

Flourishing in New Zealand Workers

Associations With Lifestyle Behaviors, Physical Health, Psychosocial, and Work-Related Indicators

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Objective: To investigate the prevalence and associations of flourishing among a large sample of New Zealand workers. **Methods:** A categorical diagnosis of flourishing was applied to data from the Sovereign Wellbeing Index, a nationally representative sample of adults in paid employment ($n = 5549$) containing various lifestyle, physical, psychosocial, and work-related indicators. **Results:** One in four New Zealand workers were categorized as flourishing. Being older and married, reporting greater income, financial security, physical health, autonomy, strengths awareness and use, work-life balance, job satisfaction, participation in the Five Ways to Well-being, volunteering, and feeling appreciated by others were all positively associated with worker flourishing independent of sociodemographics. **Conclusions:** Flourishing is a useful additional indicator for evaluating the prevalence, and identifying the drivers, of employee well-being. Employers may benefit from promoting these indicators among staff.

Organizational behavior has traditionally focused on the medical disease model, but a growing body of evidence suggests that workplaces have much to offer in the promotion of population well-being and much to gain from protecting and promoting employee well-being.^{1,2} According to Russell, “workplaces are matched only by the education system as effective settings for promoting health and preventing chronic disease,”³ and work has been ranked the third most important factor (out of seven) affecting happiness.⁴ In terms of employer benefits, initial explorations focused on organizational benefits associated with happiness (often operationalized as affect balance and life satisfaction). For example, Lyubomirsky and colleagues’⁵ review of cross-sectional, longitudinal and experimental data indicated that happy employees are more likely to exhibit superior work performance, be positively evaluated by their colleagues, have higher incomes, more fulfilling relationships, and robust health than their less happy peers. A similar review by Boehm and Lyubomirsky⁶ provided evidence of the causal nature of the relationship—positive emotions are instrumental in bringing about improvements in various positive workplace outcomes. For example, studies have identified that positive emotions are negatively and moderately correlated with employees’ intentions to leave current employment,⁷ and that emotional well-being (operationalized as positive and negative affect balance) predicts turnover⁸ and job performance (Wright and Cropanzano, 2000).

Aside from happiness, job satisfaction and engagement have been the dominant outcome variables investigated by organizational behavior researchers seeking to understand and promote employee

productivity. But using these to operationalize employee well-being now stands at odds with two strands of research indicating that (1) “engaging employees is just one part of the (productivity) story”^{1(p6)}; and (2) well-being is a multidimensional construct encompassing psychological, social, and emotional well-being.⁹ It is not our intention to dismiss the importance of employee engagement or job satisfaction as worthy of investigation, but based on the literature (for a comprehensive review, see Jeffrey et al¹) we believe that promoting employee well-being requires exploring drivers beyond engagement and job satisfaction.

Although a growing body of evidence (drawn from various different organizations and settings) indicates the positive association between higher well-being and higher productivity,^{10–12} little research has focused specifically on employee flourishing. Among positive psychology researchers, well-being is operationalized slightly differently, but there is general consensus on the following points: (1) flourishing is one of a range of ways of conceptualizing well-being, by focusing on the top end of the spectrum; (2) a person can be said to be flourishing if they perceive that their life is going well; (3) flourishing is a combination of feeling good (emotional well-being) and functioning effectively (psychological and social well-being); (4) measurement of flourishing is currently based on self-report and is therefore a subjective measure of well-being (for a review of the different theoretical, conceptual, and operational definitions of flourishing, see Hone et al⁹).

A growing body of evidence indicates the desirable correlates of flourishing¹³ and the individual and societal risks associated with its absence^{14–17} making the epidemiology of flourishing an important research focus. For example, Keyes’¹⁵ study using a representative sample of US adults showed flourishing to be associated with fewer missed or reduced working days, less perceived helplessness, fewer health limitations, and greater perceived resilience and intimacy. In another study, flourishing students reported less procrastination and higher self-control and higher grades.¹⁸ Nevertheless, the literature concerning employee flourishing is scant. Keyes and Grzywacz¹⁹ indicated that flourishing employees demonstrated higher levels of work-related productivity, put greater thought and effort into their work, reported less missed work days and less reduced days, fewer work injuries, and lower levels of health care costs. Kern and colleagues²⁰ suggested flourishing predicted life satisfaction, physical health, job satisfaction, and organizational commitment among Australian school staff. Diedericks and Rothmann’s²¹ study showed that flourishing was strongly related to job satisfaction, which in turn had a moderate effect on their organizational commitment and a strong effect on turnover intention, among a sample of South African IT workers, thereby suggesting that well-being promotion benefits not just the individual but also the organization.

Using the Sovereign Wellbeing Index (SWI),²² a large nationally representative adult sample, this study therefore aimed at (1) examining the impact of employment status on well-being; (2) estimating the prevalence of flourishing among New Zealand workers; and (3) investigating associations between flourishing and lifestyle behaviors, physical health, psychosocial, and work-related indicators.

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STUDY POPULATION AND METHODS

Data Source

Data were obtained from round 1 of the SWI,²³ an online survey containing a large range of well-being, health, lifestyle, work-related, and sociodemographic variables ($n = 324$). The full questionnaire can be viewed at <http://www.mywellbeing.co.nz/mw/default.html>. The New Zealand office of TNS Global, an international market research company, was contracted to undertake recruitment and data collection from one of the largest research panels in New Zealand (Smile City). A total of 38,439 invitations were sent to a random selection of eligible panel of approximately 400,000 members over three rounds (September to October 2012), with a response rate of 32% and a completion rate of 26% ($n = 9962$). Sample characteristics indicating alignment with the 2006 New Zealand Census suggested the sample to be nationally representative (every 5 years Statistics New Zealand makes an official count of the population in New Zealand, see <http://www.stats.govt.nz/Census/about-about-census.aspx>). All panel members aged older than 18 years were eligible, and no further exclusion criteria were applied. Largely based on round 6 of the European Social Survey (ESS) Personal and Social Wellbeing module,²⁴ the SWI data set enables us to apply the categorical diagnosis of flourishing conceptualized by Huppert and So²⁵ and applied to the European Social Survey. The bulk of the analysis in this study focuses on a reduced sample including just those participants in paid employment ($n = 5549$) and aged from 18 to 83 years ($M = 41.96$, standard deviation [SD] = 13.59). Females comprised 49% of the sample. The majority (74%) were European/other, 13% were Māori/Pacific Islander, and 13% were Asian. Up to 66% were married or living with a partner, 23% were single or never married, 10% were permanently separated or divorced, and 1% were widowed. Just under a quarter had been educated to the end of

secondary school, 26% had an apprenticeship, diploma, or trade certificate, and 23% had gone to university. The sample aligned with population parameters from the New Zealand census.²³ Demographic characteristics comparing the full SWI sample and the reduced workers sample are shown in Table 1.

