

Overall Well-Being and Supervisor Ratings of Employee Performance, Accountability, Customer Service, Innovation, Prosocial Behavior, and Self-Development

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Objective: The aim of this study was to study the effects of overall well-being and well-being change on six supervisor-rated indicators of employee performance valued by organizations: overall performance, accountability, customer service, innovation, prosocial behavior, and self-development. **Methods:** The current study used two waves of well-being survey data collected over 2 years and supervisor performance ratings for 5691 employees. Ordinary least squares regression was conducted. **Results:** Both well-being at baseline and two-year change in well-being were related to all six supervisor-rated performance dimensions, controlling for other employee characteristics. **Conclusion:** Overall well-being likely functioned as a resource enabling people to successfully perform across the specific areas highly valued by their company. Given this connection, well-being interventions could be used as a means to accomplish improved performance in dimensions that contribute to organizational performance.

As organizations compete globally, they are continually seeking to contain costs, maximize productivity, and to establish a strong competitive advantage to win market share. Especially in countries where health care costs are not a direct cost to the company, industry demands may drive companies to compete on dimensions such as customer service and innovation. Thus, a human resource strategy that aligns performance management with such organizational goals is paramount.^{1,2} Toward the goal of optimizing employee performance and productivity, a large body of research has pointed to the positive association between employee health, well-being, and productivity.³⁻⁹ These studies, however, have tended to focus on overall performance and presenteeism, failing to consider the more specific performance dimensions contributing to organizational performance, and competitive advantage. The current study investigated overall well-being and well-being change, as they relate to overall performance and five key competencies, or performance dimensions, valued by organizations: accountability, customer service, innovation, prosocial behavior, and self-development.

Overall well-being refers to perceived and experienced satisfaction with life overall and with domains of life such as work, finances, physical health, and community.^{10,11} Following this definition, researchers have defined and investigated overall well-being as a multidimensional composite of six domains: life evaluation, emotional health, physical health, healthy behaviors, work environment, and basic access.^{7,12} Overall well-being has been linked to a number of productivity outcomes for organizations, including job performance, absenteeism, presenteeism, short-term disability leave, intentions to stay, and voluntary turnover.^{4,7-9,13} Although health and well-being have been found to have a positive association with performance, many studies to date have relied on

self-reported data and cross-sectional study designs.^{3,5,6,14} Longitudinal study designs with multisource data have been less commonly employed.

In explaining the connection between well-being and job performance, the Job-Demands Resource Theory asserts that employees with higher reserves of "resources" are better equipped to cope with job demands and subsequently perform better.¹⁵ In a systematic review of the literature, Wang¹⁶ found that individual resources include physical resources (eg, energy), financial resources (eg, income and assets), social resources (eg, social support), cognitive resources (eg, knowledge), and motivational resources (eg, self-efficacy and goal commitment). Overall well-being and its subdimensions correspond conceptually with many of the resources that Wang¹⁶ suggested. For example, physical health may be indicative of physical resources just as emotional health may be representative of one's level of emotional resources. From this perspective, overall well-being can be viewed as an indicator of the amount of resources available to an individual across these areas, which has also been shown to have a positive relationship with employee performance.¹⁵

One study to date has investigated the longitudinal relationship between overall well-being change and changes in performance measured from multiple sources.⁷ Although they found strong positive relationships between well-being change and changes in self-ratings of performance and presenteeism, the change in supervisor ratings of employees meeting their performance objectives was only marginally significant in its relationship to well-being change. One explanation offered was that employees may prioritize meeting their work objectives despite some of the challenges that low well-being might impose. The authors raised the possibility that well-being has a stronger relationship to the quality with which the work is completed as opposed to the extent to which overall objectives were met.

