

Original

Factors Associated with Workers' Recognition and Attitude regarding Support for Balancing Treatment and Work in Small and Medium-Sized Enterprises

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Abstract

[Objectives] This study aimed to clarify factors related to workers' recognition and attitude regarding treatment-work balance support (TWBS) in small and medium-sized enterprises (SMEs) and identify target factors for improving systems and methods for promoting TWBS.

[Methods] A self-administered anonymous questionnaire-based survey was conducted, targeting employees of SMEs with less than 200 employees. The survey items included the "Recognition and Attitude Scale", which comprised three factors developed by the authors and related factors such as basic attributes, workplace climate for safe and active work such as psychological safety, work engagement, and support by human resource (HR) staff and managers. After examining basic statistics and single correlations, hierarchical multiple regression analyses were conducted for the score of "Recognition and Attitude Scale". First, basic attributes were used as independent variables. Next, we added a list of variables from the workplace climate for safe and active work in the second model. Then, we added a list of variables from support by HR staff and managers in the third model. Finally, the analysis used significance tests for change in R-square to assess the degree to which additional variables accounted for the variance in the score of "recognition and attitude."

[Results] The analysis included 846 employees with no missing values. In the second model, after controlling for basic attributes, the score of "recognition and attitude" was significantly related with workplace climates for safe and active work. In the final model, the score of "recognition and attitude" was significantly related with support by HR staff and managers. The coefficient of determination (adjusted R-square) was 0.544.

[Discussion] This study indicated that by fostering a workplace climate in which workers can work with safe and active, and by enhancing the support provided by HR staff and managers, workers' own recognition and attitude can be enhanced.

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—Key words—

support for balancing treatment and work, small and medium-sized enterprises, workers' recognition and attitude

Introduction

The Japanese economy is based on small and medium-sized enterprises (SMEs),¹⁾ which account for 98% of the total number of enterprises and approximately 80% of the total workforce in Japan.²⁾ Approximately 34% of workers leave their jobs when diagnosed with cancer or other diseases.³⁾ Because of the declining working-age population due to the accelerated aging and declining birthrate in the society, "labor shortage" has become a management issue for SMEs and a social problem in Japan.²⁾

In 2016, the Ministry of Health, Labour, and Welfare (MHLW) released guidelines for supporting the balance between treatment and work life to prevent job turnover due to illness and indicated how companies should support employees with illnesses by providing appropriate employment measures and giving consid-

eration to their treatment.⁴⁵⁾ However, the 2018 Patient Experience Survey Report showed that 56% of workers had left the workforce by the time of starting their cancer treatment.⁶⁾ The social need for providing treatment-work balance support ("TWBS") in all diseases, not just in cancer, is increasing, and it is an urgent issue.

To prevent unwanted turnover due to illness or treatment, the authors reported that SMEs with good practices regarding TWBS have a workplace climate where employees have a shared recognition of illness and a sense of security when people ill.⁷⁾ Yamauchi et al. also reported the association between a high level of cooperative organizational culture⁸⁾ and seek-helping intention, and suggested that it is necessary to examine the association between workers' awareness for TWBS and seek-helping intention in the future.⁹⁾ As such, the authors developed a scale to measure workers' recognition and attitude toward TWBS in SMEs ("Recognition and Attitude Scale").¹⁰⁾ However, even if the current status of "Recognition and Attitude Scale" can be grasped, the relevant factor to workers' recognition and attitude that could facilitate the effective and efficient promotion of TWBS must be clarified.

Regarding possible relevant factors for "recognition and attitude," a qualitative study⁷⁾ showed that SMEs with good practices of TWBS "have a sense of mutual respect and support and a sense of safety as the workplace climate," which seems similar to the concept of "psychological safety (PS),"¹¹⁾⁻¹⁴⁾ "work engagement (WE),"¹⁵⁾⁻¹⁸⁾ and "an atmosphere of mutual support in the workplace during illness"¹⁰⁾ to create workplace climate for safe and active work. Therefore, it is possible that these factors and "recognition and attitude" are correlated.

