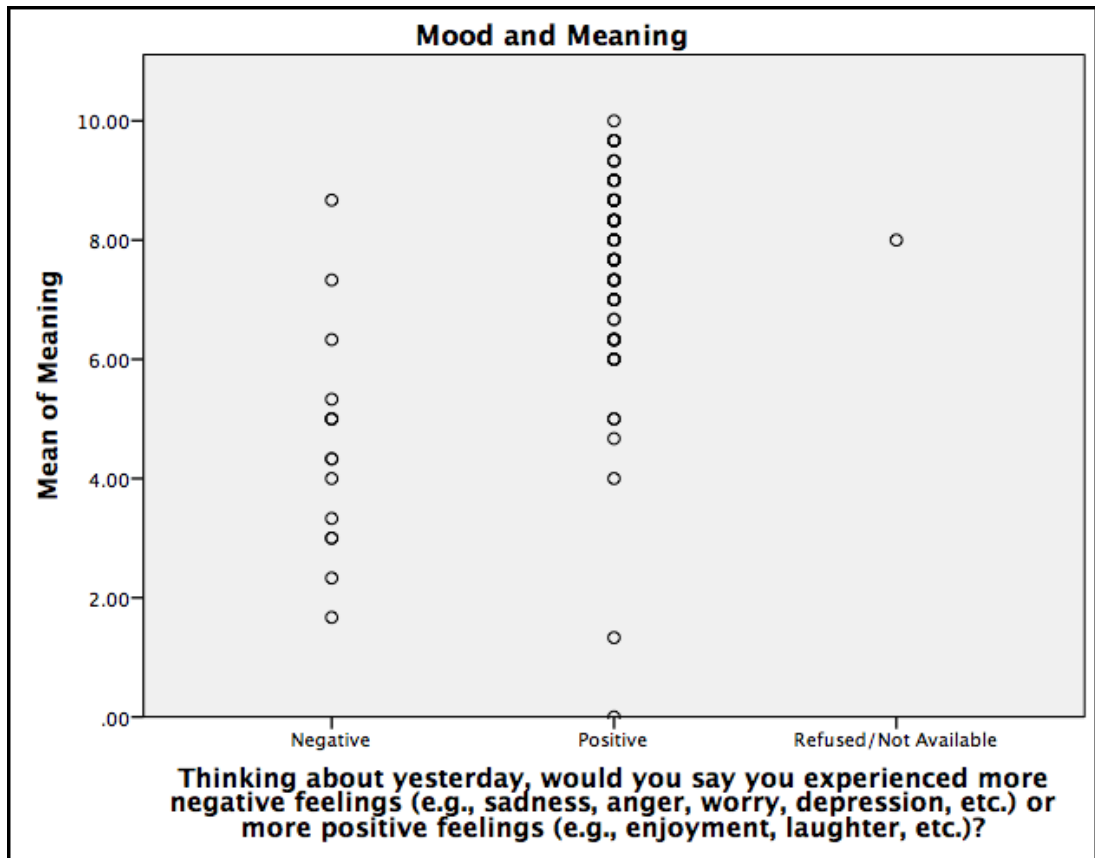
Figure 16. Correlation of mood and meaning.

Section 4: Discussion

Question 1: Is PERMA a comparable measure to overall life satisfaction, and thus could be used as a replacement?

The results from the Spearman's rank-order correlation showed that there was practically no difference between the overall PERMA score and the overall life satisfaction question from Statistics New Zealand's General Social Survey, $r_s(97) = .833$, $p < .01$.

Given that both measures are endeavouring to measure individual's wellbeing, it makes sense that there is a close relationship between the two.

This finding indicates that the PERMA measures could be appropriately incorporated into the General Social Survey in place of the single life satisfaction question. This could be beneficial as PERMA seeks to understand specific aspects of overall wellbeing, whereas the life satisfaction question on its own provides little insight into what is going on. While knowing how someone rates their overall life satisfaction is useful, a more useful and interesting thing to understand is *why* someone would rate their life satisfaction as high or low (Jayawickreme et al., 2012). An added benefit of using the PERMA measures is that PERMA seeks to understand specifically psychological and social variables, whereas the General Social Survey is particularly focused on demographic variables, although it does also include some mental health and relationship focused measures. Given that ratings of life satisfaction are subjective measures of wellbeing, it would be important to understand subjective aspects of wellbeing, such as meaning and sense of achievement. PERMA can help provide this insight.

A more refined understanding of what an overall wellbeing score means can help policy and national decision makers better understand populations of interest and the kind of societal context that policy needs to be support in order to increase overall national wellbeing. This result supports the use of PERMA measures to help do this.

One drawback in doing this, however, is that adding the PERMA measures to the General Social Survey would increase the survey by over twenty questions. This is a challenge in a survey that is already comprehensive and with Statistics New Zealand already seeking to limit the number of questions being asked of respondents. This is a challenge for many surveys, and the benefits of having a more nuanced understanding of wellbeing through added questions would need to be weighed up against the benefits of the various other modules found within

the survey (e.g., income, education, relationships, physical health, mental health, economic standards of living, demographic questions, etc.). Much of what government does is provide services in very specific areas such as education, or employment, or social services. So, understanding these things is important. However, there are other surveys conducted and data sources that help provide insight into these things, such as Statistics New Zealand's Household Economic Survey, or education data gained through primary, secondary and tertiary institutions. Further, with the creation of the Integrated Data Infrastructure, where government data is being 'joined' together, ready to be investigated, a wealth of information becomes available. Education data can now be linked with tax data, social services data, and health data to see how multiple variables interact with each other.

The General Social Survey, however, provides a unique insight into subjective experiences rather than mere counts of what services individuals have accessed, how high their income is, and what education they have. As such, the social survey can provide insight into how people interpret their experience in the context of other more 'demographic' based achievements.

The more 'objective' type measures used in the social survey (such as income levels, education levels, health measures, etc.) also presume a place of importance in the achievement of high levels of wellbeing, regardless of their perceived subjective value (Schueller & Seligman, 2010, pp. 254–255). While these are undoubtedly important determinants of wellbeing, they only tell part of the story. As such, it is also important to acknowledge, through what is measured, that much of the human experience of life is subjective and cannot be solely distilled down to a summation of a person's education, their income level, or how many rooms there are in their house. As such, subjective experiences, values, and assessments should be measured alongside more objectively observable variables.