Dimensions of job performance, sometimes referred to as competencies, involve knowledge, skills, and attributes that differentiate high performers from average performers.¹⁷ To better understand the relationship between well-being, well-being change, and performance, Daniels and Harris¹ called for future research to study individual performance dimensions that contribute to overall performance. Sharing this view, we see three benefits to an investigation of well-being, as it relates to specific performance dimensions. First, a focus on specific dimensions not only informs whether or not employees have met their job requirements but also informs the more specific behaviors they took to meet those job requirements. Second, performance dimensions usually serve as key objectives in a number of human resource practices such as recruiting, training, evaluation, performance management, and organizational culture building.^{18,19} A better understanding about how and why employees demonstrate these dimensions can make human resource practices more efficient. Finally, the performance of individual employees contributes to the overall performance of the organization in areas where companies struggle to compete.^{20,21} A better understanding of these dimensions can help organizations bolster their competitive advantages in a turbulent, uncertain, and fast-changing global environment.²²

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As such, the current study focused on several specific employee performance areas that an organization identified as being most valuable for organizational performance: (a) self-initiated accountability, (b) customer service, (c) innovation, (d) prosocial behaviors, and (e) self-development. Self-initiated accountability refers to employees' willingness to have their actions evaluated by some external party who provides rewards or sanctions contingent on the evaluation.^{23,24} Customer service refers to the extent to which the employees' service meets the customer's expectations and fulfills their needs,²⁵ which is vital to organizations because a high quality of customer service increases organization's revenue,^{26,27} creates customer loyalty,²⁸ and increases brand equity.^{27,29} Innovation refers to an application of a new idea to develop or modify a product, process, or service,³⁰ which is critical in order to demonstrate uniqueness and stay competitive with other organizations in the market.^{31,32} Prosocial behavior refers to employee discretionary behaviors that go beyond job requirements and are beneficial to the overall organizational effectiveness,³³ which have been found to (a) enhance coworker and managerial productivity; (b) reduce the maintenance cost of the organization so that scarce organizational resources can be used for more important tasks; (c) strengthen the organization's ability to attract and retain good employees; (d) increase the stability of the organization; and (e) help the organization adapt to a changing business environment.³⁴ Lastly, employee self-development refers to employees' discretionary learning or mastering of new knowledge, skills, and abilities,³⁵ which is important to organizations because it (a) is generally considered as an essential prerequisite to organizational adaptability and competitiveness;³⁶ (b) is associated with employees' capability to achieve high job performance;^{37,38} and (c) can prepare employees for future challenges as job requirements are undergoing a constant change.³⁹

Given that each of these dimensions are considered valuable in their contribution to overall organizational performance and are likely impacted by employee well-being, the present study investigates the longitudinal effects of overall well-being and well-being change on supervisor-rated overall performance and these five performance dimensions.

METHOD

Study Design and Participants

We administered the Healthways Well-being Assessment (WBA) to employees of a large national employer in the United States in the summer of 2010, 2011, and 2012 (from June to August of each year). A total of 11,775 employees completed the 2010 well-being survey out of approximately 30,000 employees (39% response rate). One year later, 9786 employees took the survey out of approximately 30,000 employees (33% response rate), and 6170 of those employees also took the survey in 2010 (return

rate = 52%). In the third year, 35,140 employees took the survey out of approximately 36,000 (98% response rate), and 5691 of those employees had also taken the survey in 2010 and 2011 (return rate = 48%).

The current study aimed to examine the effects of well-being and well-being change over 2 years. Therefore, the time span of the current study was set to include two time points: the first administration of the Well-being Assessment (Time 1) and the third administration of the Well-being Assessment 2 years later (Time 2). Four months following Time 2, supervisors provided performance ratings for each employee. Figure 1 provides a depiction of this study design timeline. Because the sample was limited to only those who had completed surveys in all three administrations, there were no missing data for Well-being Assessments across 3 years. For supervisor ratings on performance, the missing data varied by area of performance rated and ranged from 331 to 1384 (overall performance: 1,384; accountability: 331; customer service: 336; innovation: 336; prosocial behavior: 331; self-development: 335).

Between Time 1 and Time 2, a series of programs were implemented to increase healthy behaviors, reduce health risks, and improve well-being. The well-being program included telephonic coaching for lifestyle and disease management and additional web resources providing educational information and behavior tracking devices for behaviors such as diet and activity. Monetary incentives were offered to increase the participation rate in taking well-being surveys and joining lifestyle coaching programs. Participants were able to earn an incentive up to \$200 if they participated in well-being surveys and actively engaged in lifestyle coaching programs.

Measures

Control variables

Age, gender, education level, and marital status were captured and used as control variables in the models. Education level was coded as 0 for those who had achieved a high school diploma or less and a 1 for those who had achieved higher than a high school diploma. Marital status was coded as 0 for those who were single, divorced, or widowed, and 1 for those who were married or partnered.

