Predicting employee participation in, and satisfaction with, wellness programs:

The role of employee, supervisor, and organizational support

Running Head: Employee wellness programs

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Sources of Funding:

None.

Conflict of Interest:

None declared.

Abstract

Objective: To examine the role of employee, supervisor, and organizational support in the prediction of employee participation in wellness programs. **Methods:** Data were collected at two time points (T1 and T2) from 194 Australian employees. **Results:** Hierarchical binary logistic regressions revealed that higher levels of employee and supervisor support for wellness at T1 each predicted T2 participation, and high supervisor support was more effective when organizational support was high and did not compensate for when organizational support was low. Employees with higher perceptions of T1 poor general health had a lower likelihood of T2 participation, and higher levels of T1 supervisor support was a further deterrent to participation. **Conclusions:** Different sources of support for wellness predict employee attendance in wellness programs and it is important to ensure that supervisor and organizational support are aligned.

Keywords: workplace wellness programs, supervisor support, organizational support, employee health, evaluations

Clinical Significance

High employee and supervisor support for wellness each predicted participation, and high supervisor support was more effective when organizational support was high and did not compensate for when organizational support was low. It is important to ensure that supervisor and organizational support are aligned in order to encourage employee participation.

With the rise in organizations making wellness programs available to their workforce, the issue of employee participation in such initiatives has gained attention in the literature. From a search in the databases Scopus, Web of Science, and EBSCOhost using the search terms 'wellness program' AND 'participation' in title, abstract or keywords, a total of 291 articles were identified from 1980-2020, after removing duplicates across the three searches. The trend of publication on this topic, albeit with some fluctuations, shows an increase over time, as depicted in Figure 1. One topic of investigation has been the factors that *predict* employee participation in wellness programs and, in reviewing this literature, three broad themes emerge that reflect either the employee (e.g., demographic and sociodemographic characteristics; prior health status; job attitudes such as job satisfaction), the organization (e.g., leader and supervisor support for wellness), or the inherent nature of the wellness program (e.g., intrinsic and extrinsic rewards offered; required time commitment; costs and benefits) and its design features (e.g., location; convenience; comprehensiveness; program length; learning methods and modalities).

In the present research, our *first aim* is to focus on two of the aforementioned sets of predictors: employees' prior health status and their own support for health, as well as support for wellness from their immediate supervisor and the broader organization. Of particular interest is the revelation that healthier workers tend to participate more in wellness programs.[1,2] Further, Kilpatrick, Blizzard, Sanderson, Teale, and Venn[3,4] demonstrated that health barriers prevent employees from participating in wellness programs. Such findings are in spite of the intuitive view that employees with more to gain (i.e., in poorer health) would be more inclined to avail themselves of such opportunities. Such a phenomenon could be due to perceived social costs (i.e., stigmatization and other threats to self-esteem) that such individuals might anticipate, preventing them from seeking help for their health in a work context (see Drach-Zahavy[5]). Thus, in the absence of such internal resources, we argue that employee perceptions of external resources, in the form of line manager or supervisor support for wellness,[6-8] and broader organizational support for wellness,[6,8,9] are needed in order to encourage individuals with poorer health to participate in their organization's wellness program offerings.

Our *second aim* is motivated by the observation that the predictors of employees' post-participation reactions to and appraisals of wellness programs have received scant attention. Indeed, the human resource management (HRM) literature has a long tradition of evaluating its programs (e.g., training and development) according to a range of different evaluation frameworks, such as the models by Kirkpatrick,[10] Kraiger, Ford, and Salas,[11] and Holton, Bates, Noe, and Ruona.[12] Such frameworks make a distinction between initial affective reactions (or satisfaction), knowledge acquisition and learning, and subsequent behavior change (or transfer of learning), and measure both training evaluations and training effectiveness. Favorable evaluations are important for the likelihood of future participation and the spreading of positive recommendations to colleagues about the organization's wellness program, as well as better adherence to health goals and achievement of health outcomes. We located just one paper that focused on antecedents (and also consequences) associated with participants' satisfaction with a comprehensive wellness program.[13] Positive antecedents included being female and older, working in certain industries, being in the program for longer, and higher incentive amounts. Coaching modalities (i.e., telephone coaching) also affected satisfaction. Importantly, satisfaction was associated with sustained program participation and achievement of health goals.

Yet, apart from these program features, there is a lack of knowledge concerning the factors associated with favorable wellness program evaluations in relation to employee, supervisor, and organizational support for wellness. For example, in the broader HRM literature, employee characteristics, such as pre-training motivation and confidence, have been investigated as predictors of training reactions, learning, behaviors, and long-term organizational benefits[14] and supervisor support for training has been shown to predict better employee post-training motivation to learn and motivation to transfer learning.[15]

Moreover, the influence of an employee's health status on their responses and reactions to wellness programs has received limited research attention. In non-training contexts, Holman and Wall[16] showed that psychological strain has the potential to inhibit learning outcomes, such as skill-related confidence and utilization. Taris and Feij[17] also demonstrated that poor psychological health, as measured with the General Health Questionnaire (GHQ), predicted less willingness to adopt new behavioral patterns in a sample of newcomer employees. As reviewed by Holman and Wall,[16] anxiety is thought to interfere with information processing and experimentation with new ideas, whereas depression is associated with low confidence and motivation, as well as the avoidance of challenges.

Many of the studies investigating wellness programs tend to focus on distinct offerings, structured programs and activities with a firm start-and-end date that facilitate pre- and post-evaluation of subsequent employee health outcomes.[9] In practice, however, it is common for organizations to provide ongoing wellness programs that include a suite of service offerings from which employees can pick and choose on an as-needs basis. This longer-term approach is designed to create a culture of health and wellness beyond explicit monitoring and evaluation of employee short-term health outcomes. It is acknowledged that there are studies that examine long-term wellness programs. For example, Äikäs and

colleagues[18] investigated an 8-year program, made up of 76 services, seven annual events, and three health risk assessments, and the above-mentioned wellness program evaluated by Ovbiosa-Akinbosoye and Long[13] spanned four years. There also are studies that examine the 'comprehensiveness' of wellness programs as a feature that predicts participation and effectiveness (e.g., Batorsky, Van Stolk, & Liu;[19] Kilpatrick et al.;[3,4] see also Parks & Steelman,[20] for a meta-analysis). However, such studies still focus on defined activities, whereas for our purposes, we focus on employees' utilization of wellness programs, irrespective of the content, purpose, and comprehensiveness of the wellness activities on offer.

The two main aims of the present research can be summarized according to the following seven sets of hypotheses (see Table 1). First, to examine the extent to which employee, supervisor, and organizational support for wellness (assessed at T1) are conducive to participation in wellness programs three months later, as assessed at T2 (Hypotheses 1a, b, c). Second, to examine the extent to which these three T1 support for wellness variables lessen the anticipated negative association between T1 poor health status and T2 participation (Hypotheses 2a, b, c). Third, to examine the 2-way interactive (Hypothesis 3a, b, c) and 3-way interactive (Hypothesis 3d) effects of T1 employee, supervisor, and organizational support for wellness in predicting the odds of T2 participation. Fourth, to examine the extent to which T1 employee, supervisor, and organizational support for wellness promote positive evaluations at T2 for employees who utilized the wellness program offerings available to them in the last three months (Hypotheses 4a, b, c), as well as, fifth, the associated 2-way (Hypotheses 5a, b, c) and 3-way (Hypothesis 5d) interactive effects. Sixth and seventh, T1 poor health status (Hypotheses 6a, b, c) and T2 poor health status (Hypotheses 7a, b, c) were investigated for their potential to foster negative evaluations at T2.

METHODS

Sampling Procedure

A sample of Australian employees were recruited through Qualtrics. To be eligible, participants had to be (1) employed (either full-time or part-time) on a permanent or temporary basis and (2) have an ongoing wellness program available in their organization. T1 responses were collected in August 2019. T2 responses were collected three months later (using an anonymous identification code for matching purposes). Respondents received an incentive that was at least the Australian minimum wage requirement. The University Human Research Ethics Committee of Queensland University of Technology approved the research (no: 1900000521).

At T1, 528 responses were received, and 247 responses were received at T2. Data cleaning procedures revealed six cases with inconsistent demographic information across T1 and T2. In addition, there were four cases who, at T1, indicated they were unsure if they had attended any wellness activities. These 10 cases were omitted, leaving 518 at T1 and 237 at T2 (see Table 2).

