

Conceptualizations of Wellbeing: Insights from a Prototype Analysis on New Zealand Workers

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Abstract: The current research investigated New Zealand workers' perspectives of wellbeing. Specifically, we were interested in how workers conceptualized wellbeing and what sorts of activities workers currently engage in to promote their individual wellbeing. Four studies surveyed whether workers' conceptualizations of wellbeing are consistent with academic models of wellbeing, the different ways New Zealand workers promote individual wellbeing, and whether the concept of wellbeing is prototypically organized (that is, if not all instances of a concept share all of the features of a prototype). Indicating that wellbeing is indeed prototypically organized, participants were able to list components of wellbeing and then demonstrated significant agreement over which components were central (important) to the concept of wellbeing, and which were peripheral (less important). Results indicated that New Zealand workers are less likely than academic researchers to consider the presence of achievement, engagement, and optimism as important for wellbeing. In contrast to current popular academic models, New Zealand workers viewed physical health, work-life balance, and feeling valued as central components of wellbeing. Physical activity/regular exercise, nurturing relationships, participating in hobbies/interests, and healthy eating were identified as the most popular ways to promote personal wellbeing. Implications for human resource managers, employees, researchers and policy makers are discussed, in addition to recommendations for future research.

Keywords: prototype analysis; wellbeing; well-being; workers

BACKGROUND

A growing evidence-base of the desirable associations of high levels of wellbeing among workers, combined with emerging risks associated with low levels of employee wellbeing (for a comprehensive review see Jeffrey, Mahoney, Michaelson, & Abdallah, 2014), is alerting employers to the importance of complementing objective indicators of organizational success with assessment of employee wellbeing. However, any such evaluation requires agreement over what constitutes wellbeing, which research shows is as yet, far from clear. Although several researchers and research teams (e.g., Diener et al., 2010; Durie, 1994; Huppert & So, 2013; Keyes, 2002; Ryff, 1989; Ryff & Keyes, 1995; Seligman, 2011) have developed theoretical, conceptual and operational models of wellbeing, and there is general agreement that wellbeing is a multi-dimensional concept, that is where the consensus ends. No internationally agreed-upon definition of wellbeing currently exists, and its measurement remains haphazard (Diener, 2009; Diener & Seligman, 2004; Donaldson, Dollwet, & Rao, 2014; Forgeard, Jayawickreme, Kern, & Seligman, 2011; Hone, Jarden, & Schofield, 2015). For example, Ryff's (1989) model suggests that there are six dimensions of psychological wellbeing (self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth), Seligman's (2011) wellbeing theory has five domains (positive emotions, engagement, relationships, meaning and accomplishment), and Huppert and So (2013) identified ten components of wellbeing as the mirror opposites of symptoms common to mental disorders (positive emotions, engagement, competence, meaning, positive relationships, emotional stability, vitality, optimism, resilience, and self-esteem). This makes deciding which model to base a wellbeing strategy upon, and which psychometric tool, or tools, to select for assessment, a conundrum for human resource managers. See Hone, Jarden, Schofield and Duncan (2014), and Forgeard, Jayawickreme, Kern and Seligman (2011) for comprehensive reviews.

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A recent New Zealand study revealed the impact of this multiplicity of definitions by showing the differing prevalence rates for population flourishing (high levels of wellbeing) calculated according to the different wellbeing model used (Hone et al., 2014). Although using one model estimated that 24% of New Zealand adults were currently flourishing, using another model indicated 41%. Furthermore, the same study also highlighted the lack of research investigating lay perceptions of wellbeing. Although McMahan and Estes (2011) investigated lay perspectives of wellbeing, their study was limited by their methodology. Instead of giving participants free reign to express their own perceptions of wellbeing, participants' were asked to rate 30 specific items of wellbeing selected by the researchers according to previous theoretical studies. According to a qualitative study investigating the barriers to raising population wellbeing "the public's responses to the term wellbeing are extremely mixed. Some feel that it is impenetrable and too abstract; some equate it with 'feel-good' products and services (skincare, aromatherapy); some link it to mental health problems" (Mahony, Thompson, & Seaford, 2011, p. 6). In the present study, we therefore believed it is important to seek lay-opinion on the construct of wellbeing and use less restrictive methodology than the McMahan and Estes study. Given the current interest in, and identified advantages of promoting employee wellbeing, we were specifically interested in examining New Zealand workers' perspectives.

The extent to which workers' conceptions of wellbeing correspond with researchers' theoretical models is an important question worthy of empirical investigation for three reasons: Firstly, it is possible that workers' efforts to maintain and promote their own wellbeing may relate to (and therefore be limited by) their own perception of the concept. Thus, investigating workers' perspectives on what constitutes wellbeing and how workers go about promoting it may provide insights into how well public health and/or health and productivity management messages around wellbeing are 'getting through' to employees. Secondly, in fields such as human resources and psychology, in which assessment frequently relies on self-report questionnaires, it is essential to be confident that measured constructs correspond with the concept of wellbeing in the mind of

participants. As the philosopher Wittgenstein said: “the meaning of a word is its use in the language” (Wittgenstein, 1958, S43). Investigating workers’ perceptions of wellbeing could therefore inform, and perhaps refine, existing models and measurements of wellbeing. Finally, it is potentially alienating for academia to define workers’ wellbeing without inviting workers’ participation to such an important topic.

The current research seeks to address this evidence gap by examining New Zealand workers’ perspectives on wellbeing. We did so by investigating two questions, one concerning workers’ understanding of the components of wellbeing, the other concerning the things workers do to promote their wellbeing. We chose to use a prototype analysis (Rosch, 1975) as our methodology because the current disagreement between academic researchers indicates that wellbeing may not be definable in a classical sense, but may be prototypically organized. The classical view of concept definition takes an all or nothing approach to category membership, for example, that relationships are a necessary feature of wellbeing and equally important as positive emotions. The prototype approach, in contrast, accepts that not all instances of a concept share all the features of a prototype. It involves ranking features (as either central or peripheral) rather than identifying critical features (deeming them necessary and sufficient). This is an important distinction for a multidimensional and complex concept such as wellbeing. For example, an individual could be categorized as having high wellbeing (flourishing) if they exercise regularly, have supportive friends, and experience frequent positive emotions, but lack a sense of purpose in their lives. The fact that we currently have so many different conceptual definitions of wellbeing (with some models including components that other models lack) indicates that wellbeing may have a prototype structure. Previous studies have shown prototype analysis to be particularly suited to investigating natural language concepts with a “fuzzy collection” of features determining category membership (Lambert, Graham, & Fincham, 2009, p. 1195) and researchers have used this methodology to examine the structure of similar psychological constructs such as gratitude (Lambert et al., 2009), forgiveness (Kearns & Fincham, 2004), love (Fehr, 1988), and infidelity (Weiser, Lalasz, Weigel, & Evans, 2014).

