

correlated with work engagement and workplace social capital more strongly than did job demands. These findings are consistent with the theoretical framework of the JD-R model³⁷⁾ in which job demands predict negative emotional reactions (such as burnout) while job resources predict both negative and positive emotional reactions (such as work engagement).

Insert Table 7

Discussion

In the present study, we developed the New BJSQ, which can assess an extensive set of job demands, job resources, and outcomes, by adding items/scales to the current version of the BJSQ. Most scales of the New BJSQ as well as the current BJSQ showed acceptable levels of internal consistency and test-retest reliability over one year. Principal component analyses of scale items showed that the first factor explained 50% or more of variance for most scales, suggesting factor-based validity of these scales. Exploratory factor analysis of the current BJSQ/New BJSQ scales of psychosocial work environment indicated that the three-factor structure (i.e., job demands, task-level job resources, and combined factor for workgroup- and organizational-level job resources) is meaningful while confirmatory factor analysis showed better model fit for the firstly assumed four-factor structure rather than the three-factor structure based on the result of the exploratory factor analysis. A correlation analysis showed that job demands and job resources were associated with mental and physical health while job resources were also associated with positive outcomes, such as work engagement and workplace social capital, as predicted by the JD-R model³⁷⁾. These findings provided evidence that the New BJSQ scales are reliable and valid and fit expectations from the JD-R model.

As introduced earlier, the principal aim of the New BJSQ is to assess psychosocial workplace environments and their employee (i.e., health-related) and organizational (i.e., business-related) outcomes in an extensive way. By using the national average scores as well as information about their distributions by gender, occupation, employment type, and

industry, as norms, the New BJSQ scales can be used to assess psychosocial work environment and related outcomes to prevent stress at work and promote positive mental health at work. Newly added scales can be used to assess psychological work environment with a broader range of theoretical models of job stress, such as ERI and organizational justice, and a boarder range of outcomes, such as work engagement, perceived workplace social capital, and workplace harassment. The New BJSQ followed the tradition of the current BJSQ, assessing psychosocial work environment and outcomes simultaneously, which is also used in the PRIMA-EF approach²⁵). An additional unique feature of the New BJSQ is that it includes a scale of perceived workplace social capital as an organizational outcome summarizing influence of psychosocial job resources. This approach may have some merits. While outcomes are a primary indicator of the need for an intervention, measuring psychosocial work environment could provide information on components of work environment, which should be a target of the intervention. The information provided by this approach on the association between psychosocial work environment and outcomes, which may vary depending on workplace, occupation, and industry, could be also useful for planning an intervention. Furthermore, outcomes assessed by the New BJSQ are supposed to predict further distal employee outcomes, such as satisfaction and well-being, and organizational outcomes, such as productivity and innovation, which need to be addressed in the future research.

The present study has some limitations that should be considered. First, the response rate in the present study was only 47.7% and employees engaged in large-sized enterprises (number of employees \geq 1,000) seemed overrepresented (see Table 2). In addition, out of these respondents ($n=1,633$), only 479 participated in the follow-up survey. Although we calculated national average of each scale of the current BJSQ and New BJSQ using these 1,633 respondents, it should be noted that the national average scores of the present study (shown in Table 3) is only preliminary and may be affected by a selection bias to some extent.

Further research using larger sample with higher response rate should be conducted to calculate more precise national average scores. Second, we exhaustively reviewed the relevant literature to find recent theories on job stress and their measures. Accordingly, we selected new scales/items according to the questionnaires and/or published job stress and related variables used in foreign studies, which may provide a piece of content validity of the New BJSQ. However, a more detailed content validity could not be examined. Similarly, the present study provided a partial support for construct validity of the New BJSQ by calculating a proportion of variance explained by the first factor and conducting factor analyses and correlation analyses between psychosocial work environment and outcomes. However, convergent and discriminant validities using other reliable and valid measurements (e.g., Job Content Questionnaire [JCQ]³⁹⁾, General Health Questionnaire [GHQ]⁴⁰⁾, Center for Epidemiologic Studies Depression [CES-D] Scale⁴¹⁾, World Health Organization Health and Work Performance Questionnaire [WHO-HPQ]⁴²⁾, etc.) could not be examined. Thus, more detailed content and construct validities should be examined in a future study. Third, a few scales of the New BJSQ showed only modest internal consistency and test-retest reliability, particularly for role clarity scale. Further review of these items is needed to achieve higher measurement accuracy. Fourth, since the confirmatory factor analysis did not reach the recommended acceptable level for model fit (i.e., GFI, AGFI, and CFI>0.90 and RMSEA<0.05)⁴³⁾, further study on factor structure of the New BJSQ is needed. Finally, as mentioned earlier, the standard version of the New BJSQ has 141 items in total when combined with the current 57-item BJSQ, which may be acceptable in practice due to large number of items. However, a recommended set of scales and a short version were also developed. A future study should examine the reliability and validity of these versions. Although the New BJSQ remains a matter of further revisions, it can assess a broader set of psychosocial factors at work compared to the current BJSQ.