As a hypothesis, PS is defined as "the belief that one will not be punished or humiliated for speaking up one's ideas."¹¹⁾ It is possible that this may be the case, an atmosphere where people are comfortable speaking up about relevant feelings, even if a worker has an illness. In a workplace climate with high PS, workers with illnesses are believed to be more likely to seek help from their workplace.

Moreover, WE, which is defined as "a positive, fulfilling, work-related state of mind," is used as an indicator of job satisfaction.¹⁵⁾ Even if some workers are ill, there could be a positive and fulfilling psychological state related to work as individuals and teams, characterized by vitality, enthusiasm, and immersion. In a workplace with high WE, workers with illness may be able to work actively because of mutual support.

Regarding other relevant factors, HR staff members⁷⁾¹⁸⁾ are generally in charge of health and safety duties and are likely to be consulted by workers for TWBS. In a survey of patients with cancer, managers were most commonly consulted by workers with illness in the workplace.³⁾ Since occupational health professionals are rarely employed in SMEs, support by HR staff and managers is essential and may be related to workers' recognition and attitude.

This study aimed to clarify the factors related to workers' recognition and attitude toward TWBS in SMEs by examining the aforementioned hypothesis, which will suggest strategies for promoting TWBS in SMEs.

Methods

1. Participants

Our study targeted employees of SMEs with less than 200 employees. To examine factors related to the score of "Recognition and Attitude Scale", it was necessary to select companies that could have been making certain initiatives. Thus, we selected our participants from among companies certified as "health and productivity management organizations" by the Ministry of Economy, Trade and Industry or equivalent. We included manufacturing and construction industries, and companies that did not employ occupational health nurses (OHNs). This survey was conducted from November 2021 to January 2022 using web-based and paper anonymous questionnaires to maintain appreciable response rates even during the COVID-19 pandemic.

To recruit targeted companies, we sent a request through inquiry forms on the companies' websites. Appointments were made by telephone with companies that expressed interest in participating in the study. While explaining the contents of the research to managers, we clarified the exclusion criteria for this study and confirmed that no OHNs were employed. Those who consented to participate filled a research consent

form.

2. Measures

The selection of survey items was discussed by two researchers with more than 10 years of experience as OHNs. The authors developed the survey items involving the “Recognition and Attitude Scale”.¹⁰ The scale has a three-factor structure with 20 items. The first subscale includes 9 items, such as [The employer issues statements and informs of the company’s policies on TWBS] for “recognition of workplace initiatives for TWBS (recognition of workplace initiatives).” The second subscale includes five items, such as [I understand the roles of OHNs or occupational physicians and the kind of support they provide] for “understanding of the professional roles in TWBS (understanding of professional roles).” The third subscale includes six items, such as [I think TWBS is important to continue working] for “attitude and sense of self-efficacy toward TWBS (attitude and self-efficacy).” The “Recognition and Attitude Scale” consists of a 20-item 6-point scale, ranging from 0 = strongly disagree to 5 = strongly agree (0–100 points). The respondents were asked about the type of business, number of employees, gender, age, length of service, position, and employment status.

As for workplace climate for safe and active work, PS consists of a 7-item 6-point scale, ranging from 0 = not at all to 5 = strongly agree (0–35 points).¹⁴ WE consists of a 9-item 7-point scale, ranging from 0 = never to 6 = always (0–54 points). The Japanese version of the Utrecht Work Engagement Scale including “I feel energized at work” was used.¹⁶ In addition, through discussion among the researchers, “There is an atmosphere of mutual support when people become ill in the workplace (an atmosphere of mutual support in the workplace during illness)” consists of one item 4-point scale, ranging from 1 = not at all to 4 = yes (1–4 points).

Concerning “support from HR staff and managers,”^{7,19} SMEs often do not have a dedicated contact point for consultation regarding illness and treatment because occupational health professionals are rarely employed. Thus, it was inferred that HR staff and managers might be familiar contact points when employees continue working while undergoing treatment for illness. According to a previous study, when SME employees become ill, they may be concerned about privacy issues, personnel evaluations, promotions, wages, etc., and may be reluctant to report their illness.¹⁹ It is crucial for HR staff and managers to be consulted by employees with complex concerns and illnesses and to support them adequately. The respondents were asked about three items, such as “Managers talk to subordinates so that they can maintain their health and work,” using a 4-point scale (1 = no, 4 = yes).