In order for a construct to demonstrate a prototype structure, two conditions must be met (Rosch, 1975), and in the current study we took the following approach to the investigation: First, individuals must be able to list components relevant to the concept and then reliably rate (agree upon) the centrality of these components to that concept. Second, the centrality rating of each component should influence how individuals think about the concept.

OVERVIEW OF STUDIES

The following four studies aimed to explore New Zealand workers’ perspectives of wellbeing. The purpose of Study 1 was to obtain a list of wellbeing components and to reduce this list to a manageable size (e.g., 30 components). This allowed for a second sample of workers to rank the centrality of each component in terms of its importance to wellbeing (Study 2). In Study 3 we investigated the extent that component centrality could influence the way that New Zealand workers thought about wellbeing. Finally, to assess workers’ level of awareness of evidence-based pathways to wellbeing, in Study 4 we asked participants to identify ways in which they currently promoted their personal wellbeing. Implications for human resource managers, employees, researchers and policy makers are discussed, in addition to recommendations for future areas of research.

Study 1: Compilation of Prototypic Features via Free-Listing

The aim of Study 1 was to compile a list of wellbeing components according to the perceptions of New Zealand workers. This was achieved by asking participants to list all the components and indicators of wellbeing that they could think of in a free-response format.

Method

Participants. Participants were 130 New Zealand workers (approximately 55% female). The sample was made up of 66 lawyers from across all regions of New Zealand and 64 teaching staff at a Christchurch high school. Participants ranged in age from approximately 25 to 65 years old. Both samples were predominantly New Zealand European.

Procedure. Participants were invited to participate in the research study via an email invitation and information sheet sent to all staff 6-8 days before the study took place (in accordance with AUT Ethics Procedure: 15/74). Participants were given the following instructions in writing:

This is a study on what New Zealand workers think of when they consider the word wellbeing. For example, if you were asked to list the components and indicators of fear, you might write: possible danger occurs, attention is focused on the threat, the heart beats wildly, the person runs as fast as they can. In the current study, we are not interested in fear but in the characteristics of wellbeing. Imagine that you are explaining this term to someone who has no experience of wellbeing (adapted from Fehr & Russell, 1984 Study 6) and answer the following question: What, in your opinion, are the key components and indicators of wellbeing? Please list as many as you can.

Responses were collected after five minutes by the researcher.

Analysis. The coding procedure was adapted from Fehr (1988). Firstly, monolexemic linguistic units were identified and extracted, such as happiness, relationships, and optimism. Responses preceded by modifiers were coded as a single item, so that “being tolerant” was coded as “tolerance” and “lots of laughter” as “laughter”. When a participant used a phrase, judgment was necessary to establish its coding. For example, “being a member and participant of your community” was divided into two distinctive linguistic units, “community belonging” and “community participation”, although, as “balanced family/work life” and “balance between work and home life” were judged to be identical in meaning, they were both coded as “work-life balance”. To maintain the richness of responses a conservative approach to coding was taken throughout this process. For example, “positive frame of mind” was coded as “positive frame of mind” and “positive outlook” was coded as “positive outlook”. The total number of responses generated was 952, comprising 231 different linguistic units. Participants generated an average of 7.4 linguistic units (5.7 for lawyers and 9.0 for teachers).

Following a procedure adapted from Fehr (1988), Kearns and Fincham (2004), and Weiser and colleagues (Weiser, Lalasz, Weigel, & Evans, 2014), the next phase involved the first and second authors condensing the 231 linguistic units into component categories. First, all indicator items were removed in addition to any items scored once which did not lend themselves to being condensed into larger component categories, such as “thriving not just surviving” and “plenty of water”. Although we were initially interested in both indicators and components when gathering data, we excluded indicators from our analysis as we considered that their investigation was beyond the purpose and scope of the study. Single word units, such as happiness, gratitude, community and contentment, were classified as distinct components. Linguistic units were deemed to be in the same component category if they were a) different grammatical forms of the same word, and b) judged to be similar in meaning. Because our study aimed to explore workers’ perspectives, and we were particularly interested in the language used, in order to reflect workers’ responses with greater accuracy we chose to keep components such as ‘positive attitude’ and ‘optimism’ separate. To reduce participant burden in the next phase of this study, any component category endorsed by less than four of the 130 participants (2% of our sample) was excluded from the final list. A third researcher reviewed final component categories and resolved discrepancies.

Results. The coding procedure produced 27 components of wellbeing. Substantial variability appeared across responses, with no single component mentioned by all 130 participants. Over half the sample (52%) considered good physical health to be a component of wellbeing, although only 3% suggested accomplishments/achievements. Substantial agreement existed on the following components: good relationships (49%), being happy (38%) and balance/work-life balance (32%). No participant endorsed all 27 components. The largest number of components mentioned by participants was ten out of 27 (endorsed by just one participant). Six per cent mentioned 7-9 components, 25% mentioned 5 or 6 components, 66% mentioned less than five, and 2% mentioned none of the 27 components. Components are displayed in Table A1 (Appendix A), which shows both the frequency of responses (i.e., the total number of times each component was written across all 130 participants' responses), and the percentage of participants that endorsed each component. Refer to Table A1 for a list of the wellbeing components generated in Study 1, and their centrality ratings as identified in Study 2.

Discussion. In this study, 952 responses reduced to 27 different components of wellbeing. This result is comparable to other prototype studies of psychological constructs such as forgiveness (Weiser, Lalasz, Weigel, & Evans, 2014), and gratitude (Kearns & Fincham, 2004).

Both the large number of responses, and the specific content generated may reflect the high degree of awareness towards wellbeing among New Zealand workers. However, the low frequency of responses on certain components of wellbeing commonly featured in academic models, and high frequency for components omitted from current wellbeing models, illustrates a lack of alignment between workers' and academics' perspectives. In terms of similarities, the following components suggested by workers also feature in academic models: good relationships; positive emotions (both high and low arousal positive emotions are referred to by workers in various forms including happiness, enjoyment, contentment); satisfaction; community belonging; autonomy; meaning/purpose in life; accomplishment; emotional stability (referred to by workers as a sense of feeling calm/relaxed); engagement; optimism; resilience; self-esteem; vitality (referred to by workers as energetic/vitality); and being respected. This indicates the substantial alignment between researchers' and workers' perspectives on wellbeing. However, the low levels of participant endorsement on many of these components show substantial variance in individual worker's perceptions of wellbeing. For instance, only 7% of participants included personal satisfaction in their list of wellbeing components (which, while named differently by workers, we suggest represents a positive evaluation of oneself and therefore aligns with the academic construct of life satisfaction), 5% included meaning/sense of purpose, 4% included autonomy/having a sense of control over your life, 3% included accomplishments/achievements, and 3% included optimism.