Acknowledgements

The present study was supported by a Health Labour Sciences Research Grant 2009–2011 "Study on the dissemination of primary prevention of mental health problems among workers" (H21-rodo-ippan-001) from the Ministry of Health Labour and Welfare, Japan. The preparation of the manuscript was partially supported by a Health Labour Sciences Research Grant 2013 "Study on risk assessment methods in promoting mental health measures in the workplace" (H25-rodo-ippan-009) from the Ministry of Health Labour and Welfare, Japan.

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Table 1 Scales and the number of items on the Brief Job Stress Questionnaire (BJSQ) and New BJSQ

Scales †	BJSQ (B) or New BJSQ (N)	Number of items (BJSQ + New BJSQ)
Job demands		
1. Quantitative job overload	B	3
2. Qualitative job overload	B	3
3. Physical demands	B	1
4. Interpersonal conflict	B	3
5. Poor physical environment	B	1
6. Emotional demands	N	3
7. Role conflict	N	3
8. Work-self balance (negative)	N	2
Job resources: task-level		
9. Job control	B	3
10. Suitable jobs	B	1
11. Skill utilization	B	1
12. Meaningfulness of work	B/N ‡	3
13. Role clarity	N	3
14. Career opportunity	N	3
15. Novelty	N	3
16. Predictability	N	3
Job resources: workgroup-level		
17. Supervisor support	B	3
18. Coworker support	B	3
19. [Support from family and friends]	B	3
20. Monetary/status reward	N	2
21. Esteem reward	N	2
22. Job security	N	3
23. Leadership	N	3
24. Interactional justice	N	3
25. Workplace where people compliment each other	N	3
26. Workplace where mistakes are acceptable	N	2
27. Collective efficacy	N	3
Job resources: organizational-level		
28. Trust with management	N	3
29. Preparedness for change	N	3
30. Procedural justice	N	3
31. Respect for individuals	N	3
32. Fair personnel evaluation	N	3
33. Diversity	N	3
34. Career development	N	5
35. Work-self balance (positive)	N	2
Outcomes		
36. Vigor	B	3
37. Anger-irritability	B	3
38. Fatigue	B	3
39. Anxiety	B	3
40. Depression	B	6
41. Physical stress reaction	B	11
42. Job satisfaction	B	1
43. [Satisfaction with family life]	B	1
44. Workplace harassment	N	2
45. Workplace social capital	N	3
46. Work engagement	N	2
47. Performance of a duty	N	3
48. Realization of creativity	N	3
49. Active learning	N	3
Total number of items		141

† [] indicates non-work environment or outcome.

‡ A three-item scale was constructed for the New BJSQ by adding two items to its one-item BJSQ scale on intrinsic reward.

Table 2 Demographic characteristics among employees who participated in the baseline survey ($N = 1,633$) and one-year follow-up survey ($N = 417$)

Demographic characteristics	Baseline		One-year follow-up	
	<i>n</i> (%)	Average (SD)	<i>n</i> (%)	Average (SD)
Gender				
Men	847 (51.9)		202 (48.4)	
Women	786 (48.1)		215 (51.6)	
Age				
29 years old or less	254 (15.6)		41 (9.8)	
30–39 years old	450 (27.6)		107 (25.7)	
40–49 years old	464 (28.4)		129 (30.9)	
50–59 years old	426 (26.1)		129 (30.9)	
60 years old or more	39 (2.4)		11 (2.6)	
Occupation				
Managers	152 (9.3)		42 (10.1)	
Professionals and Technicians	363 (22.2)		95 (22.8)	
Clerks	301 (18.4)		75 (18.0)	
Sales workers	171 (10.5)		40 (9.6)	
Service workers	165 (10.1)		50 (12.0)	
Transportation and telecommunications	70 (4.3)		14 (3.4)	
Production workers and laborers	252 (15.4)		55 (13.2)	
Others	147 (9.0)		45 (10.8)	
Unknown	12 (0.7)		1 (0.2)	
Employment contract				
Company president and executives	37 (2.3)		7 (1.7)	
Permanent employees	1,051 (64.4)		256 (61.4)	
Temporary employees	39 (2.4)		7 (1.7)	
Contract employees	99 (6.1)		29 (7.0)	
Part-time workers	383 (23.5)		113 (27.1)	
Others	20 (1.2)		5 (1.2)	
Unknown	4 (0.2)		- (0.0)	
Working hours in the past month		172.3 (55.9)		168.0 (53.7)
Company size (number of employees)				
1–20	282 (17.3)		64 (15.3)	
21–49	156 (9.6)		39 (9.4)	
50–99	134 (8.2)		46 (11.0)	
100–299	243 (14.9)		50 (12.0)	
300–499	106 (6.5)		33 (7.9)	
500–999	126 (7.7)		39 (9.4)	
1,000 or more	441 (27.0)		100 (24.0)	
Civil service	113 (6.9)		39 (9.4)	
Unknown	32 (2.0)		7 (1.7)	

