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Psychometric Properties of the Polish Version of Karasek's Job Content Questionnaire

Dorota Żołnierczyk-Zreda

Central Institute for Labour Protection – National Research Institute (CIOP-PIB), Poland

Sylwia Bedyńska

University of Social Sciences and Humanities, Poland

Aim. *The objective of this study was to test the psychometric properties of selected scales, namely, Decision Latitude, Psychological Job Demand, Social Support and Job Insecurity, from the Polish version of Karasek's 29-item Job Content Questionnaire (JCQ).* ***Method.*** *The study covered 2626 workers from a wide range of occupations. Estimation of internal consistency with Cronbach's α, and both exploratory factor analysis (with principal axis method) and confirmatory factor analysis were the main statistical methods. Predictive validity was assessed by regressing the outcomes of JCQ scales on the outcomes of Goldberg and Williams's General Health Questionnaire.* ***Results.*** *The internal consistency of the scales was satisfactory, ranging from .60 to .85. The 4-dimensional structure of the measured version was generally confirmed; the 4 dimensions being Decision Latitude; Psychological Job Demands and Job Insecurity merged into 1 factor; Co-workers' Social Support; and Supervisors' Social Support. Fit indexes for this model were satisfactory, it was also proved that this model predicted mental health.* ***Conclusions.*** *The Polish version of Karasek's 29-item JCQ has satisfactory psychometric properties; it is a short, easy method for assessing psychosocial work conditions.*

Job Content Questionnaire demand control social support job insecurity

1. INTRODUCTION

The job demand–control (JDC) model [1, 2] is one of the most influential models in research on the relationship between work and health problems, such as cardiovascular disease, and mental and musculoskeletal disorders [3, 4, 5, 6]. It states that two main job psychosocial conditions, i.e., Job Demands and Job Control can impinge upon the worker, causing various affective and behavioural outcomes. Job Demands refer to workload, work pace and role conflict; Job Control or Decision Latitude refers to the worker's ability to make decisions about their work (decision authority) and to decide what skills to employ (skill discretion) [1].

According to the strain hypothesis of the JDC model, people working in high strain jobs (characterized by high demands and low control) will develop strain-related outcomes, such as lack of psychological and physical well-being. Conversely, people working in low-strain jobs (low demands and high control) will not suffer from these outcomes. According to the activation hypothesis of the JDC model, high job demands in combination with high job control lead to

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Correspondence should be sent to Dorota Żołnierczyk-Zreda, CIOP-PIB, ul. Czerniakowska 16, 00-701 Warszawa, Poland. E-mail: dozol@ciop.pl.

increased motivation for learning and skill development. A specific form of the strain hypothesis is the buffer hypothesis which refers to an interactive effect of job demands and job control. It states that control attenuates (buffers) the negative effect of demands on well-being.

In the late 1980s, the JDC model was expanded with a third dimension, Social Support, which refers to helpful social interaction available from both co-workers and supervisors resulting in the job demand–control–social support (JDCS) model [2, 7, 8, 9].

The measure most widely used for assessing demands, control and support, and also used in the aforementioned studies on the relationship between work and health problems, was the Job Content Questionnaire (JCQ), originally developed in the USA [7]. The core JCQ measuring Psychological Demands (5 items), Decision Latitude (9 items), Social Support (8 items), Job Insecurity (3 items) and Physical Demands (1 item) is based on 26 questions taken from the U.S. quality of employment survey (QES), and then expanded into its longer version of 49 items, called the Recommended JCQ Version [10]. This version was used across six studies conducted in four countries: the USA, Canada, The Netherlands and Japan; its basic psychometric qualities were assessed in these studies [11].

A large body of studies on the relationship between work and health used modified versions of the original JCQ, e.g., shorter or JCQ-like (or JCQ-based) measures [12, 13, 14, 15, 16, 17, 18, 19, 20, 21].

The Leiden Quality of Work Questionnaire [22], the Swedish Demand–Control–Support Questionnaire or the Thorell Questionnaire [4] and the Copenhagen Psychosocial Questionnaire (hereafter referred to as JCQ-like questionnaires) [23] are among the most commonly used JCQ-based instruments

A Polish JCQ-like questionnaire was developed in the late 1990s, expanded by Job Satisfaction and Desirable Changes at Work scales [24]. The instrument with a total of 103 items turned out to be reliable and valid to measure work-related stress across different occupations. However, this method included only one item on job insecurity, an aspect of psychosocial work conditions, which has become increasingly important these days in Poland because of massive restructuring related to an economic transition in the past two decades.