Despite its absence from many academic models of wellbeing, physical health was the second most highly endorsed component by New Zealand workers, mentioned by 52% of our sample. Aside from Durie's whare tapa whā model (1994) and Frisch's Quality of Life model (2013), none of the other popular academic models of wellbeing include physical health. Previous studies have shown physical health to be strongly associated with high levels of wellbeing, with a recent study reporting that New Zealand workers with "good/very good health" had 8.4 times greater odds of flourishing than those with "bad/very bad health" (Hone, Jarden, Duncan, & Schofield, in press). Other components listed by workers, but not included in many of the current academic models of wellbeing, include: balance/work-life balance; feeling valued; positive attitude; enjoyable work; financial security; manageable/low stress; gratitude and mindfulness. Many of these constructs are recognized by academia as strongly associated with wellbeing, but not regarded as components of wellbeing. For example, see Wood, Froh and Geraghty (2010) comprehensive review of the close relationship between gratitude and wellbeing, and Fredrickson and colleagues' (2008) study on the positive effects for employees of an eight week programme promoting mindfulness in a workplace setting.

Together these results indicate that there (both unnecessary and yet insufficient components) are neither necessary, nor sufficient, components of wellbeing (thereby indicating that it may be a

prototypically organized construct), and that this organization is different to current academic models.

Study 2: Centrality Ratings of Wellbeing Components

Study 2 investigated the prototype structure of wellbeing. We examined whether some components of wellbeing are considered to be more central to the concept, whereas others are more peripheral. For a construct to possess a prototypical structure, participants must be able to make meaningful judgments about whether components are central or peripheral, and substantial agreement on these judgments must exist. The purpose of Study 2 was to gather information regarding the centrality of the components identified in Study 1.

Method

Participants. Participants were 52 New Zealand workers from a different high school in Christchurch. The sample was 86% female, with 13% below 35 years, 50% between 35-50 years, and 37% over 50 years.

Procedure. Participants were invited to participate in the research study via an email invitation and information sheet sent to all staff (in accordance with AUT Ethics Procedure: 15/74). Participants were given the following instructions in writing:

In a previous study we asked people to list what they thought of as the key components of wellbeing. The most frequent responses are listed alphabetically below. Please read through the entire list and then rate how central (or important) you think each of the components is to the concept of wellbeing by circling a number between 1 and 8.

We would like you to think not only about your own experiences with wellbeing but the concept of wellbeing in general — what you think are its defining components. Don't worry about why you think something is or isn't central – and please don't confer with colleagues!

Participants were given five minutes to rate the centrality of the 27 components identified in Study 1.

Analysis. Mean centrality ratings were calculated using data for all available responses. Two indices provided evidence for the reliability of the means. First, we computed the intra-class correlation coefficient (ICC). The ICC is equivalent to the mean of all possible split-half correlations of the 52 judges with respect to the 27 features ($ICC = .901, p < .000$), which indicates excellent inter-rater reliability. For the purposes of ICC analysis we excluded missing cases listwise ($n = 9$). Further analyses, based on a flipped data matrix and treating the 27 features as cases, and the 52 judges as items, showed that the internal consistency of the ratings was exceptionally high ($\alpha = .914$). Figure 1A (Appendix B) gives a graphic representation of the proximal distances between components derived from conducting multidimensional scaling (MDS) on SPSS. MDS provides a visual representation of the pattern of proximities (i.e. similarities or distances) among a set of objects on two dimensions (Schiffman, Reynolds, & Young, 1981). In other words, the more similar two components' mean scores are, the closer they lie in the multidimensional space, whereas dissimilar components will be located further apart from one another. Mean centrality ratings for all 27 components are listed in Table A1 (Appendix A).

Results. Comparing mean centrality ratings from Study 2 with percentages of participant endorsements from Study 1, it is apparent that some components were frequently endorsed and deemed central (in other words, important) to wellbeing: good mental health, good relationships, balance/work-life balance, and good physical health. These four were all ranked among the top five

according to both centrality (this study) and participant endorsements (Study 1). Some components endorsed by relatively small proportions of the sample (sense of purpose/meaning and autonomy for example) in Study 1 were given high centrality ratings in this study. Overall however, centrality and endorsement rankings were positively correlated ($r = .597, p < .001$). See Figure 2A (Appendix C) for a scatterplot graph illustrating the associations between Study 1 and Study 2 component rankings. For example, good relationships was ranked second in Study 1 and second in Study 2, whereas a sense of feeling calm/relaxed was ranked 6th in Study 1 but 19th in Study 2.

Discussion. This data indicates that workers consider some components to be more prototypical of wellbeing than others. To use an analogy, just as an apple is acknowledged to be more prototypical of a fruit than an avocado. Study 2 indicates that these workers view good mental health, good relationships, balance/work-life balance, good physical health, and feeling valued as more prototypical of wellbeing than spirituality, achievements/accomplishments, mindfulness, and engagement. Furthermore, analyses indicated significant reliability among participant ratings, thereby fulfilling the first criterion for demonstrating that a construct is prototypically organized. Although differences in frequency and centrality were found, this is a common finding among prototype analyses (Rosch, 1975), and is thought to reflect the fact that frequency and centrality measure different aspects of internal structure. We suggest that compiling a list of wellbeing components in free-response format requires different cognitive processes to ranking a pre-determined list of wellbeing components. Despite differences, correlation analysis revealed component ranking across the two studies to be significantly positively associated.

Study 3: Investigating Component Centrality's Impact on Perceptions of Wellbeing

Studies 1 and 2 indicated that the concept of wellbeing might be structured prototypically. In Study 1, New Zealand workers listed what they considered to be components of wellbeing and in Study 2 a second sample of New Zealand workers ranked those components according to centrality/importance. However, if a concept has a prototype structure this structure should affect how people think about and recognize instances of wellbeing. Hence, in Study 3 we presented a different sample of workers with two scenarios of hypothetical individuals, one composed of components identified in Study 2 as central to wellbeing, and one composed from components identified as peripheral.

We hypothesized that if central components are more prototypical of wellbeing than peripheral components, that participants would view the central scenario as a better representation of wellbeing than the peripheral scenario.

Method

Participants. Participants were 21 New Zealand workers from a third school in Christchurch. The sample was 75% female, with 33% below 35 years, 33% between 35-50 years, and 33% over 50 years.

Procedure. First, we separated central from peripheral components of wellbeing by conducting a median split of the centrality ratings from Study 2. While we acknowledge the artificial nature of this procedure, and that centrality is continuous rather than dichotomous, it was necessary for the purposes of the present study. The median was calculated as 6.22. Participants were invited to participate in the research study via an email invitation and information sheet (in accordance with AUT Ethics Procedure: 15/74).

Participants were presented with two hypothetical scenarios created by the researchers, one of which described a wellbeing experience using only central words (see Jack's below) and another using only peripheral words (see Julie's below). Owing to our intentional selection of only central components

in Jack’s central scenario, this had a higher mean centrality score (6.76) than did Julie’s peripheral (5.60).

Jack’s wellbeing: Jack is really happy. Right now he feels he’s got the balance between home and work right in his new job: he’s finally managing to get home early enough to spend time with his family every night, and his boss’s recent praise shows his work is highly valued. He feels well supported by his new colleagues, and their comments on his positive attitude and obvious resilience have given him a real boost. What’s more the company nurse declared his physical health was in good shape last week.