Table 3 Averages (and standard deviations, SDs) of the BJSQ and New BJSQ scores obtained from a nationally representative survey of employees of Japan in 2010/2011 †

Scales ‡	Number of items	Average	(SD)
1. Quantitative job overload	3	2.14	0.76
2. Qualitative job overload	3	2.16	0.71
3. Physical demands	1	2.49	1.08
4. Interpersonal conflict	3	2.88	0.66
5. Poor physical environment	1	2.78	0.99
6. Emotional demands	3	2.65	0.82
7. Role conflict	3	2.78	0.77
8. Work-self balance (negative)	2	2.78	0.86
Job demands summary		2.58	0.51
9. Job control	3	2.53	0.74
10. Suitable jobs	1	2.92	0.80
11. Skill utilization	1	3.00	0.85
12. Meaningfulness of work	3	3.09	0.67
13. Role clarity	3	3.16	0.59
14. Career opportunity	3	2.68	0.81
15. Novelty	3	2.78	0.80
16. Predictability	3	2.46	0.73
Task-level job resources summary		2.90	0.49
17. Supervisor support	3	2.37	0.75
18. Coworker support	3	2.68	0.70
19. [Support from family and friends]	3	3.31	0.68
20. Monetary/status reward	2	2.41	0.79
21. Esteem reward	2	2.72	0.67
22. Job security	3	2.46	0.75
23. Leadership	3	2.18	0.77
24. Interactional justice	3	2.55	0.80
25. Workplace where people compliment each other	3	2.42	0.82
26. Workplace where mistakes are acceptable	2	2.26	0.78
27. Collective efficacy	3	2.49	0.74
Workgroup-level job resources summary		2.45	0.54
28. Trust with management	3	2.53	0.71
29. Preparedness for change	3	2.48	0.72
30. Procedural justice	3	2.27	0.73
31. Respect for individuals	3	2.12	0.72
32. Fair personnel evaluation	3	2.15	0.77
33. Diversity	3	2.52	0.70
34. Career development	5	2.19	0.74
35. Work-self balance (positive)	2	2.10	0.78
Organizational-level job resources summary		2.29	0.56
36. Vigor	3	2.26	0.79
37. Anger-irritability	3	2.70	0.85
38. Fatigue	3	2.70	0.88
39. Anxiety	3	2.87	0.80
40. Depression	6	3.27	0.67
Psychological stress reaction (total)	18	2.85	0.61
41. Physical stress reaction	11	3.22	0.54
42. Job satisfaction	1	2.60	0.85
43. [Satisfaction with family life]	1	3.06	0.81
44. Workplace harassment	2	3.58	0.67
45. Workplace social capital	3	2.74	0.69
46. Work engagement	2	2.52	0.77
47. Performance of a duty	3	2.98	0.57
48. Realization of creativity	3	2.67	0.72
49. Active learning	3	2.55	0.72

† The number of respondents varied from 1,590 to 1,627 because of missing values.

‡ [] indicates non-work environment or outcome. Each scale score was converted so that the higher score indicates better state and ranges from 1 to 4. See text for more details on scoring.

Table 4 Internal consistency, one-year test-retest reliability, and factor based validity of the BJSQ and New BJSQ scales

