Association between pain-related fear and presenteeism among eldercare workers with low back pain.

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Association between pain-related fear and presenteeism among eldercare workers with low back pain.

（腰痛を有する介護職員における
運動恐怖感とプレゼンティーズムの関連）

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Abstract

Background: Presenteeism (work product

ivity loss at work) and low back pain (LBP) are prevalent among eldercare workers. Presenteeism is a serious emerging problem in an occupational setting. While many studies report the impact of pain-related fear on absenteeism, its impact on presenteeism remains unclear.

Methods: We conducted a cross-sectional study to investigate the association between pain-related fear and presenteeism among 505 eldercare workers with LBP. We measured pain-related fear using the 11-item Tampa Scale for Kinesiophobia (TSK-11). We used the Work Limitations Questionnaire (WLQ) to estimate productivity loss due to presenteeism with items including Time Management, Mental-Interpersonal Demands, Physical Demands, and Output Demands. The presenteeism was categorized into no (<5%), mild (5%–10.9%), moderate (11%–16.9%), and severe presenteeism (≥17%). We further performed ordinal logistic regression analyses, and the covariates were age, sex, pain intensity, pain disability, and psychosocial factors. Multiple imputation was conducted to provide informed estimates for observations with missing data.

Results: After adjustment, a higher TSK score was significantly associated with a higher presenteeism (proportional OR = 1.10, 95% CI = 1.06–1.15). A significant association of TSK with all WLQ subscales was retained even after the adjustment (Time Management: proportional OR = 1.04, 95% CI = 1.01–1.08; Mental-Interpersonal Demands: proportional OR = 1.08, 95% CI = 1.04–1.12; Physical Demands: proportional OR = 1.04, 95% CI = 1.01–1.08; and Output Demands: proportional OR = 1.06, 95% CI = 1.02–1.10).

Conclusions: Our findings suggest that pain-related fear is an important factor related to presenteeism among eldercare workers with LBP.

Introduction

Presenteeism is a relatively new concept, which is defined as “the problem of workers being on the job, but, because of illness or other medical conditions, not fully functioning” (Hemp, 2004). It has recently acquired social attention because socioeconomic burden of presenteeism was estimated to cost 1.9–5.1 times more than the direct cost, including medical and pharmaceutical costs (Sainsbury Centre for Mental Health, 2007). According to a previous study conducted in Japan, the cost due to absenteeism was $520 per person per year and that due to presenteeism was $3,055 (Nagata et al., 2018). Moreover, presenteeism is a risk factor for future absenteeism and a decrement in self-rated health (Bergstrom et al., 2009; Taloyan et al., 2012; Janssens et al., 2013). Therefore, it is a major individual and societal issue, which should be improved.

Eldercare workers are particularly vulnerable to presenteeism (Aronsson et al., 2000) in terms of mental and physical aspects. Owing to their elderly care responsibility, a self-sacrificing behavior could pressurize them to work despite illness (Elstad and Vabo, 2008). Additionally, eldercare work is a physically demanding work. Low back pain (LBP) is a prevalent and challenging problem (Davis and Kotowski 2015; Yokoyama et

al., 2014), which impacts early retirement and absenteeism among eldercare workers (d'Errico et al., 2013; The Ministry of Health, Labour and Welfare, 2011). In Japan, LBP accounted for 62% of causes of sick leave longer than 4 days. The number of LBP has rapidly increased in the eldercare setting, and 19% of that were occurred in eldercare setting (The Ministry of Health, Labour and Welfare, 2011). Moreover, LBP causes presenteeism (Jensen et al., 2012). Therefore, studies assessing why eldercare workers with LBP have difficulties in performing their work are warranted.

A previous study demonstrated a relationship between pain intensity and presenteeism among Japanese workers with LBP (Sadosky et al., 2015). Pain-related fear is considered to be an important contributor of LBP, with pain-related fear being more disabling than pain itself (Crombez et al., 1999). Pain may induce a fear of future pain, which can cause an avoidance of back-stressing activities and pain hypervigilance. In the long term, pain-related fear could lead to physical deconditioning, disability, and absenteeism (Crombez et al., 1999; Vlaeyen and Linton, 2000; Jensen et al., 2010). We hypothesized that the pain-related fear also has a profound negative impact on work-related disability such as presenteeism. However, no study has yet investigated whether

pain-related fear affects presenteeism among the workers. The present study aims to explain the association between pain-related fear and presenteeism among eldercare workers with LBP.

