

Recipes for Occupational Wellbeing: An Investigation of the Associations with Wellbeing in New Zealand Workers.

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Abstract: This cross sectional study sought to investigate if workers in eight distinct occupational groups in New Zealand experienced wellbeing in the same way or if there were unique recipes for wellbeing according to occupational context. We first examined and compared the prevalence of flourishing (a global wellbeing outcome) and job satisfaction (a specific contextual wellbeing outcome) amongst the occupational groups. We then investigated if there were differences in the factors associated with flourishing and job satisfaction for each group of workers. Results of nonparametric testing revealed that the prevalence of flourishing and job satisfaction varied significantly between occupational groups, in particular, between higher and lower status occupations. Multiple regression analysis revealed that although there were unique factors associated with flourishing and job satisfaction scores across occupational groups, meaning and purpose was most strongly associated with flourishing scores while work life balance was most strongly associated with job satisfaction scores. The findings are discussed in the context of current workplace wellbeing initiatives.

Keywords: occupational wellbeing; flourishing; job satisfaction; self-determination; health gradient; wellbeing needs assessment.

BACKGROUND

The 21st century has brought with it a number of changes to the modern workplace. The extent and speed of change is unparalleled, resulting in fundamental alterations to the occupational landscape (Laloux, 2014). Jobs today are more related to psychological demands, rather than physical; there are fewer jobs in mass production; women and older people are a growing proportion of the work force, and there are more part-time roles (Marmot, Siegrist, & Theorell, 2006).

Whilst changes to the modern workplace offer important improvements for job flexibility, crafting, workplace health and safety and the potential for employee wellbeing, it is nevertheless reported that work-related stress is a leading cause of absence from work in developed countries (Cooper, 2015; European Agency for Health and Safety at Work, 2009). In response, many organisations have

implemented programmes designed to mitigate job stress (Martin, Sanderson, & Cocker, 2009). Traditionally, such workplace programmes have focused on a risk-based or negatively framed approach to health (e.g., Occupational Health and Safety models that aim to prevent illness and injury) but rarely on positively framed approaches that actively promote the positive aspects of employee wellbeing (LaMontagne, Keegel, & Vallance, 2007; Luthans, 2002b; Page & Vella-Brodrick, 2012). There is evidence that positive wellbeing serves as a protective factor against a number of mental disorders (Keyes, Dhingra, & Simoes, 2010; Wood & Joseph, 2010), buffers against stress (Layous, Chancellor, & Lyubomirsky, 2014; Tugade & Fredrickson, 2004), promotes physical and psychological health (Boehm & Kubzansky, 2012) and is strongly linked with favourable workplace outcomes (Beyond Blue & PWC, 2014; Rodríguez-Carvajal, Moreno-Jiménez, de Rivas-Hermosilla, Álvarez-Bejarano, & Vergel, 2010). Promoting employee wellbeing is therefore considered an important component of workplace wellbeing initiatives, both in and of itself but also as a proactive buffer against job stress.

In light of the benefits to high levels of wellbeing, it is recommended that workplaces adopt an integrated approach to workplace mental health (i.e. equal attention be given to illness prevention, health promotion and the treatment of mental health problems; LaMontagne et al., 2014). Whilst a substantial amount of knowledge is available on the factors associated with employee ill-health, comparatively little is known about the factors associated with employee wellbeing (LaMontagne et al., 2014; Mills, Fleck, & Kozikowski, 2013).

Most of the research that has been conducted on employee wellbeing has come from the fields of Positive Organisation Scholarship (Cameron, Dutton, & Quinn, 2003) and Positive Organisational Behaviour (Luthans, 2002b; Nelson & Cooper, 2007). Research stemming from these fields has demonstrated that wellbeing at work goes beyond the dominant outcome variables of engagement and job satisfaction, to include “positively oriented human resource strengths and psychological capacities” (Luthans, 2002a, p. 59). This includes the concept of psychological capital (which refers to hope, resilience, self-efficacy and optimism: Avey, Luthans, Smith, & Palmer, 2010). Recently, number of studies, including an analysis of workplace wellbeing in a New Zealand working population (Hone, Jarden, Schofield, & Duncan, 2015), have shown that employee wellbeing involves more than being engaged and having job satisfaction, but is related to a range of lifestyle, physical, psychosocial, and work-related factors. For the reason that many employee wellbeing programmes continue to operate from a risk-based perspective (i.e. the prevention and treatment of illness and injury: LaMontagne et al., 2014), we urge that the future focus on employee wellbeing take into account a broader range of contributing factors and adopt a positively-orientated approach to promoting wellbeing.

Understanding Employee Wellbeing

The definition of wellbeing varies according to the framework from which it is considered (Hone, Jarden, Schofield, & Duncan, 2014). For instance, Seligman’s (2011) ‘PERMA’ model focuses on Positive emotions, Engagement, Relationships, Meaning in life, and Accomplishments, while Diener et al. (2010) ‘Flourishing Scale’ focuses on psychological wellbeing (purpose/meaning, positive relationships, engagement, social contribution, competence, self-respect, optimism, social relationships). Although there is a general consensus that wellbeing is a multi-dimensional construct and that flourishing refers to high levels of wellbeing (Huppert & So, 2013), there is disagreement concerning various component factors (e.g., accomplishment is in Seligman’s (2011) PERMA model, but is absent from all other major models, and physical health is absent from all of the models listed above). Moreover, there are few studies that have authenticated the models in different cultural and contextual environments. Therefore, although research on wellbeing and flourishing informs us

of the general pathways to flourishing in life, very little is known about what promotes wellbeing at a contextual level, in particular in the occupational context.