Scales †	<i>n</i>	Cronbach's alpha coefficient	Proportion explained by the first factor (%)	One-year test-retest (Pearson's correlation coefficient) <i>n</i> = 373–389
Job demands				
1. Quantitative job overload	1,621	.770	69.0	.655***
2. Qualitative job overload	1,617	.741	66.3	.716***
3. Physical demands	–	NC	–	.699***
4. Interpersonal conflict	1,610	.690	61.8	.563***
5. Poor physical environment	–	NC	–	.637***
6. Emotional demands	1,624	.860	78.2	.628***
7. Role conflict	1,623	.791	70.6	.633***
8. Work-self balance (negative)	1,624	.885	89.7	.616***
Job resources: task-level				
9. Job control	1,618	.717	63.9	.653***
10. Suitable jobs	–	NC	–	.659***
11. Skill utilization	–	NC	–	.428***
12. Meaningfulness of work	1,624	.813	74.0	.720***
13. Role clarity	1,626	.646	59.4	.426***
14. Career opportunity	1,618	.848	76.8	.691***
15. Novelty	1,621	.781	69.5	.575***
16. Predictability	1,625	.691	62.0	.424***
Job resources: workgroup-level				
17. Supervisor support	1,612	.808	72.3	.611***
18. Coworker support	1,615	.781	69.6	.541***
19. [Support from family and friends]	1,619	.832	74.9	.599***
20. Monetary/status reward	1,622	.728	78.8	.633***
21. Esteem reward	1,618	.706	77.4	.613***
22. Job security	1,620	.639	58.1	.620***
23. Leadership	1,607	.787	70.6	.654***
24. Interactional justice	1,616	.905	84.3	.566***
25. Workplace where people compliment each other	1,624	.905	84.2	.595***
26. Workplace where mistakes are acceptable	1,619	.774	81.6	.588***
27. Collective efficacy	1,616	.913	85.2	.524***
Job resources: organizational-level				
28. Trust with management	1,618	.851	77.2	.693***
29. Preparedness for change	1,615	.771	68.7	.555***
30. Procedural justice	1,611	.792	70.7	.584***
31. Respect for individuals	1,609	.845	76.4	.616***
32. Fair personnel evaluation	1,606	.859	78.2	.626***
33. Diversity	1,611	.685	61.5	.654***
34. Career development	1,609	.889	69.6	.733***
35. Work-self balance (positive)	1,623	.796	83.1	.625***
Outcomes				
36. Vigor	1,616	.899	83.3	.614***
37. Anger-irritability	1,618	.910	84.7	.547***
38. Fatigue	1,624	.891	82.2	.541***
39. Anxiety	1,623	.773	69.1	.603***
40. Depression	1,618	.885	63.9	.630***
Psychological stress reaction (total)	1,590	.929	46.4	.692***
41. Physical stress reaction	1,610	.839	39.4	.689***
42. Job satisfaction	–	NC	–	.642***
43. [Satisfaction with family life]	–	NC	–	.580***
44. Workplace harassment	1,624	.707	78.7	.478***
45. Workplace social capital	1,626	.852	77.2	.620***
46. Work engagement	1,622	.752	80.2	.664***
47. Performance of a duty	1,617	.781	70.2	.480***
48. Realization of creativity	1,620	.869	79.3	.603***
49. Active learning	1,620	.839	75.7	.547***

*** $p < 0.001$. NC: Not calculated because of one-item scale.

† [] indicates non-work environment or outcome.

Table 5 Exploratory factor analysis of 34 BJSQ and New BJSQ psychosocial work environment scales †

Scales	Factor 1 (Workgroup- and organizational-level job resources)	Factor 2 (Job demands)	Factor 3 (Task-level job resources)
Job demands			
1. Quantitative job overload	.067	<u>.712</u>	-.080
2. Qualitative job overload	-.064	<u>.686</u>	-.274
3. Physical demands	.089	.318	-.032
4. Interpersonal conflict	.494	<u>.501</u>	.452
5. Poor physical environment	.363	.250	.291
6. Emotional demands	.255	<u>.673</u>	.247
7. Role conflict	.414	<u>.654</u>	.330
8. Work-self balance (negative)	.222	<u>.589</u>	.208
Job resources: task-level			
9. Job control	.383	.296	.371
10. Suitable jobs	.348	.184	<u>.634</u>
11. Skill utilization	.232	-.078	.451
12. Meaningfulness of work	.483	-.102	<u>.808</u>
13. Role clarity	.407	.156	.422
14. Career opportunity	<u>.579</u>	-.093	<u>.674</u>
15. Novelty	-.172	.431	-.121
16. Predictability	.292	.111	.288
Job resources: workgroup-level			
17. Supervisor support	<u>.608</u>	.183	.492
18. Coworker support	.410	.156	.432
20. Monetary/status reward	<u>.588</u>	.252	.379
21. Esteem reward	<u>.654</u>	.244	<u>.506</u>
22. Job security	.482	.199	.343
23. Leadership	<u>.754</u>	.005	.426
24. Interactional justice	<u>.747</u>	.210	.424
25. Workplace where people compliment each other	<u>.727</u>	.166	.420
26. Workplace where mistakes are acceptable	<u>.692</u>	.056	.490
27. Collective efficacy	<u>.546</u>	.117	.455
Job resources: organizational-level			
28. Trust with management	<u>.712</u>	.221	.382
29. Preparedness for change	<u>.763</u>	.154	.367
30. Procedural justice	<u>.714</u>	.140	.304
31. Respect for individuals	<u>.760</u>	.141	.476
32. Fair personnel evaluation	<u>.765</u>	.116	.320
33. Diversity	<u>.603</u>	.174	.372
34. Career development	<u>.792</u>	.027	.435
35. Work-self balance (positive)	<u>.528</u>	.141	<u>.521</u>

† Data from 1,442 respondents who completed 34 scales from a national representative survey of employees of Japan in 2010/2011. "19. Support from family and friends" scale was excluded from the analysis because of non-work environment. Principal factor method was used to extract factors with scree test criterion, and a rotated factor structure with Oblimin method is shown. Factor loadings over 0.50 are underlined.