Overall Well-being

Individual Well-being Score (IWBS), calculated from items in the WBA, was used to assess overall well-being. The IWBS has been used in previous studies investigating overall well-being.^{7,40} It contained six domains: Life Evaluation, Emotional Health, Physical Health, Healthy Behaviors, Work Environment, and Basic Access to food, water, healthcare, and a good community. The overall well-being score is computed as the average of the six domain scores and ranges from 0 to 100, with 100 representing highest possible well-being.

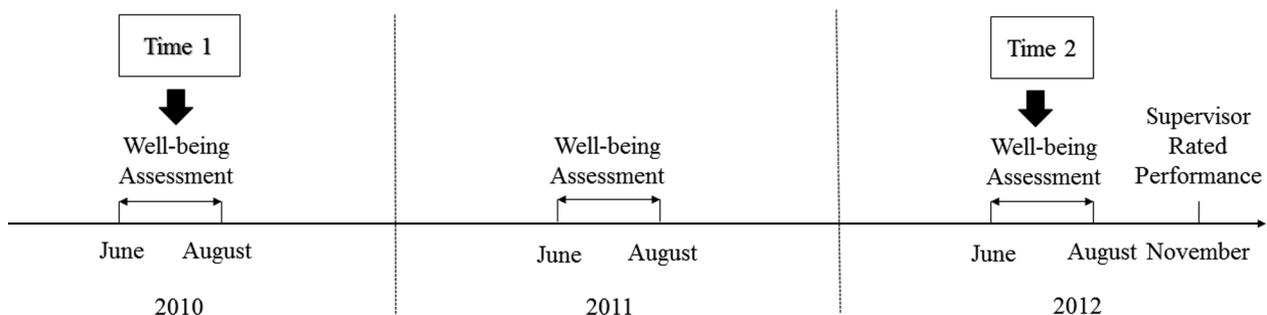


FIGURE 1. Timeline of well-being assessments and supervisor-rated performance.

Well-being Change

Well-being change was measured categorically according to participants who increased by one or more well-being segments, stayed in the same segment, or decreased by one or more segments between baseline and follow-up. Well-being segments have been established in prior research,^{8,41} consisting of high (88–100), medium–high (75–88), medium (66–75), low–medium (53–66), and low well-being categories (0–53). Change across segments baseline and follow-up was then coded according to those who decreased, stayed the same, or increased in their well-being segment over time.

Performance Outcomes

Supervisors assessed employees’ performance dimensions at the end of the third year. Supervisors rated employees’ overall performance with one item that asked about meeting overall performance objectives, which was rated on a three-point scale ranging from high to low performance. For all other performance measures, supervisors rated a single item on a four-point scale ranging from high to low performance. Accountability was measured with an item that asked about taking personal accountability. Customer service was assessed with an item that asked whether the employee provided quality customer service. Innovation behavior was captured by asking to what extent the employee generated and implemented innovations. Prosocial behavior was rated using an item that asked about creating an open and positive culture. Self-development was captured with an item that asked about taking initiative to develop oneself.

Statistical Analysis

Ordinary least squares regression was employed to test all hypotheses. To test the effects of well-being, we regressed the performance outcomes on well-being while controlling for covariates. To test the effects of well-being change, we tested a model that used dummy-coded variables to contrast those who worsened in their well-being across one or more segments to those who stayed the same and improved across well-being segments over the 2-year period.

RESULTS

Descriptive statistics are summarized in Table 1. In the final sample, 31% were male. Average age was 45 years, ranging from 21 to 73 years (SD = 9.96). Among them, 67% were married or had a partner, and 79% had high school education or above.

Table 2 presents the means of overall well-being and its dimensions across two time points. A paired *t* test suggested significant improvements in overall well-being and the six domains. This enabled the study of the change in well-being and its relationship to performance dimensions.