Wellbeing in Context

Evidence that occupational context has a bearing on employee wellbeing has been well established. For instance, in the landmark longitudinal studies of British civil servants (Whitehall Studies: Marmot, Rose, Shipley, & Hamilton, 1978; Marmot et al. 1991) occupational status was shown to have a strong bearing on health. For example, in the Whitehall Studies it was demonstrated that people in higher occupational status employment experienced more positive health outcomes, while people in lower occupational status employment experienced more ill-health (Marmot, et al. 1978; Marmot et al. 1991). The Whitehall Studies also demonstrated that as occupational status reduced there was a corresponding decline in the workers' health status. Health differences across the occupational hierarchy have been widely reported and are referred to as the health gradient (Marmot, 2004).

In addition to occupational status, a number of other variables have been shown to influence wellbeing. Influences such as culture (Diener, Shigehiro, & Lucas, 2003), personality types (Zhai, Willis, O'Shea, Zhai, & Yang, 2014), and age (Hone et al., 2015), all impact the experience of wellbeing. Moreover, as certain types of people may be drawn to particular occupations (e.g., a caring person becomes a nurse: Garcia-Sedeño, Navarro, & Menacho, 2009), there may be unique occupational contextual factors that influence wellbeing.

Although a number of studies have investigated the factors that influence the wellbeing of employees in general (Biggio & Cortese, 2013; Dickson-Swift, Fox, Marshall, Welch & Willis, 2014 Hone et al., 2015), have compared the stress-prevalence of different employee groups (Johnson et al., 2005), and have investigated contributors to the health gradient (e.g., income, level of education; Geyer & Peter, 2000), the same emphasis has not been placed on understanding the unique variations in wellbeing according to occupational context. That is, there are few studies that have investigated the factors associated with wellbeing (i.e. flourishing and job satisfaction) for different occupational groups, rather than workers as a whole. As each occupation is unique in the demands that are placed upon employees (Bakker & Demerouti, 2007), in the current study we consider that the resources associated with employee flourishing and job satisfaction may differ according to occupational context.

Objectives of the Current Study

The current study seeks to explore differences and similarities in the flourishing (a global wellbeing outcome) and job satisfaction (a specific contextual wellbeing outcome) scores of workers in distinct occupational groups within New Zealand. The study has two aims:

- 1) to investigate if the prevalence rates of flourishing and job satisfaction are the same, or different, for each occupational group, and
- 2) to understand if the associations between wellbeing (flourishing and job satisfaction) and major life domains is the same for each occupational group, or if there is a unique recipe according to occupation.

By further examining the recipes for flourishing and job satisfaction for different occupations we are better placed to offer recommendations on how to improve and tailor existing organisational

wellbeing initiatives, both for wellbeing at work (job satisfaction) and for wellbeing across life (flourishing).

METHOD

Data Source

The Sovereign Wellbeing Index (SWI; Jarden et al., 2013) is an online survey containing a large range of wellbeing, health, lifestyle, work-related, and socio-demographic variables (total items = 324; see www.mywellbeing.co.nz). It had been designed specifically to measure the health and wellbeing of New Zealanders and was conducted for the first time in 2012 and again in 2014. The current study used data from wave two (2014) of this index.

Procedure and Participants

The New Zealand office of TNS Global, an international market research company, collected data from one of the largest research panels in New Zealand (Smile City Ltd, 2012). In the first of three waves (September to October 2012) a total of 38,439 invitations were sent to a random selection of approximately 400,000 members; the completion rate was 26% ($N = 9,962$). Participants who completed the 2012 survey were invited to participate in the second 2014 wave, for which the completion rate was 44% ($n = 4,435$). Additional invitations were then sent to 53,628 new panel members that did not participate in 2012. Of these invitations, a total of 5,577 adults participated (10%), and of those that responded to the survey invitation, 88% completed the survey ($n = 11,426$).

Similar to wave one, the sampling strategy for wave two was stratified against the 2006 NZ Census values. Sample characteristics of both wave one and wave two indicated close alignment with the NZ Census, suggesting the sample to be nationally representative. All panel members aged over 18 were eligible and no further exclusion criteria were applied. As the focus of our analysis is occupational wellbeing, we used a reduced sample of only those participants in paid employment ($N = 5,126$). Refer to Table A1 (Appendix A) for a description of the demographic characteristics of those participants in paid employment.

Measures

The SWI survey contains validated psychometric scales and is largely based on wave six of the European Social Survey (ESS) Personal and Social Wellbeing module (European Social Survey, 2012). Questions were drawn from a variety of sources including the NZ Health Survey (Ministry of Health, 2006) and it has been used across 26 European countries (Huppert & So, 2013). In addition, this module was supplemented with additional scales, including the Flourishing Scale, a self-reported measure of psychological wellbeing (Diener et al., 2010), two questions on strengths use (Govindji & Linley, 2007), and a life domains satisfaction scale. Refer to Table A2 (Appendix B) for a description of each construct that has been included in our analysis, including the corresponding items and response scales.

RESULTS

The data were analysed using SPSS version 22. Given the large sample size the Shapiro-Wilks test of normality, which is only appropriate for small samples (i.e. $< 2,000$: Field, 2013), could not be used. As such, preliminary analysis of the data (Flourishing Scale score, job satisfaction variable) included visual inspection of histograms for skewness and kurtosis, and normal Q-Q Plots, which suggested these variables to be negative skewed. The Levene's F test also revealed that the

homogeneity of variance assumption was not met ($p < .001$). Therefore, the non-parametric tests of the Kruskal-Wallis and Mann-Whitney U tests were used with an alpha level of .05 for all subsequent analyses.

First we investigated the prevalence of flourishing across the eight occupational groups. The Kruskal-Wallis test revealed that there was a statistically significant difference in average Flourishing Scale scores across the groups, $\chi^2(7, n = 5126) = 172.05, p < .001$. Table 1 displays the median and Interquartile Range (IQR) of Flourishing Scale scores for each occupation, displayed from highest to lowest median Flourishing Scale score rank.