The objective of this study was thus to assess the psychometric properties, such as reliability and validity (confirmatory, exploratory and predictive) of the original JCQ in the Polish population, including Job Insecurity (3 items) Decision Latitude (9 items), Psychological Demands (9 items) and Social Support (8 items) scales. Moreover, we used the longer version of the Psychological Demands scale (9 items) in our study as cross-cultural comparisons of outcomes collected with different JCQ translations into 23 languages revealed weaknesses of the 5-item Psychological Demand Scale [25].

We also tried to check the usefulness of the Polish version of JCQ for a wide range of occupations, since the existing studies using JCQ or JCQ-like instruments were conducted predominantly in persons employed in the human service sector, like healthcare and education [26, 27, 28, 29, 30, 31, 32, 33].

2. METHOD

2.1. Study Population

The study population included 2626 individuals and was representative both geographically and demographically. It covered 9 out of 10 major occupational groups, according to ISCO-08 [34] (Table 1) from randomly chosen 25 companies across a range of company size and industry branches.

Data collection was performed by sending questionnaires that included the Polish version of JCQ to 3200 workers for self-administration. In the second step, 2628 questionnaires were returned, which constituted 82.06% of the initial number.

The total of 1784 females (67.8%; M = 36.9; SD = 10.5) and 844 males (31.2%; M = 34.6; SD = 10.6) participated in the study. The mean age was M = 36.9; SD = 10.6, range: 19–70.

2.2. Instrument

The instrument was obtained in an authorized process, i.e., a back translation from English into Polish and again into English, and was approved for use.

Of the JCQ items, 29 items were chosen for analyses: Decision Latitude, Psychological Demands, Social Support and Job Insecurity scales [10].

For Decision Latitude, two subscales were used. One subscale, skill discretion (6 items), assesses "both the level of skill and creativity required on the job and the flexibility permitted the worker in deciding what skills to employ and skill underutilization" (p. 323) [11]. Another subscale, decision authority (3 items) assesses "the organizationally mediated possibilities for a worker to make decisions about their work" (p. 323) [11]. Each item of these two subscales has four answer categories (where 1 = *totally disagree*, 4 = *totally agree*).

For Psychological Demands, a 9-item subscale was used. It relates to mental workload, organization constraints on task completion, such as role ambiguity and conflicting work demands. Each item of this scale has four answer categories (where 1 = *totally disagree*, 4 = *totally agree*).

Social Support dimension is assessed with two subscales. One subscale relates to Supervisors' Support (4 items), i.e., both emotional and instrumental support. The same aspects of support are measured with the Co-workers' Support scale (5 items). Each item of these two scales has four answer categories (where 1 = *totally disagree,* 4 = *totally agree*).

The Job Insecurity scale (3 items) diagnoses general Job Insecurity that limits future career development possibilities. Two items were answered like the rest of the JCQ items (1 = *totally disagree,* 4 = *totally agree*), but one had five answer categories (1 = *regular, stable*; 2 = *seasonal/odd jobs*; 3 = *frequent job dismissals/ redundancies*; 4 = *seasonal/odd jobs with frequent sacking*; 5 = *other*).

The scale scores were calculated according to formulas presented in the original manual [7].

Mental health over the past 6 weeks was assessed with the 28-item General Health Questionnaire (GHQ-28) [24]. The original version of GHQ diagnoses four distress dimensions: somatic complaints, anxiety and insomnia, social dysfunction and depression. Each subscale has 7 items. Participants are asked to respond to each item on a 4-point scale (where 1 = *better than usual*, 4 = *much worse than usual*).

The self-administered questionnaires included an open-ended question on performed occupation, which was classified according to ISCO-08 [34], including the 10 major occupational groups (Table 1).

2.3. Statistics

All analyses were conducted separately for females and males with SPSS 20.0 and Amos 19.0 [35]. Mean values and standard deviations of each scale were calculated and analysis of variance (ANOVA) was used to evaluate statistical differences between females and males.

The scale reliability of the Polish version of JCQ was assessed with the internal consistency method using Cronbach's α. It has been suggested that α should be within the range of .60–.90 to consider a scale to be reasonably consistent [36].

