Community Research

Validity and reliability of the Indonesian version of the new brief job stress questionnaire (short version) for work-related stress screening among office workers

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ABSTRACT

BACKGROUND The short version of the new brief job stress questionnaire (SV-NBJSQ) that is originally in Japanese could evaluate work-related stress in Indonesian office workers. However, it has not been validated in Indonesian. Thus, this study aimed to test the validity and reliability of the Indonesian version of the SV-NBJSQ.

METHODS This study was conducted by linguistic and cultural adaptation of the original Japanese questionnaire into Indonesian and continued with exploratory factor analysis, internal consistency, and reliability test of Cronbach's alpha. Electronic and paper-based data were collected using total sampling from office workers at two companies in Jakarta from December 2017 to August 2018.

RESULTS A total of 438 respondents filled the questionnaire. The final version of the questionnaire consisted of 63 items, screened based on a loading factor of >0.4 and 13 factors (dimensions). Each factor had a Cronbach's alpha of 0.628–0.887, while the entire 63 had 0.904 with a total documented cumulative variation of 64.97%.

CONCLUSIONS The Indonesian version of the SV-NBJSQ is valid and reliable. Thus, we may use it as a more suitable, updated, and comprehensive tool to evaluate work-related stress among office workers.

KEYWORDS Indonesia, reliability and validity, screening, translations, work-related stress, questionnaire

Work-related stress is a significant global challenge for workers in terms of health and the company/institution.[1] These impacts include dysfunctional behavior, absenteeism, presenteeism, and poor physical health such as a reduced immune system. Data in Indonesia showed that the prevalence of work-related stress among young executives in several companies in Jakarta was quite high, reaching 25%.[2] Meanwhile, it reached 79% among civil servants of the Ministry of Health of the Republic of Indonesia.[3]

Psychosocial factors at the workplace play a significant role in causing work-related stress. Thus, detecting and evaluating these psychosocial factors become necessary. One frequently used instrument for this particular purpose is the self-administered questionnaire by the employee, which is inexpensive and easily analyzable.[4] Many new questionnaires are emerging every several years as the field of mental health and stress prevention is constantly evolving. One recently developed instrument is the new brief

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job stress questionnaire (NBJSQ) by Inoue et al[5] in 2014. This questionnaire is aimed at job demands and job resources assessment as well as employee and organizational outcomes with multidimensional and comprehensive approach. Inoue's team developed NBJSQ by adding new questions to the previously existing brief job stress questionnaire (BJSQ), which was established several years beforehand. NBJSQ had 141 questions/items (84 new items added to the BJSQ), which was not fully practical to be utilized in the common workplace. The team then created the concise/shortened version of NBJSQ (SV-NBJSQ) containing 80 questions (23 items added to the BJSQ), examined in Japanese employees aged 20–60 years who were on the payroll of a company.[6] Thus, NBJSQ (and along with SV-NBJSQ) has more updated theoretical job stress models for a more holistic and detailed multidimensional assessment.

Psychosocial factors are one potential hazard for workers, including white-collar workers. Several work-related stress questionnaires have been validated in the Indonesian population, but no questionnaire has assessed workplace psychosocial factors in a multidimensional and comprehensive manner. NBJSQ (and the short version) shows this multidimensional characteristic by adding factors based on the effort-reward imbalance model, higher-level organizational factors (such as workplace social capital), factors related to positive psychology, and workplace bullying/harassment to the former BJSQ which already encompassed many factors; thus, SV-NBJSQ for evaluating Indonesian workers can be used to obtain more holistic factors that cannot be obtained by other questionnaires. SV-NBJSQ has not been officially translated into Indonesian and has not undergone validity and reliability tests. Thus, this study aimed to generate a valid and reliable Indonesian version of the SV-NBJSQ.

METHODS

A cross-sectional study was conducted from December 2017 to August 2018 in Jakarta with linguistic adaptation (translations) and transcultural validity, followed by exploratory factor analysis to construct validity. The subjects were office (white-collar) workers of two companies in the oil and gas sector. The recruitment was conducted via open announcement, which was endorsed by the management. The inclusion criterion was had passed the probation period (3 months); while the exclusion criteria were had a history of psychiatric disorder, received treatment that might affect their mental state, and did not answer the questionnaire completely. Only subjects who agreed and had given an informed consent were proceeded in this study. The minimum sample size was calculated using the factor analysis method. Considering the 80-item questionnaire and the chosen respondent-to-question ratio of 5:1, the minimum sample size needed for the factor analysis was 400 subjects.