TABLE 1. Summary Statistics of Study Group

Characteristic	Statistic
Sample size	5691
Age, yrs (mean, SD)	44.78 (9.96)
Sex, <i>n</i> (%)	
Male	1552 (32%)
Female	3329 (68%)
Married, <i>n</i> (%)	
Married/Partner	3717 (67%)
Single/Divorced/Widow	1817 (33%)
Education, <i>n</i> (%)	
Less than high school	1215 (22%)
High school	658 (12%)
Technical or vocational school	424 (8%)
Some college	1305 (23%)
College graduate	1512 (27%)
Postgraduate	481 (8%)

SD, standard deviation.

We aimed to study the relationship between well-being and performance dimensions. As summarized in Table 3, overall well-being at baseline had significant positive effects on follow-up overall performance, accountability, customer service, innovation, prosocial behavior, and self-development. The effect sizes ranged from 0.01 to 0.04.

To study the effects of well-being change, we conducted two contrasts both of which were controlled for baseline well-being and employee characteristics; we compared people who improved with people who decreased, and we compared those who stayed the same with those who decreased. As summarized in Table 4, holding constant the baseline well-being, those who stayed the same had significantly better supervisor ratings in accountability, customer service, prosocial behavior, and self-development than those who decreased in their well-being. Differences in ratings of innovation and overall performance were not significant between those whose well-being decreased and those whose well-being stayed the same. Similarly, compared with people who decreased, those whose well-being increased had significantly higher supervisor ratings in all the performance dimensions controlling for their level of well-being at baseline. These results reveal that people whose well-being increased fared better in their performance reviews than those who worsened.

Lastly, given our research applied multiple tests of hypotheses, the probability of making one or more false discoveries might be a concern. To address this concern, we adopted false discovery rate (FDR) following the recommendation of many researchers.^{42–44} All

TABLE 2. Descriptive Statistics and Pair *t* Tests for Overall Well-Being and its Domains Between Time 1 and Time 2

	T1		T2		T1–T2 Difference	<i>t</i> Test
	Mean	Standard Deviation	Mean	Standard Deviation		
Overall well-being	74.77	13.17	77.96	12.49	3.19	20.25 ^a
Life evaluation	76.93	12.94	80.06	12.44	3.13	18.00 ^a
Emotional health	78.20	25.36	81.96	23.81	3.76	9.96 ^a
Physical health	72.63	24.21	75.96	23.07	3.33	11.07 ^a
Healthy behavior	51.25	34.95	55.58	35.16	4.33	9.24 ^a
Work environment	77.59	26.20	80.93	24.58	3.34	9.02 ^a
Basic access	92.06	12.07	93.35	11.03	1.29	8.12 ^a

^a*P* < 0.001.

TABLE 3. Regression Results for the Relationship Between Well-Being and Outcomes

	T2 Overall Performance		T2 Accountability		T2 Customer Service		T2 Innovation		T2 Prosocial Behavior		T2 Self-development	
	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE
T1 age	-0.16 ^c	<0.01	-0.07 ^c	<0.01	-0.03 ^a	<0.01	-0.14 ^c	<0.01	-0.05 ^c	<0.01	-0.16 ^c	<0.01
Gender	-0.02 ^a	0.02	-0.03 ^a	0.02	-0.04 ^b	0.02	0.03	0.02	-0.04 ^b	0.02	-0.01	0.02
Education	0.02 ^a	0.02	-0.03 ^a	0.02	-0.02	0.02	-0.01	0.02	-0.01	0.02	-0.01	0.02
Marital status	0.08 ^c	0.02	0.08 ^c	0.02	0.04 ^b	0.02	0.07 ^c	0.02	0.05 ^b	0.02	0.04 ^b	0.02
T1 well-being	0.12 ^c	<0.01	0.10 ^c	<0.01	0.06 ^c	<0.01	0.04 ^b	<0.01	0.08 ^c	<0.01	0.06 ^a	<0.01
R ²	0.04		0.02		0.01		0.02		0.01		0.03	

β, standardized beta; SE, standard error.
^aP < 0.05; ^bP < 0.01; ^cP < 0.001.

the original results remained the same after applying FDR, suggesting a low likelihood to make one or more false discoveries.

DISCUSSION

Organizations compete in a number of areas, such as customer service and innovation. As the global competitive marketplace moves beyond just health care cost savings, organizations compete on dimensions of organizational performance. The focus has shifted beyond just work getting done (productivity), to how the work gets done (performance dimensions). Attributes such as innovation and collaboration are a competitive advantage beyond just execution of daily tasks and work output. These performance dimensions are what differentiate the long-term success of companies in their respective markets.