In this case, and in light of the wealth of data already available from other sources, it would be beneficial that the General Social Survey retain its unique place as focusing on specifically social and more subjective variables, providing an insight that all the other data sources do not. As mentioned previously regarding the development of Treasury's Higher Living Standards, ensuring the place of subjective wellbeing measures such as PERMA in the General Social Survey, will help provide a triangulating check of whether government policy is on target with its more objective policies and initiatives (Gleisner et al., 2011).

Question 2: What extra information could PERMA provide in understanding how people rate their overall life satisfaction?

Investigation into how the individual elements of PERMA (Positive emotion, engagement, relationships, meaning, and achievement) related to the overall life satisfaction measure indicates that there is more going on at individual element levels than each aspect of PERMA simply being a proxy for overall life satisfaction. As noted above, when summed together, PERMA overall correlated highly with overall life satisfaction. However, while all the individual elements of PERMA were positively correlated with OLS, it was not the case that they all had the same strength of a relationship. This is important to know as it could suggest that overall life satisfaction is possibly influenced more strongly by certain subjective elements as found in PERMA than other elements.

Meaning

Whether someone felt they had meaning in their life was the most strongly positively correlated element of PERMA with overall life satisfaction, $r_s(97) = .818$, $p < .01$, practically as strong as the overall PERMA score correlation with overall life satisfaction. This is in line with previous research which has found, for example, similar results with college students (e.g., Datu & Mateo, 2015), in different nationalities (Ang & O, 2012; Cömert, Özyeşil, & Burcu Özgülük, 2016; Douglass, Duffy, & Autin, 2016) with older adults and the elderly (Ang & O, 2012; Chow, 2017) and with minorities such as gay, lesbian and bisexual communities (Allan, Tebbe, Duffy, & Autin, 2015). In one study of multiple variables including personality testing, age, education, income, marital status, social support, identity fusion, community satisfaction, meaning and life change, it was found that the presence of meaning in an individual's life was the single most important factor in predicting their level of satisfaction with their life (Grinde, Nes, MacDonald, & Wilson, 2017).

Without further predictive analysis of this relationship, and an in-depth refinement of the concept of 'meaning', it is hard to explain the exact relationship here, but there is a strong suggestion that meaning plays an essential role into how someone views their overall wellbeing. However, the relationship between meaning and life satisfaction, and the mechanism by which meaning relates to life satisfaction, has been investigated by multiple researchers. In many instances, research has found that meaning mediates the relationship between life satisfaction and other variables. Datu and Mateo (2015) investigated the relationship between gratitude, meaning and life satisfaction. Their findings suggested that the

relationship between gratitude and life satisfaction was partially mediated by meaning. A suggested reason for this is that gratitude helps to create a perspective that helps individuals construct meaning into events, which in turn increases satisfaction. Meaning has also been found to mediate the relationships between job satisfaction and life satisfaction in both India and the United States (Douglass et al., 2016) and in the LGBTI community (Allan et al., 2015), where one having a sense of a calling increased a person's sense of meaning which in turn increased their satisfaction with life. Similarly, meaning was found to mediate the relationship between knowledge about a stroke and the impact that knowledge had on the elderly's satisfaction with life by providing information that helped patients reassess their sense of meaning, leading to an increased sense of satisfaction (Chow, 2017).

While the relationship between meaning and life satisfaction is very strong, one should not make the mistake the one can be replaced with the other. In an international study of how meaning and life satisfaction are experienced in wealthy and poor countries, Oishi and Diener (2014) found that, as has been shown repeatedly, wealthier nations had higher levels of life satisfaction than poorer countries. However, the opposite was true for meaning where poorer nations had a greater sense of meaning than wealthier nations. Here we find an interesting relationship as meaning has been shown to be highly influence life satisfaction. However, the relationship is not black and white as one would then expect that nations with higher levels of meaning would have higher levels of life satisfaction. Thus, it is a possibility that, while meaning may impact on the presence of life satisfaction, one can be present independent of the other. Another important note in this research was that meaning levels predicted suicide rates whereas life satisfaction did not. This is supported by research showing that the presence of meaning is strongly correlated with mental wellbeing (Cömert et al., 2016) and even improved physical health outcomes (Chow, 2017) and the absence of meaning leading to poor functioning and negative mental health outcomes such as anxiety and depression (Cömert et al., 2016). Given the clear policy implications of such findings, it becomes more important to identify multiple factors that lead to wellbeing as different factors have different impacts on individual's lives. In a study seeking to understand how people understand the concepts of 'life satisfaction', 'happiness', and a 'good life', Carlquist, Ullebert, Delle Fave, Blakar, and Nafsted (2017) found that people understood the concepts differently. Satisfaction was found to be more related to hedonic theories of wellbeing.

Of particular note for the participants in this study, previous research has found that age does play a moderating influence between meaning and life satisfaction. In a study

investigating relationship between caregiving, life satisfaction, and meaning in older adults, Ang (2012) found that, as well as there being a significant relationship between meaning and life satisfaction for older adults, there was a stronger relationship for those in the older adult category of the study (those aged 65 to 84 years old). This is important to note, as it could suggest that the role of meaning in the cognitive assessment of one's life may increase with age. Ang postulated that this is possible result of a cumulative effect of older adults having resolved passed regrets and integrating meaning into their lives through previous life stages.

This insight would be lost in the General Social Survey without the use of the PERMA measures, as the General Social Survey does not investigate individual's sense of meaning and its importance in their life. The strength of the relationship between meaning and overall life satisfaction begs the question whether overall life satisfaction is simply a proxy for whether or not individuals find much meaning in their lives.

The idea of meaning taps into a more eudemonic view of wellbeing, identifying that wellbeing is not simply about 'feeling good' but it is also about 'doing well' (Jayawickreme et al., 2012, p. 328) and even 'doing good', incorporating the idea that people should develop what is good within themselves and use these attributes to contribute to the world and others around them (Peterson et al., 2005).

Positive Emotion

The results demonstrated a strong positive relationship between positive emotion and overall satisfaction with their lives. This supports the hypothesis discussed in section one, and which Martin Seligman supports, that life satisfaction is largely a hedonic measure of wellbeing, and is closely attached to positive emotions. However, the stronger relationship between meaning and overall life satisfaction suggests that this relationship is not purely black and white. In this way, the PERMA theory of wellbeing has potentially identified an element that is more closely related to life satisfaction that simply the emotional state.

While the reason for this is finding is not clear, it could be that the older age group of this study lends itself to participants reflecting more closely on the meaning associated with their lives. Given that they have lived longer, potentially have more time and reason to reflect on life given their life stage, older adults have more experiences to assess and to try understand past experiences, whereas younger people, at different life stages, are too caught up in the moments of trying to 'live' that they don't have time to reflect on the meaning of their actions.