Permission to use this questionnaire in Indonesia was already granted by Inoue et al,[5] followed by the forward-backward translation of the SV-NBJSQ from Japanese to Indonesian and *vice versa*. The translation was done by a sworn translator from Universitas Indonesia. The backward translation was provided to the representative of the original authors to discuss any identified discrepancies or unclear translations with the investigator (ADL). The result of this review and the forward-translation questionnaire were reviewed by an expert committee consisting of an occupational physician specialist (from the Department of Community Medicine, Universitas Indonesia), a psychiatrist (from a private hospital in Jakarta), a company physician (from an oil and gas company in Jakarta), a human resource manager (from a private oil and gas company), and a statistician (from the Department of Community Medicine, Universitas Indonesia). The resulting questionnaire was then tested for a cognitive debriefing phase to a small group of 28 subjects with the same characteristics as the target population. Furthermore, the final version was sent to the study subjects, bundled in a package with a document containing an explanation of the study, informed consent form, and form to capture subject characteristics. This package was delivered electronically (via the internet/email) and manually (hardcopy) upon request. After all responses were obtained, subjects fulfilling exclusion criteria were removed, and exploratory factor analysis was performed. As the initial step for factor analysis, the measurement of sampling adequacy from the total collected data was calculated based on the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity. Factor analysis was aimed to determine the new number of dimensions (through eigenvalue >1) and the questions that would remain (items that have inter-item correlations of 0.3–0.9 with a minimum 0.4 loading factor). The expected cumulative/total variance to

determine the number of dimensions was ≥60%. Values for internal consistencies were also calculated for each dimension. The reliability test was done by assessing internal consistency using a Cronbach's alpha. The approval from the Ethics Committee of the Faculty of Medicine, Universitas Indonesia was already obtained (No: 0004/UN2.F1.ETIK/2018).

RESULTS

In the pre-validation phase (from the beginning until cognitive debriefing), revisions and additional sentences were applied to the initial Indonesian version based on the inputs from the expert committees and cognitive debriefing results from 28 subjects. The pre-final version was then sent to the subjects of the validation phase.

In the validation phase (post-cognitive debriefing), 438 subjects fulfilled the inclusion and exclusion criteria. Thirty-one respondents who gave incomplete answers, declined to consent, and had panic disorder were excluded; thus, only 438 were eligible for factor analysis. Table 1 shows the characteristics of the respondents.

Measurement of sampling adequacy was calculated using KMO and Bartlett's tests of sphericity, where the scores were shown to be >0.9 and $p<0.001$, respectively, thus allowing for factor analysis. When the rotation of principal axis factor matrix (varimax rotation) was generated, not all 80 questions met the criteria of loading factor ≥0.4. The exclusions of such questions were done through several cycles, resulting in 63 retained questions. The calculation for eigenvalue >1 for these 63 questions resulted in 12 factors/dimensions; however, only five factors were eligible. The resulted mapping of the 63 questions into these five factors can be seen in Table 2. Based on the mapping, the questions were distributed unequally in each factor; thus, a re-arrangement of this categorization was deemed necessary.

After this re-arrangement, the investigator (ADL) established 13 new factors/dimensions and calculated the Cronbach's alpha values for each dimension and the whole questionnaire. The cumulative variance for these 13 factors was calculated, resulting in a value of 64.966%. Each dimension was named following the principle: if it was identical to the Japanese version, the naming would mirror the original term; while if it was different from the Japanese version, a new name would be formulated. This final mapping of these 63 questions within these 13 factors, along with the factor/dimension's names, values of item correlation, loading factor, and Cronbach's alpha, are shown in Table 3.