The current study examined the extent to which employees' well-being is related to their performance across dimensions valued by an employer. Using a longitudinal dataset, we found that overall well-being at baseline had a positive and significant relationship with supervisor-rated overall performance, self-initiated accountability, customer service, innovation, prosocial behavior, and self-development 2 years later. Moreover, individuals experiencing positive changes in well-being received significantly higher performance ratings across all dimensions than those who declined. These findings suggest that improving employees' well-being could be an effective way for employers to promote valued performance dimensions in the workplace.

Our results indicated that well-being may function as a critical set of resources that enable employees to better perform their jobs. Previous research has found a positive relationship between well-being and performance;^{3,5,6} however, a majority of this research adopted a narrow focus on work-related well-being such as job satisfaction rather than overall well-being. Moreover, cross-sectional study design and analyses investigating self-reported

variables could also present some issues in terms of common method bias. Using a longitudinal design and supervisor-rated performance measures, the current study answered a call for more research to investigate the dimensions of performance from multiple sources over time.⁷

Our positive findings on accountability contributed to the previous research by highlighting that higher levels of overall well-being may be a prerequisite condition for employees to engage in self-initiated accountability behaviors. This research is supplemental to previous research that focused on the benefits of self-initiated accountability to organizations.⁴⁵ Moreover, this study demonstrated that, even when considering employees' initial well-being level, those whose well-being improved over time received significantly higher on ratings on accountability. Thus, overall well-being could represent an important internal resource that increases the likelihood of employees demonstrating self-initiated behaviors.

Customer service is another performance area of focus for organizations. Past research has demonstrated that dealing with customers can be emotionally exhausting,⁴⁶ and that stress results from the incongruence between experienced feelings and expressed feelings, referred to as "surface acting."⁴⁷ According to some observations, stress coming from customer service can occur as many as 10 times a day in the workplace;^{46,48} therefore, helping individuals cope with the stress becomes a challenge for practitioners. To that end, the finding that employees with higher well-being receive better ratings in their delivery of customer service highlights overall well-being as a possible way practitioners could enable or enhance this outcome. Consistent with Conservation of Resource Theory, higher levels of well-being can represent a larger reservoir of resources available to compensate for the loss of resources that resulted from surface acting.⁴⁹ In agreement with the findings of Wang,¹⁶ which indicated that employees may need

TABLE 4. Regression Results for the Relationship Between Well-Being Change and Outcomes

Variables	T2 Overall Performance	T2 Accountability	T2 Customer Service	T2 Innovation	T2 Prosocial Behavior	T2 Self-development
	β (SE)					
T1-T2 Well-being change						
Stay the same vs decreasing	0.04 (0.02)	0.05 ^b (0.02)	0.05 ^a (0.02)	<0.01 (0.02)	0.06 ^b (0.02)	0.05 ^b (0.02)
Increasing vs decreasing	0.05 ^a (0.03)	0.09 ^c (0.03)	0.08 ^c (0.02)	0.05 ^b (0.02)	0.10 ^c (0.02)	0.07 ^c (0.02)
R ²	0.04	0.02	0.01	0.03	0.02	0.03

Note. Decreasing group is the reference group. Controlled for baseline well-being, age, gender, marriage status, and education. β, standardized beta; SE, standard error.
^aP < 0.05; ^bP < 0.01; ^cP < 0.001.

multi-faceted resources to cope with surface acting, the current findings around overall well-being suggest that employees could benefit from resources across different areas, such as physical, social, financial, and motivational. Future research should more specifically investigate the role these specific areas of well-being play in the determination of customer service and other types of performance at work.

The finding that well-being and well-being change were associated with innovation performance ratings has similar implications for practice. Studies on the predictors of innovation have tended to focus on the Human Resource practices that are likely to increase innovation, such as team goalsetting,⁵⁰ supportive leadership,⁵¹ and job redesign.⁵² In contrast to those studies, the current study maintained that employees are able to be more innovative when they have higher well-being. It is possible that the higher levels of health, support, positive emotions, and other resources that define high well-being increased the potential for individuals to be innovative on the job. The positive relationship between well-being and innovation suggests that efforts aimed at promoting employee innovation may benefit from well-being oriented intervention.