The demographic profile for the 237 employees who provided data at both time points was compared to the 281 T1 cases who dropped out at T2. Chi-square tests revealed that women were less likely than men to complete T2, $\chi^2 = 3.829$, $df = 1$, $p = .050$. The chi-square test revealed no significant differences between full-time and part-time employees, $\chi^2 = .295$, $df = 1$, $p = .587$, permanent and temporary employment status, $\chi^2 = .039$, $df = 1$, $p = .844$, or supervisor responsibilities, $\chi^2 = .967$, $df = 1$, $p = .325$, on attrition. Independent sample *t*-tests revealed that neither age, $t(452) = -0.769$, $p = .442$, nor tenure, $t(513) = -0.505$, $p = .613$, were significant on attrition.

Sample Size and Characteristics

A further 43 cases were removed from the matched T1-T2 sample because they indicated there had been no wellness program offerings in their organization in the last three months. Thus, the final useable sample consisted of 194 matched T1-T2 responses (see Table 2), and had the following profile based on demographic data as reported at T1: 115 (59.3%) identified as women and 79 (40.7%) identified as men; average age was 46.05 years (SD = 12.67), ranging from 21 to 75 years; 138 were employed on a full-time basis (71.1%) and 56 on a part-time basis (28.9%); 173 were employed on a permanent basis (89.2%) and 21 on a temporary basis (10.8%). On average, participants had worked 10.20 years in their organization (SD = 8.53), with tenure ranging from 0.80 to 42.75 years. Ninety-four (48.5%) respondents had supervisor responsibilities, while 98 (50.5%) did not. Employees represented the full range of industries as classified by The Australian and New Zealand Standard Classification of Occupations (ANZSCO) system (see Table 2). Also shown in Table 2 is the descriptive information for the subsample that participated in a wellness program in the last three months.

Wellness Program Features and Participation

From a list of eight content areas (+ other), respondents indicated the types of initiatives offered in their organization's wellness program (and how many). Based on T2 responses, the most common wellness program feature was mental health and well-being (25.6%). The questionnaire provided respondents with a definition of mental health activities that included formal stress management programs; access to employee assistance programs and counseling services; and seminars, classes, workshops, and training on a range of topics, including: common mental health disorders; time management; interpersonal conflict; organizational change; parenting and maintaining positive family relationships; work-life balance; resilience; mindfulness; and relaxation. The remaining content features, in order of occurrence across the sample, were physical health (23.3%), health assessments (17.5%), nutrition (11.3%), sleep and fatigue (8.3%), financial well-being (8.3%), alcohol management (6.7%), smoking cessation (6.2%), and other (2.6%). Moreover, in relation to the comprehensiveness or breadth of offerings, 25.3% indicated their wellness programs comprised just a single feature, of which the most common initiative was mental health and well-being (38.8%).

Wellness program participation was measured at T2 by asking: "Did you participate in any aspect of your organization's health and wellness program in the last three months?" with options being 'yes', 'no', and 'not offered in the last three months'. The wellness program participation variable was dichotomized, such that 99 (51%) had not participated (coded as 0) and 95 (49%) had participated (coded as 1).

Measures

Control variables

Past participation was measured at T1 with a single item asking respondents if they had ever made use of the wellness program offerings in their organization. Response options were 'yes', 'no', and 'not sure'. Again, this variable was dichotomized, such that 76 (39.2%) had not participated or were unsure and 116 (59.8%) had participated (coded as 1), and 1% missing.

Time pressure was measured at T1 with three items from Cousins et al.[21] asking about unachievable deadlines, unrealistic time pressures, and needing to neglect some tasks due to having too much to do. Response options ranged from 1 (never) to 7 (always).

Support for wellness variables

All three support for wellness variables were measured at T1 on a 7-point rating scale, ranging from 1 (disagree) to 7 (agree). *Employee support* for wellness was measured with four items asking about their commitment to personal health (e.g., It is important to me to reduce workplace risks to my own health). Items were adapted from the individual health-oriented readiness for change scale developed by Mueller, Jenny, and Bauer[22] and the health self-care scale developed by Franke, Felfe, and Pundt.[23] *Supervisor support* for wellness (e.g., My immediate supervisor encourages participation in organizational activities that promote employee health and well-being) and *organizational support* for wellness (e.g., Senior management is committed to employee health and well-being) were each measured with 13 items taken from a range of existing health leadership scales (e.g., Zweber, Henning, & Magley[24]).

Employee poor health status

Poor general health was measured at T1 and T2 using a single item from the perceived physical and mental health items from Moriarty, Zack, and Kobau,[25] which asked: "would you say that in general your health is", as rated from 1 (poor) to 5 (excellent). This item was reverse-coded such that higher scores indicated poorer self-rated general health. Previous studies have found that perceived health is a strong indicator of current and future health.[26,27]

Psychological strain was measured at T1 and T2 using the 12-item version of the GHQ.[28] An example item was: "felt you couldn't overcome your difficulties?" Items were

rated from 1 (never) to 7 (always). The scale consists of both negatively and positively worded items designed to detect mental health problems, including anxiety/depression, loss of confidence, and social dysfunction of a non-clinical nature. Six items were reverse-coded so that higher scores reflected higher psychological strain.

Job burnout was measured at T1 and T2 using the item "I feel burned out from my work" that was rated on a scale ranging from 1 (never or almost never) to 7 (always or almost always). West, Dyrbye, Sloan, and Shanafelt[29] found that this single item provided a good estimation of job burnout.

T2 Wellness program evaluations and outcomes

For the 95 employees who had participated in a wellness program offering in the last three months, the T2 survey directed them to a set of evaluation questions that were informed by the various wellness program benefits identified by Nöhammer, Schusterschitz, and Stummer.[30] All items were rated on a scale ranging from 1 (disagree) to 4 (agree completely).

Wellness program satisfaction was measured with 10 items that were subjected to an exploratory factor analysis (EFA) using principal axis factoring and oblique (Oblimin) rotation to evaluate its multidimensional nature ($n = 89$). The items were highly inter-correlated, but also had some unique contributions (KMO = .805). Furthermore, Bartlett's Test of Sphericity indicated the correlations between items was adequate, $\chi^2(45) = 441.180$, $p < .001$. Although the scree plot displayed three possible factors, the core factors were identified according to eigenvalues. Two factors emerged with an eigenvalue over one (Factor 1 = 5.038; Factor 2 = 1.206), explaining 62.4% of the total variance. One item was removed as it failed to load >.4 on either factor. Five items incorporating cognitive satisfaction (e.g., informative, worthwhile) loaded on the first factor (mean factor loading = .709), while four items reflecting affective satisfaction (e.g., enjoyable, fun) loaded on the second factor (mean factor loading = .718).

Wellness learning was measured with seven items asking respondents to indicate the extent to which their awareness, understanding, strategies, skills, motivation, attitude, and confidence in regard to their health and well-being had improved because of attending the wellness program. EFA results ($n = 93$) using principal axis factoring and oblique (Oblimin) rotation revealed the items were highly inter-correlated, while having some unique contributions (KMO = .861). Bartlett's Test of Sphericity indicated the correlations between items was adequate, $\chi^2(21) = 267.342$, $p < .001$. Although the scree plot displayed two possible factors, only one factor (mean factor loading = .698) emerged with an eigenvalue over one (Factor 1 = 3.941), explaining 56.30% of the total variance.

Wellness behavior change was assessed by asking "What are you doing differently, since participating in your organization's health and wellness program?" and the three items included: paying more attention to my health and well-being; making better decisions about my health and well-being; using strategies to manage my health and well-being.

Wellness benefits was measured using 10 items asking respondents to indicate the health and well-being benefits they have noticed from the changes made, since participating in their organization's health and wellness program. Items reflected feeling more motivated and productive at work; greater sense of control; better at coping and relaxing; better work-life balance; better energy levels. EFA results (n = 94) using principal axis factoring and oblique (Oblimin) rotation revealed the items were highly inter-correlated, while having some unique contributions (KMO = .916). Bartlett's Test of Sphericity indicated the correlations between items was adequate, $\chi^2(45) = 676.258$, $p < .001$. Only one factor (mean factor loading = .779) emerged from the scree plot and with an eigenvalue over one (Factor 1 = 6.466), explaining 64.66% of the total variance, confirming the scale's unidimensional nature.

Relationship improvements was measured with three items asking employees to indicate the relational benefits with their supervisors, colleagues, and family/friends from the changes made since participating in their organization's health and wellness.

Statistical Methods

Table 3 displays descriptive data (means, standard deviations, alphas) and inter-correlations among the focal variables for the matched T1-T2 sample and Table 4 displays descriptive data (means and standard deviations) and inter-correlations for the subsample that participated in a wellness program in the last three months, with the addition of the T2 wellness program evaluation variables. Listwise deletion was used for missing data for the correlations and regressions described in the following sections.