Table 1. Characteristics of the respondents

Variables	n (%) (N = 438)
Age (years)	
20–29	95 (21.7)
30–39	198 (45.2)
40–49	108 (24.7)
50–59	31 (7.1)
≥60	2 (0.5)
Not answered	4 (1.0)
Sex	
Male	300 (68.5)
Female	136 (31.1)
Not answered	2 (0.5)
Position in company	
Executive/senior management	37 (8.4)
Full-time	249 (56.8)
Contract	128 (29.2)
Part-time	8 (1.8)
Others	16 (3.7)

Table 2. The mapping of the remaining questions

Factor	Question number(s)
1	2, 12, 13, 14, 15, 16, 17, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 53, 56, 58, 59, 60, 61, 62, 63, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 78, 79, 80
2	18, 19, 20
3	52, 55
4	8, 9
5	3

Table 3. Final mapping of the questions

Factor/dimension		Question (in Indonesian and English)		Item correlation	Factor loading	Cronbach's alpha
1	Work demands (note: same as the Japanese version)	A	*Saya tidak dapat menyelesaikan pekerjaan pada waktu yang ditentukan* (I can't complete work in the required time)	0.535	0.420	0.628
		B	*Saya harus bekerja keras semampu saya* (I have to work as hard as I can)	0.729	0.547	
		C	*Terdapat perbedaan opini dalam departemen yang menimbulkan konflik* (There are differences of opinions in my department which cause conflict)	0.614	0.517	
		D	*Departemen saya tidak bersinergi dengan baik dengan departemen lain* (My department does not get along well with other departments)	0.643	0.492	
		E	*Saya memiliki tempat kerja dengan suasana yang bersahabat* (My workplace has a friendly atmosphere)	0.640	0.594	
		F	*Saya kadang-kadang merasa kesal dengan pekerjaan saya* (I sometimes get upset about my work)	0.609	0.705	
		G	*Saya mendapat perintah yang berbeda dari dua orang atau lebih* (I receive incompatible instructions/requests from 2 or more people)	0.451	0.543	
		H	*Kehidupan pribadi saya sangat terganggu karena memikirkan pekerjaan* (My personal life suffers because I am thinking about work)	0.512	0.600	
2	Compatibility with task/work (note: different from the Japanese version)	A	*Saya cocok dengan pekerjaan saya* (I am suitable with my job)	0.649	0.485	0.705
		B	*Pekerjaan saya membangkitkan semangat saya untuk bekerja* (My job gives me energy to work)	0.735	0.610	
		C	*Saya memahami tugas kerja dan tanggung jawab saya* (I understand my duties and responsibilities are)	0.573	0.405	
		D	*Saya memiliki kesempatan mengembangkan kemampuan saya* (I have opportunities to improve my skills)	0.608	0.537	
3	Anger/irritability symptoms (note: same as the Japanese version)	A	*Saya merasa marah* (I feel angry)	0.627	0.616	0.809
		B	*Saya merasa kesal di dalam hati* (I feel inwardly annoyed)	0.719	0.682	
		C	*Saya merasa mudah tersinggung* (I feel easily offended/irritable)	0.618	0.511	
4	Fatigue symptoms (note: same as the Japanese version)	A	*Saya merasa sangat lelah* (I feel extremely tired)	0.617	0.652	0.868
		B	*Saya merasa kehabisan tenaga* (I feel exhausted)	0.666	0.690	
		C	*Saya merasa lesu* (I feel weary)	0.650	0.716	
5	Anxiety symptoms (note: same as the Japanese version)	A	*Saya merasa tegang* (I feel tense)	0.649	0.631	0.847
		B	*Saya merasa khawatir atau tidak aman* (I feel anxious or insecure)	0.708	0.636	
		C	*Saya merasa tidak tenang* (I feel restless)	0.737	0.680	
6	Depression symptoms (note: same as the Japanese version)	A	*Saya merasa murung* (I feel depressed)	0.739	0.718	0.887
		B	*Saya merasa melakukan apa pun rasanya sulit* (I feel that doing anything is a hassle)	0.664	0.642	
		C	*Saya tidak bisa berkonsentrasi* (I cannot concentrate)	0.598	0.586	
		D	*Saya merasa tidak gembira* (I do not feel happy)	0.688	0.703	
		E	*Saya tidak bisa berkonsentrasi dalam pekerjaan* (I cannot focus to handle my job)	0.594	0.566	
		F	*Saya merasa sedih* (I feel sad)	0.644	0.644	

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Table 3. (continued)