The proximity of older adults to death could also provide impetus for them to apply a greater emphasis to meaning than to emotional experience.

Another possible explanation for older adults placing less emphasis on emotion over meaning is that older adults are likely more resilient than their younger counterparts. It is possible that, given the variety of their experiences, they have the benefit of hindsight where they are less at the mercy of their emotional states, with a broader perspective that allows them to see these emotional states in the context of multiple events. Thus, they could view emotions as passing feelings, without giving them as much heed as younger people may. In essence, older adults could be less likely to get swept away by their emotions than younger people, and thus can apply a more objective perspective to overall assessment of their lives.

While positive emotion was not identified in this study as having a stronger relationship than meaning, it is important to note that it still was quite a strong relationship. Thus, the impact of the emotional and more hedonic state can't be underestimated when seeking to understand the answers people give when asked to rate their overall life satisfaction. This provides further impetus for the need to ask about other elements of wellbeing, as the emotional state can obscure a more nuanced understanding of what is going on and how people go about pursuing a life filled with wellbeing.

Relationships

Positive relationships was also found to be relatively strongly correlated with overall life satisfaction. Given the importance of social relationships in human experience, this is not a surprising finding.

Relationships are hugely important to humans, and their impact cannot be underestimated. At different life stages, different relationships come to the fore, from the peer relationships of young adulthood, to the relationships with work colleagues and spouses later, to the relationships between grandparents and grandchildren, and sadly often the loss of relationships at older age through neglect, loneliness or death.

Given the relatively strong correlation between relationships and overall life satisfaction, this finding supports the idea that the PERMA theory of wellbeing identifies a further element of wellbeing that is not investigated through simply measuring individual's ratings of overall life satisfaction. This finding highlights the importance of understanding how relationships impact on wellbeing and this has implications for public policy development.

This study focused on older adults and it is likely that the impact of relationships on wellbeing may change throughout the various stages of life, given the different types of relationships that are enjoyed. Further investigation into the nature and type of relationships and their impact on wellbeing at various stages of life would be useful in further teasing apart what relationships mean for a populations wellbeing at different life stages. Superu's work into understand family and whānau wellbeing supports this idea, recognising that all individuals are part of a network of interpersonal relationships. Public policy can impact on these relationships at various stages of life, whether it be through support for maternity or paternity leave at work or the removal of barriers in the use of land for the building of houses/buildings that enable intergenerational families to live together. In a place such as Auckland, where housing is at crisis levels, such policies can have significant impacts on family and whānau relationships. This becomes particularly important when considering the emphasis placed on community focused cultures such as the Māori culture or Pasifika cultures. The importance of interacting with and housing their elderly is central to their culture, with their elders playing important roles in the raising of children, and the passing down of cultural knowledge. These relationships can be impacted detrimentally by policies that focus on the individual. Thus, it becomes important to measure aspects of wellbeing that identify the important role and nature of positive relationships.

Achievement

Achievement also had a moderately strong relationship with life satisfaction ratings. The relationship between life satisfaction and achievement is not fully clear. However, it is possible that part of the mechanism for assessing how individual's rate their lives is moderated through how they view whether or not they have achieved or accomplished those things they have set out to accomplish.

It is also likely that achievements, and what is considered an achievement, are viewed differently at different life stages. At younger ages, achievement may be focused on educational outcomes, or sporting outcomes, or even whether or not someone as successfully completed a favourite X-box game. Towards middle age achievement may be focused on the accumulation of wealth or property, or potentially the achievements of their own children. In older age, achievements may be focused on health outcomes, or through observing how well older children and their families are doing. Whatever the case may be, it is apparent that achievement forms part of the make-up of what people use to rate their overall sense of wellbeing.

The relationship between achievement and overall life satisfaction supports the use of PERMA as an appropriate replacement for life satisfaction. PERMA provides insight into this element of wellbeing that would not have been identified through life satisfaction alone.

The implications for understanding achievement from a public policy perspective are perhaps as not as clearly outlined as for other areas of wellbeing such as relationships or engagement. However, when focusing on specific areas of governmental oversight the relationship becomes clearer. An example of this is in the educational arena. Governments spend large sums of money investing in the education of their populations. Understanding that a sense of achievement is an important part of wellbeing could have significant impacts on how educational policy is framed, particularly for minority groups who experience poorer educational outcomes than the majority. While beyond the scope of this research, investigating the relationship between a sense of accomplishment and other more objective measures such as educational outcomes or health outcomes or income outcomes would provide a rich source of information for helping governments not only understand what may be important for impacting on wellbeing, but why these things are important. In this case it could be potentially because they lead to a greater sense of achievement, which in turn leads to a greater sense of wellbeing overall. Policy that can then maximise on programmes that support a sense of achievement rather than a sense of marginalisation for the greatest number of people could, in theory, lead to a wider increase in levels of national wellbeing.

Engagement

Interestingly, the weakest relationship, while still significant and positive, was between overall life satisfaction and engagement suggesting that the relationship between engagement and life satisfaction is a somewhat complicated one.

However, this finding further supports that idea that, if Seligman's theory of wellbeing is accepted, than engagement would be something that is totally missed when simply using global ratings of life.

One possible reason for the weak relationship between engagement and overall life satisfaction is that engagement could be perceived as a largely momentary experience, rather than a global experience. This would imply that in order for this to factor strongly into how people perceive their overall wellbeing, they would need to be aware of the prevalence of a state of engagement in their lives as this requires an understanding of what engagement is and when one has experienced it.

It is also possible that engagement, while important, is not something that is commonly associated with wellbeing and happiness, rather being a specific term that is more well known to those familiar with psychological constructs and the study of psychological states. Thus, engagement and what is meant by engagement is probably not as consciously familiar to the general population as some of the other elements, such a positive emotions, meaning and positive relationships. This lack of familiarity with the concept could preclude it from being factored into how individuals view their overall sense of wellbeing.

While the relationship between life satisfaction and engagement is not totally clear, it appears that engagement contributes something to a sense of wellbeing, and thus should be an important aspect for measurement and assessment. The relevance of engagement to public policy development could be varied, with perceivable applications in the education sector and the work sector and how people experience a state of 'flow' in these everyday activities.

Question 3: Is PERMA useful in detecting any differences in how different ethnicities rate their overall well-being?

The results indicated that there was little to no difference between Māori and New Zealand Europeans in how they rate their overall wellbeing. The difference was negligible between overall life satisfaction and PERMA for both ethnicities, and both showed the same pattern: New Zealand Europeans ratings were slightly lower than Māori using both measures.