Methods

Procedure and participants

We used a database collected between January 2014 and March 2014 of eldercare workers employed by a Japanese company providing eldercare services. We distributed self-reporting questionnaires to 1894 eldercare workers employed in nursing home care or home visit care during their routine health checkups, and 954 eldercare workers returned the completed questionnaires (response rate: 50.4%). Inclusion criteria were 1) eldercare workers, 2) experienced LBP in the month prior to this study, and 3) not on sick leave. Finally, 505 eldercare workers (52.9%) were included for this cross-sectional study. Ethical approval for this study was given by the Ethics Committee of Kobe University Graduate School of Health Sciences (Kobe, Japan). By completing the questionnaires, the participants indicated their consent for participation.

Low back pain

The presence of LBP was determined from the participant's response that indicated an LBP that lasted for ≥24 hours in the month prior to this study. The location of LBP was defined as a pain between the twelfth rib and inferior gluteal folds as per a previous report (Hoy et al., 2010).

LBP intensity was measured using a 5-point Likert scale (no, mild, moderate, severe, and very severe pain). LBP duration was categorized into 4 groups: <1 week, 1–4 weeks, 4–12 weeks, and ≥12 weeks. LBP disability was assessed by a Japanese version of the Roland-Morris Disability Questionnaire (RDQ) (Suzukamo et al., 2003). The RDQ comprised 20 items related to LBP limitations in various daily life activities (e.g. walking, sitting, and putting on socks) and 4 items related to pain, sleep, appetite, and emotional functions. Each of these items is scored either 0 or 1. The total RDQ score ranges from 0 to 24; a higher score indicates a higher degree of LBP disability.

Presenteeism

The 25-item Japanese version of the Work Limitations Questionnaire (WLQ) was used to evaluate presenteeism (Lerner et al., 2001; Takegami et al., 2014). It is a reliable and valid

self-report questionnaire assessing the degree to which health problems interfere with the ability to perform job tasks in 2 weeks prior to this study. The WLQ consists of the following 4 subscales: (1) Time Management (5 items): the difficulty in performing a job tasks in a timely manner and in scheduling tasks; (2) Mental-Interpersonal Demands (9 items): the difficulty in performing cognitive job tasks and in interacting with colleagues; (3) Physical Demands (6 items): the ability to perform job tasks involving body strength, movement, endurance, coordination, and flexibility; and (4) Output Demands (5 items): work quantity and quality reduction and timeliness of completed work. For the items of Time Management, Mental-Interpersonal Demands, and Output Demands, response options were as follows: 1 (difficult none of the time), 2 (difficult a slight bit of the time), 3 (difficult some of the time), 4 (difficult most of the time), and 5 (difficult all of the time). On the other hand, for Physical Demands, the response options were as follows: 1 (able all of the time), 2 (able most of the time), 3 (able some of the time), 4 (able a minimal amount of the time), and 5 (able none of the time). Additionally, “Not applicable” was also provided as a response option and treated as a missing value. Each subscale score was converted to percentage, 0% (least limited) to 100% (most limited). Presenteeism

(%) was assessed from the weighed sum of the 4 WLQ subscale scores using a validated algorithm ranging from 0% to 24.9%. Due to non-normal distributions of presenteeism and subscales, presenteeism was categorized according to the official and confidential WLQ scoring documentation as follows: no presenteeism (<5%), mild presenteeism (5%–10.9%), moderate presenteeism (11%–16.9%), and severe presenteeism (≥17%) (Brown et al., 2013), and each score was categorized into a quartile.

Pain-related fear

Tampa Scale for Kinesiophobia (TSK) is widely used to assess the fear of movement or (re)injury. In this study, we used the shorter 11-item Japanese version of the TSK (TSK-11), which shows better internal reliability, identical construction, and known group validity compared with the 17-item version (Kikuchi et al., 2015). Each item was scored on a 4-point Likert scale, ranging from 1 (strongly disagree) to 4 (strongly agree). The TSK-11 score ranges from 11 to 44; a higher score indicates a higher degree of pain-related fear.

Demographic data and other measurements

Data on demographics and characteristics (age, sex, workplace, body mass index, smoking status, and psychosocial factors) were collected from a report of routine health checkups and self-reported questionnaire.