Measures

In Table 2, we list the 28 behavioral, physical health, psychosocial, and work-related measures assessed by the SWI (round 1) and included in our analyses. The survey contains validated psychometric scales, including the ESS, a robust questionnaire used across 26 European countries,²⁵ and questions drawn from various sources including the New Zealand Health Survey.²⁶

Flourishing

Flourishing was diagnosed according to the model conceptualized and tested for establishing prevalence of flourishing among 23 European countries, using round 3 of the ESS data.²⁵ Huppert and So's²⁵ theoretical and conceptual definition of flourishing was designed to mirror the internationally agreed on methodology used in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM),²⁷ as well as the International Classification of Diseases,²⁸ requiring the presence of opposite symptoms to Major Depressive Episode (*Diagnostic and Statistical Manual of Mental Disorders*, 4th revision), Depressive Episode (International Classification of Diseases, 10th revision), and Generalized Anxiety Disorder (terminology common to both systems). Using an expert and lay panel, these researchers identified the opposites of each mental illness symptom producing a list of 10 positive features (competence, emotional stability, engagement, meaning, optimism, positive emotion, positive relationships, resilience, self-esteem, and vitality). Huppert and So²⁵ then tested their conceptual and operational definition of flourishing using the ESS data from a representative

TABLE 1. Demographic Characteristics of the Whole SWI Sample and of Only Workers

| | Male | | Female | | Total | |
|--|---------------------|----------------|---------------------|----------------|---------------------|----------------|
| | Whole Sample, n (%) | Workers, n (%) | Whole Sample, n (%) | Workers, n (%) | Whole Sample, n (%) | Workers, n (%) |
| Age, yrs | | | | | | |
| <30 | 840 (21.0) | 471 (19.7) | 1,296 (29.4) | 654 (28.2) | 2,136 (25.4) | 1,125 (23.9) |
| 30–39 | 681 (17.0) | 537 (22.4) | 843 (19.1) | 519 (22.4) | 1,524 (18.1) | 1,056 (22.4) |
| 40–49 | 683 (17.1) | 524 (21.9) | 784 (17.8) | 494 (21.3) | 1,467 (17.4) | 1,018 (21.6) |
| 50–59 | 715 (17.9) | 523 (21.8) | 648 (14.7) | 400 (17.3) | 1,363 (16.2) | 923 (19.6) |
| >60 | 1,078 (27.0) | 339 (14.2) | 843 (19.0) | 251 (10.8) | 1,921 (22.8) | 590 (12.5) |
| Ethnicity | | | | | | |
| European | 3,415 (75.1) | 1,998 (72.8) | 3,889 (76.0) | 2,037 (75.8) | 7,304 (75.6) | 4,035 (74.3) |
| Maori/Pacific Islander | 538 (11.8) | 307 (11.2) | 751 (14.7) | 375 (13.9) | 1,289 (13.3) | 682 (12.6) |
| Asian | 596 (13.1) | 438 (16.0) | 475 (9.3) | 277 (10.3) | 1,071 (11.1) | 715 (13.2) |
| Marital status | | | | | | |
| Single/never married | 1,218 (26.8) | 614 (22.2) | 1,185 (23.5) | 615 (23.1) | 2,403 (25.1) | 1,229 (22.6) |
| Married/living with partner | 2,817 (61.9) | 1,933 (69.9) | 3,013 (59.8) | 1,676 (62.9) | 5,830 (60.8) | 3,609 (66.4) |
| Divorced/separated | 432 (9.5) | 198 (7.2) | 641 (12.7) | 325 (12.2) | 1,073 (11.2) | 523 (9.6) |
| Widowed | 83 (1.8) | 22 (0.8) | 197 (3.9) | 49 (1.8) | 280 (2.9) | 71 (1.3) |
| Combined household income | | | | | | |
| <\$40,000 | 1,118 (31.4) | 285 (12.7) | 1,311 (35.7) | 411 (20.5) | 2,429 (33.6) | 696 (16.4) |
| \$40,001–\$70,000 | 922 (25.9) | 663 (29.5) | 1,079 (29.4) | 618 (30.9) | 2,001 (27.7) | 1,281 (30.1) |
| \$70,001–\$100,000 | 748 (21.0) | 637 (28.3) | 734 (20.0) | 542 (27.1) | 1,482 (20.5) | 1,179 (27.7) |
| > \$101,000 | 771 (21.7) | 662 (29.5) | 548 (14.9) | 431 (21.5) | 1,319 (18.2) | 1,093 (25.7) |
| Education | | | | | | |
| Finished secondary school | 1,112 (25.2) | 690 (25.3) | 1,456 (30.1) | 749 (28.7) | 2,568 (27.8) | 1,439 (27.0) |
| University entrance/bursary/scholarship | 582 (13.2) | 305 (11.2) | 614 (12.7) | 285 (10.9) | 1,196 (12.9) | 590 (11.1) |
| Apprenticeship, diploma, trade certificate | 1,219 (27.6) | 736 (27.0) | 1,119 (23.1) | 622 (23.9) | 2,338 (25.3) | 1,358 (25.5) |
| Bachelor degree or higher | 818 (18.5) | 607 (22.3) | 959 (19.8) | 607 (23.3) | 1,777 (19.2) | 1,214 (22.8) |
| Postgraduate diploma/degree or higher | 537 (12.2) | 384 (14.1) | 517 (10.7) | 344 (13.2) | 1,054 (11.4) | 728 (13.7) |

TABLE 2. Sovereign Wellbeing Index (Round 1) Lifestyle, Health, and Work-Related Indicators

| Lifestyle Behaviors | Physical Health | Psychosocial | Work-Related |
|---------------------|---------------------------|-----------------------|--------------------|
| Connect | Body mass index | Strengths (awareness) | Hours worked |
| Give | Subjective general health | Strengths (use) | Occupation |
| Take notice | Functional health* | Autonomy | Work–life balance |
| Keep learning | Arthritis | Feeling appreciated | Job satisfaction |
| Be active | Chronic fatigue | Depression | Financial security |
| Smoking | OOS | | |
| Alcohol (frequency) | Back/spinal | | |
| Volunteering | | Migraine | |

*Daily activities hampered by health.
OOS, occupational overuse syndrome.

sample of 43,000 Europeans,²⁹ analyzing responses from the survey’s 10 items most closely corresponding to the identified positive features, plus one-item assessing life satisfaction.²⁵ Exploratory factor analysis revealed the presence of three factors, which they referred to as “positive characteristics” (comprising emotional stability, vitality, optimism, resilience, and self-esteem), “positive functioning” (comprising engagement, competence, meaning, and positive relationships), and “positive appraisal” (comprising life satisfaction and positive emotion). On the basis of factor analysis, inter-item correlations, and data distribution, Huppert and So proposed a categorical diagnosis for flourishing that required a strong endorsement of positive emotion and a strong endorsement of four out of five “positive characteristic” features and three out of four “positive functioning” features (for greater detail on how they categorized a feature as absent or present, see Huppert and So²⁵). This method intentionally mirrors the *Diagnostic and Statistical Manual of Mental Disorders*’s methodology in not requiring the simultaneous presence of all symptoms, but a specified number. Accordingly, flourishing “is the combination of feeling good and functioning effectively.”^{25(p838)} For a full list of indicator items and their individual thresholds, see Appendix 1.

Lifestyle Behaviors

The SWI includes items assessing participation in the *Five Ways to Well-being* (Connect, Give, Take Notice, Keep Learning, and Be Active) identified by the New Economics Foundation as evidence-based behaviors to improve population well-being.³⁰ Connect was assessed with a single item, “How often do you meet socially with friends, relatives or work colleagues?” using a 1 to 7 Likert scale (1 = *never* to 7 = *every day*). Give was assessed using the question “To what extent do you provide help and support to people you are close to when they need it?” using a 0 to 6 Likert scale (0 = *not at all* to 6 = *completely*). Take Notice was assessed using the question “On a typical day, how often do you take notice and appreciate your surroundings?” using a 0 to 10 Likert scale (0 = *never* to 10 = *always*). Keep Learning was assessed using the item “To what extent do you learn new things in life?” using a 0 to 6 Likert scale (0 = *not at all* to 6 = *a great deal*). Be Active was measured using the Lifestyle Physical Activity and Sedentary Scale, an original scale developed for the SWI assessing daily physical activity, transport physical activity, and exercise physical activity. Questions on smoking and alcohol intake were drawn from the New Zealand Health Survey.²⁶ Participation in voluntary work was operationalized by the item “In the past 12 months, how often did you get involved in work for voluntary or charitable organisations?” using a 1 to 6 Likert scale (1 = *at least once a week* to 6 = *never*).