Table 1

Ranked Flourishing Scale Score for each Occupational Group

Occupation	<i>n</i>	<i>Md</i>	<i>(IQR)</i>
Manager	692	48.00	(7.50)
Professional	1494	48.00	(7.00)
Community or Personal Service Worker	358	47.00	(9.00)
Machinery Operator or Driver	222	46.00	(9.25)
Clerical or Administrative Worker	930	46.00	(8.00)
Technician or Trade Worker	568	46.00	(10.00)
Sales Worker	464	45.00	(8.00)
Labourer	284	42.00	(14.00)

Having established that there were significant differences between occupations, Mann-Whitney U tests (with Bonferroni corrections) were conducted to examine the individual differences between the occupational groups. Refer to Table A3 (Appendix C) for a description of the z scores, statistical significance and Cohen’s d effect size ($r = z / \sqrt{N}$) for each occupational group. The effect sizes are displayed from highest to lowest value. As indicated in Table A3 (Appendix C), the largest differences in the median Flourishing Scale scores between occupational groups were between Labourers and all other occupations.

Given that some occupations had higher flourishing than others, next we investigated if there was a unique recipe for flourishing for each occupational group. A series of standard multiple regression analysis were used to assess the ability of lifestyle, health, psychosocial, satisfaction with major life domains, and work-related factors to predict levels of flourishing (Flourishing Scale scores) for workers in eight separate occupation groups.

Prior to conducting the regression analysis, an analysis of standard residuals was carried out on the data to identify extreme outliers (Tabachnick & Fidell, 2007, p. 128). A scatterplot graph was generated for each occupation and was used to visually confirm outliers. Fourteen of the 5,216 participants had standardised residual values above about +/- 3.3, and were removed. An examination of correlations revealed that no independent variables were highly correlated, and the collinearity statistics (i.e. Tolerance and Variance Inflation Factor (VIF) were all within accepted limits; Pallant, 2011, p. 158). The assumption of multicollinearity was deemed to have been met, suggesting that all scales were measuring independent constructs. A significant ($p < .001$) regression equation was found across occupational groups, demonstrating that the items selected for the regression analysis were able to predict a large proportion of the variance in Flourishing Scale scores for each occupation.

Next, we examined which of the lifestyle, health, psychosocial factors, satisfaction with major life domains, and work-related factors explained the greatest amount of variance in Flourishing Scale

scores for each separate occupation type. Beta weights were used to identify the five largest factors of the 33 possible. For a description of the five largest factors by occupational group, refer to Table A4 (Appendix D). As depicted in Table A4, the factors most strongly associated with the Flourishing Scale scores for the majority of occupations were meaning and purpose (i.e. “I feel what I do is valuable and worthwhile”) and self-esteem (i.e. “In general I feel very positive about myself”).

As indicated in Figure 1, the five factors most commonly associated with flourishing amongst the occupational groups were meaning and purpose, self-esteem, relationships themes, use of strengths, and give. The results also indicate that the factors most strongly associated with the Flourishing Scale score are different across occupational groups (refer to Table A4, Appendix D).

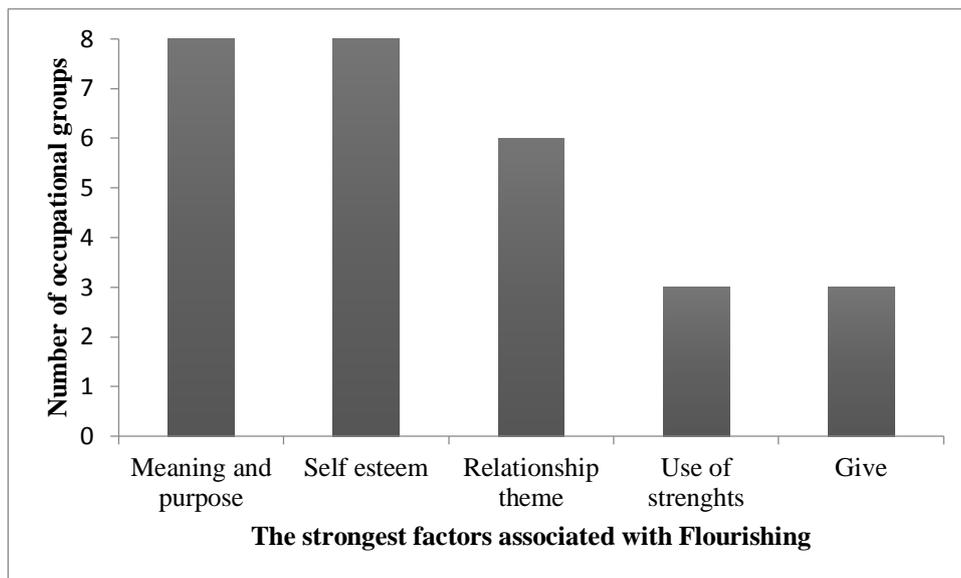


Figure 1. Strongest Factors Associated With Flourishing Across Occupational Groups

Next we investigated the prevalence rates of job satisfaction (a more specific contextual wellbeing outcome compared to flourishing) across the eight occupational groups, using a similar analysis strategy. The Kruskal-Wallis test revealed a significant difference in job satisfaction between occupational groups, $\chi^2(7, n = 5186) = 103.43, p < .001$. Table 2 displays the median and Interquartile Range (IQR) job satisfaction scores for each occupation, displayed from highest to lowest median job satisfaction score rank.

Table 2

Ranked Job Satisfaction Score for each Occupational Group

Occupation	<i>n</i>	<i>Md (IQR)</i>
Manager	699	7.0 (2)
Professional	1517	7.0 (2)
Community or Personal Service Worker	362	7.0 (3)
Machinery Operator or Driver	229	7.0 (3)
Clerical or Administrative Worker	940	7.0 (3)
Technician or Trade Worker	573	7.0 (3)
Sales Worker	475	6.0 (4)
Labourer	391	6.0 (4)

Having established that there were significant differences between occupations, Mann-Whitney U tests (with Bonferroni corrections) were conducted to examine the individual differences between the occupational groups. Refer to Table A5 (Appendix E) for a description of the z scores, statistical significance and Cohen's d effect size ($r = z / \sqrt{N}$) for each occupational group. The effect sizes are displayed from highest to lowest value. As indicated in Table A5, the biggest differences in median job satisfaction scores were between occupational of Professionals and Labourers, Managers and Sales Workers, and between Managers and Labourers.