In this manner, it could be argued that PERMA has not detected any useful difference in ethnic differences of overall life satisfaction. However, given the high correlation between the two measures overall, this finding would be expected. This also supports the argument that PERMA could be used in place of the overall life satisfaction question, without losing the information gained through life satisfaction. That is, we still get an overall picture of how individual's rate their lives, and understand its associated relationship to positive affect. However, with PERMA we also gain extra insightful information that can help us understand wellbeing further.

An interesting point to note with this finding is that in this research Māori rated their overall wellbeing as higher than New Zealand Europeans, and with both measures. This is not the usual finding, as Māori surveyed through the General Social Surveys generally indicate

that Māori rate their overall wellbeing is slightly lower than New Zealand Europeans (e.g., MacPherson, 2015). However, while the overall average rating of life satisfaction for Māori may general be lower, the most recent General Social Survey findings suggested that when Māori are happy, they tend to be happier than New Zealand Europeans, with more Māori indicating a 10/10 score for life satisfaction than New Zealand Europeans .

Another potential factor in this research is that the sample was based on older adults aged 55-64 years old. It is possible that due to the importance of meaning, positive emotion, and relationships, Māori older adults could experience a greater abundance of experiences than New Zealand Europeans in the same age range. Māori have a wide range of cultural experiences available to them, with strong connections to the land, their people, and their culture. They have sacred sites and spaces that they can visit and gain meaning from which may not be as prevalent for non-Māori living in New Zealand. The Māori culture also celebrates and places older adults in a position of respect and honour that could provide stronger relationship links between the generations than might exist for New Zealand Europeans. It is possible that the Māori culture becomes more important as they age, thus increasing a sense of meaning and increasing positive relationships in their lives, leading to a greater sense of overall life satisfaction. This is somewhat supported by results in the most recent General Social Survey where, when asked about whether they found life worthwhile (a recent addition to the GSS), Māori respondents were more likely to provide an answer of 10/10 than New Zealand European respondents. This is particularly interesting given that more Māori reported lower levels of a worthwhile life in the other response options (0-9), yet when it comes to the most happy Māori, and Māori who feel whether life is most worthwhile, in both instances more Māori would score 10/10 than Europeans. This suggests that when Māori do find meaning or when they are happy overall, their levels are higher than Europeans.

However, even though there was a difference indicated between the ethnicities in this research, this difference was not very marked, so any explanations of the gap between the two need to be taken with caution. It could very well be that the findings are the result of limited sampling and when a broader sample is captured across a wider area of New Zealand the results might reflect those found in the much larger samples of the New Zealand General Social Survey.

Question 4: What differences does PERMA suggest between Māori and European New Zealanders?

While there was not too much of a difference between ethnicities when rating their overall life satisfaction, delving into the individual elements of PERMA identifies some interesting, albeit small, differences.

Māori, on average score slightly higher on all elements of PERMA than New Zealand European respondents. While not a large difference in any single area, this finding alone is worth some consideration. As indicated in the discussion regarding question 3 of this research, there may be cultural reasons for older Māori identifying indicating higher scores on average than New Zealand Europeans. Only in achievement were the results small enough to be practically non-existent.

It is interesting to note that not only were the individual PERMA elements higher for Māori, but the way the different ethnicities responded to each element varied across the elements, i.e. the overall profile across the elements was not the same for each ethnic group. Thoughts on differences with each elements with the greatest disparity and why the profile across elements might be different is considered below.

Engagement

Most notably, the greatest difference was demonstrated with engagement, where Māori respondents on average scored nearly a whole scale point higher in engagement than New Zealand Europeans. This is an interesting finding, the reasons for which are not exactly clear. However, similar to discussions in question 3, there could be cultural explanations for why Māori scored higher than New Zealand Europeans in this area.

One possible explanation is that older Māori adults may be engaged in more activities than their New Zealand European counterparts. This would provide more opportunities for them to experience absorption in tasks, and experience this more often. Participation in cultural activities could also provide this experience, with older Māori adults possibly being given much more opportunities to engage in focused cultural activities than their New Zealand European counterparts. There is a rich history in Māori culture of the older generations providing childcare for the grandchildren, often even taking over the day to day care of their grandchildren, with potentially more instances of intergenerational whānau living together than in New Zealand European families. This intermix of the generations, and the responsibilities

attached to looking after children in old age possibly provide more opportunities for older Māori adults to experience tasks that fully absorb their attention.

The western ideal of career is often focused ultimately on a goal of retirement, where formal work ceases. However, it is possible that this pattern of retirement in western culture also denies older adults the opportunities to experience the focused 'flow' state often associated with in-depth work. Unless older adults purposefully seek this type of activity out, it is likely that opportunities to experience it would decline considerably. In Māori culture, however, there is less of a focus on 'retirement' with older adults continuing to be importantly engaged in their community as leaders of their iwi (tribe) or hapu (sub-tribe). One does not simply retire from these responsibilities and the cultural expectations for the older generations to lead and provide guidance to the younger generations continues. Older adults often play significant roles in formal gatherings such as at tangi (funerals) or births, or at meetings on marae, with very specific roles for them to fill. Older Māori are much more likely, for example, to have visited their ancestral Marae (meeting house) (Statistics NZ, 2016), suggesting a much stronger role that culture plays in their life, and a stronger link to their culture at older adulthood. Such cultural activities provide opportunities for Māori adults to continue filling visible and significant social roles right up to the end of their lives. Given the increasing focus on governmental settlement of Treaty of Waitangi claims, older Māori adults are also often trustees and heavily involved in the settling and management of iwi, hapu or whānau assets. New Zealand Europeans, on the other hand, may instead focus their retirement on activities that are more leisurely in nature, e.g., playing golf, travelling, visiting friends, etc. While these are not negative activities, the requirement for the deep focus associated with engagement and the state of 'flow' could be less likely to occur.

At this point it is important to remember that, out of all the PERMA elements, engagement had the weakest relationship with overall life satisfaction or wellbeing. Thus, while for Māori it appears to suggest an increased role in their lives, perhaps it does not contribute as much to whether someone is leading a flourishing life as suggested by Seligman, and its importance should be viewed critically.

Much more research is needed into the specifics of what engagement might mean for different ethnicities, and the role it plays in how individuals assess their overall sense of wellbeing. It could be the case the there are differences between ethnicities as to how much value they place on engagement when making global assessments.

Positive Emotion

The next greatest disparity between ethnicities was found in the positive emotion element where there was a difference of 0.4 on the Likert scale.