3. Statistical analysis

To obtain basic statistics and correlation coefficients and examine the factors related to the score of the “Recognition and Attitude Scale”, variables were selected based on the hypotheses, and the hypotheses were tested. After examining basic statistics and single correlations, hierarchical multiple regression analysis was conducted with the score of the “Recognition and Attitude Scale” as the dependent variable. First, the basic attributes as independent variables were controlled. Next, we added a list of variables from the workplace climate for safe and active work in the second model. Subsequently, we added a list of variables from support by HR staff and managers in the third model. Finally, the analysis used significance tests for change in the R-square to assess the degree to which additional variables accounted for the variance in the score of the “Recognition and Attitude Scale” using IBM SPSS statistics ver. 26.0 for Windows.

4. Ethical considerations

The purpose, duration, participants, protection of personal information, survey items using questionnaires, anonymization of institutional and personal information, and the possibility of conducting the questionnaire on paper and the web were explained to the managers and HR staff of the target companies. The HR staff of each company selected the questionnaire tool. The web-based questionnaire was created using Google Forms, and the URL was sent by e-mail to the HR staff. The paper survey was sent to the HR staff of each company, who returned it to the researcher. The study aim, the time required to respond, and the fact that the survey was anonymous were explained on the cover pages of the paper and web surveys. Moreover, the employee research subjects were asked to participate in the study voluntarily. Consent was deemed to have been obtained upon the return of the questionnaire.

This study was conducted with the approval of the Institutional Review Board for Clinical Research of To-

Table 1 Attributes of participating companies and workers

		number	%
Companies		22	(100.0)
Industry type	Construction industry	5	(22.7)
	Manufacturing	17	(77.3)
Employee size	20–49	11	(50.0)
	50–199	11	(50.0)
Workers		846	(100.0)
Gender	Male	636	(75.2)
	Female	210	(24.8)
Age	20s	195	(23.0)
	30s	157	(18.6)
	40s	242	(28.6)
	50s	166	(19.6)
	over 60	86	(10.2)
Years of service	[Mean ± SD]	[11.9 ± 9.9]	
Job title	Managers	237	(28.0)
	General employee	609	(72.0)
Employment type	Regular employee	749	(88.5)
	Contract employee	97	(11.5)

SD: standard deviation

kai University (21R-127).

Results

The survey was distributed to 1,373 respondents, and 1,180 responded (response rate: 85.9%). A total of 846 cases with no missing values were included in the analysis (valid response rate: 71.7%). The paper survey response rate ranged from 37.5 to 100.0%, and the web survey response rate ranged from 32.9 to 76.2% showed no significant differences.

1. Basic attributes

Twenty-two companies participated in the study, with approximately 80% in the manufacturing industry and 50% having less than 50 employees (Table 1). The subjects were approximately 80% male, 60% were in their 40s or older, approximately 30% held managerial positions, and approximately 90% were regular employees with 11.9 ± 9.9 years of service.

2. Single correlation coefficient on the score of the “Recognition and Attitude Scale”

Table 2 shows the correlation coefficients of the “Recognition and Attitude Scale” with the basic attributes, workplace climate for safe and active work, and support by HR staff and managers. Concerning basic attributes, very weak correlations were found for industry type, employee size, age, and job title. WE and an atmosphere of mutual support during illness showed moderate correlations ($r = 0.387$ – 0.464 , $p < .001$). The correlation coefficient for support by HR staff and managers ranged from ($r = 0.553$ – 0.597 , $p < .001$) for all variables.

3. Hierarchical multiple regression analysis on the score of the “Recognition and Attitude Scale”

Table 3 shows that Model II demonstrated a significant association of the workplace climate for safe and active work, with a contribution rate of approximately 36%, to the score of “Recognition and Attitude Scale”. Compared to Model I, Model II increased the contribution of the model by approximately 30%. The type of industry and employee size were significantly associated with the score of the “Recognition and Attitude Scale”. A new significant association was found between age and the score of the “Recognition and Attitude Scale” ($p < .01$).