Aim 1—predicting T2 wellness program participation—required two sets of hierarchical binary logistic regressions. The positive main effects of the three T1 support for wellness variables (Hypotheses 1a, b, c), the negative main effects of the three T1 poor health status variables, and the 2-way interaction between T1 poor health status and T1 support for wellness (Hypotheses 2a, b, c) were tested in a series of nine regressions (see Table 5). This approach was taken so as to test the unique effect of each predictor without undue influence from the other predictors. The 2-way interactive (Hypotheses 3a, b, c) and 3-way interactive (Hypothesis 3d) effects of T1 employee, supervisor, and organizational wellness support on T2 participation was assessed in a single regression (table not depicted).

Aim 2—predicting T2 wellness program evaluations—required three different sets of hierarchical multiple regressions. The positive relationships of T1 employee, supervisor, and organizational wellness support on T2 evaluations were tested in 18 regressions (Hypotheses 4a, b, c), one for each support for wellness variable across the six T2 evaluations (see Table 6). The 2-way interactions (Hypotheses 5a, b, c) and 3-way interaction (Hypothesis 5d) among T1 employee, supervisor, and organizational wellness support were tested in a single regression, repeated for each evaluation (table not depicted). The negative relationships of poor general health, psychological strain, and job burnout at T1 (Hypotheses 6a b, c) and T2 (Hypotheses 7a, b, c) on T2 evaluations were tested in a single regression, again one for each

evaluation (see Table 7).

For all analyses, past utilization of wellness programs (T1 past participation) was controlled for at Step 1, because of the premise that past behavior predicts future behavior, with past health-related behavior shown to be correlated with future health-related behavior.[31] In addition, employees' time pressure was treated as a covariate (also entered at Step 1) because this job demand has been shown to promote participation, presumably because such employees have the most to gain (see Drach-Zahavy[5]), but also because it has been shown to act as a logistical barrier to participation.[3,4,32-34] All controls and predictors were centered in order to account for correlations among the predictors, and significant interactions were probed using simple slopes 1 *SD* above and below the mean.

RESULTS

As shown in Table 5, results indicated employee support and supervisor support for wellness each had a significant positive main effect on the odds of employees taking part in their organization's wellness program in the next three months (Hypothesis 1a, b), over and above the significant positive main effects of T1 past participation and T1 time pressure, and regardless of which T1 poor health status variable was in the equation. Organizational support for wellness was not significant (Hypothesis 1c). There was evidence to suggest that T1 poor general health exerted a significant negative main effect on the likelihood of T2 participation, regardless of which support for wellness variable was in the equation, whereas T1 psychological strain and T1 job burnout were not predictive of T2 participation

As shown in Table 5, there was no evidence to suggest that employee support (Hypothesis 2a) and organizational support (Hypothesis 2c) for wellness interacted with T1 poor health status in the prediction of T2 program participation. Just one significant 2-way interaction involving supervisor support met the $p < .05$ threshold: T1 poor general health x T1 supervisor support for wellness showed a significant odds ratio, $B = -.25$, $SE = .11$, $OR = 0.78$, $CI = 0.63, 0.96$, $z = 5.65$, $p < .05$ (see Figure 2). Inconsistent with the nature of the prediction specified in Hypothesis 2b, however, the negative relationship between poor general health and participation was strengthened (rather than weakened) at high supervisor support for wellness, $b = -.74$, $se = .27$, $OR = 1.44$, $p < .01$, and was not significant at low supervisor support for wellness, $b = .07$, $se = .27$, $OR = -1.77$, $p = .80$. Thus, although high supervisor support for wellness was important for encouraging participation for employees with low poor general health, it was detrimental for employees with high poor general health.

There was a significant 2-way interaction of supervisor support x organizational support on the likelihood of T2 participation, $B = .23$, $SE = .09$, $OR = 1.26$, $CI = 1.05, 1.52$, $z = 6.09$, $p < .05$. As shown in Figure 3, consistent with Hypothesis 3c, the positive main effect of supervisor support for wellness on participation was significant at high organizational support for wellness, $b = .86$, $se = .23$, $OR = 2.37$, $p < .001$, and not significant at low organizational support for wellness, $b = .17$, $se = .19$, $OR = 1.19$, $p = .36$. The 3-way interaction among all three types of support for wellness was not associated with the

likelihood of T2 participation (Hypothesis 3d).

The relationships between T1 employee, supervisor, and organizational wellness support and employees' post-participation evaluations are shown in Table 6 (Hypotheses 4a, b, c). Entry of the covariate variables at Step 1 indicated T1 past participation in a wellness program was not associated with any of the T2 evaluations. T1 time pressure had a significant negative association with T2 cognitive satisfaction and T2 affective satisfaction but did not predict the remaining T2 evaluations. T1 employee support for wellness, entered at Step 2, had significant positive associations with all T2 evaluations (Hypothesis 4a). T1 supervisor support for wellness, entered at Step 2, had a significant positive association with wellness behavior change, wellness benefits, and relationship improvements, but not cognitive and affective satisfaction, or wellness learning (Hypothesis 4b). T1 organizational support for wellness, entered at Step 2, had significant positive associations with all of the T2 evaluations (Hypothesis 4c).

The 2-way interactions (Hypotheses 5a, b, c) and 3-way interaction (Hypothesis 5d) among T1 employee, supervisor, and organizational wellness support were tested in six regressions, one for each T2 evaluation. After controlling for the effects of the two covariates (Step 1) and the three supports for wellness (Step 2), Step 3 accounted for a significant amount of variance in T2 wellness learning, $R^2Ch.$ = .08, $FCh.(3, 84) = 2.91$, $p < .05$, revealing that the supervisor support x organizational support interaction was significant, B = .05, SE = .02, CI = 0.01, 0.09, $p < .05$. The positive main effect of supervisor support for wellness on participants' wellness learning was less marked when organizational support was low, b = -.10, $t(87) = -2.07$, $p < .05$, and non-significant when organizational support was high, b = .04, $t(87) = 0.71$, p = .479 (see Figure 4). It is noteworthy that wellness learning was lowest when there was a mismatch between high supervisor and low organizational support.

Step 4 revealed that the T1 employee support x supervisor support x organizational support interaction (Hypothesis 5d) was significant on T2 wellness behavior change, B = -.05, SE = .03, CI = -0.10, -0.00, $p < .05$, and accounted for a significant increment of variance, $R^2Ch.$ = .04, $FCh.(1, 83) = 4.42$, $p < .05$. The positive main effect of employee support on wellness behavior change was significant at high supervisor support, low organizational support, b = .60, $t(85) = 2.43$, $p < .05$, and at low supervisor support, low organizational support, b = .19, $t(85) = 2.06$, $p < .05$. In contrast, the negative relationship between employee support on wellness behavior change was not significant at high supervisor support, high organizational support, b = -.24, $t(85) = -1.60$, p = .113, or at low supervisor support, high organizational support, b = -.10, $t(85) = -0.39$, p = .697, and these two slopes were not statistically different from each other.[35] The high supervisor support x high organizational support slope was statistically different from both the high supervisor support x low organizational support, $t = -2.81$, $p < .01$, CI = -1.42, -.25, and the low supervisor support x low organizational support, $t = -2.35$, $p < .05$, CI = -0.77, -0.07, slopes.

As shown in Step 2 of Table 7, T1 poor general health, psychological strain, and job burnout had no significant associations with the T2 evaluations (Hypotheses 6a, b, c). As

shown in Step 3 of Table 7, T2 psychological strain had a weak negative relationship with T2 cognitive satisfaction, B = -.14, SE = .08, CI = -0.29, 0.02, $p < .10$, and significant negative associations with T2 wellness learning, B = -.29, SE = .08, CI = -0.45, -0.14, $p < .001$, and T2 wellness behavior change, B = -.25, SE = .11, CI = -0.46, -0.04 $p < .05$, supporting Hypothesis 7b. There was no support for T2 poor general health (Hypothesis 7a) and T2 job burnout (Hypothesis 7c).

DISCUSSION

Predicting Wellness Program Participation

Employees' support for wellness emerged as a predictor of their future participation in wellness programs and is in keeping with studies showing those who are motivated or high in readiness for change have greater participation rates.[1] Supervisor support for wellness predicted employee participation, which is line with studies that have shown that having a supervisor against workplace health promotion is a barrier to participation,[33] and also is in line with supervisor support studies conducted in the broader context of employee development and training.[36] The bivariate correlation between organizational support and participation was the weakest of the three support for wellness variables and did not reveal a consistent pattern of results when the covariates (past participation and time pressure) and prior health status were in the equation.