Table 6 Confirmatory factor analysis of 34 BJSQ and New BJSQ psychosocial work environment scales: factor loading for each scale in the four-factor structure (i.e., job demands and task-, workgroup-, and organizational-level job resources) †

Scales	Job demands	Task-level job resources	Workgroup-level job resources	Organizational-level job resources
1. Quantitative job overload	.600***			
2. Qualitative job overload	.481***			
3. Physical demands	.318***			
4. Interpersonal conflict	.627***			
5. Poor physical environment	.364***			
6. Emotional demands	.706***			
7. Role conflict	.750***			
8. Work-self balance (negative)	.599***			
9. Job control		.411***		
10. Suitable jobs		.580***		
11. Skill utilization		.438***		
12. Meaningfulness of work		.758***		
13. Role clarity		.463***		
14. Career opportunity		.772***		
15. Novelty		-.238***		
16. Predictability		.340***		
17. Supervisor support			.689***	
18. Coworker support			.459***	
20. Monetary/status reward			.582***	
21. Esteem reward			.693***	
22. Job security			.477***	
23. Leadership			.778***	
24. Interactional justice			.804***	
25. Workplace where people compliment each other			.787***	
26. Workplace where mistakes are acceptable			.707***	
27. Collective efficacy			.564***	
28. Trust with management				.733***
29. Preparedness for change				.773***
30. Procedural justice				.751***
31. Respect for individuals				.794***
32. Fair personnel evaluation				.792***
33. Diversity				.613***
34. Career development				.812***
35. Work-self balance (positive)				.543***

*** $p < 0.001$.

† Data from 1,442 respondents who completed 34 scales from a national representative survey of employees of Japan in 2010/2011. "19. Support from family and friends" scale was excluded from the analysis because of non-work environment. Maximum likelihood method was used to estimate factor loadings. A blank indicates that there was no path from a factor to a job demands/resources scale (i.e., zero factor loading) as hypothetically defined in the model³⁸.

Table 7 Polychoric correlation coefficients between psychosocial work environment (job demands and job resources) and outcomes measured by using the BJSQ/New BJSQ scales: a national representative sample of employees of Japan in 2010/2011 †

Scales ‡	Psychological stress reactions	Physical stress reactions	Work engagement	Workplace social capital	Workplace harassment
Job demands					
1. Quantitative job overload	.361**	.251**	-.050	.072**	.207**
2. Qualitative job overload	.240**	.174**	-.241**	-.056*	.147**
3. Physical demands	.142**	.103**	-.110**	.022	.126**
4. Interpersonal conflict	.494**	.282**	.305**	.570**	.531**
5. Poor physical environment	.268**	.179**	.259**	.337**	.240**
6. Emotional demands	.583**	.384**	.172**	.251**	.419**
7. Role conflict	.505**	.319**	.236**	.410**	.431**
8. Work-self balance (negative)	.499**	.317**	.160**	.220**	.275**
Job resources: task-level					
9. Job control	.329**	.190**	.290**	.241**	.219**
10. Suitable jobs	.411**	.171**	.610**	.361**	.254**
11. Skill utilization	.142**	.092**	.326**	.193**	.157**
12. Meaningfulness of work	.331**	.142**	.738**	.455**	.183**
13. Role clarity	.245**	.103**	.328**	.394**	.153**
14. Career opportunity	.300**	.150**	.578**	.425**	.162**
15. Novelty	-.141**	-.096**	.151**	.017	-.098**
16. Predictability	.208**	.124**	.229**	.220**	.091**
Job resources: workgroup-level					
17. Supervisor support	.360**	.209**	.395**	.409**	.314**
18. Coworker support	.305**	.180**	.321**	.459**	.264**
19. [Support from family and friends]	.196**	.105**	.175**	.210**	.164**
20. Monetary/status reward	.337**	.241**	.331**	.427**	.223**
21. Esteem reward	.390**	.237**	.438**	.511**	.341**
22. Job security	.361**	.248**	.306**	.332**	.326**
23. Leadership	.299**	.170**	.429**	.461**	.184**
24. Interactional justice	.376**	.211**	.420**	.503**	.362**
25. Workplace where people compliment each other	.342**	.189**	.434**	.454**	.302**
26. Workplace where mistakes are acceptable	.322**	.177**	.480**	.458**	.240**
27. Collective efficacy	.320**	.165**	.482**	.518**	.188**
Job resources: organizational-level					
28. Trust with management	.366**	.200**	.421**	.547**	.329**
29. Preparedness for change	.341**	.159**	.393**	.501**	.247**
30. Procedural justice	.303**	.209**	.354**	.477**	.245**
31. Respect for individuals	.373**	.246**	.514**	.510**	.235**
32. Fair personnel evaluation	.307**	.193**	.396**	.505**	.205**
33. Diversity	.285**	.156**	.342**	.447**	.222**
34. Career development	.302**	.181**	.477**	.545**	.211**
35. Work-self balance (positive)	.435**	.244**	.662**	.417**	.190**

* $p < 0.05$, ** $p < 0.01$. No asterisk means $p > 0.05$.

† Based on data from 1,398 respondents who completed all the scales. Note that all scale scores were converted so that higher scores indicate a better status. See text for more detail.

‡ [] indicates non-work environment or outcome.