The 22-item Japanese version of the Job Content Questionnaire (JCQ) was used to measure psychosocial stressors (Kawakami et al., 1995). The JCQ comprises 3 subscales: job demands (range, 12–48), job control (range, 24–96), and social support (range, 8–32). The job demands subscale comprised 5 items; the job control subscale comprised 2 subscales: skill discretion (6 items) and decision authority (3 items); and the social support subscale comprised 2 subscales: supervisor support (4 items) and co-worker support (4 items). The JCQ employs a 4-point Likert scale for each item; a higher score indicates higher job demands, job control, and social support. In terms of confidentiality, we ensured that only researchers checked the responses because the JCQ included questions about co-workers and supervisors.

Depressive symptoms were evaluated using the Centre for Epidemiologic Studies Depression Scale (CES-D) (Andresen et al., 1994), which comprises 10 items with a 4-point Likert scale ranging from 0 (rarely or none of the time; <1 day) to 3 (most

or all of the time; 5–7 days). The total score ranges from 0 to 30; a score of ≥10 indicates a clinically relevant depressive symptoms (Andresen et al., 1994).

Statistical analysis

For descriptive data, categorical variables were presented as frequency and percentage and continuous variables as mean ± SD (standard deviations). If distributions of the continuous variables were skewed, data were presented as median (range or interquartile range).

For univariable and multivariable analyses, we performed ordinal logistic regression analyses using TSK-11 scores as an independent variable and presenteeism or quartile of each WLQ subscale as a dependent variable. Based on prior knowledge, age, sex, LBP intensity, LBP disability, and psychosocial factors (job demands, job control, and social support) were selected as covariates for all multivariable analysis (Mannion et al., 2009). These analyzes were not adjusted for depressive symptoms because they could represent a mediator rather than a confounder for the association between pain-related fear and presenteeism (Vlaeyen and Linton, 2000; Adler et al., 2006; Lerner et al., 2010). Moreover, we performed sensitivity analysis by combining moderate presenteeism and

severe presenteeism into one category because only 3 participants were categorized into severe presenteeism. In these analyses, proportional odds ratios (POR) and 95% confidence intervals (CI) were estimated.

Our data had missing values for several variables as shown in Table 1. Multiple imputation by the chained equation method was performed using "mi impute chained" command in Stata13.1 (StataCorp, College Station, TX) to manage selection bias and loss of information due to missing data (Rubin and Schenker, 1991). The variables used in ordinal logistic regression analysis were further used to generate 20 imputed data sets. Rubin's rules were applied for combining estimates and standard errors (Rubin, 1987). We also conducted the complete-case analyses for comparison with results of multiple imputation.

All statistical analyses were performed with Stata 13.1 software. $P < 0.05$ was considered to be statistically significant.

Table 1. Characteristics of eldercare workers with LBP in the study (n = 505)

		Missing data, n (%)
Age, years, median (range: min–max)	48 (22–74)	0 (0.0)
Sex, *n* (%)		0 (0.0)
Male	82 (16.2)	
Female	423 (83.8)	
Workplace, *n* (%)		0 (0.0)
Nursing home care	161 (31.9)	
Home visit care	344 (68.1)	
BMI, kg/m^2, median (range: min–max)	21.7 (15.3–41.8)	0 (0.0)
Current smokers, *n* (%)	153 (30.3)	0 (0.0)
LBP Intensity, *n* (%)		12 (2.4)
No pain	0 (0.0)	
Mild pain	126 (25.6)	
Moderate pain	192 (39.0)	
Severe pain	111 (22.5)	
Very severe pain	64 (13.0)	
LBP duration, *n* (%)		13 (2.6)
Less than 1 week	151 (30.7)	
1–4 weeks	114 (23.2)	
4–12 weeks	71 (14.4)	
12 weeks or longer	156 (31.7)	