Given that some occupations had higher job satisfaction than others, next we investigated if there was a unique recipe for job satisfaction for each occupational group. A series of standard multiple regression analysis were used to assess the ability of lifestyle, health, psychosocial, satisfaction with major life domains, and work-related factors to predict levels of job satisfaction for workers in eight separate occupation groups. The DV was the SWI item that was based on one item from NZ Health Survey (Ministry of Health, 2006), "All things considered, how satisfied are you with your present job?", which respondents used a Likert scale to answer (0 = extremely dissatisfied, to 10 = extremely satisfied).

Prior to conducting the regression analysis an analysis of standard residuals was carried out on the data to identify any extreme outliers. Overall 14 of the 5,216 participants had standardised residual values above about +/- 3.3, and were removed. An examination of correlations revealed that no independent variables were highly correlated, and the collinearity statistics were all within accepted limits. The assumption of multicollinearity was deemed to have been met, suggesting that all scales were measuring independent constructs. A significant ($p < .001$) regression equation was found across occupational groups, demonstrating that the items selected for the regression analysis were able to predict a large proportion of the variance in job satisfaction scores for each occupation.

Next we examined which of the lifestyle, health, psychosocial, satisfaction with major life domains, and work-related factors explained the most amount of variance in job satisfaction scores for each separate occupational group. Beta weights were used to identify the top five largest factors of the 31 possible. Table A6 (Appendix F) illustrates results by occupational group, and then from highest to lowest from the top 5 of 31 beta weights.

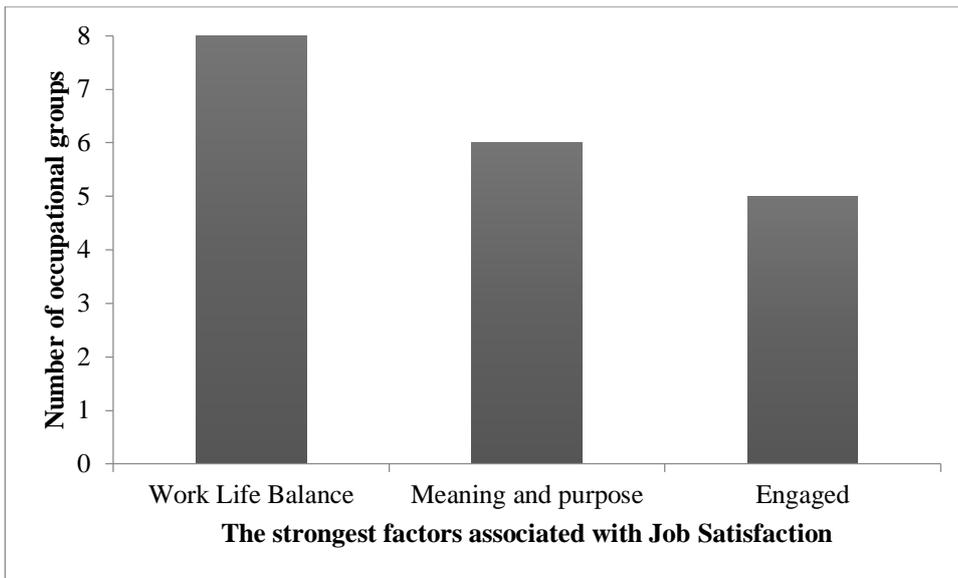


Figure 2. Strongest Factors Associated With Job Satisfaction Across Occupational Groups.

Figure 2 indicates that the factor most strongly associated with job satisfaction for all occupations was work life balance (i.e. “All things considered, how satisfied are you with the balance between the time you spend on your paid work and the time you spend on other aspects of your life?”). There were two other factors that were commonly associated with job satisfaction amongst the occupational groups, meaning and purpose (i.e. “I feel what I do is valuable and worthwhile”) and engagement (i.e. “How much of the time would you generally say you are absorbed in what you are doing?”). However, the results also indicate that the factors most strongly associated with the job satisfaction score are different across occupational groups (see Table A6).

Results of the analysis also reveal that the factors most strongly associated with flourishing (a global measure of wellbeing) differ to the factors most strongly associated with job satisfaction (a specific contextual wellbeing outcome), refer to Figures 1 and 2. For instance, work life balance was the strongest factor associated with job satisfaction across occupational groups, yet it was not strongly associated with flourishing for any occupational group. In contrast, meaning and purpose had strong associations with both flourishing and job satisfaction for most occupational groups. The results indicate that different factors may be associated with different aspects of wellbeing.

DISCUSSION

Interested to explore the impact of occupational group on the experience of, and factors involved in, flourishing and job satisfaction, in the present study we compared flourishing and job satisfaction between different occupational groups of New Zealand workers. We found evidence to suggest that the prevalence of flourishing and job satisfaction were different between the eight different occupational groups, but more so for flourishing (see Tables 1 and 2). The most notable differences were for managers and professionals, who experienced higher flourishing (and job satisfaction) than sales workers or labourers. Given that flourishing scores varied in line with occupational status, it appears that flourishing may also be a factor involved in the health gradient (i.e. health differences that correspond with occupational status: Marmot, 2004).

In an effort to understand the determinants of the health gradient, González, Swanson, Lynch, & Williams (2014) recently demonstrated that the satisfaction of workers’ basic psychological needs (i.e. autonomy, relatedness and competence, known as Self-Determination; Ryan & Deci, 2000)

plays a role. Gonzalez et al. (2014) explored the role of self-determination in four occupational groups (executive and management, supervisor, clerical/skilled non-manual and manual) and found that with each incremental step in occupational hierarchy there was a corresponding increase in workers' self-determination, which corresponded with more positive health outcomes. It appears that occupational context may play a role in supporting workers' basic psychological needs, and in turn facilitate their overall health and wellbeing.