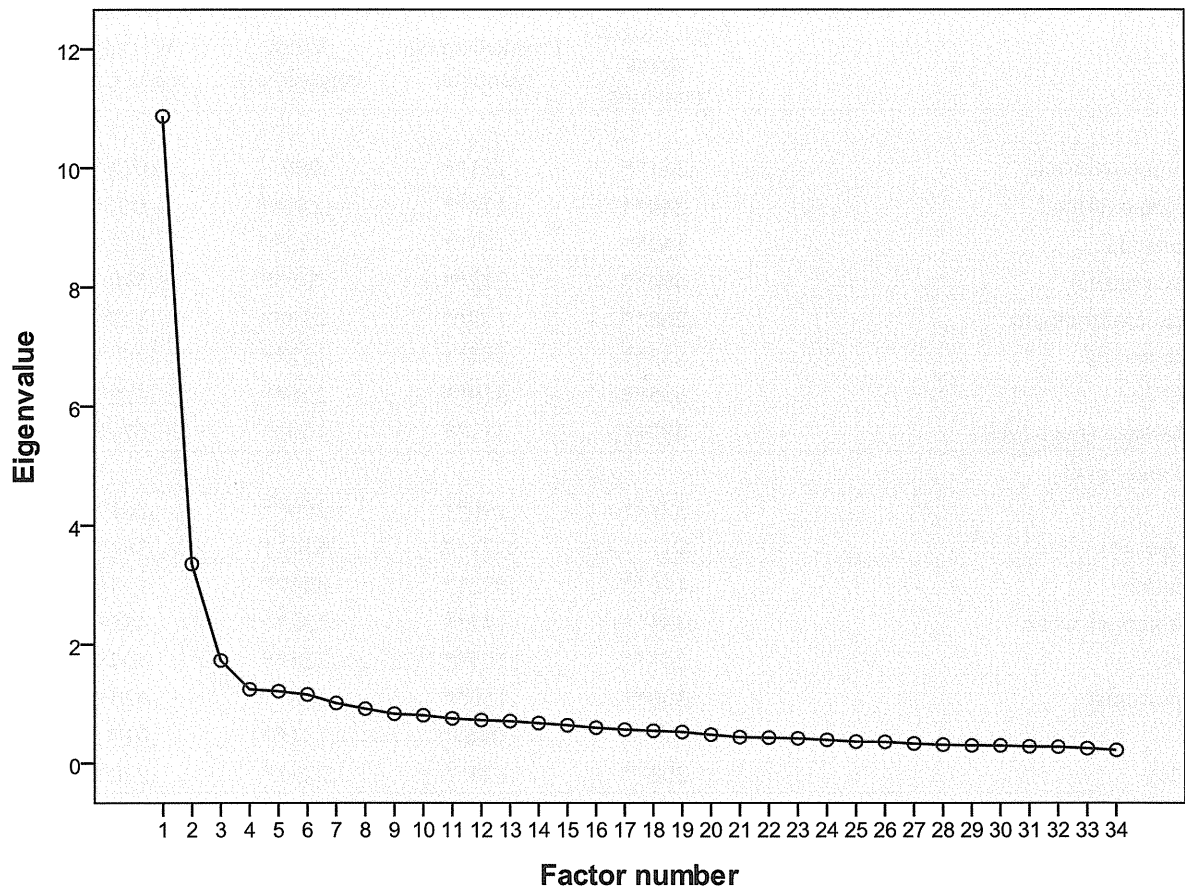


Figure 1 Scree plot for exploratory factor analysis

■職業性ストレス簡易調査票の開発と応用
新職業性ストレス簡易調査票の開発

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Development of a New Brief Job Stress Questionnaire

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Abstract We developed a new version of the Brief Job Stress Questionnaire (New BJSQ), which can measure job demands, job resources, and outcomes more multidimensionally and comprehensively by adding new items to the previous version of the BJSQ. To improve its usability, a “recommended version” and a “short version” were also developed to complement the standard (or full) version. For each New BJSQ subscale, Cronbach’s alpha and Pearson product-moment correlation coefficients showed generally good internal consistency and test-retest reliability. Furthermore, we also developed a feedback form for the New BJSQ for workplaces and received positive feedback from personnel department representatives about its usability. Finally, each subscale of the New BJSQ and the previous BJSQ was positioned within a “kenko-ikiiki (healthy and active) workplace model” which has been proposed as a new Japanese framework for prevention of job stress. We expect the New BJSQ to become a key assessment tool for promoting the “kenko-ikiiki workplace” in which personnel work actively and healthfully and their workplace has a sense of connectedness.