Julie’s wellbeing: Julie is fully engaged with life. Her new job has given her a greater sense of financial security, stress levels are lower than at her last company, plus she feels respected by clients. On the home front, she’s started helping out with her local community, which has given her a sense of accomplishment. The mindfulness podcast she’s been listening to actually seems to be paying dividends - she’s getting better at living in the present – combined with her strong faith, she’s feeling contentment.

Participants were then asked to rate how closely each scenario matched their concept of wellbeing using a 10-point scale (1 = not at all to 10 = extremely).

Results. Workers scored the central scenario higher than the peripheral scenario (Jack’s mean = 7.81; Julie’s mean = 6.52). The mean difference in scores was 1.29 with a 95% confidence interval ranging from .198 to 2.37. Next, a mixed between-within subjects’ analysis of variance was conducted to explore the impact of age on participants’ scores across the two wellbeing scenarios (although we did collect data on gender, the two groups were too ill-matched to conduct statistical analysis). Participants were divided into three age groups (Group 1: < 35 years, n = 7; Group 2: 35-50 years, n = 7; Group 3: > 50 years, n = 7). Means and standard deviations are presented in Table 1.

There was a significant effect for scenario (Wilks’ Lambda = .67, F (1, 18) = 8.78, p = .008, multivariate partial eta squared = .33) and a significant interaction effect between participants’ ratings of the two wellbeing scenarios and their age (Wilks’ Lambda = .62, F(2,18) = 5.46, p = .014, multivariate partial eta squared = .38). Workers’ selection of the two wellbeing scenarios was moderated by their age.

Table 1

Descriptive statistics for the two hypothetical wellbeing scenarios

Scenario	Age	N	M	SD
Jack	< 35	7	8.43	.98
	35-50	7	6.86	.90
	> 50	7	7.81	1.22
	Total	21	7.81	1.21
Julie	< 35	7	6.43	1.40
	35-50	7	7.57	1.27
	> 50	7	5.57	2.22
	Total	21	6.52	1.81

Discussion. Results demonstrate that component centrality does influence New Zealand workers’ perception of wellbeing. Participants considered Jack’s wellbeing (the scenario containing only central components) to be more prototypical of wellbeing than Julie’s scenario (containing only

peripheral components). The results of Study 3 thereby confirm that wellbeing is prototypically structured. However, we also note that this was not true of the 35-50 year old age group. This middle aged group scored Julie's wellbeing (the peripheral scenario) higher than Jack's wellbeing (the central scenario). Given our small sample size, we recommend that future research investigates the interaction between age and component centrality on cognition using larger samples.

Study 4: Pathways to Wellbeing

In addition to understanding the perceptions of New Zealand regarding the components of wellbeing, we were interested to know the kinds of activities that they engage in for wellbeing. Accordingly, we asked the participants from Study 1 an additional question concerning their wellbeing.

Method

Participants. Study 4 involved the same participants as Study 1. The sample (n = 130) was made up of 66 lawyers from across all regions of New Zealand and 64 teaching staff at a Christchurch high school. Participants ranged in age from approximately 25 to 65 years old.

Procedure. Participants were invited to participate in the research study via an email invitation and information sheet sent to all staff 6-8 days before the study took place (in accordance with AUT Ethics Procedure: 15/74). After the questions for Study 1, participants responded to this question relating to Study 4: "What sort of things do you do to promote your wellbeing?" Please list them below.

Participants were given a 13-line free-response form and instructed to indicate their consent for participation by ticking the consent box.

Analysis. Coding was performed according to the same protocol as described in Study 1. Firstly, monolexemic linguistic units were identified and extracted, such as gardening, exercise, and reading. For each phrase, a judgment was necessary to establish the coding. For example, "not taking work home (come early in the morning)" was coded as "taking minimal work home", whereas "get advice on matters" was coded as "seek advice", "have time just for me" was coded as "taking time for myself" and all forms of exercise and physical activity were coded as "exercise and physical activities". A conservative approach to coding was taken throughout this process, so that "differentiate between work time, hobby time and relaxation" was coded verbatim, and "not letting myself stew" was retained as a linguistic unit in order to maintain the richness of responses. Phrases such as "treat myself and my husband to regular trips away" were coded into two linguistic categories, "time with partner" and "trips away" because it reflected both mechanisms.

The total number of responses through this process was 994, comprising 175 different linguistic units. Participants generated an average of 7.6 linguistic units (6.0 for lawyers and 9.3 for teachers). Because we noticed that respondents often included pathways to wellbeing among their responses to question one ("what, in your opinion are the key components and indicators of wellbeing?"), we carried these responses over and included them in Study 4. This added a further 201 responses giving us a total number of 1,195 responses.

The next phase involved grouping all 175 linguistic units into pathway categories. Two researchers (the first and third authors) jointly debated the allocation of each of the 175 linguistic units into pathway categories. Firstly, we combined linguistic units deemed to be in the same category if they were a) different grammatical forms of the same word, and b) judged to be similar in meaning. Hence, linguistic units such as "taking active holidays", "visit beautiful places in New Zealand" and "restful holidays" were grouped into a "holidays and weekends away" pathway category. Similarly, linguistic units coded as "phoning my family", "socializing with work colleagues", "spending time with my friends" and "helping partner" were all collapsed into a "nurturing relationships" pathway category. All linguistic units describing hobbies and activities such as "baking", "listening to music",

“dancing”, “participate/attend cultural activities”, “singing”, “craft” and “reading” were grouped together as a “hobbies/interests” pathway category.

Although “digital entertainment” and “walking” could have been collapsed into the categories “hobbies/interests” and “physical activity/regular exercise”, in order to retain a fuller picture on the types of pathways reported by workers, we retained these distinctive categories. Owing to of the similarity in their mechanisms, we also created a pathway category called “stress reduction techniques” comprising linguistic units such as “have a broad perspective on life – try not to see the small issues as the major ones”, “not getting stressed over issues”, “don’t sweat small stuff”, “techniques to reduce stress” and “try to minimise negative thoughts or dwell on incidents that are aggravators in my life”. Finally, 52 linguistic units endorsed less than four times (2%) were excluded from the analysis. Following this procedure allowed us to collapse the 175 linguistic items into to 35 pathway categories. Table A2 (Appendix D) displays the final list of 35 pathways, their response frequencies, and the percentage of participants reporting they used this pathway to promote personal wellbeing.

Results. Our results indicate that a high percentage of participants consider that physical activity/exercise (78%) and nurturing relationships (72%) promotes their wellbeing. Although these two pathways were endorsed by approximately three quarters of our sample, the next most popular pathways were endorsed by far less participants: interests/hobbies (40%), healthy eating (35%), taking time out for rest and relaxation (35%), preserving work-life balance (27%) and ensuring that they got a good night sleep (26%). The greatest number of pathways endorsed by any of our participants was 14 ($n = 2$), while 8% endorsed more than 9 pathways, 22% endorsed between 7 and 9 pathways, 40% endorsed either 5 or 6, 34% endorsed less than 5, and 4% endorsed none of the pathways identified in Study 4.