The validity of the Polish version of JCQ was evaluated with both confirmatory and exploratory factor analyses. Confirmatory factor analysis (CFA) with AMOS 19.0 for analysing covariance structure was relied upon to test similarity of factor structures within gender subgroups. First, two hypothetical models were compared: one allowing for co-variations among the set of common factors as specified by exploratory factor analysis (EFA) with the principal axis method against the more simple model without any covariation. Similarity of factor loadings for the best fitting model was then tested in gender subgroups.

A number of fit statistics were used to assess the model's goodness-of-fit as suggested in the literature. The first one was the Satorra–Bentler scaled χ^2 value, which is the most commonly used test statistic for hypothesis testing to evaluate the appropriateness of a structural equation model. Fit value divided by its degrees of freedom was also considered. A ratio of five or under is beginning to be reasonable and a ratio in the

range of 2 to 1, or 3 to 1 is indicative of an acceptable fit between the hypothetical model and sample data [37]. The other fit indexes reported were

- root mean square error of approximation (RAMSEA), which is the most popular one;
- normed fit index (NFI) developed by Bentler and Bonett [38], which was revised by Bentler to take sample size into account and is called the comparative fit index (CFI) [39];
- goodness-of-fit index (GFI) developed by Jöreskog and Sörbom [40], which tests how much better the model fits as compared to no model at all (null model), i.e., when all parameters are fixed at zero;
- adjusted goodness-of-fit index (AGFI) also developed by Jöreskog and Sörbom [40] to adjust for a bias resulting from model complexity. The AGFI adjusts for the model's degrees of freedom relative to the number of observed variables and therefore rewards less complex models with fewer parameters.

Values over .90 (maximum is 1) for the AGFI, and over .95 for the NFI and CFI indicate a good fit of the model to data.

As to factorial validity, EFA was performed on the scales measuring Decision Latitude, Psychological Demands, Social Support, and Job Insecurity for females and males separately. Nonorthogonal oblimin (rotation) with delta value equal zero was performed, because this method represents clustering of variables more accurately than orthogonal rotation, and provides information about the extent to which the factors are correlated with each other. Factor loadings over .30 were considered as acceptable loadings on a factor.

Predictive validity was assessed by regressing the outcomes of JCQ scales on the outcomes of somatic complaints, anxiety, social dysfunction and depression measured with Goldberg and Williams's General Health Questionnaire-28 [41].

3. RESULTS

3.1. Descriptive Statistics

Missing values were replaced by the mean. Estimation of the means, standard deviations and correlation coefficients revealed that there were no significant differences in items before and after estimating missing values.

The mean values of most scales differed significantly in the groups of females and males. Results of ANOVA showed that females declared a significantly higher level of Job Insecurity and Psychological Demands, and a lower level of Decision Latitude compared to males. Females and males did not differ significantly in relation to Social Support at work (Table 2). These outcomes thus point to greater work-related stress in females compared to males.

3.2. Internal Consistency and Correlations Among Scales

Fairly high values for reliability coefficients measured with Cronbach's α were found, indicating acceptable levels of internal consistency for

TABLE 1. Demographic Characteristics and Work Conditions of Study Population (*N* = 2626)

Variables	*N* (%)
Gender	
male	844 (31.2)
female	1784 (67.8)
missing	
Education (years)	
<9 (primary)	173 (6.6)
10–12 (secondary)	1171 (44.7)
12–16 (tertiary)	507 (19.3)
16–18 (graduate)	776 (29.1)
≥ Ph.D.	8.0 (0.4)
n/a	11.0 (0.4)
Employment grade	
legislator/senior official/ manager	91 (3.4)
professional	381 (14.5)
technician/associate professional	249 (9.5)
office worker	482 (18.4)
shop/market sales/service worker	398 (15.2)
agriculture/forestry/fishery worker	228 (8.7)
craft and related trade worker	91 (3.4)
plant/machine operator	376 (14.3)
elementary occupation	146 (5.6)
missing	186 (7.1)

Notes. n/a = information not available.

each scale, except for Psychological Demands in the male group, which reached the borderline value (Table 2). The best reliability coefficients were found for Social Support.

Table 3 shows there was significant negative correlation between Decision Latitude and Job Insecurity and between Job Demands and Job Insecurity scales of the Polish version of JQC in the female group. Positive correlation between Social Support and Decision Latitude was found in the same group. The same pattern, with stronger effects of correlation, was found in the male group (Table 4).