Physical Health

Body mass index was calculated using self-reported height and weight ($weight_{kg}/(height_m)^2$). Scores were classified underweight/

normal (16 to 24.99), overweight (25 to 29.99), and obese 30 or more). Subjective general health was operationalized by the item, “How is your health in general?” (1 = *very good* to 5 = *very bad*) and functional health by the item, “Are you hampered in your daily activities in any way by any longstanding illness, disability, infirmity, or mental health problem?” (1 = *yes a lot* to 3 = *no*). Diagnosis of specific conditions (arthritis, chronic fatigue syndrome, occupational overuse syndrome, back or spinal problems, and migraine headaches) was assessed by the item “In the past six months, have you experienced symptoms from or been diagnosed by a health professional with any of the following conditions?”

Psychosocial

Strengths was operationalized via two questions from the Strengths Knowledge and Strength Use Scales,³¹ “I know my strengths well” using a 1 to 5 Likert scale (1 = *strongly disagree* to 5 = *strongly agree*) and “I always try to use my strengths” using a 1 to 5 Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Autonomy was operationalized by responses to the item, “I feel I am free to decide for myself how to live my life” using a 1 to 5 Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Feeling appreciated was operationalized by the item “To what extent to you feel appreciated by the people you are close to?” using a 0 to 10 Likert scale (0 = *not at all* to 10 = *completely*), and depression was one of the symptoms assessed in the item “In the past six months, have you experienced symptoms from or been diagnosed by a health professional with any of the following conditions?”

Work-Related

The SWI also featured five variables related to work. In addition to work hours and occupation, job satisfaction was operationalized by the item “All things considered, how satisfied are you with your present job?” using a 0 to 10 Likert scale (0 = *extremely dissatisfied* to 10 = *extremely satisfied*). Work–life balance was operationalized by the item, “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?” using a 0 to 10 Likert scale (0 = *extremely dissatisfied* to 10 = *extremely satisfied*). Financial security was operationalized via the item, “Which of these descriptions comes closest to how you feel about your household’s income nowadays?” using a 1 to 4 Likert scale (1 = *living comfortably on present income* to 4 = *finding it very difficult on present income*).

Data Analysis

Data were analyzed using SPSS v22 (IBM SPSS, Armonk, NY), and cases of missing data were excluded pairwise. First, we investigated whether work was good for well-being by creating a new dichotomous variable according to the Huppert and So’s categorical diagnosis described above (see Appendix 1), distinguishing between

flourishing and nonflourishing participants using the entire SWI data set ($n = 9962$). Using cross-tabulation analysis we calculated the prevalence of flourishing among working, notworking, permanently sick/disabled, and retired participants. For each subgroup, 95% confidence intervals (CIs) were calculated to estimate the prevalence of flourishing in the population. A CI is a range within which the true population value is likely (95% of the time) to fall. When the sample size is large, as it is here, the CI is typically narrow and the estimate more precise.

Next, a new sample was created comprising just those participants in paid employment ($n = 5549$) and the above analyses conducted on this reduced sample. Using binary logistic regression we then investigated the association between the dichotomous flourishing variable and the various categorical lifestyle, physical health, psychosocial, and work-related indicators. Unadjusted odds ratios and 95% CIs for each of the 28 independent variables were calculated, followed by “partial” adjustment for sociodemographic variables (sex, age, ethnicity, marital status, combined household income, and education). Analyses confirming the lack of high intercorrelations between demographic variables suggested that there are unlikely to be any meaningful effects of multicollinearity. An odds ratio represents the odds of being categorized as flourishing according to different participant responses. For example, the odds of flourishing for smokers compared with nonsmokers. An odds ratio of more than 1 means the odds of flourishing are greater in the group of interest (nonsmokers) than in the reference group (smokers); an odds ratio of less than 1 means the odds of flourishing are less in the group of interest than in the reference group. A P value less than 0.05 was used to indicate statistical significance. Finally, we conducted a “fully” adjusted logistic regression to investigate which of the Five Ways to Well-being was most strongly associated with flourishing.

RESULTS

Is Work Good for Well-Being?

Applying the Huppert and So's²⁵ categorical diagnosis of flourishing to the full SWI data set confirmed that work is good for well-being up until retirement—25% of those in paid employment were flourishing, compared with 10% of those not working, 9% of those permanently sick/disabled, and 35% of retirees.

Prevalence and Sociodemographic Characteristics of Flourishing Workers

Prevalence rates, population proportions, and unadjusted and adjusted (for sex, age, ethnicity, marital status, combined household income, and education) odds ratios for flourishing workers are shown in Table 3. Adjusting for differences in sex, age, ethnicity, marital status, combined household income, and academic qualifications indicated that sex and ethnicity made no significant difference to the odds of flourishing, but that age, marital status, income, and academic qualifications were significantly associated with flourishing. Flourishing workers were on average more than 5 years older than nonflourishing workers ($M = 46.79$, $SD = 14.37$ vs $M = 41.04$, $SD = 13.33$) and the odds of flourishing increased with age—the odds of flourishing were 1.43 times greater among workers aged 50 to 59 years and 2.78 times greater among those aged older than 60 years than those younger than 30 years. Approaching half (42%) of New Zealand workers aged 60 years and older ($n = 580$) were flourishing (95% CI, 36.4 to 47.0). The odds of flourishing were 1.70 times greater among married workers/those living with a partner than single/never married workers. Respondents with a combined household income between NZ\$70,001 and \$100,000 had 1.31 times the odds of flourishing than those earning less than NZ\$40,000, whereas those with a

combined household income more than NZ\$100,001 had 2.10 times the odds. Of the 1075 respondents in this top bracket of combined household income, just over a third (34%) were flourishing (95% CI, 30.9 to 37.9). Workers educated to postgraduate level had 1.41 times greater odds of flourishing than those educated to high school level. Of the 708 respondents educated to postgraduate level, 30% were flourishing (95% CI, 26.3 to 34.5).

Lifestyle Behaviors

Adjusting for differences in sex, age, ethnicity, marital status, combined household income, and academic qualifications, the odds of flourishing increased with more frequent participation of the Five Ways to Well-being—workers responding that they connected often had 2.33 times greater odds of flourishing than those connecting seldom/sometimes; respondents giving often had 3.77 times greater odds of flourishing than those responding seldom/sometimes; those taking notice often had 4.22 times greater odds of flourishing than those responding that they seldom/sometimes took notice; those learning often had 3.07 times greater odds of flourishing than those responding seldom/sometimes; and often active workers had 1.46 times greater odds of flourishing than those active seldom/sometimes. Of particular note are the high proportions of individuals categorized as flourishing among each of the subgroups responding that they participate “often” in the Five Ways to Well-being—38% (95% CI, 34.3 to 40.9) of those connecting “often”; 32% (95% CI, 30.6 to 34.2) of those giving “often”; 44% (95% CI, 41.1 to 47.1) of those taking notice “often”; 40% (95% CI, 37.2 to 42.4) of those learning “often”; and 35% (95% CI, 29.9 to 39.7) of those being active “often.” Further regression analysis simultaneously adjusting for all six sociodemographic variables and each of the Five Ways to Well-being revealed that four of the five remained significantly associated with flourishing, with the greatest odds coming from Take Notice, closely followed by Keep Learning, and only Be Active was not. For odds ratios from this analysis, see Fig. 1. Volunteering was also significantly related to flourishing independent of sociodemographic variables, with workers getting involved in volunteering or charity work at least once a month having 1.89 greater odds of flourishing than those volunteering least regularly.