Given that positive emotion is often closely correlated with a global assessment of wellbeing like life satisfaction, it is useful to think about why older Māori adults would possibly rate their positive emotions as higher than New Zealand Europeans.

Similar to discussions above, the level of social engagement that Māori culture requires is potentially a mediating factor in creating opportunities for older Māori adults to experience positive emotions. The culture encourages an intimate level of whānau relationships and living circumstances which could provide a greater sense of pleasure. It is also possible that the options for finding emotional relief in times of stress are increased because of Māori culture. For example, while death is a common experience for all older adults, with friends and loved ones dying more often than for younger age groups, the death experience for Māori older adults could likely be a very different one than for New Zealand Europeans. Māori tangi (funerals) are large family affairs with many friends and whānau coming from across the country and across the world to pay respects to the deceased. Tangi will usually last for a number of days, with whānau and friends all close by to offer support and relief. It is not only a time of mourning, but also a time of celebration, a time of connecting and re-investing in relationships with both the living and the dead. Waiata (songs) are sung and many speeches are given. Tangi will usually take place on the ancestral Marae of the deceased, and all who are staying for a number of days will often sleep together, eat together, and prepare food together. The body of the deceased is usually displayed in an open casket, with friends and loved ones gathered around to pay respects and remember them. It is not inconceivable that such an event provides a rich source of comfort, healing and resilience for older Māori adults, where death is not a solely physical experience, but also a spiritual one, and a connecting one where whakapapa (genealogy) is celebrated and experienced. Māori culture, as with most spiritual traditions, does not see death as the end, and there is a strong sense that the deceased continue to live and have strong connections to the living.

This is a marked contrast to many New Zealand European funerals which, by comparison are much smaller affairs. If there is not a religion associated with the family, funerals can often take place in a funeral home, one that has no connection with the family

other than that it was available at the time. Funerals will typically be simple and short affairs, lasting no more than a few hours, with the deceased laid to rest on the same day as the service.

Given the reality of death for older adults and the visibility of it in their lives, it could be strongly argued that Māori cultural practices provide a point of resilience for older Māori adults. Death can be experienced as a traumatic and depressing experience, and yet the Māori cultural tradition has imbued it with cultural significance and celebration and healing. Thus, in the experience of death, it is likely that Māori also experience many positive emotions that last for a considerable amount of time. Given the fact that many Māori will also often live with or be very closely tied to their extended families, these relationships provide a further buffer against the negative emotional experiences often associated with death. As such, it is likely that Māori cultural practices provide opportunities for positive emotional experiences to be focused on more than negative emotional experiences.

As also noted above, older Māori adults are also often afforded much respect and fill positions of responsibility in their iwi, hapu or whānau. These responsibilities and the activities associated with them could also provide opportunity for older Māori adults to experience an increase in positive emotions over negative ones, experiences that might be limited in the 'retired' lifestyle of New Zealand Europeans. Indeed, it could be the case that the western concept of 'retirement', and its positive associations with rest and relaxation, in actual fact decreases the likelihood that these positive experiences are to be achieved.

Further research would be greatly beneficial in helping to understand how cultural practices, such as in Māori culture, could create increased opportunities to experience positive emotion amongst individuals and learnings could then be applied to instances where these practices are not as prevalent or as visible.

Meaning

The third greatest disparity between the ethnicities was found in the meaning element of PERMA, with Māori rating their sense of meaning higher than New Zealand Europeans.

While the difference is relatively small, it is possible that Māori have more visible and lived opportunities to directly experience or create meaning in life. Their cultural practise imbues the world around them with meaning from giving birth, to the movement of the starts and the moon, to the processes associated with death, to the sacredness of some sites and treasures. For instance, a typical Māori greeting (mihi) will involve them introducing

themselves by linking themselves with their origins. In this greeting they state the region of New Zealand where they are from, the mountain they associate with, the body of water they are linked to, and their tribal whakapapa (genealogy). They often know the very waka (canoe/ship) that they come from that originally arrived in New Zealand with their ancestors. Such regular and common practices can create a daily sense of connection and meaning, where they are not solely individuals, but are connected to a much wider whole. It is a cognitively conscious activity that connects them personally to the wider world.

New Zealand Europeans, on the other hand, may not have such a broader sense of connection and meaning, and if they do, they may not have such conscious opportunities to express this meaning and sense of connection to a greater whole. Often this is realised through religious practices, but as more and more New Zealanders identify less with a particular religion[4], it could be the case that meaning generation needs to be a more focused and cognitive pursuit as there is no overarching cultural context that provides it for them. Typically religion would have provided this context through regular daily religious practices that bring a sense of meaning creation and purpose to the fore. In the absence of these practices and a system of believe, individuals must seek out or create their own system and then develop practices that reinforce this believe, along with the inherent drive needed to continue in attending to these daily practices. Given the need to focus on getting education and raising family and earning an income, there may be little conscious time, and no regular daily practices, that reinforce a sense of greater meaning or purpose in life for those without a strong cultural or religious impetus. Once New Zealand Europeans find that children have moved out of home, and work is no longer relevant, it is possible that, while meaning becomes more important, its creation and the daily practices that support it have become unfamiliar.

Given that both ethnicities rated meaning as the second highest element of PERMA, and given that it was the most strongly correlated element of PERMA with overall life satisfaction, it is clear that meaning plays an important role for both ethnicities in wellbeing. However, the opportunities for creating and practising a life filled with a sense of meaning, and the processes used to focus on that meaning, may be very different, and may provide an explanation for the differences identified here.

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[4] Those indicating 'no religion' in Census data increased from 1.02 million in 2001 to 1.64 million in 2013. (Statistics New Zealand, n.d.)

It should be noted that the above discussion in no way is intending to state that New Zealand Europeans do not create or enjoy any great sense of meaning in their lives. But rather, it is more suggesting that there *may* be less conscious experiences provided for New Zealand Europeans, through the context of their lived daily culture, to either create or tap into their meaning systems, whatever they may be.

A rich source of further research would be found in investigating how different cultures in New Zealand create a sense of meaning in their lives, and how the practices associated with this meaning are realised throughout the different life stages. It is probable that all cultures have a strong sense of meaning deriving from various philosophies. However, the opportunities and systems available to practise this sense of meaning may not be as readily accessible to some ethnicities as it is for others, and that may also depend on the country in which ethnicities are living. Research could help identify opportunities for different cultures to express and create meaning throughout their lives, with a possible benefit of increasing an overall sense of wellbeing.