The negative role of an employee's prior poor general health on their odds of future participation was consistent with past studies demonstrating that healthier individuals tend to have greater participation rates.[1,3,2,4] Future participation also was found to be influenced by the joint relationship between prior poor general health and supervisor support for wellness. As would be expected, low poor general health combined with high supervisor support for wellness was the most conducive to participation. However, for employees with high poor general health, having a supervisor supportive of wellness was detrimental to their participation. This finding is in line with the reverse-buffering effect often seen for supervisor support. Indeed, other supervisor support studies focusing on employees with health issues, such as musculoskeletal pain, also show that supportive supervisors inadvertently exacerbate employees' behavioral stress reactions (see Jimmieson & Thorpe[37]). In this respect, employees in poor general health might find a supportive supervisor an unwanted form of support, perhaps because it represents a threat to their sense of self (see Semmer, Jacobshagen, Meier, & Elfering[38]), and therefore resist wellness program attendance.

Our results also speak to those reported by Drach-Zahavy[5] who found that perceived social cost measure (e.g., participating in wellness programs makes you feel inadequate and incompetent) moderated the relationship between the existence of workplace health initiatives and nurses' physical, mental, and general well-being, such that their positive effects were evident only when such costs were perceived as low. An alternative suggestion worth future investigation might be that a supportive supervisor is in fact an effective 'health substitute' for employees who perceive their general health to be poor. It also might be that

the type of support (e.g., instrumental or emotional) shows differential effects that cannot be determined by our global measure of supervisor support for wellness and future research should use measures that make such a distinction.

The joint role of supervisor support and organizational support on participation revealed that, as to be expected, participation rates were highest when supervisor support for wellness and organizational support for wellness both were high. In contrast, the positive main effect of supervisor support was not significant when organizational support was low, suggesting no amount of supervisor support for wellness compensates for the absence of organizational support. This pattern of results is consistent with research showing the importance of broad organizational support in encouraging participation in wellness programs,[6,8,9] but our findings add further insight by demonstrating that supervisor support alone is ineffectual when organizational support is lacking. Given that there is potential for this type of 'mismatched' work environment in terms of wellness support to be quite a common experience for employees, ensuring that supervisors' efforts to encourage employee attendance at wellness programs are backed-up and reinforced by the organization is an important practical recommendation.

A recent experimental vignette conducted by Shi and Gordon[39] showed that incongruence, or 'an imperfection situation', between supervisor support and organizational support resulted in the worse outcomes for psychological contract breach and lower work engagement, which is in keeping with our observation that participation was lowest for the low supervisor support-high organizational support combination (even compared to low-low). Shi and Gordon[39] also showed that not receiving supervisor support was more detrimental than not receiving organizational support, which is consistent with our finding that this mismatched combination also was lower than the high supervisor support-low organizational support combination. Thus, employees are the most disengaged when they know that organizational support exists, but their own immediate supervisor does not demonstrate the same level of support.

The findings for the two control variables in predicting participation are noteworthy. As expected, employees who reported having previously used the wellness program reported having used it again, three months later. Thus, organizations should encourage employees to attend because it encourages a future pattern of behavior. It is acknowledged that our measure of past participation did not include a timeframe, but asked if participants had ever attended a wellness program, so it is difficult to determine if such a 'wellness habit' erodes over time. In regard to time pressure, employees who reported high time pressure had higher participation rates three months later. The direction of this effect lends support for a positive interpretation, such that employees under high time pressure are motivated to make the time to attend to wellness activities because of the potential gains (see Drach-Zahavy[5]), rather than being time poor acting as an obstacle.[3,4,32,33,34] Indeed, Drach-Zahavy[5] found that the positive relationship between the existence of workplace wellness initiatives (irrespective of actual participation) on psychological and general well-being was more evident when job demands were high. Interestingly, the effect was opposite in the prediction of physical health,

suggesting that job demands need to be low for employees to realize the physical health benefits of having wellness programs on offer. We suggest this finding might be because employees need to allocate a greater time commitment in order to partake in physical health activities, but future research examining the moderating role of time pressure would need to also assess actual participation.

Predicting Wellness Program Evaluations

Results demonstrated that, when employees are committed to caring for and improving their health and well-being, they tend to come away with positive evaluations of the wellness program and self-reports of learning and behavior change. In the broader HRM field, previous studies investigating learning and transfer of learning also have found that related concepts to employee support for wellness, such as motivation to learn and needs awareness, are associated with how well knowledge, skills, and abilities are gained.[15,40] The positive main effects of supervisor support for wellness were limited to associations with wellness behavior change, wellness benefits, and relationship improvements, suggesting that supportive supervisors are less important for emotional and learning evaluations but needed for more behavioral changes back in the workplace. Organizational support for wellness was important for all six evaluations, consistent with evidence that organizational support plays an indirect role in transfer of learning in the training literature.[41,42] As a limitation of our research, it is noted that other training studies have shown that peer or collegial support is the most influential type of support,[40,43,44] which was not assessed in our study.

The 2-way interaction between supervisor support and organizational support for wellness was significant for the wellness learning of attendees. As to be expected, wellness learning was highest when both sources of support for wellness were high. However, high supervisor support was found to have a negative impact on wellness learning when organizational support was low, whereas wellness learning remained high and stable across low and high supervisor support when organizational support was high. Thus, organizational support appears to override supervisor support and is important regardless of the level of supervisor support. This outcome speaks to our earlier finding in relation to participation that supervisor support is not sufficient in the absence of organizational support and it seems this specific finding also applies to wellness learning for attendees.

The 3-way interaction between employee, supervisor, and organizational support for wellness was significant on wellness behavior change. Overall, a number of conclusions can be made from this interaction. Both high supervisor and organizational support for wellness are needed in order to compensate for when employee support for their own wellness is low. And furthermore, for such employees, a mismatched combination of having a supportive supervisor in an unsupportive organizational environment is detrimental to their wellness behavior change. Again, this finding extends the earlier result for conflicting sources of supervisor and organizational support on wellness learning. It also is interesting to note that, at high employee support for wellness, supervisor and organizational support for wellness provided no further additional benefits.

We found no evidence to suggest that prior poor general health predicted post-attendance evaluations, and T2 poor general health and T2 job burnout were not significant predictors of the various evaluation indicators we assessed. T2 psychological strain, however, had negative associations with how informative and worthwhile (cognitive evaluations) participants found the program; how confident, aware, and skilled (wellness learning) they felt; and how much they had improved their health and wellness behaviors (wellness behavior change). These results suggest that when employees are under psychological strain, they find wellness programs less useful and are less able to absorb learning and apply learned skills and knowledge. This conclusion echoes previous findings showing psychological strain inhibits learning and skill utilization.[16] It also should be noted that a negative cognitive bias effect might be in operation. According to cognitive models of depression (e.g., Beck[45]), depressed individuals tend to filter out or dismiss the positive aspects of a situation. It is suggested that designers of wellness programs build-in as many opportunities as possible for participants to experience positive emotions, given that positive emotions can help 'undo' negative emotions.[46] The results for the concurrent measures as opposed to the earlier T1 measures reinforces that it is feelings at the time of evaluations that matter.

Limitations

There are a number of methodological limitations that should be noted when evaluating the conclusions drawn from the present research. The significant results could be due to Type 1 error, in light of the multiple tests undertaken to test the hypotheses. The interaction hypotheses, on the whole, received minimal support. The supervisor and organizational wellness support measures had a high correlation, despite the fact that each scale used different items designed to reflect the different scope and responsibilities of the supervisor compared to the organization. All measures were self-report, including the evaluations associated with wellness-related learning and behavior change, and did not include physical or actual objective medical health outcome measures. Although the time-ordered research design is a strength, it was limited to a single 3-month follow-up and does not permit causal interpretations, nor were we able to assess any lasting effects of wellness program evaluations. The fact that our research did not focus on one particular type of wellness program can be construed as a strength, but it is not possible to determine if the specific type and features of the wellness activities on offer influenced the results. Although the diverse sample is a strength, the small sample size suggests caution is warranted when generalizing the results.

Conclusions

To summarize, a number of conclusions can be made in regard to what encourages or discourages future participation in wellness programs and what predicts participants' evaluations of wellness programs. Past participation predicted future participation and being under time pressure also was conducive to participation. Employee and supervisor support for wellness each predicted participation, and supervisor support was more effective when organizational support was high and did not compensate for when organizational support was

low. Employees with lower ratings of their own health were less inclined to attend, and findings point towards the importance of needing to be mindful that supervisor support can further discourage vulnerable employees from making use of wellness program activities.