Key words: job stress (職業性ストレス), primary prevention (一次予防), psychosocial risk management (心理社会的リスクマネジメント), reliability (信頼性), stress assessment (ストレス調査)

1. はじめに

わが国における労働者のメンタルヘルス不調は増加の傾向にあり, その未然防止 (第一次予防) は, 労使双方にとって優先順位の高い課題となっている。これまでの研究で, 労働者のメンタルヘルス不調の第一次

予防の1つとして, 「職場環境等の評価と改善の実施」は, 科学的有効性が確認されており^{1,2)}, その実施ツールとして, 「職業性ストレス簡易調査票」³⁾ および「仕事のストレス判定図」⁴⁾ が開発されている。しかし, これらのツールは, 開発から10年が経過し, (1) 報酬や, 組織の公正性などの仕事の資源を評価できていないこ

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と、(2)アウトカム(結果)指標として、ポジティブな側面を評価できていないことなどの課題がある。一方、ヨーロッパ諸国では、職場のストレス要因や仕事の資源を、作業(タスク)レベルから事業場レベルまで、包括的に評価・判定する取り組みが行われ始めている。そこで、厚生労働省厚生労働科学研究費補助金労働安全衛生総合研究事業「労働者のメンタルヘルス不調の第一次予防の浸透手法に関する調査研究」(H21-労働一般-001)班(主任研究者:川上憲人)(以下、一次予防研究班)では、これまでの職業性ストレス簡易調査票(以下、旧調査票)に新たに項目を追加し、ヨーロッパ諸国と同様、仕事の負担、仕事の資源、アウトカムをより包括的に評価できる、新しい職業性ストレス簡易調査票(以下、新調査票)の開発を、研究目的の1つとして掲げ、2009(平成21)年度~2011(平成23)年度の3年計画で、新調査票およびそのフィードバック(結果返却)様式の開発を行った。本稿では、新調査票の開発プロセスを紹介するとともに、現場での実用可能性について、考察していくことにする。

2. 新職業性ストレス簡易調査票の開発プロセス

2.1 候補尺度の作成

新調査票に含めると良いと思われる「仕事の負担」、「仕事の資源」および「アウトカム」に関する下位尺度とその具体的項目を集約し(主に信頼性・妥当性が確認されている既存の尺度を集約したが、一部、オリジナルの項目も含めた)、「仕事の資源」に関する下位尺度については、当該尺度が着目している段階に応じて「作業レベル」、「部署レベル」、「事業場レベル」の3段階に分類した。その後、「仕事の負担」、「仕事の資源」に関する下位尺度について、概念が重複するものをまとめ、欧州の心理社会的リスクマネジメントに関する共通枠組み(Psychosocial Risk Management-European Framework: PRIMA-EF)⁵⁾、英国のHealth and Safety Executive(HSE)が提唱しているマネジメント基準⁶⁾、デンマークで使用されている職場の心理社会的要因を測定する尺度(Copenhagen Psychosocial Questionnaire: COPSOQ II)⁷⁾、および、韓国で使用されている職場の心理社会的要因を測定する尺度(Korean Occupational Stress Scale: KOSS)⁸⁾と照らし合わせ、わが国の現状を考慮しながら、新調

査票に含める下位尺度に優先順位をつけた。その後、現場の産業保健専門職ら(産業医、臨床心理士など)にヒアリングを行い、新調査票の候補尺度に含める下位尺度を取捨選択し、1下位尺度あたり3~5項目程度になるよう、項目を絞り込んだ。また、質問内容の分かりやすさなどを吟味し、文言の修正を行い、候補尺度の初版を作成した。最後に、ステークホルダー会議(本研究事業において、労働者のメンタルヘルス不調の第一次予防の推進枠組みを検討するために、毎年度2回開催:主要な労働安全衛生研究機関の研究員、産業保健専門職、使用者・労働側団体の代表者らが参加)を開催し、本会議のワークショップで話し合われた内容をもとに、候補尺度の初版に項目を追加し、候補尺度の最終版を作成した。

2.2 尺度の確定と理論モデルの構築

Yahoo!リサーチのモニターに登録している、全国の15歳以上の被雇用者を対象に、旧調査票と新調査票の候補尺度を含む、WEB調査を実施した。2010年3月17日に、対象者に調査の依頼を一斉送信し、回答者数が1,000名に達した時点で調査を打ち切った。即日、1,000名(男性687名、女性313名)が回答し、得られたデータをもとに、項目の絞り込みを行い、新調査票に含める尺度項目を確定した。

さらに、ステークホルダー会議を開催し、職場のメンタルヘルスの第一次予防を推進していくための、新しい日本型枠組みの理論モデルを検討するとともに、その理論モデルにおける、新調査票の各下位尺度の位置づけを検討した。

2.3 推奨尺度セット、短縮版の作成

新調査票で新たに追加した下位尺度は、必ずしも全ての調査で常に必要というわけではなく、使用する者が、業種や職種、事業場の特性に合わせて、必要と思う下位尺度を選択し、使用しても差し支えない。そこで、2010年5月~2011年2月に、新調査票の利用者として想定される、産業保健スタッフや人事労務担当者などを対象に、新調査票に新たに含めた下位尺度のうち、「重要と思うもの」と「不要・使いにくいと思うもの」を挙げてもらう(複数回答可)、WEBアンケートを実施した。有効回答の得られた103名のデータを解析し、全項目版(以下、「標準版」)から優先度の高い下位尺度を抽出した、「推奨尺度セット」を作成した。