Given that the experience of self-determination is strongly linked with psychological growth, health, wellbeing and job satisfaction (Deci et al. 2001; Lynch, Plant, & Ryan, 2005; Ryan & Deci, 2000) it is recommended that workplaces, particularly those lower in the occupational hierarchy, consider ways to increase self-determination in their staff. Research shows that self-determination can be increased in workplaces in a number of ways. For instance, a management style that supports autonomy in the workplace has been linked with the experience of self-determination in employees (Gagné & Deci, 2005). Employees who are empowered to informally change their work activities so that they align closer with their intrinsic desires, interests and values (i.e. job crafting), experience greater self-determination (Slemp & Vella-Brodrick, 2014). People who set self-concordant goals (i.e. goals that express the person's enduring interests and values) also experience self-determination (Sheldon & Eliot, 1999).

We next investigated if there was a unique recipe for flourishing and job satisfaction in different occupations. We found that each occupation does have a unique recipe, and based on the size of the beta weights, that each occupation had two core ingredients identified for flourishing: 1) meaning and purpose, and 2) self-esteem; and one core ingredient identified for job satisfaction: 1) work life balance. But just as any recipe requires more than core ingredients for it to be a success, the same can be said of employee wellbeing. Results of the current study demonstrate that each occupation has a unique set of factors that are associated with flourishing and job satisfaction.

Given the unique recipe for flourishing and job satisfaction in each occupational group, it suggests that a 'one size fits all approach' may not be an ideal way to approach employee wellbeing. Indeed, Spence (2015) reported that one reason for low utilisation rates in Australian Employee Assistance Programs is because the programs do not target the actual needs of the employees. Moreover, Dickson-Swift, Fox, Marshall, Welch and Willis (2014) reported that employees cited a 'one size fits all approach' to employee wellbeing programs as a barrier to service use. This also aligns with the developing positive psychological intervention literature on "intervention fit" (Slemp, Kern, & Vella-Brodrick, 2015) between the person and intervention.

In order to overcome a 'one size fits all approach' to employee wellbeing, it is recommended that organisations conduct a wellbeing needs assessment to identify employee needs and the key drivers of their wellbeing to help guide their wellbeing policy and choices. Indeed, occupational wellbeing experts state that a 'wellbeing needs assessment' is the critical first step of any wellbeing intervention, as it informs who and what the intervention should target and identifies potential barriers to lasting change (Maneotis & Krauss, 2015). Moreover, Cooper (2015) recommended that stakeholders also be involved in the design of wellbeing initiatives to ensure their ongoing success.

Despite unique factors being associated with flourishing; meaning and purpose explained the most variance in flourishing scores across occupational groups, a finding consistent within the literature (Michaelson, Pratt, Grant, & Dunn, 2014). Workers consistently identify meaningful work as one of the most important features that they seek out in a job, ahead of income, job security, promotions, and hours (Cascio, 2003). Industry also recognises that to be an 'employer of choice' organisations must enable their employees "to do meaningful work, while offering opportunities for personal

growth and autonomy” (Harvard Business Review, 2013, p. 1). The results of the current study provide support for these recommendations.

Following the Pareto Principle (80-20 rule, Koch, 2004) workplaces may benefit most from focusing efforts on what matters most to employees (i.e. increasing opportunities for meaning and purpose). Job crafting is a simple yet effective process to increase the meaning and purpose that people experience in their jobs (Wrzesniewski, 2014). Job crafting occurs when employees are empowered to change aspects of their jobs (e.g., their tasks or relationships) to better meet their psychological needs (e.g., autonomy, strengths, passions, values). In doing so employees experience more meaning and engagement in their work, which has the effect of generating the resources to better meet their job demands (Tims, Bakker, & Derks, 2013). For example, in the current study, community/personal service workers’ flourishing scores were correlated highly with ‘providing support and help to other people’ ($r = .41, p < .05$). Empowering these workers to craft creative ways that they could ‘give’ to others may have profound effects on their wellbeing and work performance.

The core association with job satisfaction was work life balance, which was by far the top contributing factor for all employees. This finding is somewhat consistent with the literature, in that workplace flexibility is highly valued by employees (Dickson-Swift et al., 2014) and related to increased job satisfaction (Haar, Russo, Suñe, & Ollier-Malaterre, 2014). Surprisingly however, work life balance did not share as much variance with flourishing scores for all workers. This is unexpected given that work life balance has been strongly linked with employee health and wellbeing (Greenhaus, & Powell, 2006) and is likely related to the way in which work life balance was assessed in the current study (i.e. using only one question). Nonetheless, given the strength of the association between work life balance and job satisfaction, and the extensive existing literature regarding work life balance and employee wellbeing (see Zheng, Molineux, Mirshekary, & Scarparo, 2015), it is recommended that HR Personnel consult their employees to investigate meaningful ways to increase workplace flexibility (e.g., family friendly policies, flexible work hours, job sharing). Such efforts may have greater impact than focusing on the specific aspects of the job or other incentives, such as increased pay, or training opportunities (Warr, 2002).

Lastly, it may be necessary for organisations to concentrate on more than one outcome for their wellbeing initiatives. In the current study, whilst work life balance was strongly associated with job satisfaction across occupational groups, it did not have the same impact on flourishing scores. However, meaning and purpose was strongly associated with both job satisfaction and flourishing. As flourishing and job satisfaction scores were somewhat, however not completely correlated ($r = .47$), organisations may need to consider both factors in their wellbeing initiatives.