Table 1. Continued

		Missing data, n (%)
RDQ, median (interquartile range)	2 (1–5)	26 (5.1)
TSK, mean ± SD	22.6 (5.4)	19 (3.8)
Job demands, mean ± SD	32.4 (5.0)	25 (5.0)
Job control, mean ± SD	64.9 (8.3)	21 (4.2)
Social support, median (interquartile range)	23 (22–25)	28 (5.5)
Depressive symptom, *n* (%)	130 (26.9)	11 (2.2)
WLQ categorization, *n* (%)		78 (15.4)
No presenteeism	272 (63.7)	
Mild presenteeism	126 (29.5)	
Moderate presenteeism	26 (6.1)	
Severe presenteeism	3 (0.7)	
WLQ scores, median (interquartile range)		
Presenteeism, %	3.8 (1.8–6.3)	78 (15.4)
Time Management	5 (0–20.0)	43 (8.5)
Mental-Interpersonal Demands	8.3 (0–18.8)	29 (5.7)
Physical Demands	25 (8.3–45.0)	24 (4.8)
Output Demands	10 (0–25)	26 (5.1)

LBP: low back pain, BMI: body mass index,

RDQ: Roland-Morris Disability Questionnaire, TSK: Tampa Scale for Kinesiophobia,

WLQ: Work Limitations Questionnaire, SD: Standard Deviation

Results

The present study included 505 eldercare workers after multiple imputation; out of these, 355 samples were included in complete-case analyses. Seventy-eight (15.4%) samples lacked presenteeism information, and 19 (3.8%) had missing data for the TSK-11. The participant characteristics are shown in Table 1. The median age was 48 years, and 83.8% of the participants were female eldercare workers. The median of presenteeism was 3.8%. The mean ± SD score for the TSK-11 was 22.4 ± 5.3; the scores for the participants with no presenteeism, with mild presenteeism, with moderate presenteeism, and with severe presenteeism were 21.1 ± 4.5, 24.1 ± 4.8, 25.9 ± 8.2, and 30.7 ± 16.2, respectively.

Association of TSK with presenteeism

As indicated in Table 2, the TSK-11 scores were significantly associated with presenteeism. After covariate adjustment, higher TSK-11 scores were significantly associated with higher presenteeism (adjusted POR = 1.10, 95% CI = 1.06–1.15). The results of the sensitivity analysis were similar to those of the original analysis even after combining moderate presenteeism and severe presenteeism into one category (adjusted POR = 1.10, 95% CI = 1.05–1.15).

Table 2. Ordinal logistic regression models for presenteeism estimated by the WLQ (Multiple imputation)

	Crude Model	Adjusted Model
	POR (95% CI)	POR (95% CI)
TSK, score	1.12 (1.08–1.17)[a]	1.10 (1.06–1.15)[a]
Age, per year	0.98 (0.97–1.00)[a]	0.98 (0.96–0.99)[a]
Female	0.57 (0.36–0.92)[a]	0.61 (0.36–1.03)
LBP intensity		
Mild	Ref	Ref
Moderate	1.00 (0.61–1.64)	0.77 (0.45–1.33)
Severe	1.36 (0.79–2.33)	0.81 (0.44–1.49)
Very severe	1.72 (0.93–3.21)	0.91 (0.44–1.87)
RDQ, score	1.08 (1.03–1.13)[a]	1.05 (1.00–1.11)[a]
Job demands, score	1.12 (1.08–1.17)[a]	1.10 (1.05–1.15)[a]
Job control, score	1.00 (0.98–1.03)	1.01 (0.98–1.04)
Social support, score	0.91 (0.86–0.96)[a]	0.92 (0.86–0.98)[a]

n = 505, POR: proportional odds ratio, 95% CI: 95% confidence interval, TSK: Tampa Scale for Kinesiophobia, LBP: low back pain, RDQ:

Roland-Morris Disability Questionnaire, a: $P < 0.05$, Adjusted for age and sex, LBP intensity, LBP disability, job demands, job control, social support

Table 3. Multivariable ordinal logistic regression models for subscales of the WLQ categorized by quartile (Multiple imputation)