Physical Health

Adjusting for differences in sex, age, ethnicity, marital status, combined household income, and academic qualifications, analyses indicated significant associations between flourishing and body mass index, general health, functioning health, arthritis, chronic fatigue syndrome, occupational overuse syndrome, back or spinal pain, and migraines. The odds of flourishing increased with improved general health and functioning—those with “good/very good” health had 8.43 greater odds of flourishing than those with “bad/very bad health”; those reporting that they were not hampered by health in their daily activities had 1.87 greater the odds of flourishing than those who responded their daily activities were hampered by health “a lot.” The impact of poor physical health on respondents’ psychological health is indicated in these results—only 4% (95% CI, 1.2 to 6.6) of those responding that their general health was “bad/very bad” were flourishing ($n = 205$), compared with 31% (95% CI, 29.2 to 32.6) of those responding that their general health was “good/very good” ($n = 3973$). Similarly, only 13% (95% CI, 7.3 to 18.7) of those reporting that their health hampered their daily activities “a lot” ($n = 154$) were flourishing, compared with 29% (95% CI, 26.8 to 30.2) of those reporting that they were not hampered by health in their daily activities ($n = 3897$). Participants without symptoms or a diagnosis of arthritis, chronic fatigue syndrome, occupational overuse syndrome, back/spinal problems, or migraines had 1.45, 2.94, 2.01, 1.62, and 1.67 greater odds of flourishing, respectively, than those experiencing symptoms or diagnosed with each of these conditions.

TABLE 3. Correlates of Flourishing in Adult New Zealand Workers

| | Percentage Participants (n) | | % Population Proportion | Unadjusted Odds Ratio (95% CI) | Adjusted Ratio (95% CI) |
|------------------------------------|-----------------------------|--------------|-------------------------|--------------------------------|-------------------------|
| | Notflourishing | Flourishing | Lower-Upper CI (95%) | | |
| Sociodemographic indicators | | | | | |
| Sex | | | | | |
| Male | 74.4 (2,018) | 25.6 (694) | 23.7–27.5 | 1.00 | 1.00 |
| Female | 74.8 (1,990) | 25.2 (670) | 23.3–27.1 | 0.98 (0.87–1.11) | 1.14 (0.97–1.33) |
| Age, yrs | | | | | |
| <30 | 79.9 (882) | 20.3 (224) | 17.6–23.0 | 1.00 | 1.00 |
| 30–39 | 78.3 (799) | 21.7 (222) | 18.8–24.6 | 1.09 (0.89–1.35) | 0.93 (0.73–1.18) |
| 40–49 | 76.3 (757) | 23.7 (235) | 20.7–26.7 | 1.22* (0.99–1.50) | 1.00 (0.78–1.28) |
| 50–59 | 70.5 (639) | 29.5 (267) | 26.0–33.0* | 1.65* (1.34–2.02) | 1.43* (1.11–1.84) |
| ≥60 | 58.3 (338) | 41.7 (242) | 36.4–47.0* | 2.82* (2.26–3.52) | 2.78* (2.10–3.67) |
| Ethnicity | | | | | |
| Maori/Pacific Island | 74.1 (486) | 25.9 (170) | 22.0–29.8 | 1.00 | 1.00 |
| Asian | 77.5 (524) | 22.5 (152) | 18.9–26.1 | 0.83 (0.65–1.07) | 0.86 (0.62–1.21) |
| European | 74.1 (2,932) | 25.9 (1,026) | 24.3–27.5 | 1.00 (0.83–1.21) | 0.91 (0.72–1.15) |
| Marital | | | | | |
| Not married | 84.2 (1,005) | 15.8 (188) | 13.5–18.1 | 1.00 | 1.00 |
| Married/living with partner | 71.1 (2,494) | 28.9 (1,013) | 27.1–30.7* | 2.17* (1.83–2.58) | 1.70* (1.35–2.15) |
| Separated | 76.5 (391) | 23.5 (120) | 19.3–27.7* | 1.64* (1.27–2.12) | 1.32 (0.95–1.84) |
| Widowed | 73.2 (52) | 26.8 (19) | 14.8–38.8 | 1.95* (1.13–3.38) | 1.07 (0.55–2.08) |
| Income | | | | | |
| ≤\$40k | 81.0 (554) | 19.0 (130) | 15.7–22.3 | 1.00 | 1.00 |
| \$40–70k | 79.2 (994) | 20.8 (261) | 18.3–23.3 | 1.12 (0.89–1.42) | 1.09 (0.84–1.41) |
| \$70–\$100k | 74.2 (856) | 25.8 (297) | 22.9–28.7* | 1.48* (1.17–1.87) | 1.31* (1.00–1.70) |
| ≥ \$100,001 | 65.6 (705) | 34.4 (370) | 30.9–37.9* | 2.24* (1.78–2.81) | 2.10* (1.61–2.74) |
| Academic qualifications | | | | | |
| Secondary | 75.2 (1,058) | 24.8 (348) | 22.2–27.4 | 1.00 | 1.00 |
| UE | 75.8 (435) | 24.2 (139) | 20.2–28.2 | 0.97 (0.78–1.22) | 1.02 (0.77–1.35) |
| App/trade | 76.1 (1,007) | 23.9 (317) | 21.3–26.5 | 0.96 (0.80–1.14) | 1.07 (0.86–1.32) |
| Bachelor | 74.0 (875) | 26.0 (307) | 23.1–28.9 | 1.07 (0.89–1.27) | 1.25 (0.99–1.57) |
| Postgraduate | 69.6 (493) | 30.4 (215) | 26.3–34.5 | 1.33* (1.09–1.62) | 1.41* (1.09–1.82) |
| Lifestyle behaviors | | | | | |
| Connect | | | | | |
| Sometimes/seldom | 78.7 (3,150) | 21.3 (851) | 19.9–22.7 | 1.00 | 1.00 |
| Often | 62.4 (833) | 37.6 (503) | 34.3–40.9* | 2.24* (1.96–2.56) | 2.33* (1.97–2.76) |
| Give | | | | | |
| Sometimes/seldom | 89.6 (1,544) | 10.4 (179) | 8.9–11.9 | 1.00 | 1.00 |
| Often | 67.6 (2,468) | 32.4 (1,182) | 30.6–34.2* | 4.13* (3.49–4.90) | 3.77* (3.07–4.65) |
| Take notice | | | | | |
| Sometimes/seldom | 84.8 (2,948) | 15.2 (527) | 13.9–16.5 | 1.00 | 1.00 |
| Often | 55.9 (1,061) | 44.1 (836) | 41.1–47.1* | 4.41* (3.87–5.02) | 4.22* (3.59–4.97) |
| Keep Learning | | | | | |
| Sometimes/seldom | 85.7 (2,609) | 14.3 (434) | 13.0–15.6 | 1.00 | 1.00 |
| Often | 60.2 (1,407) | 39.8 (930) | 37.2–42.4* | 3.97* (3.49–4.53) | 3.70* (3.14–4.35) |
| Be Active | | | | | |
| Sometimes/seldom | 75.7 (3,634) | 24.3 (1,168) | 22.9–25.7 | 1.00 | 1.00 |
| Often | 65.2 (367) | 34.8 (196) | 29.9–39.7* | 1.66* (1.38–2.00) | 1.46* (1.15–1.84) |
| Smoking | | | | | |
| Smoker | 78.1 (701) | 21.9 (196) | 18.8–25.0 | 1.00 | 1.00 |
| Nonsmoker | 73.8 (3,281) | 26.2 (1,162) | 24.4–27.7 | 1.27* (1.07–1.50) | 1.07 (0.87–1.33) |
| Alcohol consumption | | | | | |
| Do not drink | 74.4 (808) | 25.6 (278) | 22.6–28.2 | 1.00 | 1.00 |
| ≤monthly | 77.5 (1,239) | 22.5 (360) | 20.2–24.8 | 0.84 (0.71–1.01) | 0.84 (0.67–1.05) |
| ≤4x/mo | 73.8 (821) | 26.2 (292) | 23.2–29.2 | 1.03 (0.85–1.25) | 1.02 (0.81–1.30) |
| ≤3x/wk | 73.2 (632) | 26.8 (231) | 23.3–30.3 | 1.06 (0.87–1.30) | 0.81 (0.62–1.05) |
| ≥4x/wk | 71.3 (454) | 28.7 (183) | 24.5–32.9 | 1.17 (0.94–1.46) | 0.92 (0.70–1.22) |
| Volunteering | | | | | |
| Seldom | 79.7 (2,515) | 20.3 (639) | 18.7–21.9 | 1.00 | 1.00 |
| Sometimes | 70.1 (661) | 29.3 (282) | 26.4–33.4* | 1.68* (1.43–1.98) | 1.58* (1.30–1.93) |
| Often | 63.9 (711) | 36.1 (401) | 32.6–39.6* | 2.22* (1.91–2.58) | 1.89* (1.57–2.27) |
| Physical health indicators | | | | | |
| BMI | | | | | |
| Obese | 77.3 (1,039) | 22.7 (305) | 20.2–25.2 | 1.00 | 1.00 |
| Overweight | 70.9 (1,093) | 29.1 (449) | 26.4–31.8* | 1.40* (1.18–1.66) | 1.50* (1.23–1.84) |
| Not overweight | 75.5 (1,202) | 24.5 (389) | 22.1–26.9 | 1.10 (0.93–1.31) | 1.22 (0.98–1.51) |