Limitations

There are several limitations to the current study. These include the non-specific nature of many questions asked. For instance, to assess participants’ experience of meaning and purpose they were asked, “I generally feel that what I do in my life is valuable and worthwhile”. This is not specifically related to the workplace and it may be that participants derive meaning and purpose in other facets of their life (e.g., children), which affected the results. A scale such as Steger, Dik, and Duffy’s (2012) Work and Meaning Inventory would be more appropriate. Secondly, due to the broad nature of the occupational groups (i.e. eight broad categories) such findings may not be generalisable to more specific occupational groups. Future research would benefit from exploring the unique recipe for wellbeing in more specific occupational groups. Lastly, the cross-sectional and correlational study design prevents us from making causal conclusions. While our findings indicate that there are a number of core and unique associations with employee flourishing and job satisfaction, we cannot

be sure that these indicators cause flourishing or job satisfaction. Future investigations would benefit from examining such factors in longitudinal studies. Despite the limitations, the current findings are consistent with the literature, suggesting that the study makes a valuable contribution to the field of occupational wellbeing.

Conclusion

Employee wellbeing is valuable and there are benefits to promoting positive wellbeing in all workplaces. However, to positively influence flourishing and job satisfaction a shift in focus is required away from a 'one size fits all approach' to a more strategic and tailored approach to employee wellbeing. This includes conducting a comprehensive wellbeing needs assessment so that organisational wellbeing initiatives can be customised to the unique needs and desires of employees in different occupational contexts. Additionally, the current findings suggest that regardless of occupational status, meaning and purpose is important to flourishing, just as work life balance is to job satisfaction. Empowering employees to informally craft aspects of their job may be a powerful way to increase meaning and purpose and allow for more workplace flexibility.

Whilst this study has provided some unique insights into how employees experience flourishing and job satisfaction, further research that examines the unique pathways to wellbeing in specific occupational groups is warranted.

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Appendix A: Demographic description of the sample

Table A1

Demographic Characteristics of Workers in the 2014 Wave of the SWI.

Occupation	<i>n</i>	%	Age	Gender %	European %	Maori %	Asian %
Manager	702	13.5	<i>M</i> = 43.85 <i>SD</i> = 12.31	M 60.5 F 39.5	73.4	11.8	13.4
Professional	1524	29.3	<i>M</i> = 40.52 <i>SD</i> = 12.44	M 49.3 F 50.7	69.1	7.7	21.0
Technician or Trade Worker	575	11.0	<i>M</i> = 43.23 <i>SD</i> = 13.11	M 79.8 F 20.2	72.2	11.3	14.8
Community or Personal Service Worker	363	7.0	<i>M</i> = 44.96 <i>SD</i> = 12.73	M 26.8 F 73.2	77.1	14.9	7.4
Clerical or Administrative Worker	944	18.1	<i>M</i> = 41.69 <i>SD</i> = 12.05	M 25.4 F 74.6	73.5	13.0	12.1
Sales Worker	478	9.2	<i>M</i> = 39.09 <i>SD</i> = 14.56	M 43.9 F 56.1	74.5	10.9	13.6
Machinery Operator or Driver	229	4.4	<i>M</i> = 46.94 <i>SD</i> = 13.03	M 86.9 F 13.1	72.1	18.3	8.7
Labourer	395	7.6	<i>M</i> = 40.88 <i>SD</i> = 13.74	M 61.9 F 38.1	74.9	14.2	8.9
Total	5210	100.0	<i>M</i> = 41.98 <i>SD</i> = 12.93	50.4 M 49.6 F	72.0	13.0	13.0

Appendix B: Constructs, items, and response scales

Table A2

Questions and Response Scales of the Lifestyle, Health, Psychosocial, Life Satisfaction, and Work-related Constructs Used.

Construct	Question	Response scale
Lifestyle behaviours		
Connect ¹	How often do you meet socially with friends, relatives or work colleagues?	1 = never, to 7 = every day
Give ¹	To what extent do you provide help and support to people you are close to when they need it?	0 = not at all, to 6 = completely
Take Notice ¹	On a typical day, how often do you take notice and appreciate your surroundings?	0 = never, to 10 = always
Keep learning ¹	To what extent do you learn new things in life?	0 = not at all to, 6 = a great deal
Be Active ¹	How much time do you spend in physical activity with others?	0 = not at all, to 6 = a great deal
Be Active	How much time do you spend in physical activity on your own?	0 = never to, 5 = five days a week
Volunteering	In the past 12 months, how often did you get involved in work for voluntary or charitable organizations?	1 = never to, 6 = at least once a week
Subjective health	How is your health in general?	1 = very bad to, 5 = very good
Psychosocial		
Strengths ²	I know my strengths well.	1 = strongly disagree to, 5 = strongly agree
Strengths ²	I always try to use my strengths.	1 = strongly disagree to, 5 = strongly agree
Autonomy	I feel I am free to decide for myself how to live my life.	1 = strongly disagree to, 5 = strongly agree
Engaged	How much of the time would you generally say you are absorbed in what you are doing?	0 = none of the time to, 10 = all of the time
Feeling respected	To what extent do you feel that people treat you with respect?	0 = not at all to, 6 = a great deal
Social support	To what extent do you receive help and support from people you are close to when you need it?	0 = not at all to, 6 = completely

Relationships	How many people are there with whom you can discuss intimate and personal matters?	1 = none to, 7 = 10 or more
Resilience	When things go wrong in my life, it generally takes me a long time to get back to normal.	1 = strongly agree to, 5 = strongly disagree
Resilience	How difficult or easy do you find it to deal with important problems that come up in your life?	0 = extremely difficult to, 10 = extremely easy
Meaning / purpose	I generally feel that what I do in my life is valuable and worthwhile.	1 = strongly disagree to, 5 = strongly agree
Self esteem	In general I feel very positive about myself.	1 = strongly disagree to, 5 = strongly agree
Work related		
Job satisfaction	All things considered, how satisfied are you with your present job?	0 = extremely dissatisfied to, 10 = extremely satisfied
Work life balance	All things considered, how satisfied are you with the balance between the time you spend on your paid work and the time you spend on other aspects of your life?	0 = extremely dissatisfied to, 10 = extremely satisfied
Financial security	Which of these descriptions comes closest to how you feel about your household's income nowadays?	1 = finding it very difficult on present income to, 4 = living comfortably on present income
Satisfaction with major life domains	How satisfied are you with each of these aspects in your life? Intimate relationships, Family, Friends, Leisure time, Time on your own, Politics, Work, Education, Religion, Spirituality, and Community Involvement.	0 = extremely dissatisfied to, 10 = extremely satisfied
Diener Flourishing Scale	I lead a purposeful and meaningful life. My social relationships are supportive and rewarding. I am engaged and interested in my daily activities. I actively contribute to the happiness and wellbeing of others. I am competent and capable in the activities that are important to me. I am a good person and live a good life. I am optimistic about my future.	1 = strongly disagree to, 7 = strongly agree

People respect me.