また、作成した新調査票は、1下位尺度あたり2~5

項目で構成されており、旧調査票(57項目)に、「標準版」や「推奨尺度セット」を追加して使用した場合、項目数が多くなりすぎて、「現場で利用しにくい」という声が上がると考えられた。前述の、デンマークで使用されている測定尺度(COPSOQ II)⁷⁾は、この点を考慮し、複数項目からなる調査研究用の尺度に加え、各下位尺度から1項目を選び、現場でより簡便に使用することが可能な、1項目の尺度を別途作成している。これに倣い、1下位尺度あたり1~2項目からなる「短縮版」を作成した。尚、項目の選定に際しては、「推奨尺度セット」に含めた各下位尺度について、項目-得点相関(item-total correlation)を算出し、原則、項目-得点相関が最も高かった項目を採用したが、その項目の内容が、特定場面に限定的であるような場合には、著者らを含む作成チーム⁹⁾で合議の上、項目-得点相関が2番目に高かった項目を採用した。

2.4 新調査票の信頼性の検討

層化多段無作為抽出法により、全国の代表サンプルとなる、日本国籍を持つ20歳以上60歳以下の一般地域住民5,000名を抽出し、2010年11月25日に旧調査票と新調査票を含む、自記式調査票を送付した。2011年2月18日までに2,400名の調査票を回収した。このうち、重複回答や白票などを除いた、有効回答数は2,384名(回収率47.7%)であり、有効回答者のうち、被雇用者と回答した1,633名(男性847名、女性786名)のデータから、下位尺度ごとにクロンバックの α 係数を算出し、内的整合性を検討した。また、これらの被雇用者のうち、今後の調査に回答してもよいと回答した479名に対し、2011年11月11日に、同一の調査票による追跡調査への回答を依頼し、2011年12月22日までに回答が得られた417名(回収率87%)のデータを用い、尺度項目の1年間の再テスト信頼性を確認した。

2.5 フィードバック様式の作成と試行

新調査票は、組織レベル(事業場や部署)での評価を主目的として作成されていることから、当面、新調査票のフィードバック様式は、組織レベル用(事業場や部署別の集計結果を示した様式)のみを作成することとした。前述の被雇用者1,633名(男性847名、女性786名)のデータを標準データとし、そのデータと比較可能なフィードバック様式の雛形を作成した。そ

の後、2社を対象に、新調査票を用いた調査と、様式の雛形を用いた結果返却を実施し、人事労務担当者から、様式に対する意見を収集した。

3. 結 果

3.1 候補尺度の構成

2.1節で示した一連のプロセスを経て、34の下位尺度をもつ、計129項目からなる候補尺度が完成した。このうち、「仕事の負担」に含めた下位尺度は、「量的負担」、「情緒的負担」、「役割葛藤」、「職場のハラスメント」、「ワーク・セルフ・バランス(ネガティブ)」の5下位尺度(14項目)、「仕事の資源(作業レベル)」に含めた下位尺度は、「仕事の意義」、「仕事のコントロール」、「役割明確さ」、「成長の機会」、「新奇性」、「予測可能性」の6下位尺度(19項目)、「仕事の資源(部署レベル)」に含めた下位尺度は、「職場の一体感(ソーシャル・キャピタル)」、「経済・地位報酬」、「尊重報酬」、「安定報酬」、「上司のリーダーシップ」、「上司の公正な態度」、「ほめてもらえる職場」、「失敗を認める職場」、「グループの有能感」の9下位尺度(38項目)、「仕事の資源(事業場レベル)」に含めた下位尺度は、「経営層との信頼関係」、「変化への対応」、「手続きの公正性」、「個人の尊重」、「公正な人事評価」、「多様な労働者への対応」、「キャリア形成」、「ワーク・セルフ・バランス(ポジティブ)」の8下位尺度(33項目)、「アウトカム」に含めた下位尺度は、「ワーク・エンゲイジメント」、「(規定された)職務の遂行」、「創造性の発揮」、「積極的な学習」、「仕事のパフォーマンス」、「その他」の6下位尺度(25項目)であった。

3.2 新調査票の完成・理論モデルへの位置づけ

最終的に30の下位尺度をもつ、計84項目(旧調査票の57項目を合わせた場合、計141項目)からなる新調査票(標準版)が完成した。候補尺度から削除された4下位尺度は、「量的負担」、「仕事のコントロール」、「仕事のパフォーマンス」、「その他(アウトカム)」であり、前者2つは、既に旧調査票で測定されていること、後者2つは、もともと項目の妥当性検討のために追加した項目であったことが、削除した主な理由である。

また、ステークホルダー会議において、職場のメンタルヘルスの第一次予防を推進していく枠組みとして、企業の自主改善活動により、(1)労働者が健康で、