In addition to what is demonstrated in Table A2, it is interesting to note the large amount of endorsements for supportive management (22% of participants cited 12 different aspects of management behavior as ways to promote their personal wellbeing). These include “supportive management”, “fair treatment”, “regulated workflow” and “being engaged in change in the workplace”. Because we did not regard these as personal pathways to wellbeing, rather more of an organizational approach, we did not include them in Table A2.

Discussion. One hundred and thirty workers produced 1,195 responses and 175 linguistic units of pathways to wellbeing. The mean number of linguistic units reported by lawyers was substantially less than those of teachers ($M = 6.0$ for lawyers compared to $M = 9.3$ for teachers) indicating that teachers are using a greater number of pathways to promote personal wellbeing than lawyers. Without further research it is difficult to know what to make of this finding, however, it is potentially indicative of lesser awareness among lawyers (relative to teachers) of the many potential pathways to wellbeing. Of course this may not be the case, and the reduced mean may merely be a reflection of personal choice, or of different response styles. We suggest further research to investigate typical pathways to personal wellbeing between professions.

The fact that all 130 participants mentioned no single pathway indicates the substantial variance in workers’ chosen paths to wellbeing. The most common pathway to wellbeing, endorsed by 78% of participants in this study, was “physical activity/regular exercise”, which may reflect the effectiveness of long-term public health campaigns promoting the health benefits of physical activity in New Zealand, such as Sport and Recreation New Zealand’s “Push Play” campaign (for a review of this campaign’s effectiveness see Bauman et al., 2003) and the Ministry of Health’s 2010 National Depression Initiative involving John Kirwan (see <http://www.depression.org.nz>). A somewhat more surprising finding was that 9% of workers ($n = 12$) listed yoga among their choice of physical activity.

Although many were mentioned by a minority of participants, it is also interesting to note the immense number of evidence-based pathways to wellbeing included in our study’s results. For instance, the Mental Health Foundation’s Five Ways to Wellbeing are all represented here: Connect

(nurturing relationships was endorsed by 72%), Be Active (physical activity/exercise was endorsed by 78% and interests/hobbies was endorsed by 40%), Take Notice (practicing mindfulness was endorsed by 12%), Keep Learning (continued learning was endorsed by 5%), and Give (giving to others was endorsed by 7%). The small amount of participants reporting using continued learning as a pathway to wellbeing echoes our experience as practitioners, where employee assessment using the Sovereign Wellbeing Survey has revealed similar findings (visit <http://www.mywellbeing.co.nz/mw/> to see the survey).

Our findings extend on a body of empirical literature that is evidence to the effectiveness of the Five Ways to Wellbeing (Aked, Marks, Cordon, & Thompson, 2009). Accordingly, augmenting awareness of the positive effects of learning and giving on wellbeing may make these two useful targets for future employee education.

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It is also noteworthy that what may be viewed as more traditional pathways to wellbeing (physical activity/exercise, relationships, interests/hobbies, good sleep, and healthy eating) were among the most popular responses, whereas some of the pathways recently validated by positive psychology studies appeared less frequently. For example, Mongrain, Chin, and Shapira (2011) found that practicing compassion (being kind) towards others, even over just a one-week period, promoted happiness and self-esteem over six months. Fredrickson and colleagues have indicated the effectiveness of mindfulness meditation for promoting employee wellbeing (Fredrickson et al., 2008), Sheldon and colleagues have shown pursuing goals over a six-month period produced sustainable gains in happiness (Sheldon et al., 2010) and Sergeant and Mongrain (2011) report that adults assigned to a one week gratitude exercise produced greater increases in happiness over a six month period than did those assigned to the control condition. Drawing from this body of research, we find evidence to suggest that these evidenced-based pathways to wellbeing, although relatively less practiced by the current sample of New Zealand workers, may represent useful targets for future promotion of employee wellbeing.

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DISCUSSION

Employee wellbeing is currently a hot topic among human resource management, attracting substantial interest based on empirical evidence of its desirable correlates at both the individual and organizational level (for a review of the evidence indicating associations between wellbeing and employee turnover and performance see Page & Vella-Brodrick, 2009). Workplaces organized for the purpose of fostering well-being have more creative, more loyal, and more productive staff, and perform better in terms of customer satisfaction, according to Jeffrey and colleagues' comprehensive literature review on the benefits of focusing on employee wellbeing (2014). Yet the absence of a standardized and universally agreed upon measure of wellbeing, and any investigation examining lay perspectives of wellbeing to date, prompted us to study New Zealand workers' perspectives of wellbeing. Specifically, we were interested in how workers conceptualized wellbeing, and what sorts of activities workers currently engage in to promote their individual wellbeing.

Conducting, for the first time, a prototype analysis of wellbeing, we found evidence that wellbeing is prototypically structured. In other words, some components of wellbeing are widely recognized as being more typical of the construct than others. Using components of wellbeing identified by Study 1, participants in Study 2 were able to reach sufficient agreement over which components were central (i.e. important) for wellbeing, and which were peripheral (less important). This satisfied the first criterion for demonstrating a prototype structure. When participants viewed the two hypothetical scenarios in Study 3 they rated the scenario restricted to central components (Jack's) as more closely resembling their concept of wellbeing than the scenario that contained only peripheral components (Julie's). This confirmed that component centrality influences workers' perceptions of wellbeing, and satisfied the second criterion for demonstrating that a concept is prototypically organized.

Collectively then, these three studies provide preliminary evidence that workers' concepts of wellbeing are structured around a prototype. Instead of requiring necessary and sufficient criteria for category membership (as classically organized constructs do), viewing wellbeing as a prototype provides a more useful description. Wellbeing can be defined as having a "fuzzy collection" (Lambert, Graham, & Fincham, 2009, p. 1195) of components and levels of wellbeing categorized by the presence or absence of many central components of the prototype. This stands in contrast to Keyes' model of wellbeing (one of the most rigorously validated and widely used in international empirical research), which suggests that positive emotions are a necessary component of a categorical diagnosis of flourishing (Keyes, 2002, 2005; Keyes et al., 2008).