Model III (final model) demonstrated a significant association of the support by HR staff and managers,

Table 2 Single correlation on “Recognition and Attitude Scale”

	r	p-value
n = 846		
Basic attribute ^{a)}		
industry type (construction: 1, manufacturing: 0)	0.151	<0.001 ***
Employee size (0-49: 1, 50-99: 2, 100-199: 3)	0.093	0.007 **
gender (male: 1, female: 0)	-0.039	0.255
Age (20s: 1, 30s: 2, 40s: 3, 50s: 4, over 60: 5)	0.084	0.014 *
Job title (managers: 1, or not: 0)	0.144	<0.001 ***
Employment type (regular employee: 1, contract employee: 0)	-0.016	0.649
Workplace climate for safe and active work		
An atmosphere of mutual support in the workplace during illness ^{a)} (1 item, 1-4)	0.464	<0.001 ***
Psychological safety ^{b)} (7 items, 0-35)	0.262	<0.001 ***
Work engagement ^{b)} (9 items, 0-54)	0.387	<0.001 ***
Support from HR staff and managers ^{a)} (3 items, 1-4 for each item)		
Managers talk to subordinates so that they can maintain their health and work	0.553	<0.001 ***
HR staff consult with employees on how to take sick leaves and how to work comfortably when they become ill	0.563	<0.001 ***
HR staff explain to sick workers and employees that personnel evaluations are fair according to the way they work	0.597	<0.001 ***

r: Correlation coefficient.

^{a)} Spearman's rank-sum correlation analysis

^{b)} Pearson's correlation coefficient analysis

*** p < .001, ** p < .01, * p < .05

with a contribution rate of approximately 54%, to the score of “Recognition and Attitude Scale”. Compared to Model II, Model III increased the contribution of the model by approximately 20%. Workplace climate for safe and active work was significantly associated with the score of the “Recognition and Attitude Scale” ($p < .001$). Support provided by HR staff and managers was significantly associated with the score of the “Recognition and Attitude Scale” ($p < .05$). The score of the “Recognition and Attitude Scale” showed a significant association with “HR staff consults with employees on how to take sick leave and how to work comfortably when an employee becomes illnesses” and “HR staff explains to sick workers and employees that personnel evaluations are fair according to the way they work” than with those who did not consult with HR staff ($p < .001$, $p < .05$). The score of the “Recognition and Attitude Scale” showed a significantly higher association with the statement “Managers encourage subordinates to work while maintaining good health” than with managers who did not follow this practice ($p < .001$). Support by HR staff and managers was significantly associated with the type of industry, employee size, gender, and age ($p < .05$).

Discussion

In this study, we demonstrated that “safe and active workplace climate” and “support by HR staff and managers” were related to workers’ “recognition and attitude” toward TWBS by the hierarchical multiple regression analysis. These results suggest that fostering a “safe and active workplace climate” and providing “support by HR staff and managers” may effectively improve workers’ “recognition and attitude.” The associating factors are discussed in detail in the following sections.

Association between a “safe and active workplace climate” and “recognition and attitude” of workers

In this study, we used PS⁽¹¹⁾⁻¹⁴⁾ and WE⁽¹⁵⁾⁻¹⁸⁾ as the variables for identifying “safe and active workplace climate,” which was also used as an external criterion of the “Recognition and Attitude Scale” developed in the previous study by the authors.¹⁰⁾ Hierarchical multiple regression analysis revealed that “safe and active workplace climate” was a major factor that accounted for approximately 30% “recognition and attitude” of workers regarding TWBS. Creating a safe and active workplace is crucial in the field of occupational health these days, and PS and WE, which are used as indicators of this issue, are concepts and scales that are getting attention.