Factor/dimension		Question (in Indonesian and English)		Item correlation	Factor loading	Cronbach's alpha
7	Physical reactions (note: same as the Japanese version)	A	*Saya merasa pening* (I feel dizzy)	0.641	0.682	0.877
		B	*Saya merasa pegal linu dan nyeri sendi* (I feel aches and joint pains)	0.725	0.537	
		C	*Saya merasa sakit kepala* (I feel headaches)	0.625	0.569	
		D	*Leher dan pundak saya terasa kaku* (My neck and shoulders are stiff)	0.701	0.563	
		E	*Saya merasa punggung dan pinggang saya sakit* (I feel lower back pain)	0.670	0.563	
		F	*Saya merasa mata saya lelah* (I feel that my eyes are strained)	0.536	0.563	
		G	*Jantung saya berdebar dan merasa sesak napas* (I feel heart palpitations and shortness of breath)	0.431	0.464	
		H	*Saya merasa kondisi pencernaan saya tidak baik* (I experience digestive problems)	0.717	0.455	
		I	*Saya tidak memiliki nafsu makan* (I have lost my appetite)	0.475	0.412	
		J	*Saya mengalami sembelit dan/atau diare* (I experience constipation and/or diarrhea)	0.711	0.444	
		K	*Kualitas tidur saya kurang baik (misalnya sulit untuk mulai tidur, tidur tidak nyenyak, durasi tidur kurang dari normal, dan sebagainya)* (The quality of my sleep is not optimal [for example difficult to fall asleep, sleep not well, duration less than normal, etc.])	0.533	0.541	
8	Self-actualization symptoms (note: different from the Japanese version)	A	*Saya puas dengan pekerjaan saya* (I am satisfied with my job)	0.614	0.623	0.78
		B	*Di tempat kerja kami, semua saling memahami dan menerima* (In my workplace, everybody understands and accepts each other)	0.598	0.575	
		C	*Saya merasa selalu bersemangat ketika bekerja* (I always feel passionate/excited when working)	0.680	0.723	
		D	*Saya merasa bangga dengan pekerjaan yang saya lakukan* (I am proud with the work that I do)	0.648	0.557	
9	Interactions with superior (note: different from the Japanese version)	A	*Bila anda membutuhkan nasihat atasan, seberapa jauh atasan mau mendengarkan masalah anda?* (If you need advice from your supervisor, how far is he/she willing to listen to your problem?)	0.643	0.445	0.877
		B	*Saya menerima "remunerasi" sesuai dengan pekerjaan dan "insentif" sesuai dengan kinerja saya dan perusahaan* (I receive appropriate remuneration and incentive based on my and company's performances)	0.631	0.509	
		C	*Saya menerima penilaian yang sesuai dari atasan* (I receive appropriate evaluation from my superior)	0.716	0.518	
		D	*Atasan saya memberikan kesempatan kepada bawahan untuk mengembangkan kemampuannya* (My superior provides the people working under them the opportunities to develop their skills)	0.722	0.576	
		E	*Atasan saya memperlakukan saya dengan baik dan tulus* (My superior treats me with kindness and consideration)	0.740	0.602	
		F	*Saya mendapatkan penghargaan ketika saya bekerja dengan kinerja yang baik* (I receive appreciation/award when I perform well)	0.712	0.606	
		G	*Saya diberikan kesempatan untuk memperbaiki diri atas kesalahan yang pernah dialami di tempat kerja* (I am given the opportunity to correct the mistakes I have done at my workplace)	0.653	0.520	

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Table 3. (continued)