Several other key findings were highlighted by our studies. Firstly, the free-response methodology of Study 1 showed key similarities and differences between academics' and workers' conceptualizations of wellbeing. Our methodological approach expanded upon previous studies investigating lay conceptions of wellbeing which, instead of inviting participants to describe wellbeing using free-response, asked them to rank a list of components identified by researchers and based upon previous theoretical and empirical research (McMahan & Estes, 2011). Although we do not deny the merit of McMahan and Estes' approach, we regard eliciting workers' perspectives on wellbeing via free-response is important for a construct receiving focused attention among both academics and practitioners, such as wellbeing. The current studies therefore make a unique contribution to the science of wellbeing, identifying for the first time components of wellbeing that workers consider important which are not captured by current academic models commonly used in positive psychology research. For example, although researchers have theorized that meaning and purpose, accomplishments, optimism and autonomy are key components of wellbeing, these were not highly endorsed by our sample of New Zealand workers. Instead, among the components of wellbeing most frequently identified by New Zealand workers were physical health and balance/work-life balance, neither of which feature in any of the most commonly used international academic models. Although, from a New Zealand perspective, it is interesting to note that physical health features among the four components of wellbeing in Durie's whare tapa whā model (1994), as does spiritual health, which was also identified as a component of wellbeing in Study 1. The omission of physical health from international wellbeing models also stands at odds with the growing body of literature investigating workplace wellbeing, which is substantially focused on physical health. A recent review of 14 key databases across different sciences examining how workplace wellbeing has been discussed and defined identified seven components of workplace wellbeing and calculated that health issues, a health-promoting way of living, and healthy working environments, was the second most frequently written about component, accounting for 18% of peer-reviewed articles published (Laine & Rinne, 2015). This finding combined with the findings of Study 1 indicates that positive psychology researchers are lagging behind other fields in their acknowledgment of the importance of physical health for wellbeing. Given the strong evidence of the positive association between good physical health and wellbeing, we applaud employers' efforts to promote employee wellbeing by encouraging physical activity, supporting healthy eating, and trying to ensure that work (and work related stress) does not impede good sleep and consequent worker vitality.

Similarly, we draw researchers' attention to the importance of balance/work-life balance revealed by our studies. The combination of balance and work-life balance in this component's title was explicitly chosen in order to accurately depict the breadth of life domains referred to by our sample of New Zealand workers in association with the word 'balance'. For instance, one participant wrote 'balance between competing interests', whereas others reported 'feeling balance in your life', 'balance between family, work and friends etc.', or 'balance within working life' as key components of wellbeing. The importance of balance between home and work life is supported by empirical evidence from the European Quality of Life Survey showing that poor ratings of work-life balance was the strongest predictor of stress among a sample of 35,000 Europeans (Eurofound, 2013).

Similarly, Burke, Burgess and Oberlaid found that workers in organizations that valued work-personal life balance exhibited higher levels of wellbeing, higher job satisfaction and less intention of leaving the organization (2004). Although some academic researchers (for example Frisch, 2006) have identified achieving balance across different life domains as crucial for wellbeing, others have previously criticized this as an omission from academic models (Sirgy & Wu, 2009). With this in mind, we recommend that human resource practitioners consider how work hours can be flexible to fit with other life domains. Although some researchers may not consider work-life balance a component of wellbeing on theoretical grounds, those wishing to promote and measure employee wellbeing cannot overlook its importance from a worker's perspective, as revealed in Study 1 and Study 4.

Having noted the differences between workers' and academics' perceptions of wellbeing, we now turn our attention to the similarities revealed by our studies. In particular, we note how workers' perceptions mirror academic models' in their inclusion of both affect (mood) and cognitive evaluation (satisfaction), and the presence of eudaimonic and hedonic aspects of wellbeing (for a concise explanation of these two streams of wellbeing research see Page & Vella-Brodrick, 2009 p. 443). For instance, workers agree with academics that wellbeing is made up of happiness (hedonic wellbeing) and good relationships, autonomy, and a sense of meaning/purpose (eudaimonic wellbeing). Workers also concur with the psychological theory that wellbeing encompasses both high and low activation emotions (i.e., happiness and contentment). Furthermore, the substantial alignment between academics' and workers' perspectives is indicated by the fact that 16 of the 27 components of wellbeing identified by workers in Study 1 feature in one or more of the academic models of wellbeing commonly used in positive psychology research: good relationships, good mental health, being resilient/coping with life, sense of purpose/meaning, happiness, autonomy, self-esteem, personal satisfaction, vitality, contentment, optimism, sense of calm, being respected, community, engagement, and achievements.

A second key finding of our study is the relationship between the way workers think about wellbeing (their understanding of it) and the ways workers go about promoting personal wellbeing. For example, in both studies teachers produced a higher number of responses than lawyers. This may represent a link between knowledge and action, whereby teachers are using a greater number of pathways to promote their wellbeing owing to, as Study 1 revealed, they have greater knowledge of the components of wellbeing. Alternatively, it could merely reflect the fact that lawyers are more circumspect in their language (thereby providing less responses in Study 1) and/or choose to adopt a narrower range of pathways to promoting their wellbeing despite awareness of other options. More research is required to investigate these differences.

It is also interesting to note how many of the pathways identified in Study 4 were directly connected to the components of wellbeing identified in Study 1. For instance, having identified good relationships as a central component of wellbeing in Studies 1 and 2, 72% of our sample mentioned nurturing relationships as a pathway to wellbeing in Study 4. Similarly, it appears workers use physical activity/exercise and eating healthily to promote physical health, taking time out for rest/relaxation and getting a good night's sleep to promote vitality, and being organized/planning and using stress reduction techniques to promote manageable/low stress. Given the associations between workers' perceptions of wellbeing and the activities workers use to promote personal wellbeing shown here, we believe a potentially effective target for human resource development may be the promotion of components of wellbeing endorsed less frequently by workers in Study 1, but which positive psychology has shown to be effective for promoting employee wellbeing and on-the-job performance. For example, Luthans, Avey, Avolio and Peterson (2010) have demonstrated the positive impact of a brief two-hour training programme (featuring optimism and resilience modules) on employee performance, as rated by both employees and managers separately. Similarly, the positive effects of meditation implemented in a workplace setting, producing increases in

mindfulness, purpose in life, social support, reduced symptoms of physical illness and depression has also been empirically investigated (Fredrickson et al., 2008). Finally, we recommend workplace promotion of the Five Ways to Wellbeing as an easy to implement employee awareness programme (see <http://www.mentalhealth.org.nz/home/ways-to-wellbeing/> for evidence and a range of downloadable promotional material).

Thirdly, conducting this research highlighted the substantial variation in terminology used to define wellbeing. The coding of participants' responses showed that, while we asked about components and indicators in Study 1, participants often reported pathways to wellbeing. This may reflect a fault in the design of our questionnaire in that our second question, enquiring about pathways, appeared on a second page, but we suspect it may reflect workers' confusion as to what constitutes a component, indicator or pathway to wellbeing. This confusion mirrors a similar lack of agreement among academics when defining wellbeing. Researchers frequently refer to characteristics, features, components, and dimensions of wellbeing throughout the literature, often interchangeably, but with little differentiation between the uses of these terms. For instance, in her seminal exploration of psychological wellbeing, Ryff (1989) refers to characteristics, dimensions and features all in one paragraph, whereas Seligman and colleagues' use the words pillars, domains, and components when referring to his PERMA model (Kern, Waters, Adler, & White, 2014; Seligman, 2011). A recent review study (Jayawickreme, Forgeard, & Seligman, 2012) sought to address the problems caused by the multiplicity of theories and terminology within the study of wellbeing, by suggesting an "engine approach" to wellbeing is adopted in future research. This recommended differentiating between inputs (external resources that enable wellbeing such as income and nutrition and internal resources such as character strengths and virtues), processes (internal states that influence choices such as experiencing positive emotion and implementing stress reduction strategies), and outcomes (intrinsically valuable voluntary behaviours that reflect the attainment of wellbeing such as relationships, engagement, meaning, and accomplishment). Viewed in this way it can be seen that some of the current academic models of wellbeing are a mixture of inputs, processes and outcomes, and it is interesting to discover that workers' also view wellbeing as a combination of all three. For example, Study 1 showed that New Zealand workers regard wellbeing as a combination of inputs (personality traits such as optimism), processes (subjective states such as experiencing enjoyment and contentment), and outcomes (functioning variables such as engagement and relationships). In order to reduce confusion and enable the systematic study of this multidimensional and complex construct to move forward with greater clarity, Jayawickreme and colleagues recommend researchers specify which of these three components of wellbeing future studies are addressing.