3.3. Construct Validity

3.3.1. CFA

The model was tested with CFA. Both hypothesized (consistent with the theoretical model) and final versions of the four-factor models were examined with a number of goodness-of-fit statistics (Table 5). Fit statistics are acceptable only for

TABLE 2. Range, Means, Standard Deviations, Significance of Difference Between Males and Females and Cronbach's α of Polish version of Job Content Questionnaire Scales

Variables	*N*	Range	*M (SD)*	*F*	*p*	α
Psychological Demands (9 items)						
females	1749	12–49	25.31 (4.06)			.64
males	830	11–48	24.71 (3.76)			.60
total	2579	12–48	24.89 (4.02)	5.45	.020	.61
Decision Latitude						
females	1732	26–94	62.22 (10.18)			.74
males	835	26–96	63.46 (12.12)			.79
total	2567	26–96	62.62 (10.86)	7.38	.007	.76
Social Support						
females	1745	3–36	23.73 (3.46)			.85
males	835	9–36	23.43 (3.81)			.85
total	2580	3–36	23.63 (3.58)	3.78	.052	.85
Job Insecurity						
females	799	6–14	7.31 (1.87)			.62
males	449	4–14	6.81 (1.82)			.60
total	1248	4–14	7.11 (1.87)	20.94	<.001	.61

TABLE 3. Pearson's Correlation Between Scales of Polish Version of Job Content Questionnaire (JCQ) in Females

Variable	Job Insecurity	Decision Latitude	Job Demands	Social Support
Job Insecurity	1	−.267**	.247**	−.140**
Decision Latitude	−.267**	1	−.031	.330**
Psychological Job Demands	.247**	−.031	1	−.030
Social Support	−.140**	.330**	−.030	1

Notes. ** significant at $p < .01$ (two-tailed).

TABLE 4. Pearson's Correlation Between Scales of Polish Version of Job Content Questionnaire (JCQ) in Males

Variable	Job Insecurity	Decision Latitude	Job Demands	Social Support
Job Insecurity	1	−.284**	.332**	−.196**
Decision Latitude	−.284**	1	−.060	.324**
Psychological Job Demands	.332**	−.060	1	−.048
Social Support	−.196**	.324**	−.048	1

Notes. ** significant at $p < .01$ (two-tailed).

the second model, the one with combined Job Demands and Job Insecurity scale and Social Support scales split into Co-workers' and Supervisors' Support.

3.3.2. EFA

Initially, EFA with principal axis extraction with Cattell's scree plot criterion and direct oblimin rotation revealed a solution with four factors explaining from 38% of variance in the female group to 39% of variance in the male group. Two items: 4 (*repetitive work*) and 33 (*steady*) were excluded from the analysis because of the low common variance in the initial solution (<.1).

The Social Support factor was split into two factors for both males and females: one associated with Supervisors' Social Support, the other with Co-workers' Social Support.

In the female group, the first extracted factor was Co-workers' Support with loadings of from .60 to .80 (Table 5). The second factor grouped items theoretically connected with Psychological Demands and Job Insecurity theoretical scales

TABLE 5. Factor Analysis of Polish 29-Item Version of Job Content Questionnaire Using Oblimin Rotation, Females (*N* = 1744)

	Factor			
Question/Item	**1**	**2**	**3**	**4**
Q58 co-workers helpful	.799			
Q57 co-workers encouraging	.768			
Q56 friendly co-workers	.713			
Q54 co-workers interested	.659			
Q53 co-workers competent	.601			
Q23 enough time		–.611		
Q19 work fast		.610		
Q29 unpredictable work		.549		
Q28 tasks interrupted		.542		
Q20 work hard		.514		
Q32 wait for others		.514		
Q36 future layoffs		.511		
Q22 no excessive work		–.496		
Q27 intensive concentration		.484		
Q34 job security		.451		
Q26 conflicting demands		–.370		
Q35 recent layoffs		.349		
Q05 requires creativity			–.643	
Q07 high skill level			–.579	
Q06 allows own decisions			–.533	
Q03 learn new things			–.517	
Q11 develop own abilities			–.504	
Q09 variety			–.459	
Q10 lot of say			–.404	
Q08 high skill level			–.389	
Q33 steady job			—	
Q04 repetitive work			—	
Q48 supervisor is concerned				.818
Q51 helpful supervisor				.758
Q49 supervisor pays attention				.707
Q52 supervisor good organizer				.679

Notes. Items with factor loading <.30 are not listed.

with loadings from .35 to .61. Only one item connected with Job Insecurity 33 (*steady job*) was excluded because of loading under .30. The third factor, ranging from .40 to .64, grouped 7 items connected with Decision Latitude. Item 4 (*repetitive work*) was excluded because of loadings under .03. The fourth factor was loaded by all the items related to Supervisors' Support ranging from .68 to .82.