¹The SWI includes items assessing participation in the *Five Ways to Wellbeing* (Connect, Give, Take Notice, Keep Learning, and Be Active) identified by the New Economics Foundation as evidence-based behaviours to improve population wellbeing (Aked, Marks, Cordon, & Thompson, 2009).

²Strengths were assessed via two questions from the Strengths Knowledge and Strength Use Scales (Govindji & Linley, 2007).

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Appendix C: Ranked differences in median flourishing scores

Table A3

Ranked Differences in Median Flourishing Scale Score for each Occupational Group

Occupation		<i>z</i>	<i>ES</i>	<i>Sig.</i>
Manager	Labourer	-8.681	0.264	0.01
	Sales Worker	-5.268	0.154	0.01
	Technician / Trade	-4.779	0.134	0.01
	Clerical / Administration	-5.198	0.128	0.01
	Machinery Operator / Driver	-3.349	0.110	0.01
	Professional	-0.770	0.016	<i>ns</i>
	Community / Personal Service	-0.507	0.015	<i>ns</i>
Professional	Labourer	-10.25	0.236	0.01
	Sales Worker	-6.660	0.150	0.01
	Clerical / Administration	-7.143	0.144	0.01
	Machinery Operator / Driver	-4.090	0.098	0.01
	Technician / Trade	-6.339	0.139	0.01
	Community or Personal Service	-1.151	0.026	<i>ns</i>
Technician / Trade Worker	Labourer	-4.773	0.154	0.01
	Community or Personal Service	-3.280	0.107	0.01
	Sales Worker	-0.775	0.024	<i>ns</i>
	Clerical / Administration	-0.394	0.010	<i>ns</i>
	Machinery Operator / Driver	-0.161	0.005	<i>ns</i>
Community / Personal Services	Labourer	-6.77	0.248	0.01
	Sales Worker	-3.832	0.133	0.01
	Machinery Operator / Driver	-2.507	0.103	0.05
	Clerical / Administration	-3.464	0.096	0.01
Clerical / Administrative	Labourer	-5.45	0.150	0.01
	Sales Worker	-1.174	0.054	<i>ns</i>
	Machinery Operator / Driver	-0.044	0.001	<i>ns</i>
Sales Worker	Labourer	-3.759	0.129	0.01
	Machinery Operator / Driver	-0.761	0.029	<i>ns</i>
Machinery Op. / Driver	Labourer	-3.793	0.153	0.01

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Appendix D: Items that explain the greatest amount of variance in flourishing scores

Table A4

The Five Items that Explain the Greatest Amount of Variance in Flourishing Scale Scores for Each Occupational Group.

Occupation	Factor	Beta	Sig.	95% CI
Manager	1. Meaning and Purpose	.253	.05	[1.50, 2.83]
	2. Self Esteem	.161	.05	[0.61, 1.87]
	3. Satisfied with intimate r'ships	.098	.05	[0.07, 0.42]
	4. Use of strengths	.095	.05	[0.19, 1.71]
	5. Resilience	.093	.05	[0.17, 1.02]
Professionals	1. Meaning and Purpose	.238	.05	[1.71, 2.63]
	2. Self Esteem	.185	.05	[1.03, 1.73]
	3. Satisfied with friends	.136	.05	[0.29, 0.67]
	4. Satisfied with work	.118	.05	[0.17, 0.58]
	5. Feeling respected	.100	.05	[0.34, 0.90]
Technician or Trade Worker	1. Meaning and Purpose	.175	.05	[0.78, 2.35]
	2. Self esteem	.158	.05	[0.57, 2.16]
	3. Subjective general health	.122	.05	[0.49, 1.84]
	4. Satisfied with family	.116	.05	[0.08, 0.71]
	5. Satisfied with friends	.106	.05	[0.03, 0.73]
Community or Personal Service Worker	1. Meaning and Purpose	.259	.05	[1.56, 3.25]
	2. Self esteem	.229	.05	[1.02, 2.75]
	3. Satisfied with leisure time	.188	.05	[0.22, 1.00]
	4. Satisfied with intimate r'ships	.160	.05	[0.16, 0.63]
	5. Give	.111	.05	[0.21, 1.59]
Clerical or Administrative Worker	1. Meaning and purpose	.226	.05	[1.33, 2.46]
	2. Self esteem	.211	.05	[1.04, 2.08]
	3. Satisfied with current job	.145	.05	[0.17, 0.72]
	4. Satisfied with spirituality	.128	.05	[0.11, 0.60]
	5. Satisfied with family	.095	.05	[0.11, 0.56]
Sales Worker	1. Meaning and purpose	.187	.05	[0.73, 2.56]
	2. Use of strengths	.168	.05	[0.78, 2.62]
	3. Satisfied with work	.126	<i>ns</i>	[0.00, 0.76]
	4. Self esteem	.109	<i>ns</i>	[0.06, 1.67]
	5. Give	.095	.05	0.10, 1.22]
Machinery Operator or Driver	1. Meaning and Purpose	.265	.05	[0.81, 4.24]
	2. Self esteem	.233	.05	[0.26, 3.12]
	3. Autonomy	.224	.05	[0.76, 2.99]
	4. Relationships	.191	<i>ns</i>	[0.30, 1.62]
	5. Satisfied current job	.176	.05	[-0.08, 1.18]
Labourer	1. Meaning and Purpose	.257	.05	[1.20, 3.62]
	2. Self esteem	.223	.05	[0.82, 3.31]
	3. Use of strengths	.188	.05	[0.47, 3.52]
	4. Autonomy	.148	.05	[0.26, 2.24]
	5. Give	.145	.05	[0.33, 1.74]