TABLE 3. (Continued)

| | Percentage Participants (n) | | % Population Proportion | Unadjusted Odds Ratio (95% CI) | Adjusted Ratio (95% CI) |
|-------------------------------------|-----------------------------|--------------|-------------------------|--------------------------------|-------------------------|
| | Notflourishing | Flourishing | Lower-Upper CI (95%) | | |
| General health | | | | | |
| Bad/very bad | 96.1 (197) | 3.9 (8) | 1.2–6.6 | 1.00 | 1.00 |
| Fair | 89.3 (1,060) | 10.7 (127) | 8.8–12.6* | 2.95* (1.42–6.13) | 2.17 (0.97–4.82) |
| Good/v good | 69.1 (2,747) | 30.9 (1,226) | 29.2–32.6* | 10.99* (5.40–22.36) | 8.43* (3.90–18.20) |
| Daily activities hampered by health | | | | | |
| A lot | 87.0 (134) | 13.0 (20) | 7.3–18.7 | 1.00 | 1.00 |
| To some extent | 82.3 (1,015) | 17.7 (219) | 15.4–20.0 | 1.45 (0.88–2.36) | 0.83 (0.47–1.45) |
| Not at all | 71.5 (2,786) | 28.5 (1,111) | 26.8–30.2* | 2.67* (1.66–4.30) | 1.87* (1.09–3.22) |
| Arthritis | | | | | |
| Yes | 76.0 (342) | 24.0 (108) | 19.5–28.5 | 1.00 | 1.00 |
| No | 74.5 (3,674) | 25.5 (1,256) | 24.1–26.9 | 1.08 (0.86–1.36) | 1.45* (1.09–1.92) |
| CFS | | | | | |
| Yes | 91.1 (72) | 8.9 (7) | 2.3–15.5 | 1.00 | 1.00 |
| No | 74.4 (3,944) | 25.6 (1,357) | 24.2–27.0* | 3.54* (1.63–7.71) | 2.94* (1.25–6.94) |
| OOS | | | | | |
| Yes | 84.0 (89) | 16.0 (17) | 8.4–23.6 | 1.00 | 1.00 |
| No | 74.5 (3,927) | 25.5 (1,347) | 24.1–26.9* | 1.80* (1.07–3.03) | 2.01* (1.01–3.99) |
| Back/spinal | | | | | |
| Yes | 81.0 (529) | 19.0 (124) | 15.7–22.3 | 1.00 | 1.00 |
| No | 73.8 (3,487) | 26.2 (1,240) | 24.7–27.7* | 1.52* (1.24–1.86) | 1.62* (1.26–2.07) |
| Migraine | | | | | |
| Yes | 82.9 (335) | 17.1 (79) | 13.3–20.9 | 1.00 | 1.00 |
| No | 73.9 (3,633) | 26.1 (1,285) | 24.7–27.5* | 1.72* (1.35–2.20) | 1.67* (1.24–2.26) |
| Psychosocial indicators | | | | | |
| Strengths (awareness) | | | | | |
| Low | 97.0 (351) | 3.0 (11) | 1.2–4.8 | 1.00 | 1.00 |
| Moderate | 91.2 (999) | 8.8 (96) | 7.0–10.6* | 3.07* (1.62–5.79) | 2.19* (1.07–4.49) |
| High | 68.0 (2,661) | 32.0 (1,255) | 30.2–33.8* | 15.05* (8.23–27.53) | 9.58* (4.87–18.84) |
| Strengths (use) | | | | | |
| Low | 98.0 (296) | 2.0 (6) | 0.4–3.6 | 1.00 | 1.00 |
| Moderate | 93.4 (854) | 6.6 (60) | 4.9–8.3* | 3.47* (1.48–8.11) | 3.22* (1.14–9.10) |
| High | 68.8 (2,862) | 31.2 (1,297) | 29.5–32.9* | 22.36* (9.94–50.30) | 18.13* (6.69–49.16) |
| Autonomy | | | | | |
| Low | 95.6 (645) | 4.4 (30) | 2.8–6.0 | 1.00 | 1.00 |
| Moderate | 90.9 (750) | 9.1 (75) | 7.0–11.2* | 2.15* (1.39–3.33) | 2.16* (1.30–3.59) |
| High | 67.6 (2,621) | 32.4 (1,257) | 30.6–34.2* | 10.31* (7.11–14.96) | 9.97* (6.53–15.23) |
| Feeling appreciated | | | | | |
| Low | 98.1 (610) | 1.9 (12) | 0.8–3.0 | 1.00 | 1.00 |
| Moderate | 85.0 (2,382) | 15.0 (420) | 13.6–16.4* | 8.96* (5.01–16.01) | 5.83* (3.23–10.53) |
| High | 52.1 (1,013) | 47.9 (931) | 44.8–51.0* | 46.72* (26.20–83.29) | 29.32* (16.28–52.79) |
| Depression | | | | | |
| Yes | 95.2 (434) | 4.8 (22) | 2.8–6.8 | 1.00 | 1.00 |
| No | 72.7 (3,582) | 27.3 (1,342) | 25.8–28.8* | 7.39* (4.79–11.40) | 7.21* (4.32–12.05) |
| Work-related indicators | | | | | |
| Hours worked | | | | | |
| <30/wk | 75.1 (846) | 24.9 (280) | 22.0–27.8 | 1.00 | 1.00 |
| 30–50/wk | 75.2 (2,700) | 24.8 (889) | 23.2–26.4 | 1.00 (0.85–1.16) | 0.86 (0.70–1.06) |
| >50/wk | 72.2 (242) | 27.8 (93) | 22.2–33.4 | 1.16 (0.88–1.53) | 0.92 (0.65–1.30) |
| Occupation | | | | | |
| Laborer | 80.7 (276) | 19.3 (66) | 14.6–24.0 | 1.00 | 1.00 |
| Machine op | 78.5 (150) | 21.5 (41) | 14.9–28.1 | 1.14 (0.74–1.77) | 1.00 (0.59–1.71) |
| Sales | 81.2 (362) | 18.8 (84) | 14.8–22.8 | 0.97 (0.68–1.39) | 0.79 (0.51–1.24) |
| Clerical/admin | 75.9 (600) | 24.1 (191) | 20.7–27.5 | 1.33 (0.97–1.82) | 1.02 (0.68–1.52) |
| Community/ | | | | | |
| personal service | 75.0 (156) | 25.0 (52) | 18.2–31.8 | 1.39 (0.92–2.11) | 1.00 (0.60–1.65) |
| Technical/trade | 77.6 (349) | 22.4 (101) | 18.0–26.8 | 1.21 (0.85–1.71) | 0.93 (0.60–1.43) |
| Professional | 71.8 (1,233) | 28.2 (485) | 25.7–30.7* | 1.65* (1.23–2.20) | 1.24 (0.85–1.81) |
| Manager | 68.8 (428) | 31.2 (194) | 26.8–35.6* | 1.90* (1.38–2.60) | 1.42 (0.96–2.12) |
| Work–life balance | | | | | |
| Unsatisfied | 92.0 (1,113) | 8.0 (97) | 6.4–9.6 | 1.00 | 1.00 |
| Moderately | 79.7 (1,884) | 20.3 (479) | 18.5–22.1* | 2.92* (2.32–3.67) | 2.95* (2.23–3.91) |
| Highly satisfied | 54.3 (835) | 45.7 (703) | 42.3–49.1* | 9.66* (7.67–12.16) | 10.02* (7.56–13.28) |
| Job satisfaction | | | | | |
| Not high | 85.9 (2,771) | 14.1 (456) | 12.8–15.4 | 1.00 | 1.00 |
| High | 56.4 (1,063) | 43.6 (823) | 40.6–46.6* | 4.71* (4.11–5.38) | 4.63* (3.92–5.47) |
| Financial security | | | | | |