Limitations

We readily acknowledge that the findings of the current study are limited by subjective opinion – both our own and the studies' participants. As researchers we were responsible for creating the component and pathway categories, and as such we recognize our subjective opinions over coding participant responses, and collapsing the initial linguistic units into component and pathway categories, as a potential bias to the current studies. By coding responses verbatim, and then having two researchers separately allocate linguistic units initially, and then jointly debate category allocation, we have endeavoured to find acceptable agreement and produce categories that reflect workers' perspectives of wellbeing to the best of our ability. In acknowledgment of the indeterminacy of this process, we offer our raw data as appendices so readers can judge our decision-making for themselves. Similarly, we recognize that participant responses are subjective and how one participant conceptualizes 'good mental health' may not be the same for other participants. We therefore ask that readers view our findings in consideration of this fact and hope future research will investigate workers' perceptions of some of the component categories (such as resilience, good mental health, and a positive attitude) further.

Our study is also limited by the largely homogenous nature of our sample, which was largely comprised of white, highly educated New Zealand professional workers, and by the small sample size of Study 3 ($n = 21$). Similarly, although the current studies revealed differences between teachers and lawyers, and between age groups, we did not analyse these further. We recognize that everyday concepts such as wellbeing are likely to be influenced by demographics, occupation, historical and cultural biases (Blissett, 2011). Furthermore, without controlling for participants' personality type it is also impossible to judge the impact that these play on our participants' perceptions and experience of wellbeing. Given that extraversion is known to be associated with happiness (Diener & Lucas, 1999) for example, it is possible that participants' responses in Study 1 and Study 2 were biased by personality type. Whether extraverts are more likely to rank happiness as more central to the prototype than introverts remains untested. As a result, interventions designed to promote positive emotions (happiness) may be more effective among extraverts, and assessments that involve strong endorsement of positive emotions, such as those for flourishing (such as Huppert & So, 2013) may therefore be biased towards extraverts. Future studies could use larger, heterogeneous populations, however, we agree with Fehr that "the prototype approach is not necessarily invalidated just because the contents of a prototype may vary; prototype structure and its effects are still likely to obtain" (Fehr, 1988, p. 577). That is, although components may change with different populations, conducted at a different time and place, the fact that wellbeing has a prototypical structure is likely to remain.

Despite these limitations, our findings present preliminary evidence that wellbeing is a prototypically organized construct, and that New Zealand workers have a broader perception of wellbeing than is reflected by the current academic models (including components often omitted from academic models, such as balance/work-life balance and good physical health). We suggest that the omission of good physical health in particular illustrates positive psychology's myopic perspective when conceptualizing and operationalizing wellbeing, and encourage researchers to re-evaluate this stance.

A cross-discipline approach is clearly required. We regard our findings as a benchmark of workers' awareness and practices regarding wellbeing, which we anticipate will act as a useful comparison for future research, enabling changes in workers' perspectives to be monitored over time. The assessment of workers' perceptions of wellbeing is an important and relatively unexplored area of positive psychology research and we hope future studies will test our findings using different professions, in different countries, in addition to exploring the socio-demographic effects on workers' perceptions of wellbeing.

Conclusion

For a construct receiving such focused interest, it is important for human resource managers to understand both academic and workers' perspectives of wellbeing. The findings of the current studies indicate awareness among workers of some of the components of wellbeing common to academic models (including positive relationships, good mental health, resilience, purpose/meaning and happiness). However, these studies also indicate that many workers have a broader concept of wellbeing than do researchers. In particular, we recommend that when researchers and practitioners conceptualise wellbeing, that they take note of the relative importance that workers place on balance/work-life balance, good physical health, and feeling valued, and implore that these are appraised as part of any overall assessment of employee wellbeing. We hope that our findings stimulate further conversations and exploration of the components and pathways to wellbeing among working New Zealanders and beyond.

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Appendix A: Wellbeing components generated in Study 1, sorted by Study 2 centrality rankings

Table A1

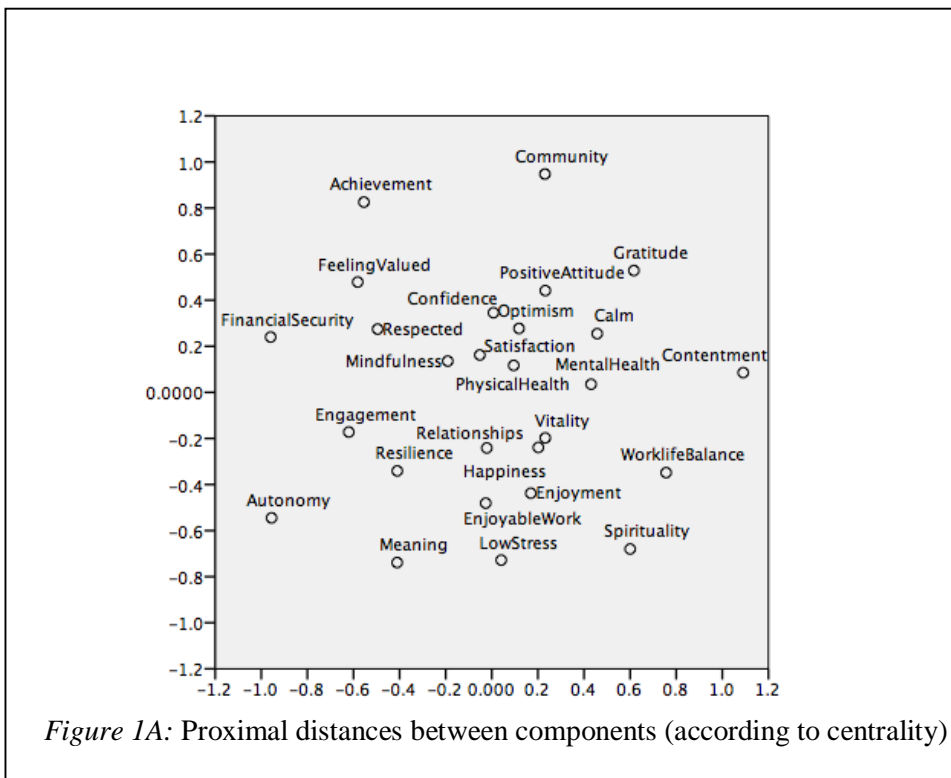
Wellbeing components generated in Study 1, sorted by Study 2 centrality rankings