Relationships and Achievement

The smallest disparity was found in relationships and achievement. It is somewhat surprising that there was not a greater gap between Māori respondents and New Zealand European respondents in how they rated their positive relationships, especially considering the heavy emphasis that is placed on interpersonal and familial relationships in Māori culture.

However, it could be the case that while positive relationships are important, they may not always be seen as positive, even though they may add to a sense of meaning or engagement for Māori. For example, the stressors of looking after grandchildren may place strain on some older adults and their relationships, while still supporting other elements of PERMA such as an individual's positive sense of meaning and engagement.

There was negligible difference between ethnicities when it came to a sense of achievement, suggesting that both Māori and New Zealand Europeans, at least at this stage of life, may experience similar levels of personal achievement, and may use the same judgement to rate themselves in achievement.

Much more research is needed to identify what variables may be impacting such assessments, and what is meant by these scores, particularly as it relates to different ethnicities.

Ethnicity differences in the PERMA profile

While some elements were practically the same for both ethnicities (i.e. achievement) it is worthwhile to note that both ethnicities had somewhat different PERMA profiles. That is, the experience across the PERMA elements and what was rated more highly was markedly different.

Listed from highest to lowest average scores, the following profiles are insightful:

Māori:

1. Engagement
2. Meaning
3. Achievement
4. Relationships AND Positive Emotion

New Zealand European:

1. Achievement
2. Meaning
3. Relationships
4. Engagement
5. Positive Emotion

Thus, we can see that using the PERMA theory, the Māori wellbeing profile in this research looks markedly different to New Zealand European wellbeing profile. This is a valuable picture to explore when seeking to understand the wellbeing of New Zealand's population, and one that would be lost when a single global assessment measure such as life satisfaction is used.

One noticeable difference is that, for New Zealand Europeans, achievement was ranked the highest element, where this was only the third highest for Māori respondents. One possible reason for this is that New Zealand Europeans, subscribing to a more western philosophy of materialism, places greater emphasis on achievement over other elements of wellbeing, whereas, for reasons discussed above, Māori place a greater emphasis upon the creation and experience of meaning in life. It may be the case that New Zealand Europeans place a greater emphasis on the accumulation of things, or the attainment of life goals such as retiring safely, or gaining a particular level of wealth, or the attainment of property, with the focus on 'having' or 'succeeding' rather than on the process of gaining these things. This could suggest a stronger

link to the 'Wanting' and 'Needing' theories of wellbeing (Jayawickreme et al., 2012), and is more reminiscent of the manner in which western governments focus their efforts to measure national wellbeing – that is through metrics that support the accumulation and use of resources.

For Māori, the highest rated element was engagement, whereas this was the second lowest for New Zealand Europeans. While nothing conclusive can be said about this finding from this research, it does suggest that there is a difference occurring here between ethnicities around what they are considering when assessing their overall sense of wellbeing. For Māori, it appears that the process of participating in absorbing activities, to use Martin Seligman's vernacular, *describes* a particular focus of their sense of wellbeing, an element that is less descriptive for New Zealand Europeans. Whether this is because they have more opportunity to experience such activities or whether they place more importance on this at a conscious level is not clear from this research. Further investigation would be useful in identifying the reasons for this emphasis.

One potential reason for this difference in description of wellbeing could be that Māori culture provides a context that is more absorbing in nature, and provides more opportunities for this sense of engagement to be experienced. As noted earlier, older Māori adults have a specific role to play in cultural and familial life. This role , and its surrounding culture, could provide a concrete structure that creates an environment where focused attention is more fully required in order to fulfil the role expected. It could be that this is something that may have been experienced more for New Zealand Europeans prior to retirement, earlier in their careers or during years of raising families. A structured work environment, with its inherent tasks and responsibilities would no doubt have required periods of focused activity where an engaged state was more often entered into. Perhaps, as New Zealand Europeans move towards the end of their careers, they become less engaged in tasks and responsibilities because they have mastered their careers by now or, having retired, the activities they pursue for the majority of their time requires less focus and hence less engagement.

It is interesting to note that for both ethnicities, meaning was ranked the second highest element, highlighting that a *description* of wellbeing for both ethnicities would include an emphasis on the sense of meaning experienced through life, though the particular level of meaning may change and what meaning *means* for different cultures would need to be further explored.

Question 5: Can PERMA help better articulate the impact of mood on overall wellbeing ratings?

Using the PERMA elements provides some interesting insight into the relationship between wellbeing and affective states. Interestingly, meaning showed the strongest correlation to the affective state over the previous day. This suggests that, more than just being a reflection of positive emotion, meaning plays an important role in some way with both the experience of affect, or vice versa. Further investigation would be useful to articulate the causal direction of this relationship as to whether a greater sense of meaning leads to stronger positive affect, or whether the affective state causes a greater rating in a sense of meaning. As indicated by this research, there is moderate relationship where more positive affect is linked to a higher rating of meaning. This could be explained by the fact that recent affective states may colour the global assessments people make around each element of the PERMA theory of wellbeing. Again, more research is needed to identify if there is any causal link between these two variables, or whether there may be other mediating factors.

The weakest relationship was between engagement and mood. This is relevant as, particularly for Māori respondents, engagement was ranked so highly as one of the PERMA elements and was also significantly positively correlated with overall life satisfaction in general. Given the weak relationship between these two elements, it suggests that the mood state does not particularly influence how individuals assess their sense of engagement. Given how highly this element was rated for Māori respondents this is important to understand, as it suggests that engagement is tapping into something completely different to mood. This is further supported by the low correlation between engagement and overall life satisfaction and overall PERMA score, suggesting more strongly that engagement is a particularly unique aspect of wellbeing that operates more independently of the other elements, and of affective state.

Not surprisingly, positive emotion was highly positively correlated with mood over the previous day. One consideration with this finding is assessing what exactly is being explored when looking at positive emotion. This finding may suggest that the positive emotion element of PERMA is tapping more into a current mood state rather than tapping into a global assessment of emotional experience. It is one thing to have had a bad day, and another thing to view one's life as generally providing positive emotional experience. The high correlation between these two variables may suggest that the positive emotion PERMA element is more

tapping into the former rather than the latter. This could require further refining of the PERMA element if a global assessment of positive emotional experience is what is meant by this element of the theory.

Similar to engagement, achievement also showed a weaker relationship with mood. It is possible that achievement is more objectively viewed as it is tied to specific things or events rather than an assessment of emotions. Thus, it could be less susceptible to emotional changes in state, either over time or in the moment.

Why are these findings important for nations and governments to understand?

Having investigated the above questions, and identified some suggested answers, the question becomes what use is this information to governments and the policies they develop?