As for wellness program evaluations, attendees under time pressure expressed cognitive and affective dissatisfaction, suggesting that organizations need to design wellness activities to ensure time-poor employees find it worth their while in terms of immediate usefulness and enjoyment. All three sources of support for wellness resulted in various positive reactions among attendees. But the high supervisor and low organization combination for wellness learning was problematic, as was this mismatched combination for wellness behavior change for employees struggling with their own support for wellness. Thus, consistent vertical messaging across supervisors and organizations is needed in order for employees to achieve their wellness goals after participation in wellness programs. Prior poor health status did not influence evaluations but employees high in psychological strain at the time of the evaluation were more inclined to view the program in a negative light, suggesting that wellness programs need to find the 'satisfaction factor' for anxious and depressed individuals and to ensure extra measures are in place to assist in their wellness-related learning and behavior change.

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Figure Captions

FIGURE 1. Articles published on wellness program participation, 1980-2020.

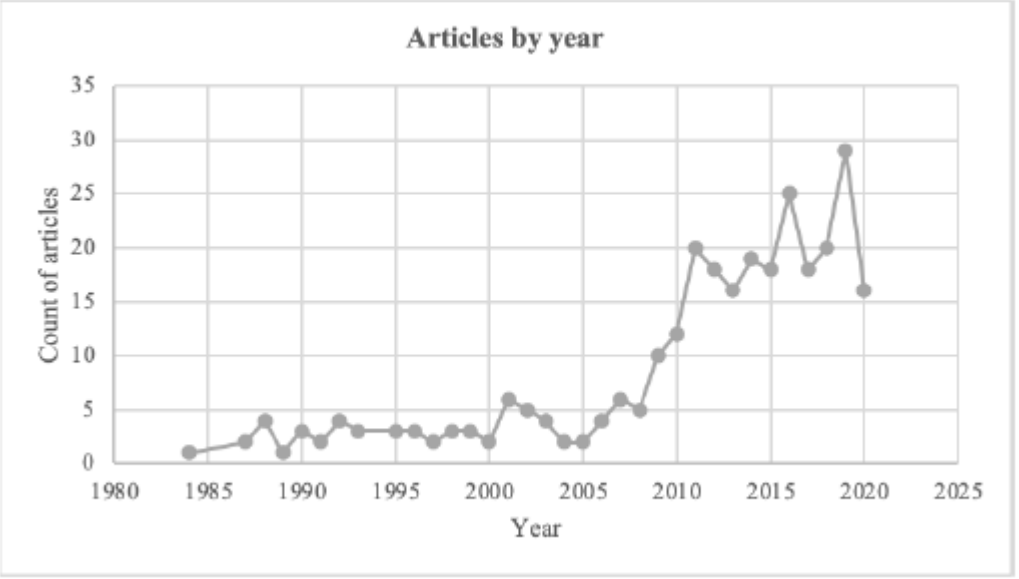

FIGURE 2. Simple slopes for the interactive relationship between T1 perceived poor general heatlh and T1 supervisor support for wellness on T2 participation.

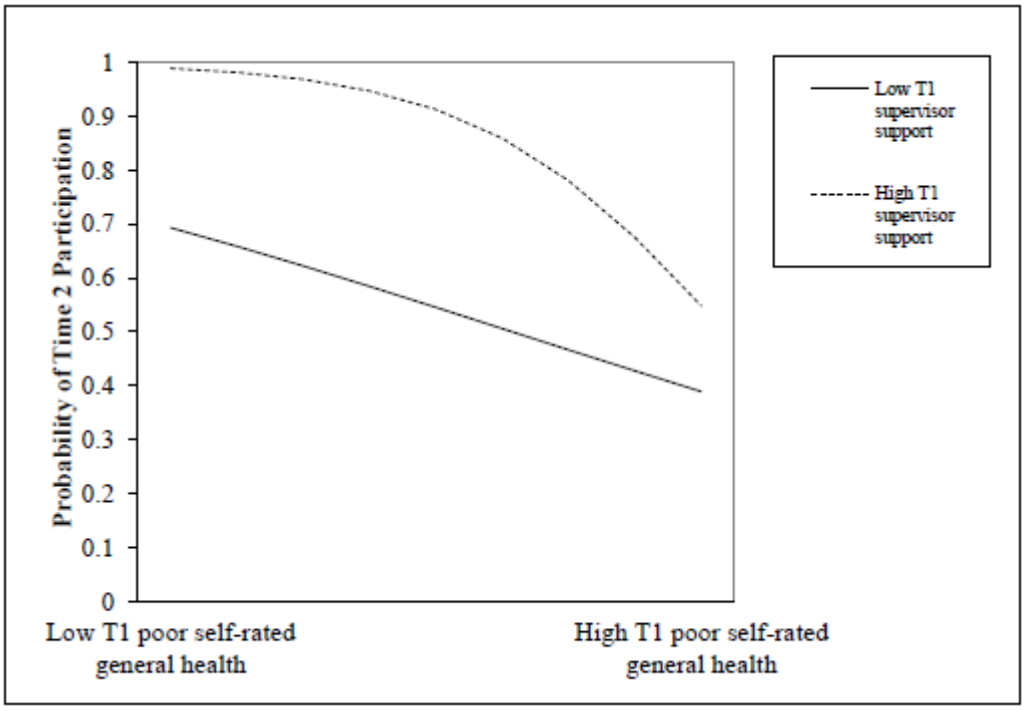

FIGURE 3. Simple slopes for the interactive relationship between T1 supervisor support and T1 organizational support for wellness on T2 participation.

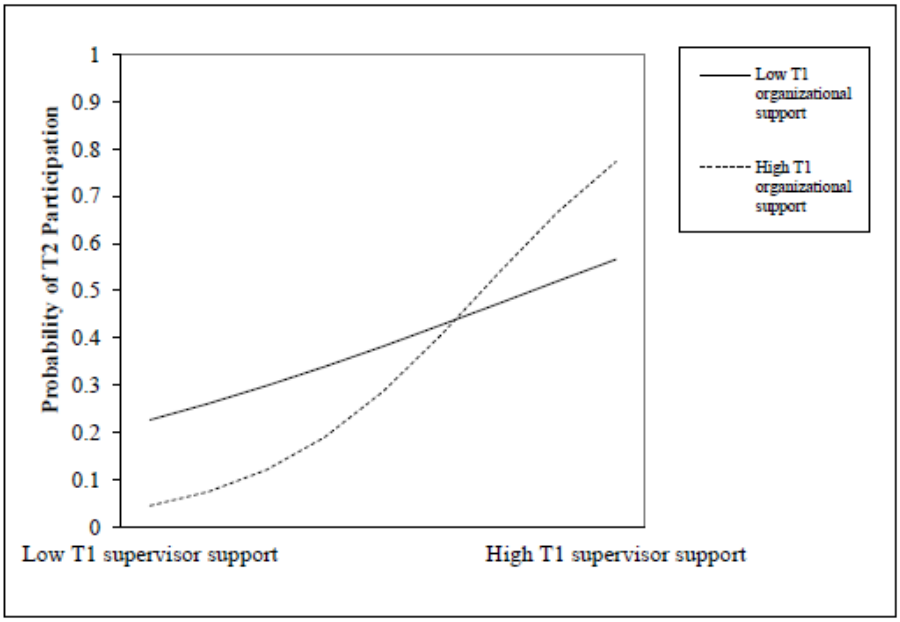

FIGURE 4. Simple slopes for the interactive relationship between T1 supervisor support and T1 organizational support for wellness on T2 wellness learning.

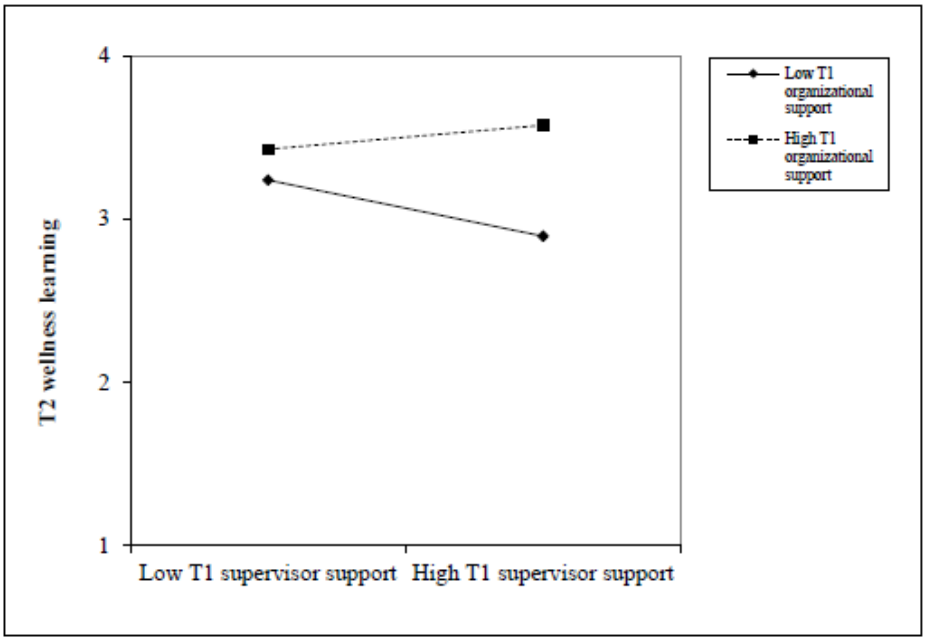

FIGURE 5. Simple slopes for the interactive relationship between T1 employee, supervisor, and organizational support for wellness on T2 wellness behavior change.