Factor/dimension			Question (in Indonesian and English)	Item correlation	Factor loading	Cronbach's alpha
10	Interactions with organization/ general management level (note: different from the Japanese version)	A	*Saya dapat memercayai informasi yang datang dari manajemen perusahaan* (I can trust the information that comes from the management)	0.659	0.491	0.869
		B	*Ketika terjadi perubahan yang berdampak pada pekerjaan atau tempat kerja saya, perusahaan mempertimbangkan pendapat dari pekerja* (When there are changes that affect my work or workplace, the company takes into consideration opinions of employees)	0.691	0.590	
		C	*Tempat kerja saya menghargai nilai dari masing-masing pekerja* (My workplace cares about the values from each employee)	0.693	0.625	
		D	*Hasil penilaian kinerja saya dijelaskan secara menyeluruh oleh atasan langsung kepada saya* (Results of my performance evaluations are fully explained to me by my superior)	0.528	0.528	
		E	*Di tempat kerja saya, semua orang (karyawan tetap, karyawan tidak tetap, karyawan paruh waktu, dan sebagainya) dihargai setara sebagai bagian dari perusahaan* (In my workplace, all types of workers [full-time, non-full-time, part-time workers, etc.] are respected equally as fellow members of the company)	0.628	0.537	
		F	*Saya mendapatkan pelatihan dan pendidikan yang berguna dan memotivasi saya dalam pengembangan karir saya* (I receive useful and motivating training for my career development)	0.529	0.563	
		G	*Pekerjaan saya memberikan semangat dan dampak positif dalam kehidupan pribadi saya* (My job gives me energy and positive impact for my personal life)	0.639	0.685	
11	Vitality/vigor symptoms (note: same as the Japanese version)	A	*Saya merasa sangat aktif* (I feel very active)	0.738	0.579	0.834
		B	*Saya merasa sangat berenergi* (I am full of energy)	0.800	0.545	
		C	*Saya merasa sangat bergairah* (I am lively)	0.726	0.545	
12	Support from outside of workplace (note: same as the Japanese version)	A	*Saat anda dalam kesulitan, seberapa besar anda dapat mengandalkan orang-orang berikut ini?: pasangan, keluarga, teman, dan lain-lain* (When you are troubled, how reliable are the following people?: spouse, family, friends, etc.)	0.749	0.703	0.684
		B	*Bila anda bertanya mengenai masalah pribadi anda, seberapa besar orang-orang ini mau mendengarkan masalah anda?: pasangan, keluarga, teman, dan lain-lain* (When you ask for advice on personal matters, how well will the following people listen to you?: spouse, family, friends, etc.)	0.747	0.630	
13	Determining own work methods (note: different from the Japanese version)	A	*Saya dapat bekerja dengan kemampuan (kecepatan kerja) saya sendiri* (I can work at my own pace)	0.739	0.557	0.7
		B	*Saya dapat menentukan bagaimana cara saya bekerja* (I can determine the method of my work)	0.726	0.552	
Total Cronbach's alpha (63 questions)						0.904

As an outcome of the factor analysis process, 17 questions from the original Japanese version were excluded in the final Indonesian version such as questions related to qualitative work overload factors, co-worker support, and easiness of communication with supervisors/co-worker/others. Moreover, the questions removed in the subcategory were questions regarding physical demands, suboptimal work environments, job security, utilization of appropriate skill, job control, satisfaction with family life, and workplace harassment. The list of these questions can be seen in Table 4.

Table 4. Questions removed during factor analysis

Question number	Question (in Indonesian)	Classification in Japanese version	
		Category	Subcategory
1	I must carry out a high amount of work in my current role and job description	Job demands	Quantitative job overload
4	I must pay very careful attention in my job		
5	My job is difficult that requires a high level of knowledge and technical skill		
6	I need to be constantly thinking about work throughout the working day		
7	My job requires a lot of physical activity and strength		Physical demands
15	My working environment is poor (e.g., noise, lighting, temperature, ventilation, etc.)		Poor physical environment
10	I can reflect and convey my opinions to those who create/shape the company policy	Job resources: task-level	Job control
11	My knowledge and skills are rarely used at work		Skill utilization
47	How freely can you talk with the following people?: superior	Job resources: workgroup-level	Supervisor support
48	How freely can you talk with the following people?: co-workers		Co-worker support
49	How freely can you talk with the following people?: spouse, family, friends, etc.		Support from family & friends
50	When you are troubled, how reliable are the following people?: superior		Supervisor support
51	When you are troubled, how reliable are the following people?: co-workers		
54	When you ask for advice on personal matters, how well will the following people listen to you?: co-workers		Co-worker support
64	I am worried about losing my job		Job security
57	I am satisfied with my family life	Outcome	Satisfaction family life
77	I am harassed at my workplace (including sexual harassment or harassment based on superiority)		Workplace harassment

Each of the 63 questions/items selected had a minimum loading factor of 0.4 for their dimensions, indicating that they were valid for their respective dimension/factor groups. A Cronbach's alpha (internal consistency) value of more than 0.6 for each dimension (0.628–0.887) was also obtained, confirming that the dimensions and their items were consistent or stable. All items had good validity and reliability, with item correlations ranging from 0.3 to 0.9 (more specifically between 0.431 and 0.800) and a Cronbach's alpha of 0.904 (>0.7). The 13 factors, which encompassed these 63 questions, showed an acceptable cumulative variance of 64,966.

DISCUSSION

This Indonesian version of the SV-NBJSQ is an important tool for evaluating work-related stress among Indonesian workers. This does not only contain more updated psychosocial factors and comprehensive multidimensional assessment but is also better understood and more suitable for Indonesian workers. This questionnaire is valid and reliable, which may ultimately help companies identify any actions needed to improve the work conditions.