TABLE 3. (Continued)

| | Percentage Participants (n) | | % Population Proportion | Unadjusted Odds Ratio (95% CI) | Adjusted Ratio (95% CI) |
|------------|-----------------------------|--------------|-------------------------|--------------------------------|-------------------------|
| | Notflourishing | Flourishing | Lower-Upper CI (95%) | | |
| Not coping | 89.5 (1,215) | 10.5 (142) | 8.8–12.2 | 1.00 | 1.00 |
| Coping | 69.3 (2,733) | 30.7 (1,202) | 29.0–32.4* | 3.7* (3.13–4.54) | 3.74* (2.95–4.76) |

*Adjusted for demographic factors (sex, age, ethnicity, marital status, combined household income, and academic qualifications). Significantly different from reference group (P < 0.05).

BMI, body mass index; CFS, Chronic Fatigue Syndrome; CI, confidence interval; OOS, occupational overuse syndrome; UE, University Entrance.

Psychosocial

Adjusting for differences in sex, age, ethnicity, marital status, combined household income, and academic qualifications, analyses indicated significant associations between flourishing and strengths awareness and strengths use, autonomy, feeling appreciated, and depression. Workers reporting moderate and high awareness of strengths had 2.19 and 9.58 greater odds of flourishing than those with low strengths awareness. Those reporting moderate and high strengths use had 3.22 and 18.13 greater odds of flourishing than those reporting they used their strengths least. Workers reporting moderate or high autonomy had 2.16 and 9.97 greater odds of flourishing than those reporting the least autonomy. Workers that felt moderately or highly appreciated by people they are close to had 5.83 and 29.32 greater odds of flourishing than those feeling least appreciated. Of those respondents reporting feeling highly appreciated almost half (48%; 95% CI, 44.8 to 51.0) were categorized as flourishing. Finally, those without depression/bipolar symptoms or diagnosis had 7.21 greater odds of flourishing than those with depression/bipolar symptoms or diagnosis.

Work-Related

Adjusting for differences in sex, age, ethnicity, marital status, combined household income, and academic qualifications, analyses negated associations between flourishing and occupation. The odds of flourishing increased with reports of work–life balance—those “moderately” and “highly satisfied” with their work–life balance had 2.95 and 10.02 greater odds of flourishing than those “unsatisfied” with work–life balance. Workers expressing high job satisfaction had 4.63 greater odds of flourishing than other workers. Those reporting financial security had 3.74 greater the odds of flourishing than those reporting they were not coping on present income. Just over a quarter of the sample (26%) reported that they were not coping on present income (n = 1353) and just 11% of these were flourishing (95% CI, 8.8 to 12.2).

DISCUSSION

This study calculated, for the first time, the prevalence of flourishing among a large sample of adult New Zealanders in paid employment. Although the traditional focus on the epidemiology of