The current study also included the prosocial behavior of fostering a positive environment as a valued dimension of performance. As prior research found that the frequency of interactions and positive emotions were important to building positive relationships,⁵³ some companies recognize the prosocial behavior of their employees as a way to promote a positive culture, productive collaboration, and attractive work setting. Extending prior research, the current study found a high level of well-being and a positive well-being change was associated with prosocial behavior ratings. Employees with higher well-being were more likely to be recognized by supervisors as having interacted with each other in positive ways, which has the potential to create value in terms of workforce culture, productivity, and retention.

Organizations also value the extent to which employees take steps to develop themselves, as this has been linked to productivity, adaptability, and general organizational competitiveness.^{36,37,39} To increase employees' self-development, research has acknowledged the important role of factors such as employee control of the environment,⁵⁴ attention,⁵⁵ and self-regulation.⁵⁶ Supplementary to the existing literature, the current study indicates that well-being improvement could also increase the likelihood that employees will engage in self-development.

Well-being and well-being change were associated with better employee performance across a diverse range of competencies. Given these relationships, it is plausible that improvements to employee well-being could enable or improve performance in these areas. To the extent that these and other performance dimensions distinguish truly successful and market leading organizations within today's competitive business environment, future research to experimentally test the causal impact of well-being improvement on these performance outcomes is warranted.

Strengths and Limitations

The findings of the current study were based on longitudinal evidence collected from both employees and supervisors linked at the individual employee level. As such, estimates of effect size are more conservative than prior research, which has been based largely on correlational, self-reported results, and likely subject to common method bias.

The present research employed a multidimensional measure of overall well-being that captured dimensions across central life areas such as health, work, and community. Using an overall well-being measure instead of a work-focused well-being measure allowed us to consider employees as a whole person accounting for the context in which they are embedded outside of their workplace. As a result, using an overall well-being measure instead of a

work-related well-being measure may have provided a more complete, conservative picture with regard to the relationship between well-being and performance.

This study was unique in that it investigated five of the specific performance areas valued by an organization and measured performance using annual evaluation ratings made by supervisors. Although each of these were single-item measures, the advantage of using items from employees' annual performance evaluations was to increase external validity, as employment decisions such as promotion, demotion, and rewards were based on these ratings.

Although there may be a reciprocal relationship between well-being and performance dimensions, the resource theories reviewed in this paper would argue that sufficient levels of well-being and resources are necessary to achieve these performance behaviors. The present study design did not allow for the testing of such reciprocal relationship. Future research with longitudinal measures of both well-being and performance ratings should investigate this question.

Future Research

Because well-being contains multiple domains, the interactive effects among these domains influencing performance dimensions would be worth investigating. For example, would higher emotional well-being compensate for low physical well-being in improving performance? Would high Life Evaluation counter balance the negative effects of low levels of Work Environment in coping with stress? Further investigation of these questions would be helpful in understanding which well-being resources are most important in what circumstances across different outcomes, and identifying in which cases some of these well-being resources may be interchangeable.

This study found that well-being change was related to performance. As such, it is important that future research be conducted to inform the design and testing of programs that improve overall well-being and extend evaluation of such interventions to also capture the more distal results such as improvement to performance dimensions. For example, Burton⁵⁷ examined a group psychosocial resilience training program and found that the resilience training program was beneficial to workplace psychosocial well-being. However, the study did not show whether the increased well-being, in turn, changed performance. Through experimental study designs, the causal impact of well-being improvement on performance dimensions should be tested in the future.

CONCLUSION

Organizations struggle to maintain a competitive advantage in a number of dimensions within their respective industries, such as innovation and customer service. Knowledge of how to increase key performance dimensions of the employees who drive that organizational competitiveness is highly needed. The current study focused on overall performance and five performance dimensions, including accountability, customer service, innovation, prosocial behavior, and self-development. By adopting a 2-year longitudinal study and having supervisor-rated employees' performance, we found that well-being level at baseline and well-being change was positively related to supervisor ratings of performance across these key dimensions. These results supported the idea that well-being and well-being change can function to enable and potentially increase job performance in ways that increase organizational profitability.

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