During the factor analysis process, the questions were not equally distributed, in which most questions were mapped into the first factor, while only a few were mapped into the other four factors. This might be because the respondents did not fully understand/comprehend the categorical differences between the questions, which required a high level of detail. However, the Cronbach's alpha value for each created factor remained high because the division of factors/domains and sub-factors/domains mirrored the original Japanese version. This can be caused by the great reliability results from the Japanese version.

If referring to the Japanese version that has five categories ("job demands," "job resources: task-level, workgroup-level, and organizational-level," and "outcomes"), the existence of these five categories was still carried over to the final Indonesian version. Several subcategories in the original version that were carried over to the Indonesian version without a reduction/removal of any questions were interpersonal conflict, suitable jobs, meaningfulness at work, job satisfaction,

emotional demands, role conflict, role clarity, career opportunity, monetary/status reward, esteem reward, leadership, interactional justice, workplace where people complement each other, workplace where mistakes are acceptable, trust with management, preparedness for change, respect for individuals, fair personnel evaluation, diversity, career development, work-self balance, and all subcategories under outcomes related to physical reactions and individual emotional symptoms.

There were 17 questions removed due to cultural difference between Indonesian and Japanese employees about their perceptions/knowledge of those factors; it was assumed that these factors might not be stressors for Indonesian employees and/or not fully understood or recognized. The perception of psychosocial factors might also be very different because the respondents in this study ranged from senior executives to part-time employees (even interns). Furthermore, the Japanese population generally has a higher education level, which may contribute to their ability in dealing with many questions (i.e. 80 questions).[7] However, it must be noted that this study and the original Japanese study did not ask for respondents' educational levels; thus, further insights must be obtained before drawing this conclusion.

Four questions regarding work overload in the quantitative and qualitative aspects were removed. Since there were three questions in the qualitative aspect, thus the entire qualitative aspect was removed. This phenomenon is also found in qualitative studies on work-related stress caused by heavy workloads amongst emergency unit nurses and employees of a multinational business company.[8] Moreover, no studies have investigated the qualitative aspect; thus, it might not be a significant factor for evaluating work-related stress in Indonesian workers.

The exclusion of the poor physical work environment is aligned with the results of two studies. Ekawarna and Sofyan[9] studied public elementary school teachers and showed that poor physical environment was correlated with anxiety that was correlated with stress levels (obtained via structural equation modeling). As the poor physical environment was not directly correlated with stress, this may explain why the factor was not included in the mapping. Meanwhile, a study in plywood company employees found that employees who were exposed to noisy environments but had good adaptability skills did not report high-stress levels, showing a similar prevalence in the high- and low-stress employees in the same environment. Moreover, the respondents were from well-established companies with good physical environments (i.e., good lighting, temperature, ventilation, noise levels, etc.).[10]

The exclusion of physical activity demand did not align with Ratih and Suwandi[11] who found a significant relationship between the high physical nature of the work and stress levels in non-workers of the production division in a company. It should also be noted that most of these respondents exhibited sedentary work lifestyles/habits. Moreover, exclusion regarding interpersonal relationship is not aligned with the results of three previous studies. A significant correlation between co-worker interactions with stress was found on studies by Dhania[12] in cigarette laborers, Lady et al[13] in civil servants for Regional Disaster Management, as well as Sormin[14] in factory workers in a palm oil factory, albeit it was not significant.

The limitation of this study was with respect to some exclusion criteria that only relied on the employees' answers (self-reported) without any verification process to the source/other documents. Hence, the provided answer might not fully accurate.

The first suggestion for future studies would be to conduct other studies which will confirm the relationship between the excluded psychosocial factors and stress among Indonesian employees. Another suggestion is to expand this study to new psychosocial factors that are not listed in the original Japanese version, with the assumption that there are specific psychosocial factors for Indonesian culture. Finally, it is suggested to create a shorter version of this Indonesian version, referring to the early study by Inoue et al[6] where a short version was developed from the longer questionnaire.

In conclusion, we have developed the Indonesian SV-NBJSQ adapted from the original Japanese version by Inoue et al,[6] which is the updated and more comprehensive tool to evaluate work-related stress amongst office workers. This questionnaire consisted of 63 questions with changes in several questions when compared to the Japanese version. Moreover, it is valid, reliable, and suitable for Indonesian office workers.

Conflict of Interest

The authors affirm no conflict of interest in this study.

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