A previous study demonstrated the significant association of PS with “mutual support” and “trust” among

Table 3 Hierarchical multiple regression analysis on “Recognition and Attitude Scale”

n = 846

	Model I			Model II			Model III		
	Standardized Coefficients	t	p-values	Standardized Coefficients	t	p-values	Standardized Coefficients	t	p-values
Basic attributes									
Industry type (construction: 1, manufacturing: 0)	0.187	5.380	0.000 ***	0.143	4.937	0.000 ***	0.122	4.960	0.000 ***
Employee size (0–49: 1, 50–99: 2, 100–199: 3)	0.148	4.214	0.000 ***	0.128	4.395	0.000 ***	0.101	4.081	0.000 ***
Gender (male: 1, female: 0)	–0.091	–2.553	0.011 *	–0.040	–1.340	0.181	–0.065	–2.571	0.010 *
Age (20s: 1, 30s: 2, 40s: 3, 50s: 4, over 60: 5)	0.063	1.710	0.088	0.085	2.698	0.007 **	0.143	5.318	0.000 ***
Job title (managers: 1, or not: 0)	0.129	3.580	0.000 ***	0.035	1.170	0.242	0.039	1.514	0.130
Employment type (regular employee: 1, contract employee: 0)	–0.005	–0.130	0.897	–0.015	–0.470	0.638	0.038	1.455	0.146
Workplace climate for safe and active work									
An atmosphere of mutual support in the workplace during illness				0.373	12.513	0.000 ***	0.148	5.202	0.000 ***
Psychological safety				0.194	6.840	0.000 ***	0.162	6.762	0.000 ***
Work engagement				0.232	7.657	0.000 ***	0.133	5.060	0.000 ***
Support from HR staff and managers									
Managers talk to subordinates so that they can maintain their health and work							0.301	8.977	0.000 ***
HR staff consult with employees on how to take sick leaves and how to work comfortably when an employee becomes illness							0.188	5.412	0.000 ***
HR staff explain to sick workers and employees that personnel evaluations are fair according to the way they work							0.094	2.548	0.011 *
R Square	0.069			0.363			0.551		
Adjusted R Square	0.062			0.356			0.544		
F Change	10.360			52.904			85.047		
p-values	<0.001			<0.001			<0.001		

Hierarchical Multiple Regression Analysis

*** p < .001, ** p < .01, * p < .05

workers.¹²⁽²⁰⁾ As for WE, studies have reported its association with “feedback on job performance” and “career development opportunities,” among other job resources, which should be mediated through communication.¹⁵⁽²¹⁾ Thus, in the previous study, communication and trust were found to be associated with PS and WE.

Our previous interview survey of SMEs with good examples of TWBS⁷ reported the presence of atmosphere of mutual respect, which was based on a sense of security and trust, in workplaces where TWBS was practiced, and managers and workers seemed to realize the importance of communication. Owing to the association of communication and trust with PS and WE “recognition and attitude” for TWBS were found to be associated with a “safe and active workplace climate,” including PS and WE.

In a previous study on workplace climate and TWBS in SMEs, Yamauchi et al. reported an association between “intention to seek help” and “cooperative organizational culture” among workers, which was evaluated by one question whether a person would seek help from the workplace when he/she became ill, which was developed by Tamura et al. for school employees. In this study, instead of seeking help intention, we used workers’ own recognition and attitude scale regarding TWBS using a 3-factor, 20-item scale. In addition, instead of cooperative organizational culture, we used WE and PS, which are very commonly used in workplace mental health, to assess multiple aspects and examine their association. Furthermore, human resource retention is a management issue for many SMEs, and previous studies have reported an association between high WE and low turnover.²¹⁽²²⁾ The association between WE and TWBS demonstrated in this study implies that the efforts for promoting TWBS in companies will possibly result in low turnover. Therefore, further empirical research

should be conducted in the future.

Association between “support by HR staff and managers” and “Recognition and Attitude Scale”

The hierarchical multiple regression analysis conducted in this study revealed that support from HR staff and managers was a major factor in explaining approximately 20% of the “recognition and attitude” of workers toward TWBS, suggesting that support by HR staff and managers is important for TWBS initiatives carried out in SME companies.