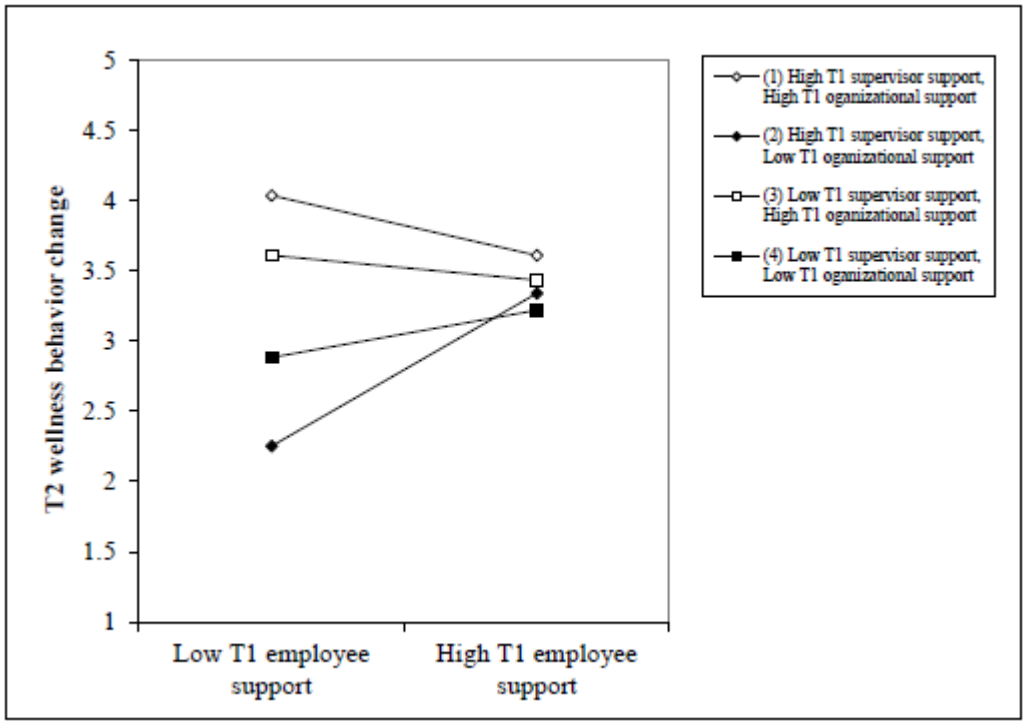

Table 1. Aims and hypotheses

Predicting Employee Participation in Wellness Program Activities (Aim 1) 1. T1 employee (Hypothesis 1a), supervisor (Hypothesis 1b), and organizational support (Hypothesis 1c) for wellness will have positive main effects on the odds of T2 participation. 2. T1 employee (Hypothesis 2a), supervisor (Hypothesis 2b), and organizational support (Hypothesis 2c) for wellness will lessen the anticipated negative association between T1 poor health status (i.e., poor general health; psychological strain; job burnout) and the odds of T2 participation. 3. T1 employee support x T1 supervisor support will predict T2 participation (Hypothesis 3a); T1 employee support x T1 organizational support will predict T2 participation (Hypothesis 3b); T1 supervisor support x T1 organizational support will predict T2 participation (Hypothesis 3c); T1 employee support x T1 supervisor support x T1 organizational support will predict T2 participation (Hypothesis 3d).
Predicting Employee Evaluations of Wellness Program Activities (Aim 2) 4. T1 employee (Hypothesis 4a), supervisor (Hypothesis 4b), and organizational support (Hypothesis 4c) for wellness will have positive main effects on T2 evaluations, as indicated via affective and cognitive satisfaction; wellness learning; wellness behavior change; wellness benefits; relationship improvements. 5. T1 employee support x T1 supervisor support will predict T2 evaluations (Hypothesis 5a); T1 employee support x T1 organizational support will predict T2 evaluations (Hypothesis 5b); T1 supervisor support x T1 organizational support will predict T2 evaluations (Hypothesis 5c); T1 employee support x T1 supervisor support x T1 organizational support will predict T2 evaluations (Hypothesis 5d). 6. T1 poor health status in the form of poor general health (Hypothesis 6a), psychological strain (Hypothesis 6b), and job burnout (Hypothesis 6c) will have negative main effects on T2 evaluations. 7. T2 poor health status in the form of poor general health (Hypothesis 7a), psychological strain (Hypothesis 7b), and job burnout (Hypothesis 7c) will have negative main effects on T2 evaluations.

Table 2. Sample characteristics

Sample demographics	Time 1 (T1) (n = 518)	Time 2 (T2) (n = 237)	No wellness program offered in last 3 months (n = 43)	Final matched T1-T2 sample (n = 194)	Employees who participated in last 3 months (n = 95)
Sex					
Women	60.6% (n = 314)	55.7% (n = 132)	44.2% (n = 19)	59.3% (n = 115)	54.7% (n = 52)
Men	38.6% (n = 200)	44.3% (n = 105)	55.8% (n = 24)	40.7% (n = 79)	45.3% (n = 43)
Age average	46.2[a]	46.7[a]	49.33[a]	46.1[a]	45.1[a]
Tenure average	10.3[a]	11.1[a]	12.1[a]	10.2[a]	10.0[a]
Employment status					
Full-time	69.7% (n = 361)	70.9% (n = 168)	69.8% (n = 30)	71.1% (n = 138)	78.9% (n = 75)
Part-time	30.3% (n = 157)	29.1% (n = 69)	30.2% (n = 13)	28.9% (n = 56)	21.1% (n = 20)
Employment type					
Permanent	90.2% (n = 467)	89.9% (n = 213)	93.0% (n = 40)	89.2% (n = 173)	88.4% (n = 84)
Temporary	9.8% (n = 51)	10.1% (n = 24)	7.0% (n = 3)	10.8% (n = 21)	11.6% (n = 11)
Industry type					
Education and Training	13.1% (n = 68)	11.8% (n = 28)	9.3% (n = 4)	13.4% (n = 26)	11.6% (n = 11)
Healthcare and Social Assistance	10.8% (n = 56)	11.4% (n = 27)	11.6% (n = 5)	8.8% (n = 17)	10.5% (n = 10)
Other	8.7% (n = 45)	8.4% (n = 10)	7.0% (n = 3)	7.2% (n = 14)	6.3% (n = 6)
Retail Trade	8.3% (n = 43)	7.2% (n = 17)	7.0% (n = 3)	7.7% (n = 15)	8.4% (n = 8)
Financial and Insurance Services	8.3% (n = 43)	8.4% (n = 20)	2.3% (n = 1)	10.8% (n = 21)	5.3% (n = 5)
Professional, Scientific, Technical	8.3% (n = 43)	11.0% (n = 26)	18.6% (n = 8)	9.8% (n = 19)	11.6% (n = 11)
Public Administration and Safety	8.1% (n = 42)	8.0% (n = 19)	7.0% (n = 3)	8.2% (n = 16)	8.4% (n = 8)
Administrative and Support Services	6.2% (n = 32)	7.2% (n = 17)	9.3% (n = 4)	6.2% (n = 12)	4.2% (n = 4)
Manufacturing	5.8% (n =	5.9% (n =	7.0% (n = 3)	5.7% (n =	8.4% (n =

	30)	14)		11)	8)
Transport, Postal, Warehousing	4.2% (n = 22)	4.2% (n = 10)	9.3% (n = 4)	4.6% (n = 9)	4.2% (n = 4)
Construction	3.9% (n = 20)	4.2% (n = 10)	0.0% (n = 0)	3.6% (n = 7)	4.2% (n = 4)
Wholesale Trade	2.5% (n = 13)	1.7% (n = 4)	2.3% (n = 1)	1.5% (n = 3)	3.2% (n = 3)
Information and Telecommunications	2.5% (n = 13)	3.0% (n = 7)	0.0% (n = 0)	2.1% (n = 4)	0.0% (n = 0)
Electricity, Gas, Water, Waste	2.1% (n = 11)	1.7% (n = 4)	0.0% (n = 0)	3.1% (n = 6)	5.3% (n = 5)
Mining	1.9% (n = 10)	0.8% (n = 2)	2.3% (n = 1)	1.5% (n = 3)	2.1% (n = 2)
Personal Services	1.9% (n = 10)	1.7% (n = 4)	2.3% (n = 1)	2.1% (n = 4)	2.1% (n = 2)
Agriculture, Forestry, Fishing	1.5% (n = 8)	0.8% (n = 2)	0.0% (n = 0)	1.5% (n = 3)	2.1% (n = 2)
Accommodation and Food Services	1.4% (n = 7)	1.3% (n = 3)	2.3% (n = 1)	1.0% (n = 2)	0.0% (n = 0)
Rental, Hiring, Real Estate Services	0.4% (n = 2)	1.3% (n = 3)	2.3% (n = 1)	0.5% (n = 1)	1.1% (n = 1)
Supervisor responsibilities	47.1% (n	51.1% (n =	53.5% (n =	48.5% (n =	64.2% (n =
Yes	= 244)	121)	23)	94)	61)
No	51.4% (n = 266)	48.9% (n = 116)	41.9% (n = 18)	50.5% (n = 98)	33.7% (n = 32)

Note: a = reported in years.