	Time management (quartile)	Mental-Interpersonal Demands (quartile)	Physical Demands (quartile)	Output Demands (quartile)
	POR (95% CI)	POR (95% CI)	POR (95% CI)	POR (95% CI)
TSK, score	1.04 (1.01–1.08)[a]	1.08 (1.04–1.12)[a]	1.05 (1.01–1.08)[a]	1.06 (1.02–1.10)[a]
Age, per year	0.98 (0.96–0.99)[a]	0.97 (0.96–0.99)[a]	1.01 (0.99–1.02)	0.98 (0.97–1.00)[a]
Female	0.72 (0.45–1.15)	0.66 (0.42–1.04)	1.56 (0.97–2.52)	0.70 (0.44–1.13)
LBP intensity				
Mild	Ref	Ref	Ref	Ref
Moderate	0.74 (0.47–1.17)	1.04 (0.68–1.58)	1.18 (0.77–1.80)	0.91 (0.59–1.40)
Severe	0.75 (0.44–1.27)	0.93 (0.57–1.53)	1.03 (0.62–1.70)	1.08 (0.65–1.79)
Very severe	1.05 (0.57–1.93)	1.03 (0.57–1.86)	0.65 (0.36–1.16)	1.06 (0.58–1.93)
RDQ, score	1.05 (1.00–1.10)[a]	1.04 (1.00–1.09)	1.02 (0.98–1.06)	1.03 (0.99–1.08)
Job demands, score	1.10 (1.06–1.15)[a]	1.08 (1.04–1.12)[a]	0.96 (0.93–1.00)[a]	1.13 (1.09–1.18)[a]
Job control, score	1.02 (1.00–1.04)	1.01 (0.99–1.03)	1.00 (0.98–1.02)	1.02 (0.99–1.04)
Social support, score	0.93 (0.88–0.98)[a]	0.94 (0.89–0.99)[a]	0.98 (0.93–1.03)	0.98 (0.93–1.03)

n = 505, POR: proportional odds ratio, 95% CI: 95% confidence interval, WLQ: Work Limitations Questionnaire, TSK: Tampa Scale for Kinesiophobia, LBP: low back pain, RDQ: Roland-Morris Disability Questionnaire, a: $P < 0.05$, Adjusted for age and sex, LBP intensity, LBP disability, job demands, job control, social support

Association of TSK with the WLQ subscales

The TSK-11 scores were significantly associated with all WLQ subscales (Time Management: POR = 1.06, 95% CI = 1.03–1.10, $p < 0.001$; Mental-Interpersonal Demands; POR = 1.09, 95% CI = 1.06–1.13, $p < 0.001$; Physical Demands: POR = 1.04, 95% CI = 1.01–1.07, $p = 0.01$; and Output Demands; POR = 1.08, 95% CI = 1.04–1.11, $p < 0.001$). Even after covariate adjustment, the associations of the TSK-11 scores with all WLQ subscales remained statistically significant (Table 3).

Complete-case analysis

The results from the complete-case analyses exhibited trends similar to those from analyses after multiple imputation (Table S1). In univariable and multivariable ordinal logistic regression analyses, the TSK-11 score was significantly associated with presenteeism (adjusted POR = 1.13, 95% CI = 1.07–1.19). Concerning the WLQ subscales, even after the adjustment, the TSK-11 score was significantly associated with Time Management (adjusted POR = 1.05, 95% CI = 1.01–1.10, $p = 0.014$), Mental-Interpersonal Demands (adjusted POR = 1.11, 95% CI = 1.06–1.16, $p < 0.001$), Physical Demands (adjusted POR = 1.05, 95% CI = 1.01–1.09, $p = 0.017$), and Output Demands

(adjusted POR = 1.07, 95% CI = 1.02–1.11, $p = 0.002$).

Other results

Concerning LBP intensity, severe pain had a marginally significant association with higher presenteeism (unadjusted POR = 1.72, 95% CI = 0.93–3.21, $p = 0.086$). After adjustment, severe pain was not significantly associated with presenteeism (adjusted POR = 0.91, 95% CI = 0.44–1.87, $p = 0.795$). Pain-related fear (TSK) was mainly responsible for this change of LBP intensity POR between the unadjusted and adjusted models (the data is not shown in the table).

Discussion and conclusions

In summary, we found that even after covariate adjustments, higher pain-related fear was significantly associated with more severe presenteeism among eldercare workers with LBP. Pain-related fear was also independently associated with all the WLQ subscales.

A higher pain-related fear was significantly associated with higher presenteeism among eldercare workers with LBP. A previous study reported the association between negative belief about LBP (measured by Fear Avoidance Beliefs

questionnaire; FABQ (Waddell et al., 1993)) and presenteeism (Mannion et al., 2009). In that study, the FABQ work was significantly associated with presenteeism. Although the results of our study were similar to those of the mentioned study, our study is different for the following reasons. First, the study participants were different (most participants of the previous study were white-collar workers who do not perform physically demanding work). Second, the study measured presenteeism with a single question within an original non-validated questionnaire (how much was your productivity impaired due to your back pain?), whereas we measured presenteeism with WLQ, which is a validated and worldwide used questionnaire (Brooks et al., 2010).