A large part of what governments do is focused on, in the broadest sense, increasing the wellbeing of their populations. They do this through multiple channels. Governments manage natural resources, maximising their productivity while also seeking to balance this with protection of the environment for future generations. Governments invest heavily in the built environment, supplying infrastructure, and shaping the physical world around us to as to enable employment opportunities, create leisure activities, create a beautiful environment for its population and visitors, and create liveable communities where families and whānau can thrive. Governments monitor and oversee the economy, ensuring that their populations can participate in economic opportunities, entice others to invest in our economy, while also trying to ensure that the most vulnerable are not left behind. Governments fund and manage the education system, creating environments for children, teenagers, and adults to continue getting educated so as to contribute meaningfully to society while also providing career opportunities for themselves. Governments manage our welfare system, seeking to enable and support the most vulnerable in our society to continue participating in society. Governments run the justice systems, they create laws and enforce laws, they fund and supply the healthcare system to ensure the physical wellbeing of society. The touchpoints between government, individuals and families are wide and varied, and it is hard to underestimate the influence governments and their policies and programmes have on the wellbeing of their populations. Whether they do a good job or a poor job, it would be difficult to argue that governments do not play a significant role in determining the level of wellbeing in their nations.

As such, it must of necessity be of value to government to understand the wellbeing of their populace. And, that wellbeing should be understood in the most holistic way possible. Given the extent of government influence on the lives of individuals and families, on communities and wider society, government must ensure that it seeks to understand wellbeing in every domain, the subjective as well as the objective, both hedonically and eudaimonically. In the past government has done very well at gathering a broad array of data, with a vast majority focusing on demographic variables (where do people live, how old are they, what are their education levels, how many live in a household, how much do they earn, etc.); on administrative data that is focused on usage and provision of services (how many and who are currently on welfare benefits, who is using the health system and what for, how many children are enrolled in primary school, what are the crime statistics and for what ethnicities, who is in our prisons, what age are they, what crime did they commit, etc., etc.); or on data that tells us about general economic trends (what is the GDP, how many are employed, what are the number of small to medium enterprises, how much do they earn, how much to they contribute to the economy, etc.). It is data that is more focused on describing population level trends of an externally objective nature. This is understandable given that governments deal in the macro, rather than the micro. That is, they are usually focused on those things that will impact the many, rather than focus in on the challenges of the few. Indeed, there are often tensions played out in the media regarding governments focus on the majority, while the minority languishes behind in an array of negative social statistics.

More specific research seeking to understand the subjective internal experience of the individual or the family has largely been left to academic institutions or research institutes. They have the time and the motivation to delve into these areas, as government agencies are usually more focused on addressing immediate needs and meeting the needs of customers. Academic institutions on the other hand, with their focus on finding and creating knowledge, have more freedom to explore questions that may, or may not, be directly useful to the provision of public services.

However, the sum total of all that a government does is to create a nation that flourishes, and where its populace lead lives where wellbeing is experienced by all. As such, it must become important that they understand also the internal experience and meaning that is created by individuals and families, and is heavily influenced by the context created by government policy and programmes. It is one thing to know that more youth are completing their NCEA level 2 qualifications, it is a completely different thing to understand why and what impact that

qualification has had on their level of wellbeing. Therefore, it is encouraging to see that governments are now becoming interested in seeking to understand the relationship between the internal and subjective wellbeing of their populations beyond relying upon external proxy measures such as education levels.

It is understandable that government agencies may be hesitant to fully delve into the subjective experience of the individual. Policy makers are often seeking to know where to invest funds, or develop programmes that will lead to the most positive outcomes for the greatest number of people. In this environment it becomes difficult to meet the needs of every individual over needs of the general. It is also much more difficult, when working on population level policies that will be focused on delivering programmes for hundreds of thousands of individuals, to see if it is the job of government to directly seek to influence whether an individual's mood on any particular day has been affected. It is easier to supply medical aid to a concrete, easily definable illness, than it is to supply a programme that will meet the psychological and emotional wellbeing needs of everyone in society. However, understanding individual wellbeing in depth will surely help identify broader trends and relationships between policy and personal variables that will allow creation of policies and programmes that will shape a context (e.g., primary schools) more conducive to increased wellbeing for a broader range of the population. It is imperative that these broader connections are made so that government agencies will more fully recognise that the externally observable world of qualifications and incomes are inseparably connected to and influenced by the internal subjective (and objective) world of emotions, and meaning creation and engagement. Only seeking to measure and understand one side, will only ever lead to governments that understand one side of the wellbeing equation.

It is heartening therefore that the academic interest in wellbeing in now finding its way into the government sector. It is hoped that this trend will continue and that much more refinement will occur to help policy makers more fully comprehend the nature of their population's wellbeing, and how this understanding can inform their policies.

Currently, the broadest official assessment that seeks to understand wellbeing from both sides of wellbeing (the externally observable world as well as the subjective internal world) is the New Zealand General Social Survey, currently conducted every two years. This is a wonderful attempt to understand how demographic variables are related to how individual's

view their overall wellbeing. It is a positive step in the right direction and will help draw links between individual wellbeing and public policy.

One of the great strengths of the NZGSS is that it attempts to understand how individuals see and rate their lives, rather than assuming a picture of their lives based on demographic trends or variables. This is a major positive step in seeking to understand wellbeing as it acknowledges the importance of government not assuming a perspective of wellbeing on behalf of their populations. If government truly is the servant of its public, then it behooves government to truly understand the perspective of its people.

This research suggests further that the measure of choice (life satisfaction) could be further refined to delve deeper into more refined elements of wellbeing. This refinement will supply richer a data set of the individual experience, and will then hopefully provide a richer source of understanding for how public programmes (e.g., provision of social welfare benefits) impact on various elements of that person's self-reported wellbeing (e.g., their level of engagement, or the meaning they are experiencing in life) and, relatedly how those subjective evaluations and experiences in turn impact on government sponsored programmes (e.g., school attendance). Identifying any potential relationships will hopefully help shape policies that are better informed and cognisant of their impact. While the term "evidenced-based policy" is widely used in government, it is often evidence that is biased towards proxy measures of wellbeing rather than measures that allow individuals to self-identify their experience. There is a need for both perspectives if policy is truly to be "evidence-based".