In the male group, the first extracted factor was loaded by 8 instead of 9 items connected with Decision Latitude, like in the female group (Table 6). Item 4 (*repetitive work*) obtained loadings under .03. The second factor grouped items connected with both Psychological Job Demands and Job Insecurity. However, 2 items: one from Psychological Job Demands, 20 (*work hard*), and one from Job Insecurity, 33 (*steady job*), were excluded because of loadings under .03. The third factor grouped all items connected with Co-workers' Support with loadings from .68 to .76, whereas the fourth factor grouped all items connected with Supervisors' Support with loadings from .78 to .85.

TABLE 6. Factor Analysis of 29-Item Version of of Job Content Questionnaire Using Oblimin Rotation, Males (*N* = 844)

	Factor			
Question/Item	**1**	**2**	**3**	**4**
Q05 requires creativity	.709			
Q07 high skill level	.616			
Q11 develop own abilities	.607			
Q03 learn new things	.582			
Q06 allows own decisions	.559			
Q09 variety	.555			
Q20 work hard	.496			
Q10 lot of say	.486			
Q08 little decision freedom	–.309			
Q04 repetitive work	—			
Q36 future layoffs		.639		
Q19 work fast		.581		
Q34 job security		.580		
Q28 tasks interrupted		.534		
Q23 enough time		–.526		
Q22 no excessive work		–.500		
Q32 wait for others		.479		
Q27 intense concentration		.436		
Q35 recent layoffs		.404		
Q26 conflicting demands		–.385		
Q29 hectic job		.323		
Q33 steady job		—		
Q54 co-workers interested			.759	
Q58 co-workers helpful			.750	
Q57 co-workers encouraging			.686	
Q53 co-workers competent			.685	
Q56 friendly co-workers			.684	
Q48 supervisor is concerned				–.851
Q51 helpful supervisor				–.796
Q52 supervisor good organizer				–.781
Q49 supervisor pays attention				–.775

Notes. Items with factor loading <.30 are not listed.

TABLE 7. Confirmatory Factor Analysis of Polish version of Job Content Questionnaire

Model	χ^2	*df*	GFI	AGFI	RAMSEA	NFI	CFI
Default	2243.822	319	.91	.89	.048	.54	.57
Independence			.80	.78	.07	.00	.00

Notes. df = 319, $p < .001$. GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, RAMSEA = root mean square error of approximation; NFI = normed fit index, CFI = comparative fit index.

3.4. Predictive Validity of Polish Version of JQC

To test predictive validity, four regression analyses were conducted to predict four measures of the General Health Questionnaire [34]: somatic complaints, anxiety, social dysfunction and depression. Predictors were control, social support and job demands, and their interactions. The latter were entered because of the assumption that a combination of all three factors caused high job strain and, therefore, interactions of those factors should predict health outcomes.

The only significant model was the one predicting somatic complaints, $F(7, 1334) = 35.82$, $p < .001$, $R^2 = .16$. All predictors and interactions were significant in this model. The most complex interaction of job demands, control and social support was significant, $F(1, 1334) = 7.87$, $p < .01$, $\Delta R^2 = .01$. Conditional effects showed that job demands were an important moderator of the relation between control and somatic complaints when social support was low. When job demands were low, the relation between control and somatic complaints was negative and stronger ($\beta = -.14$, $p < .001$) than when job demands were moderate ($\beta = -.11$, $p < .001$) or high ($\beta = -.07$, $p < .001$).

4. DISCUSSION

Although it is postulated for research on work-related stress to collect its objective indicators, self-report questionnaires are still widely used because they make it possible to study large samples with relatively low expenditure of time and money. JCQ has been translated in over 20 languages to date, but not so many studies that examined its psychometric features have used the same format. Job Insecurity was studied only in US, Dutch and Korean samples [11, 19]. Other studies checked psychometric properties of the basic JDCS model dimensions, such as Decision Latitude, Psychological Demands and Social Support [12, 13, 15, 16, 17, 18, 19, 20, 21, 22], and most of those studies used the shorter 5-item scale of job demands.