Table 3. Correlation matrix for final matched sample

Focal variables	Mean (SD)	1	2	3	4	5	6	7	8	9	10	11	12
1 T1 past participation	0.62 (0.49)												
2 T2 participation	0.50 (0.50)	.37***											
3 T1 time pressure	3.33 (1.59)	.26***	.18*	(.93)									
4 T1 employee support	5.16 (1.04)	.16*	.26***	-.10	(.73)								
5 T1 supervisor support	4.62 (1.53)	-.08	.23**	-.12	.37***	(.9							
6 T1 organizational support	4.82 (1.35)	-.02	.15*	-.20*	.47***	.7	(.98)						
7 T1 poor general health	2.73 (0.95)	-.02	-.18*	.22**	-.38***	-.3	-.27***						
8 T2 poor general health	2.70 (0.89)	.04	-.21**	.26***	-.35***	-.2	-.19*	.76***					
9 T1 psychological strain	3.00 (1.14)	.11	.02	.60***	-.38***	-.3	-.33***	.47***	.38***	(.91)			
10 T2 Psychological strain	3.01 (1.02)	.11	.03	.49***	-.34***	-.2	-.31***	.37***	.31***	.76***	(.90)		
11 T1 job burnout	3.49 (1.76)	.18*	.04	.73***	-.19*	-.3	-.31***	.38***	.33***	.70***	.56***		
12 T2 job burnout	3.64 (1.71)	.20**	-.00	.58***	-.26***	-.2	-.30***	.36***	.37***	.69***	.66***	.74***	

Notes. Cronbach's (1951) alpha reliability coefficients appear in the diagonals. n = 171 due to listwise deletion.

T1 past participation and T2 participation coded as 0 (no) and 1 (yes).

***p < .001; **p < .01; *p < .05.

Table 4. Correlations matrix for subset of sample who participated in a wellness program offering in the last three months

Focal variables	Mean (SD)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 T1 past participation	0.80 (0.40)																	
2 T1 time pressure	3.63 (1.58)	.25**	(.93)															
3 T1 employee support	5.42 (0.94)	-.07	-.14	(.69)														
4 T1 supervisor support	4.95 (1.54)	-.28**	-.21†	.40**	(.98)													
5 T1 organizational support	5.01 (1.50)	-.17	-.23*	.40**	.78**	(.9												
6 T1 poor general health	2.56 (1.00)	.11	.27*	-.44**	-.44**	-.3												
7 T2 poor general health	2.52 (0.87)	.20†	.26*	-.35**	-.23*	-.2	.68**											
8 T1 psychological strain	3.02 (1.16)	.15	.72**	-.33**	-.33**	-.2	.48**	.26*	(.91)									
9 T2 psychological strain	3.04 (1.05)	.17	.62**	-.38**	-.31**	-.3	.41**	.29**	.79**	(.90)								
10 T1	3.5	.17	.78**	-.07	-	-.2	.30**	.15	.77**	.65**								

job burnout	6 (1.85)	*		.29**				*	*									
11 T2 job burnout	3.61 (1.76)	.26**	.61***	-.12	-.18	-.2	.28*	.28*	.69***	.67***	.71***							
12 T2 cognitive satisfaction	3.48 (0.47)	.01	-.34**	.31**	.25*	.36	-.05	-.14	-.28**	-.36**	-.26*	-.31**	(.85)					
13 T2 affective satisfaction	3.30 (0.48)	-.08	-.29**	.21†	.21†	.2	.07	.00	-.15	-.24*	-.21†	-.25*	.61***	(.82)				
14 T2 wellness learning	3.36 (0.46)	-.05	-.09	.37**	.21†	.2	.06	.02	-.06	-.30**	-.04	-.12	.55***	.63***	(.87)			
15 T2 wellness behavior change	3.32 (0.60)	-.10	-.08	.27*	.36**	.43	.05	.03	-.09	-.23*	-.06	-.11	.52***	.53***	.82***	(.84)		
16 T2 wellness benefits	3.13 (0.58)	-.17	-.03	.21†	.38**	.40	.01	-.06	.06	-.05	.09	-.00	.30**	.42***	.65***	.70***	(.94)	
17 T2 relationship improvements	3.10 (0.68)	-.05	-.04	.24*	.47**	.42	-.09	-.12	-.03	-.14	.02	-.01	.42***	.41***	.64***	.67***	.79***	(.87)

Notes. Cronbach's (1951) alpha reliability coefficients appear in the diagonals. n = 84 due to listwise deletion.

T1 past participation coded as 0 (no) and 1 (yes).

***p < .001; **p < .01; *p < .05; †p < .10.

Table 5. Summary of binary logistic hierarchical regression analyses predicting T2 wellness program participation

		T2 Wellness Program Participation				
T1 Poor General Health (n = 182-183)		B (SE)	OR	95% CI	z	χ^2(df) Step
Step 1	T1 past participation	1.52 (.35)***	4.59	2.32, 9.06	19.26	31.97(2)***
	T1 time pressure	.21 (.10)*	1.24	1.01, 1.52	4.16	
Step 2	T1 employee support (ES)	.43 (.19)*	1.54	1.07, 2.21	5.33	13.66(2)**
	T1 poor general health (PGH)	-.40 (.20)†	0.67	0.45, 1.00	3.77	
Step 3	PGH × ES	-.29 (.17)†	0.75	0.54, 1.04	3.00	3.00(1)†
Step 1	T1 past participation	1.50 (.35)***	4.46	2.26, 8.79	18.67	31.69(2)***
	T1 time pressure	.22 (.10)*	1.25	1.02, 1.53	4.57	
Step 2	T1 supervisor support (SS)	.31 (.12)**	1.37	1.08, 1.73	6.92	14.37(2)***
	T1 poor general health (PGH)	-.34 (.20)†	0.71	0.48, 1.06	2.82	
Step 3	PGH × SS	-.25 (.11)*	0.78	0.63, 0.96	5.65	5.98(1)*
Step 1	T1 past participation	1.50 (.35)***	4.46	2.26, 8.79	18.67	31.69(2)***
	T1 time pressure	.22 (.10)*	1.25	1.02, 1.53	4.57	
Step 2	T1 organizational support (OS)	.20 (.13)	1.22	0.95, 1.55	2.43	9.55(2)**
	T1 poor general health (PGH)	-.44 (.20)*	0.64	0.44, 0.94	5.10	
Step 3	PGH × OS	-.21 (.12)†	0.81	0.64, 1.03	2.90	3.07(1)†
T1 Psychological Strain (n = 187-189)		B (SE)	OR	95% CI	z	χ^2(df) Step
Step 1	T1 past participation	1.58	4.85	2.47; 9.50	21.16	33.76(2)**

		(.34)***				*
	T1 time pressure	0.21 (.10)*	1.23	1.00; 1.51	4.02	
Step 2	T1 employee support (ES)	.49 (.19)**	1.63	1.12, 2.37	6.61	9.29(2)**
	T1 psychological strain (PS)	-.06 (.21)	0.94	0.62, 1.41	0.10	
Step 3	PS × ES	.01 (.14)	1.01	0.77, 1.34	0.01	0.01(1)
Step 1	T1 past participation	1.59 (.34)***	4.89	2.51, 9.53	21.68	33.85(2)** *
	T1 time pressure	.20 (.10)*	1.23	1.01, 1.50	4.05	
Step 2	T1 supervisor support (SS)	.33 (.12)**	1.40	1.11, 1.75	8.24	10.88(2)**
	T1 psychological strain (PS)	-.13 (.20)	0.88	0.60, 1.29	0.42	
Step 3	PS × SS	-.10 (.09)	0.91	0.76, 1.08	1.26	1.29(1)
Step 1	T1 past participation	1.59 (.34)***	4.89	2.51, 9.53	21.68	33.85(2)** *
	T1 time pressure	.20 (.10)*	4.05	1.01, 1.50	4.05	
Step 2	T1 organizational support (OS)	.22 (.12)†	1.24	0.97, 1.59	3.04	5.18(2)†
	T1 psychological strain (PS)	-.19 (.19)	0.83	0.57, 1.21	0.95	
Step 3	PS × OS	-.03 (.09)	0.97	0.81, 1.16	0.11	0.11(1)