Using a measure such as PERMA will help raise the profile of personal experience as government continues to measure and understand wellbeing. It provides the individual more opportunity to identify particular elements of their experience (e.g., relationships, emotion, engagement, etc.) rather than just being given a single expression of overall life satisfaction, with its limitations. This would then help balance the scorecard of the general social survey, which is still seeking mostly objectively identifiable information (e.g., income level, how many in the house, ability to buy food, education level, etc.), and provide a more nuanced, and holistic data set which would, in turn, yield much richer analyses and explanations of why the population has given the responses they have. It is hoped that such explanations would also be more recognisable to those whom such surveys are seeking to understand. That is, it is hoped they would then be able to "see themselves" in the explanations given, because they've been afforded a greater opportunity to express themselves.

Limitations and Further Research

It needs to be acknowledged that this research is not an attempt to provide a representative causal relationship explanation between PERMA elements and life satisfaction or any other variables. Due to budget and time constraints, this research was limited in its sample: the sampling pool was quite small with a limited number of Māori participating as compared with New Zealand Europeans, hence there are considerable cautions in terms of generalisability and bias. It was also limited in the age grouping of the same (55-65) in an effort to see a perceptible difference in the findings. Participants were also only recruited from a particular region in New Zealand. All of these limitations could have had adverse effects on the findings, drastically limiting its explanatory power, and potentially even its descriptive power. It is possible that adults in this age range from the Wellington region of New Zealand have particular perspectives about life that would bias their responses and would be markedly different to the same aged adults from across New Zealand. The limited age bracket used in this survey also severely limits the ability to comment on findings outside of this age range. Given that the New Zealand General Social Survey is a representative survey of New Zealanders, any true comparisons with GSS data would need to be comparably representative. A broader representative sample of ethnicities, ages, and regions across New Zealand would help identify PERMA's true utility in a survey such as the GSS, and would help identify any real differences between groups.

PERMA is also a model of wellbeing that has largely come from a western and American perspective of wellbeing, albeit with strong linkages to many cultures. As such, there are some questions around its utility when seeking to understand the wellbeing of other cultures. Further research comparing PERMA with specific cultural models of wellbeing would go a long way in helping to understand how well PERMA can be applied across cultures and ethnicities. For example, research investigating the different aspects of the Māori Te Whare Tapa Wha model of wellbeing and the PERMA theory and how they relate to each other would help test if PERMA is actually appropriate when seeking to explain Māori wellbeing. There are many Māori models, and Māori culture has a very strong sense of values and knowledge that could be compared with PERMA to gain a richer understanding.

Similarly, the individual elements of PERMA need to be further tested to fully understand their meaning across cultures. For example, this research suggests that there may

be a difference between Māori views around engagement as compared to New Zealand Europeans. However, what that specific understanding of engagement is is not clear, or what it is about engagement that caused Māori participants to score so highly. It is probable that the Māori view of engagement and a western view of the concept could be quite different, and as such have a different meaning and value in their assessment of overall wellbeing. Research into understanding the specific elements of PERMA in different cultures would go a long way in helping to understand the theory's relevance across cultures.

This research also did not seek to delve deeper into each individual element of PERMA, seeking to understand the nuances contained within each across the same participants. Given that each element had specific questions in the survey, further research into each element would help identify if there are any nuances within elements that need to be teased out, particularly when comparing across ethnic groupings. For example, the Engagement element was made up on 3 questions:

1. How often do you become absorbed in what you are doing?
2. In general, to what extent do you feel excited and interested in things?
3. How often do you lose track of time while doing something you enjoy?

There is an element of 'absorption' and 'loss of time' in these questions, but there is also an element of interest, and excitement being explored. It is possible that certain groups would weight one thing more relevant to engagement (e.g., excitement) than another (e.g., absorption). This could play out differently for different ethnicities. Further research into the within element characteristics would help further define what is meant by the concept, as well as what is meant by participant responses.

A further opportunity for exploration is how the PERMA elements relate across the variety of variables explored within the New Zealand General Social Survey. Such an investigation lay outside the scope of this research, however, the NZGSS contains a rich source of variables to investigate to better understand the relationship between PERMA elements and the focus of much public policy (e.g., education, income, health, etc.). For example, it would be particularly interesting to identify what variables were related strongest to 'Engagement' and whether this relationship was similar across ethnicities, or income levels (e.g., Do people with higher education levels report higher levels of engagement, and does this impact on their subsequent income?). All of this could be investigated through the combination of PERMA into the NZGSS.

Finally, and perhaps most markedly, much more explanation is needed to help explain the differences found in this research. This study was quite limited in its focus, and further research to specifically understand the differences would be useful. For example, understanding why Māori and New Zealand Europeans had such different profiles across the PERMA elements would help potentially identify cultural differences in conceptualising wellbeing. Is it that Māori place a heavier emphasis on engagement, or is it that they have more opportunities to be engaged in older life? Such questions provide a rich opportunity for further exploration.

Conclusion

This research was not an attempt to fully establish PERMA as an essential addition to the NZGSS, but was rather an exploration of the *possibility* of PERMA being included. It is argued that this goal has been achieved, with the conclusion that PERMA would be a potentially beneficial addition to the official statistics of New Zealand. There are further questions that need to be explored, for example whether or not PERMA is a culturally appropriate measure in the New Zealand context, however there are indications that, at this stage, this investigation would be useful. The research has shown that PERMA retains much of what is explored through the single life satisfaction measure, with highly correlated findings. Thus, using PERMA can still provide a single overall measure of wellbeing. However, it has also been shown that alongside this, PERMA can provide other information that is beneficial in exploring wellbeing, and information that can help inform public policy.

The research has also shown that the PERMA metrics identified potential differences in how different ethnicities rated their overall wellbeing. Rather than just telling us whether or not someone was satisfied, the PERMA model potentially helps us understand why that may be, or what specific element may be most strongly contributing to that response. In this case, 'Engagement' appeared to be the strongest element for Māori respondents whereas 'Achievement' was the strongest for New Zealand Europeans. This insight would be lost without the use of the PERMA metrics.

Understanding wellbeing is a crucial activity for the New Zealand government and governments across the world. It helps them understand the impact of their policies and programmes. It helps them understand how they are doing at raising the wellbeing of their people, and it helps them understand what is meant when someone identifies that they are happy or not happy.

However, understanding wellbeing, particularly at a population level, will often be only as good as the measures used. If measures are only focused on objectively observable proxies such as income levels, then true insight into the meaning of 'wellbeing, and of these proxies, will be missed and policy will be markedly lacking in understanding. The PERMA theory of wellbeing provides a potentially useful metric that would help policy makers understand the wellbeing of their populations, and how their people view the world they are creating. As such, it is worth further exploration of its utility.

It could be argued that the end result of all research and government activity is that people are happy, or that they have a sense of wellbeing, however that may be defined. More fully understanding those definitions would be to the benefit of all.

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