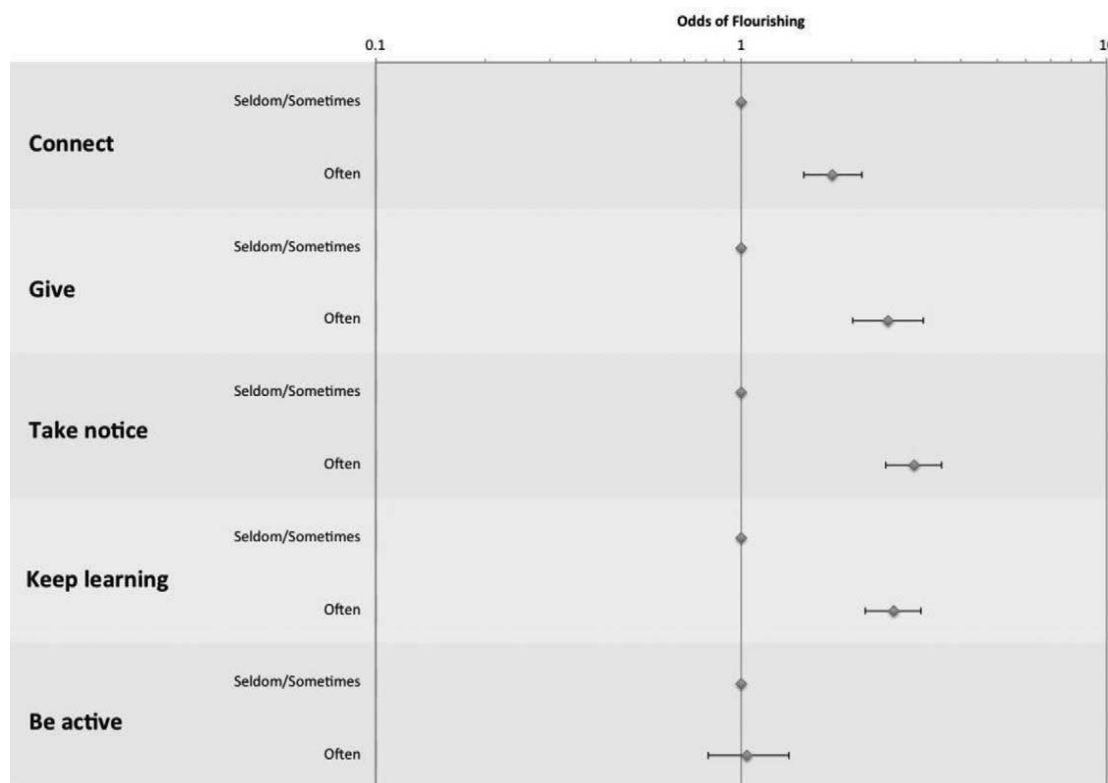


FIGURE 1. Odds of flourishing based on the Five Ways to Well-being (adjusted for six sociodemographic variables and each of the Five Ways to Well-being).

employee stress, anxiety, depression, and burnout has yielded important evidence, it does not provide a complete picture of employee well-being. Keyes¹⁴ research indicates that mental illness and mental health, while highly correlated, belong to separate continua prompting him and others to suggest that treatment and prevention of the former will not necessarily result in greater prevalence of well-being.^{14,32} Kern et al's²⁰ recent pilot study showing that flourishing predicted positive workplace outcomes independent of negative emotion supports our belief that calculating the prevalence and characteristics of employee flourishing using a nationally representative sample was a worthy research goal.

Having established that working is good for well-being (with one in four New Zealanders in paid employment diagnosed as flourishing compared with 10% of those not working, 9% of those permanently sick/disabled), we investigated the lifestyle, physical health, psychosocial, and work-related indicators associated with flourishing among workers. In this study, being older and married, reporting greater income, financial security, physical health, autonomy, strengths awareness and use, work-life balance, job satisfaction, greater participation in the Five Ways to Well-being and volunteering, and feeling more appreciated by others were all positively associated with worker flourishing.

Below we detail the most noteworthy of our findings for each of the independent variable categories (lifestyle, physical, psychosocial, and work-related indicators) in relation to existing evidence and suggest possible implications for employers and policy makers.

Among the lifestyle indicators, the close association between flourishing and the New Economics Foundation's Five Ways to Well-being adds to the existing evidence indicating the importance of these actions for the prevention of common mental health disorders and the promotion of happiness (for a comprehensive review of the evidence supporting each of the Five Ways to Well-being, see Aked et al³⁰). This study is the first of which we are aware to provide empirical evidence that all five ways are significantly associated with worker flourishing, independent of sociodemographic differences. This is an important finding, particularly in light of the Mental Health Foundation New Zealand's recent national Five Ways to Well-being campaign, depicted in Fig. 2,³³ which was disseminated across various organizations.

In view of the finding that Take Notice and Keep Learning emerged as significantly associated with the greatest odds of flourishing in the "fully" adjusted regression analysis (ie, independent of differences in sociodemographics and participation in the other Five Ways to Well-being), a suggested area for future research may be to test the effectiveness of mindfulness, gratitude (related to Take Notice), and curiosity (related to Keep Learning) interventions in promoting employee flourishing (for more on

promoting these, see the works of the authors³⁴⁻³⁷). Similarly, we wish to emphasize the importance of providing employees with opportunities to learn new skills at work. Aside from the Five Ways to Well-being, this study indicated that the odds of flourishing increased with the frequency of volunteering, which aligns with the abundant previous research indicating that "when we help others we help ourselves."^{38(p814)} Our findings, along with positive employee feedback around opportunities for volunteering through the workplace, might encourage more companies to adopt this type of philanthropic policy in future. The United Healthcare/Volunteer Match Do Good Live Well Study (an online survey of 4582 American adults) reported that 76% of those employees who volunteered through workplaces felt better about their employer as a result.³⁸

All the physical health indicators were significantly associated with greater odds of flourishing, which accords with existing evidence suggesting a very strong relationship between subjective well-being and self-assessed health^{39,40} and indicates that employers should care about employee health. A growing body of evidence clearly indicates that employers should not just help employees avoid ill-health and accidents through smoking cessation and health and safety programs but have much to benefit from promoting healthy eating, increased physical activity, and reduced time spent sitting. Indeed, a recent diary study showed young adult New Zealanders reported greater flourishing, curiosity, and creativity on days when they ate more fruit and vegetables compared with adults eating less fruit and vegetables.⁴¹ Similarly, another study using the SWI data set indicates that the odds of flourishing were greater among highly active and less sedentary New Zealand adults and lower among those consuming sugary drinks—five to six times a week and frequently experiencing restless sleep.⁴²

All five psychosocial indicators were significantly associated with greater odds of flourishing. Peterson and Seligman⁴³ define character strengths as an ubiquitously recognized subset of personality traits that are morally valued. The strong positive association between strengths awareness and use in this study backs up previous research showing that individuals who use their strengths report greater levels of well-being⁴⁴ and increased progress toward their goals.⁴⁵ Particularly noteworthy is the relatively greater odds associated with strengths use compared with strengths awareness, supporting Seligman et al's⁴⁶ earlier trial reporting strengths use increased happiness and decreased depressive symptoms at 6 months posttest, whereas participants in the strengths awareness condition only showed an effect at immediate posttest. On the basis of these findings, we suggest that employers tailor job specifications match the strengths and skills of their employees, recognize and praise employee's strengths, and endeavor to create career pro-



FIGURE 2. Mental Health Foundation New Zealand's national promotion campaign using Five Ways to Well-being.

gression pathways based on identified strengths. With this in mind, we applaud research testing the efficacy of programs designed to promote employee strengths in workplace settings.^{47,48}

Looking at the other psychosocial indicators, previous studies have linked high autonomy with happiness at work⁴⁹ and greater job satisfaction,^{50,51} but this study is the first of which we are aware to explore the relationship between autonomy and worker flourishing. We found workers reporting high autonomy had 9.97 greater odds of flourishing than those reporting low autonomy. This finding accords with Self-Determination Theory, which posits that autonomy is one of three basic psychological needs and that well-being comes from satisfying these basic needs.⁵² With this in mind, we recommend managers endeavor to foster trusting relationships between themselves and their staff, giving staff greater control over decision making and the way they organize their work, as well as enabling them to suggest their own ideas. Robertson and Cooper's¹¹ research supports the importance of fostering autonomy in the workplace, rating "control" as one of their six essentials for workplace well-being. Finally among psychosocial indicators, the finding that workers who felt highly appreciated by people they are close to had 29.32 greater odds of flourishing than those feeling least appreciated (and the fact that almost half of those feeling highly appreciated were flourishing) highlights the importance of regular and positive employee feedback. With this in mind, we suggest that employers may consider communication training a worthy investment, implementing strategies aimed at making people feel value such as Active Constructive Responding.⁵³

Looking at the work-related indicators in this study, it is interesting to note two conflicting findings. First, the odds of flourishing increased with reports of work-life balance, so that those "highly satisfied" with their work-life balance had 10.02 greater odds of flourishing than those "unsatisfied" with work-life balance; and second, this study found no significant association between work hours and flourishing. It is hard to know what to make of this finding, except it sits against a backdrop of previous conflicting findings on these two variables (for a review of the evidence, see Jeffrey et al'). "We can see from this research that there is no 'standard' number of working hours per week that will enable employees to achieve a good work-life balance, though a good starting point seems to be around what we view as conventional full-time hours without overtime," concludes Jeffrey et al.^{1(p21)} The fact that the majority worked between 30 and 50 hours (71%), we therefore take as encouraging. Similarly noteworthy is the fact that adjusting for sociodemographic differences negated any association between occupation and flourishing. In other words, once demographic differences are removed there are no greater odds of flourishing among any of the eight different job categories covered in the SWI.