A survey by Sasaki et al. on difficulties faced by HR staffs for cancer treatment and work, which was conducted in 2011 and included large workplaces, indicated that they were struggling with workplace considerations and adjustments.²³⁾ Subsequently, information about TWBS may have been disseminated with the release of the “Guidelines for Balancing Treatment and Work in the Workplace” in 2016. It is speculated that HR staff and managers responsible for coordinating the labor management are likely to be highly involved in providing TWBS.

According to basic survey on industrial safety and health conducted by the MHLW in 2021, approximately 60% large companies have set up a consultation service for TWBS with the help of an occupational health professionals, whereas this percentage is approximately 20% in SMEs with less than 300 workers.²⁴⁾ It is assumed that HR staff and managers in SMEs are likely to be consulted by workers regarding TWBS and they are the key people in charge of TWBS in SMEs. Therefore, the detection of association between “support provided by HR staff and managers” and workers’ “recognition and attitude” toward TWBS in this study is reasonable.

In addition, from a role model perspective,²⁵⁾ workers’ “recognition and attitude” toward TWBS should be enhanced through appropriate support provided by HR staff and managers. As this study demonstrated the association of workers’ “recognition and attitude” with “safe and active workplace climate,” including PS and WE, and support by HR staff and managers, strategic linking of fostering “safe and active workplace climate” with providing “support by HR staff and managers” regarding TWBS could create a synergistic effect.

Limitations

The target companies of this study were “health and productivity management organizations” or equivalent, which may have already been interested in TWBS and may result in a sample bias. However, since the mean score of the WE in this study was close to that of the MHLW’s large-scale survey of workers, the study participants may be considered general workers.

Since this survey was conducted during the COVID-19 pandemic, the confirmation of the reproducibility of the survey results in a nonpandemic situation is warranted.

Conclusion

This study demonstrated a significant association of workers’ “recognition and attitude” toward TWBS with “safe and active workplace climate,” including PS and WE, and “support from HR staff and managers” in SMEs.

The results of the survey indicate that the “recognition and attitude” of workers toward TWBS can be effectively increased by fostering a “safe and active workplace climate” including PS and WE and improving “support by HR and managers” as strategies to enhance TWBS initiatives.

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中小企業における治療と仕事の両立支援に関する 従業員自身の認知・姿勢に関連する要因

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—キーワード—

治療と仕事の両立支援, 中小企業, 従業員の認知・姿勢

〔目的〕本研究は、「中小企業における治療と仕事の両立支援に関する従業員の認知・姿勢（認知・姿勢）」に関連する要因を明らかにし、治療と仕事の両立支援（両立支援）を推進するための一助とすることを目的とした。

〔方法〕従業員数 200 名以下の中小企業の従業員を対象に、無記名自記式質問紙調査を行った。調査項目は、基本属性、著者らが開発した 3 因子からなる「認知・姿勢」尺度、心理的安全性（PS）、ワークエンゲイジメント（WE）等の「安心して活いき働ける職場風土」、および「人事担当者や管理職による支援」等を尋ねた。基本統計量を算出後、「認知・姿勢」の尺度得点を目的変数とした階層的重回帰分析を実施した。まず、Model I では、基本属性を説明変数とした。次に、Model II では、「安心して活いき働ける職場風土」を説明変数とし追加した。さらに、Model III の最終モデルでは、「人事担当者や管理職による支援」を説明変数として追加し、それぞれの Model の決定係数（調整済み R^2 ）を算出した。

〔結果〕欠損値のない 846 名を分析対象とした。Model II では、基本属性をコントロールし、「安心して活いき働ける職場風土」の得点が高いほど「認知・姿勢」との有意な関連がみられた。決定係数（調整済み R^2 ）は 0.356 であった。また、Model III の最終モデルでは、「人事担当者や管理職による支援」の得点が高いほど、「認知・姿勢」との有意な関連がみられた。決定係数（調整済み R^2 ）は 0.544 であった。

〔考察〕本研究は、従業員が安心して活いきと働ける職場風土を醸成し、人事担当者や管理職によって従業員教育や相談機能を強化していくことによって、中小企業における治療と仕事の両立支援に関する従業員自身の認知・姿勢が向上することが示唆された。

〔COI 開示〕本論文に関して開示すべき COI 状態はない

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