Component	Study 1		Study 2	
	Frequency	% participants	Centrality rating	SD
Good mental health	37	23.13	7.22	1.01
Good relationships	106	49.41	7.13	0.93
Balance/work-life balance	45	31.51	6.96	1.17
Good physical health	74	52.15	6.77	1.23
Feeling valued	14	10.91	6.73	1.01
Being resilient/coping with life	31	17.73	6.72	1.40
Positive attitude	14	10.82	6.66	1.21
Experiencing enjoyment	12	9.26	6.48	1.15
Sense of purpose/meaning	8	5.37	6.45	1.38
Self confidence & self-esteem	13	9.23	6.42	1.16
Autonomy/having a sense of control over your life	5	3.86	6.40	1.25
Personal satisfaction	9	6.96	6.40	1.12
Being happy	60	38.38	6.33	1.49
Enjoyable work	16	10.84	6.22	1.15
Gratitude	5	3.84	6.21	1.50
Contentment	26	15.32	6.20	1.36
Optimism	4	3.08	6.18	1.44
Feeling energetic/a sense of vitality	13	10.06	6.15	1.35
Sense of feeling calm/relaxed	27	18.42	6.08	1.55
Being respected	6	4.64	5.90	1.61
Community	9	6.20	5.75	1.23
Manageable (low) stress	16	12.38	5.75	1.43
Engagement/engaged	14	10.06	5.71	1.06
Mindfulness	4	3.08	5.71	1.62
Financial security	10	7.72	5.67	1.10
Achievements/accomplishments	4	3.08	5.24	1.18
Faith/spirituality	12	8.52	4.50	2.27

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Appendix B: Proximal Distances between components (according to centrality)



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Appendix C: Correlation between each component's endorsement ranking (from Study 1) and centrality ranking (from Study 2)

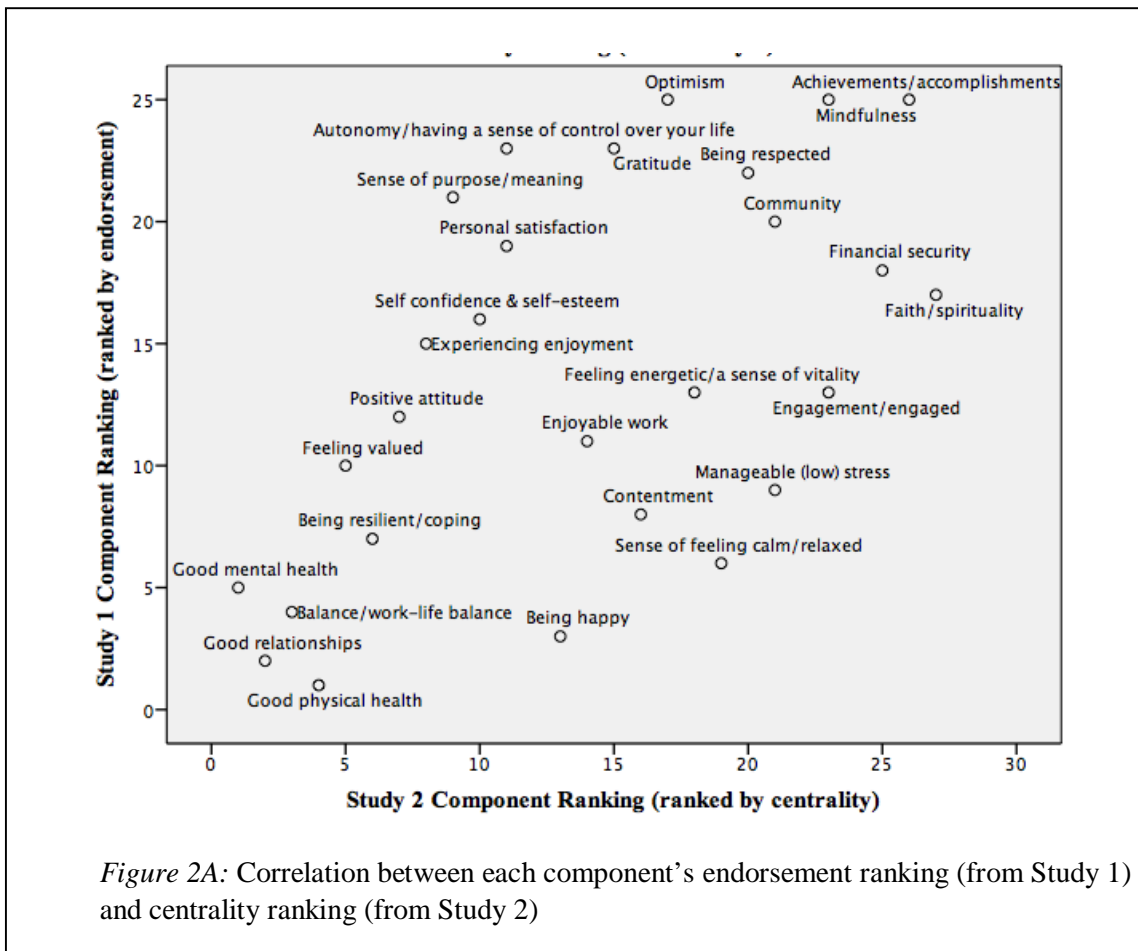


Figure 2A: Correlation between each component's endorsement ranking (from Study 1) and centrality ranking (from Study 2)

Appendix D: Pathways to wellbeing

Table A2

Pathways to wellbeing

Pathway	% participants	Frequency
Physical activity/exercise	77.69	163
Nurturing relationships	72.31	201
Interests/hobbies/ cultural activities etc.	40.00	90
Eating healthily	34.62	58
Taking time for rest/relaxation	34.62	59
Preserving work-life separation	26.92	44
Getting good sleep	26.15	59
Holidays and weekends away	23.85	35
Strategies to reduce stress	17.69	43
Digital entertainment	16.15	24
A quiet drink/good wine	15.38	21
Being organized/planning	13.85	21
Walking	13.08	18
Practicing mindfulness/ being present	11.54	20
Time in nature/outdoors	10.77	17
Socialising	10.77	20
Pets/animals	10.00	14
Talking through issues	10.00	13
Using humour/having a laugh	8.46	17
Giving to others	6.92	12
Surround myself with positive /avoid negative people	7.69	4
Do things that make me happy/ that I enjoy	6.92	11
Time alone	6.15	8
Time management	6.15	18
Seek help/advice	6.15	7
Having fun	6.15	11
Feeling grateful	6.15	8
Practicing religion/spirituality	5.38	9
Shopping	5.38	7
DIY/doing jobs around the house	4.62	7
Continued learning	4.62	18
Doing meaningful things/ work	3.85	5
Goal setting/planning	3.08	8
Community participation/ social contribution	2.31	10
Being kind	2.31	4

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