T1 Job Burnout (n = 179-180)		B (SE)	OR	95% CI	z	χ^2(df) Step
Step 1	T1 past participation	1.60 (.35)***	4.96	2.49; 9.87	20.81	29.79(2)** *
	T1 time pressure	.15 (.11)	1.16	0.95; 1.43	2.03	
Step 2	T1 employee support (ES)	.51 (.18)**	1.67	1.18, 2.37	8.24	11.84(2)**
	T1 job burnout (JB)	-.19 (.15)	0.83	0.63, 1.10	1.64	
Step 3	JB × ES	.11 (.10)	1.12	0.92, 1.35	1.30	1.35(1)

Step 1	T1 past participation	1.64 (.35)***	5.13	2.59, 10.18	21.88	30.33(2)** *
	T1 time pressure	.14 (.11)	1.15	0.94, 1.41	1.77	
Step 2	T1 supervisor support (SS)	.38 (.12)**	1.46	1.15, 1.85	9.86	13.70(2)**
	T1 job burnout (JB)	-.14 (.14)	0.87	0.66, 1.16	0.89	
Step 3	JB × SS	-.04 (.06)	0.96	0.86, 1.08	0.42	0.42(1)
Step 1	T1 past participation	1.64 (.35)***	5.13	2.59, 10.18	21.88	30.33(2)** *
	T1 time pressure	.14 (.11)	1.15	0.94, 1.41	1.77	
Step 2	T1 organizational support (OS)	.27 (.13)*	1.31	1.02, 1.69	4.39	7.57(2)*
	T1 job burnout (JB)	-.17 (.14)	0.84	0.64, 1.12	1.41	
Step 3	JB × OS	-.03 (.06)	0.97	0.86, 1.09	0.30	0.30(1)

Notes. OR = Odds Ratio; CI = Confidence Interval for OR; z = Wald Statistic.

T1 past participation and T2 participation coded 0 (no) and 1 (yes).

***p < .001; **p < .01; *p < .05; †p < .10.

Table 6. Summary of hierarchical regression analyses predicting T2 wellness program evaluations from T1 employee, supervisor, and organizational support for wellness

	T2 cognitive satisfaction n = 93		T2 affective satisfaction n = 93		T2 wellness learning n = 93		T2 wellness change n = 93		T2 wellness benefits n = 93		T2 relationship improvements n = 92	
Step 1[a]: Covariates	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**
T1 past participation	.11 (.12)	-.13, .35	.06 (.13)	-.20, .31	.01 (.13)	-.25, .26	-.05 (.16)	-.37, .28	-.21 (.16)	-.52, .10	-.02 (.19)	-.40, .36
T1 time pressure	-.09 (.03)**	-.15, -.03	-.08 (.03)**	-.15, -.02	-.01 (.03)	-.08, .05	-.01 (.04)	-.09, .07	.01 (.04)	-.07, .08	-.01 (.05)	-.10, .08
R^2	.09*		.07*		.00		.00		.02		.00	
F	4.64*		3.54*		0.11		0.10		0.91		0.06	
Step 2: Employee Support	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**
T1 employee support	.15 (.05)**	.05, .24	.11 (.05)*	.01, .22	.20 (.05)***	.10, .30	.20 (.07)**	.06, .33	.15 (.07)*	.02, .28	.19 (.08)*	.04, .35
ΔR^2	.08**		.04*		.15***		.09**		.05*		.06*	
ΔF	8.74**		4.35*		15.55***		8.44**		4.99*		6.06*	
Total R^2	.17		.12		.15		.09		.07		.07	
Step 2: Supervisor Support	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**

T1 supervisor support	.04 (.03)	-.02, .10	.05 (.03)	-.02, .11	.04 (.03)	-.02, .11	.13 (.04)*	.05, .20	.12 (.04)*	.05, .20	.20 (.04)**	.11, .28
ΔR^2	.02		.02		.02		.11**		.11**		.19***	
ΔF	1.51		2.07		1.94		10.55**		11.00**		21.13***	
Total R^2	.11		.09		.02		.11		.13		.19	
Step 2: Organizational Support	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**
T1 organizational support	.08 (.03)*	.02, .14	.07 (.03)*	.00, .13	.08 (.03)*	.01, .14	.17 (.04)***	.09, .25	.16 (.04)**	.08, .23	.20 (.04)**	.11, .29
ΔR^2	.06*		.04*		.06*		.18***		.16***		.19***	
ΔF	6.15*		3.96*		5.56*		19.24***		17.44***		20.34***	
Total R^2	.15		.11		.06		.15		.18		.19	

Notes: CI = Confidence Interval.

[a]Step 1 covariate results are identical for each regression and presented once for clarity of reporting.

T1 past participation coded 0 (no) and 1 (yes).

***p < .001; **p < .01; *p < .05.

Table 7. Summary of hierarchical regression analyses for predicting T2 wellness program evaluations from T1 and T2 employee health

	T2 cognitive satisfaction n = 85		T2 affective satisfaction n = 85		T2 wellness learning n = 85		T2 wellness behavior change n = 85		T2 wellness benefits n = 85		T2 relationship improvements n = 84	
Step 1	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**
T1 past participation	.11 (.12)	-.14, .36	-.01 (.13)	-.27, .05	-.03 (.13)	-.29, .24	-.11 (.17)	-.44, .23	-.23 (.16)	-.55, .09	-.06 (.19)	-.45, .32
T1 time pressure	-.11 (.03)**	-.17, -.04	-.09 (.03)*	-.15, -.02	-.03 (.03)	-.09, .04	-.03 (.04)	-.11, .06	.00 (.04)	-.08, 08	-.01 (.05)	-.11, .08
R^2	.12**		.08*		.01		.01		.03		.00	
F	5.69**		3.78*		0.37		0.51		1.09		0.13	
Step 2	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**	**B (SE)**	**95% CI**
T1 poor general health	.04 (.06)	-.08, .15	.07 (.06)	-.05, .19	.05 (.06)	-.07, .17	.07 (.08)	-.09, .22	-.02 (.07)	-.16, .13	-.06 (.09)	-.24, .11
T1 psychological strain	-.06 (.08)	-.21, .09	.02 (.08)	-.14, .18	-.05 (.08)	-.21, .11	-.08 (.10)	-.29, .12	.04 (.10)	-.16, .23	-.02 (.12)	-.25 .22
T1 job burnout	.02 (.05)	-.08, .11	-.00 (.05)	-.10, .10	.04 (.05)	-.07, .14	.03 (.07)	-.11, .16	.08 (.06)	-.04, .20	.06 (.08)	-.09, .21
ΔR^2	.01		.02		.01		.01		.04		.02	
ΔF	0.27		0.68		0.37		0.34		1.02		0.40	

Step 3	**B (SE)**	**95 % CI**	**B (SE)**	**95 % CI**	**B (SE)**	**95 % CI**	**B (SE)**	**95 % CI**	**B (SE)**	**95 % CI**	**B (SE)**	**95% CI**
T2 poor general health	-.08 (.08)	-.25, .08	.01 (.09)	-.16, .19	.01 (.09)	-.15, .18	.02 (.11)	-.21, .25	-.00 (.11)	-.22, .22	-.06 (.13)	-.32, .21
T2 psychological strain	-.14 (.08)†	-.29, .02	-.11 (.08)	-.27, .06	-.29 (.08)**	-.45, -.14	-.25 (.11)*	-.46, -.04	-.12 (.10)	-.33, .09	-.20 (.12)	-.45, .05
T2 job burnout	-.03 (.04)	-.12, .06	-.04 (.05)	-.13, .05	.01 (.05)	-.08, .10	.02 (.06)	-.10, .14	-.01 (.06)	-.12, .11	.04 (.07)	-.11, .18
ΔR^2	.07†		.04		.15**		.07		.02		.04	
ΔF	0.07†		1.12		4.73**		1.87		0.52		0.94	
Total R^2	.20		.15		.18		.09		.08		.05	

Notes: Unstandardized beta coefficients from step at which they were entered.
T1 past participation coded as 0 (no) and 1 (yes).
***p < .001; **p < .01; *p < .05; †p < .10.