If we compare the scales means, our findings show that Polish workers scored lower in Decision Latitude than American, Japanese, Canadian, Dutch and Belgium workers [11, 12]. Only a Korean study and a Japanese study (but for females only) reported a lower level of Decision Latitude [19]. Similarly, with regard to Job Insecurity, the Polish sample obtained the highest mean values among the other five samples, except for Korea, where Job Insecurity was found to be higher [19]. Moreover, the highest level of Job Demands was observed in our sample comparing to other European samples; only the Asian ones, i.e., the Japanese and Korean samples, had higher values than Polish workers. The poor situation concerning working conditions, such as Job Demands, Decision Latitude and Job Insecurity, is reinforced by relatively low levels of Social Support; again, the lower level of support from co-workers was reported in the Asian samples. The higher level of work-related stress observed in the Polish sample comparing to the other European samples might result from the time the studies were conducted. Most European studies cited in this section were performed during a time of financial stability, whereas our study, during an economic downturn.

We have also found that females declared a significantly higher level of Job Insecurity and Psychological Demands, and a lower level of Decision Latitude compared to males. This outcome seems to be a constant finding across most studied populations, reflecting a "deficit of good psychosocial working conditions for women" (p. 346) [11].

The scales of the Polish version of JCQ show acceptable levels reliability, which is comparable to those in previous Western and Asian studies [11, 13, 15, 16]. Cronbach's α for all scales was over .60, and only fell borderline for Psychological Demands and Job Insecurity in the male group.

Like in other studies, the value for Psychological Demands was lower than for Decision Latitude, with that for Social Support (particularly for Supervisors' Support) highest [9, 11, 12, 13]. Item 4 (*repetitive work*) of Psychological Demands had a very low item–total correlation coefficients (<.1), which has been also reported (relating to item 4) by Cheng, Luh and Guo [17], Kawakami and Fujigaki [13] and Eum, Li, Jhun, et al. [18]. As Karasek concluded, "Repetitive work is the most troublesome question in most studies" (p. 342) [11]. It is, therefore, probable that the revision of this item's translation would increase Cronbach's α for Psychological Demands.

The reliability of Job Insecurity is generally low in many other countries, being the lowest reliable in the Dutch sample [11] and, like in Psychological Demands, one item (*steady job*) should be revised.

Positive correlations between Decision Latitude and Social Support observed in our study were also confirmed in the US, Canadian, Dutch, Japanese [11, 13] and Belgium studies [12].

The study revealed the four-factor structure of the Polish version of JCQ for both males and females, but it did not confirm exactly the structure revealed in the original study.

In both the male and female groups, Social Support was split into two separate factors: Co-workers' Support and Supervisors' Support. However, they were loaded by all the items belonging to the theoretical scales. A similar effect was observed in the French [15], Belgian [12], Chinese [15] and Japanese [13, 14] populations. Factorial discrepancy between Supervisors' and Co-workers' Support is thus a general finding. The second factor groups items connected with Decision Latitude in both subgroups. An interesting finding is that the third factor in both groups was connected with Psychological Demands and Job Insecurity. This indicates that an individual's perception of psychological job demands strongly depends on job security/insecurity. This outcome is quite unique among other studies, confirming job insecurity as a serious source of stress for Polish workers and an important aspect of psychological job demands.

The predictive validity of the Polish version of JCQ was confirmed, since the correlations between most JCQ scales were significant with the four aspects of mental health, i.e., somatic complaints, anxiety and insomnia, social dysfunction, and depression, and the total GHQ indicator. Other studies also reported consistent associations between mental health and JCQ scales [1, 5, 27, 28, 32, 33].

A major limitation of the study consists in not assessing the discriminant validity of the Polish version of JCQ. It should be checked whether higher ranked ISCO-08 [34] occupational groups, traditionally considered as managers, professionals and technicians would report significantly higher in Decision Latitude and higher in Job Demands than lower ranked ISCO-08 occupations. Another limitation of the study is that there were twofold more females than males in our sample, which might have some consequences for the results.

In conclusion, the findings of this study indicate that the Polish version of the 29-item JCQ scales is reliable and valid for assessing psychosocial work conditions in the Polish population, although the Psychological Job Demands scale should include aspects of job insecurity, which confirms that in times of economic difficulties, job security/insecurity is a crucial part of workers' job demands perception and essentially impacts the intensity of work.

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