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Appendix E: Ranked differences in median job satisfaction scores

Table A5

Ranked Differences in Median Job Satisfaction Scores for each Occupational Group

Occupation		<i>z</i>	<i>ES</i>	<i>Sig.</i>
Manager	Sales Worker	-7.050	0.206	0.01
	Labourer	-6.374	0.193	0.01
	Clerical / Administration	-5.807	0.143	0.01
	Technician / Trade	-2.804	0.079	0.01
	Community / Personal Service	-1.535	0.047	<i>ns</i>
	Professional	-1.913	0.041	<i>ns</i>
	Machinery Operator / Driver	-.669	0.022	<i>ns</i>
Professional	Labourer	-5.868	0.236	0.01
	Sales Worker	-6.572	0.15	0.01
	Clerical / Administration	-5.114	0.144	0.01
	Technician / Trade	-1.517	0.139	<i>ns</i>
	Machinery Operator / Driver	-.436	0.098	<i>ns</i>
	Community or Personal Service	-.320	0.026	<i>ns</i>
Technician / Trade Worker	Labourer	-4.014	0.154	0.01
	Community or Personal Service	-.786	0.107	<i>ns</i>
	Sales Worker	-4.373	0.024	0.01
	Clerical / Administration	-2.643	0.01	<i>ns</i>
	Machinery Operator / Driver	-1.233	0.005	<i>ns</i>
Community / Personal Services	Labourer	-4.179	0.248	0.01
	Sales Worker	-4.488	0.133	0.01
	Machinery Operator / Driver	-.430	0.103	<i>ns</i>
	Clerical / Administration	-3.040	0.096	0.01
Clerical / Administrative	Labourer	-2.063	0.15	<i>ns</i>
	Sales Worker	-2.245	0.054	<i>ns</i>
	Machinery Operator / Driver	-3.026	0.001	<i>ns</i>
Sales Worker	Machinery Operator / Driver	-4.287	0.029	0.01
	Labourer	-.066	0.129	<i>ns</i>
Machinery Op. / Driver	Labourer	-3.970	0.153	0.01

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Appendix F: Items that explain the greatest amount of variance in job satisfaction scores

Table A6

The Five Items that Explain the Greatest Amount of Variance in Job Satisfaction Scores for Each Occupational Group.

Occupation	Factor	Beta	Sig.	95% CI
Manager	1. Work life balance	.574	.05	[0.45, 0.62]
	2. Satisfied with religion	.187	.05	[0.05, 0.22]
	3. Engaged	.174	.05	[0.09, 0.33]
	4. Resilience	.089	.05	[0.01, 0.35]
	5. Socialise	.079	.05	[0.00, 0.23]
Professionals	1. Work life balance	.421	.05	[0.36, 0.47]
	2. Satisfied with education	.176	.05	[0.13, 0.63]
	3. Engaged	.170	.05	[0.13, 0.28]
	4. Meaning and purpose	.165	.05	[0.31, 0.66]
	5. Autonomy	.066	.05	[0.03, 0.29]
Technician or Trade Worker	1. Work life balance	.450	.05	[0.36, 0.58]
	2. Engaged	.159	.05	[0.05, 0.33]
	3. Meaning and purpose	.156	.05	[0.11, 0.69]
	4. Satisfied with friends	.155	.05	[0.03, 0.29]
	5. Social support	.106	.05	[0.04, 0.39]
Community or Personal Service Worker	1. Work life balance	.497	.05	[0.34, 0.57]
	2. Give	.139	.05	[0.05, 0.59]
	3. Satisfied with family	.137	.05	[0.01, 0.25]
	4. Satisfied with friends	.136	<i>ns</i>	[-0.02, 0.26]
	5. Use of strengths	.091	<i>ns</i>	[-0.13, 0.67]
Clerical or Administrative Worker	1. Work life balance	.489	.05	[0.43, 0.59]
	2. Engaged	.254	.05	[0.21, 0.43]
	3. Meaning and purpose	.122	.05	[0.09, 0.58]
	4. Satisfied with friends	.112	.05	[0.02, 0.23]
	5. Social support	.087	<i>ns</i>	[-0.01, 0.29]
Sales Worker	1. Work life balance	.514	.05	[0.42, 0.65]
	2. Meaning and purpose	.273	.05	[0.40, 1.14]
	3. Engaged	.198	.05	[0.08, 0.40]
	4. Satisfied with education	.127	.05	[0.02, 0.25]
	5. Satisfied with intimate relationships	.111	<i>ns</i>	[-0.00, 0.17]
Machinery Operator or Driver	1. Work life balance	.603	.05	[0.44, 0.84]
	2. Appreciated	.205	<i>ns</i>	[-0.07, 0.48]
	3. Satisfied with politics	.176	.05	[0.01, 0.29]
	4. Use of strengths	.158	<i>ns</i>	[-0.17, 1.04]
	5. Meaning and purpose	.154	<i>ns</i>	[-0.16, 1.10]
Labourer	1. Work life balance	.591	.05	[0.49, 0.76]
	2. Absorbed	.230	.05	[0.12, 0.48]
	3. Meaning and purpose	.190	.05	[0.17, 0.95]
	4. Feel respected	.135	<i>ns</i>	[-0.00, 0.52]
	5. Self esteem	.087	<i>ns</i>	[-0.16, 0.66]

Recipes for Occupational Wellbeing

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