The final finding worthy of note concerns financial security, where those coping on present income had 3.74 greater the odds of flourishing than those not coping on present income. Just over a quarter of the sample (26%) reported they were not coping on present income ($n = 1353$), of which 11% of were flourishing. These are important statistics for policy makers to consider.

In summary, we identified four demographic subgroups with greater odds of flourishing, namely, older workers, married workers, those educated to postgraduate level, and those with higher combined household incomes. Although the cross-sectional study design prevents us from making causal predictions, our results demonstrated significant associations between flourishing and the Five Ways to Well-being, volunteering, physical health, strengths awareness, strengths use, autonomy, feeling appreciated, work-life balance, and job satisfaction. Importantly, these are all modifiable protective factors, which, on the strength of epidemiological evidence like our own, we hope may inform targeted employee well-being intervention programs in future. A number of studies already

exist showing positive effects on employee flourishing from such workplace programs.^{35,48,54,55} Longitudinal research is now required to determine the sustained intervention effect and information pertinent to the wide-scale dissemination of such programs.

Although several researchers have touched on the importance of investigating the characteristics and correlates of employee flourishing,^{20,56-58} only three previous studies have specifically investigated the relationship between flourishing and workplace outcomes.¹⁹⁻²¹ Understanding the determinants of flourishing in New Zealand workers is essential not just for their own personal health but also for the optimal functioning and consequent productive capacity of the New Zealand workforce. It is therefore our hope that this study demonstrates to the fields of organizational behavior and Positive Organizational Behavior the value of considering flourishing as a broader outcome indicator beyond their current focus on engagement, job satisfaction, and positive/negative affect balance. Definitions of employee well-being must go beyond the simple absence of disorders and include features such as competence, mastery, autonomy, independence, aspiration, and self-esteem.^{59(p225)}

Limitations

This study has several limitations. First, considering the presence of a large number of independent variables we may expect to find some significant associations by chance alone. Although we did consider focusing on one or two variables, such as the Five Ways to Well-being or strengths, the opportunity to explore a broader range of variables using a nationally representative sample encouraged us of the merits of the study.

Second, the cross-sectional study design prevents us from making causal conclusions—while our findings indicate the behavioral, physical, psychosocial, and work-related indicators that are related to greater odds of being categorized as flourishing, we cannot be sure that these indicators cause flourishing or vice versa. The longitudinal design of the SWI (two more survey rounds are due in November 2014 and November 2016) affords us the opportunity to make longitudinal comparisons over time.

Third, we acknowledge the limitations of the work-related variables included in this study. Although we understand the importance of using context-specific measures of well-being (eg, positive affect at work or engagement at work) "to capture the subtleties, complexities and variation of employees' cognitive and affective experiences at work,"^{47(p446)} the SWI includes no such data.

Fourth, several theorists suggest that well-being is best characterized as a profile of indicators across the multiple domains of feelings and functioning^{20,60} and that composite measures of flourishing obscure the multidimensionality of theories and measures, making it impossible to know which well-being elements are most beneficial for health and work outcomes. Although we acknowledge this study's limitation in this respect, we argue that epidemiological research using cross-sectional studies such as ours are important for providing prevalence rates via categorical diagnoses.

Fifth, our use of two composite strengths scores prevents us from differentiating between individual strengths. More research is needed to establish the relationship between specific strengths and flourishing, and specific strengths and desirable work-related outcomes.

Finally, all data were gathered from self-report measures, and therefore increasing the possibility that a portion of the observed associations may be attributed to common-method variance.

CONCLUSIONS

Despite a growing recognition of the key role played by psychosocial influences on employee well-being, this insight has

had limited impact on occupational health practice to date, with mainstream employers still focused on the consequences of ill health and sickness-absence.⁶¹ Hence, well-being initiatives, and knowledge, remain limited to lifestyle promotion activities such as smoking cessation, healthy eating, and physical activity programs. This in part can be explained by the significant lack of epidemiological evidence concerning the psychosocial influences on well-being, a weakness in the literature we aimed at addressing. This study builds on previous studies' findings that flourishing is an important form of human capital yielding incremental benefits above the mere absence of disease.^{15,18,19,32} Given research shows employees can learn effective strategies for sustainably improving personal well-being,^{35,48,54,62} we hope the above evidence supports the importance of well-being promotion at national policy and corporate level.

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APPENDIX 1. Features of Flourishing, Original ESS Indicator Item and Corresponding SWI Indicator Items, Thresholds and Threshold Frequencies

| Feature | Threshold | Original ESS Indicator Item % of SWI workers above this threshold and categorized as endorsing this feature of flourishing | Selected SWI Indicator Item |
|------------------------|------------------|--|---|
| Competence | ≥4 62% | Most days I feel a sense of accomplishment from what I do (1–5; strongly agree to strongly disagree) | Most days I feel a sense of accomplishment from what I do (1–5: strongly disagree to strongly agree) |
| Emotional stability | ≥2 90% | In the past week, I felt calm and peaceful | In the past week, I felt calm and peaceful |
| Engagement | ≥8 | (1–4; none or almost none of the time—all or almost all of the time) I love learning new things | (1–4; none or almost none of the time—all or almost all of the time) How much of the time would you generally say you are absorbed in what you are doing? |
| Meaning | 32% ≥4 75% | (1–5; strongly agree–strongly disagree) I generally feel that what I do in my life is valuable and worthwhile (1–5; strongly agree–strongly disagree) | (0–10; none of the time-all of the time) I generally feel that what I do in my life is valuable and worthwhile (1–5; strongly disagree–strongly agree) |
| Optimism | ≥4 65% | I am always optimistic about my future (1–5; strongly agree–strongly disagree) | I am always optimistic about my future (1–5; strongly disagree–strongly agree) |
| Positive emotion | ≥8 41% | Taking all things together, how happy would you say you are? (0–10; extremely unhappy-extremely happy) | Taking all things together, how happy would you say you are? (0–10; extremely unhappy-extremely happy) |
| Positive relationships | ≥4 | There are people in my life who really care about me | To what extent do you receive help and support from people you are close to when you need it? |
| Resilience | 69% ≥4 48% | (1–5; strongly agree–strongly disagree) When things go wrong in my life it generally takes me a long time to get back to normal (1–5; strongly agree–strongly disagree) | (0–6; not at all–completely) When things go wrong in my life it generally takes me a long time to get back to normal (1–5; strongly disagree–strongly agree) Reversed scored |
| Self-esteem | ≥4 70% | In general, I feel very positive about myself (1–5; strongly agree–strongly disagree) REV | In general, I feel very positive about myself (1–5; strongly disagree–strongly agree) |
| Vitality | ≥3 42% | In the past week, I had a lot of energy (1–4; none or almost none of the time—all or almost all of the time) | During the past week, you had a lot of energy? (1–4; none or almost none of the time—all or almost all) |