To the best of our knowledge, this is the first study to demonstrate the presenteeism components that are associated with pain-related fear using a validated tool, such as WLQ. This is helpful for further understanding the relation between pain-related fear and presenteeism. In this study, pain-related fear was significantly associated with all subscales. This finding indicates that pain-related fear can be physically and psychologically associated with presenteeism. From a physical perspective, pain-related fear causes an avoidance of physical activity and exercise, which can result in physical

impairment and disability (Vlaeyen and Linton, 2000; Swinkels-Meewisse et al., 2006; Panhale et al., 2016). Considering their physically demanding job, eldercare workers with higher pain-related fear would have difficulties in performing physically demanding tasks, such as transferring, repositioning, and bathing the elderly. From a psychological perspective, pain-related fear could lead to psychological problems, including depression, according to the fear-avoidance model (Vlaeyen and Linton, 2000). Some studies showed that psychological problems affect presenteeism (Adler et al., 2006; Lerner et al., 2010). The involvement of psychological symptoms represents a probable explanation for the association of the pain-related fear with presenteeism.

However, unlike pain-related fear, LBP intensity had no significant association with presenteeism after covariate adjustments. One study reported a significant association between LBP intensity and presenteeism among Japanese workers with LBP (Sadosky et al., 2015). In this study, information on pain-related fear and LBP disability was not measured and adjusted. In our study, the association between LBP intensity and presenteeism was changed after adjusting with pain-related fear or LBP disability. Thus, pain-related fear and LBP disability might be more important than pain itself. This implies

that main target is not pain itself but negative belief on LBP.

Therefore, considering the profound influence of presenteeism on socioeconomic burden (Sainsbury Centre for Mental Health, 2007), healthcare professionals (physicians, physical therapists, and public health nurses) should consider pain-related fear while dealing with LBP in occupational settings. Considering less burden to answer the TSK-11, it is informative to get a grasp of pain-related fear as needed. For LBP with higher pain-related fear, cognitive-behavioral therapy could be an effective approach (Lamb et al., 2010). Further studies are warranted to show the effect of cognitive-behavioral therapy on presenteeism among workers with LBP.

Our study has some limitations. First, the study had a cross-sectional design. Thus, the underlying relationship between pain-related fear and presenteeism remains unclear, and further longitudinal studies are required. Second, we distributed the questionnaires to eldercare workers during routine health check-up, and while 954 provided responses (response rate: 50.4%), the information and characteristics of non-respondents are missing. The respondents might be more concerned about their health than the non-respondents. Lastly, although the results were adjusted for sex, most

participants (83.8%) were female. These characteristics of the participants should be considered in terms of generalization of our results.

In conclusion, our study suggests that pain-related fear could play a vital role in presenteeism among eldercare workers with LBP.

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Table S1. Ordinal logistic regression models for presenteeism estimated by the WLQ (Complete-case analysis)

	Crude Model	Adjusted Model
	POR (95% CI)	**POR (95% CI)**
TSK, score	1.16 (1.11–1.22)[a]	1.13 (1.07–1.19)[a]
Age, per year	0.98 (0.97–1.00)	0.98 (0.96–0.99)[a]
Female	0.64 (0.36–1.11)	0.68 (0.37–1.27)
LBP intensity		
Mild	Ref	Ref
Moderate	1.11 (0.63–1.95)	0.82 (0.44–1.53)
Severe	2.07 (1.13–3.82)[a]	1.23 (0.62–2.44)
Very severe	1.92 (0.94–3.92)	1.06 (0.48–2.35)
RDQ, score	1.10 (1.04–1.16)[a]	1.06 (1.00–1.12)
Job demands, score	1.12 (1.07–1.18)[a]	1.09 (1.03–1.14)[a]
Job control, score	1.00 (0.98–1.03)	1.01 (0.98–1.05)
Social support, score	0.90 (0.84–0.95)[a]	0.92 (0.85–0.98)[a]

n = 355, POR: proportional odds ratio, 95% CI: 95% confidence interval, TSK: Tampa Scale for Kinesiophobia, LBP: low back pain, RDQ: Roland-Morris Disability Questionnaire, a: $P < 0.05$, Adjusted for age and sex, LBP intensity, LBP disability, job demands, job control, social support.