Work-related stress, quality of life, and positivity among bank employees

Stress lavoro-correlato, qualità della vita e positività tra i dipendenti bancari

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ABSTRACT

Background. The present study aimed to analyze the levels of work-related stress and perceived well-being among employees of cooperative credit banks (BCCs) in the Veneto region (Italy). The risk of stress was assessed using Karasek's Job Demand-Control (JDC) model.

Methods. An anonymous online questionnaire was administered via email to workers registered with trade unions, covering 91% of the total workers. The study collected socio-demographic and work-related information between April and June 2021 using the following validated questionnaires: the Bank Employee Stress Test 8 (BEST8), the Job Content Questionnaire (JCQ) by Karasek, the Short-Form (SF)-12 Health Survey, and the Positivity Scale (PS). A logistic regression analysis was used to assess the significant associations between quality of life (QoL) and potential stressors.

Results. A total of 1,506 questionnaires were collected, with a response rate of 38%. Fifty-eight percent of the participants were male, with an average age of 45 years (standard deviation [SD]=8.2). Regarding QoL, the average physical component score (PCS) was 52.3 (95% confidence interval [CI]: 51.9-52.7), while the mental component score (MCS) was 35.9 (95% CI: 35.5-36.6), which is significantly lower than the average for the Italian population, typically ranging from 48 to 51.7. According to the JCQ, the mean decision latitude (DL) reported by participants was 65.7, and the mean job demand (JD) was 38.5. Overall, 24.3% of the workers were found to be in a state of distress. The regression model showed that distress was significantly associated with anxiety over unmet budget targets due to potential relocation or role changes, difficulty adapting to a fast-paced work environment, moral conflict with sales or consultation demands, and pressure from colleagues or superiors to be more flexible. The model demonstrated a goodness-of-fit of 46%.

Conclusions. The "contextual stressors" identified in this study appear to be linked to organizational culture, career development opportunities, decision-making autonomy, and the level of control given to employees. On the other hand, the "content-related stressors" are connected to the intensity and pace of work. The QoL among workers was significantly lower than the national average.

From an epidemiological standpoint, these findings offer valuable insights for future studies aimed at better understanding the causal relationship between stressors and health outcomes, and they may also encourage the implementation of health prevention and stress management interventions.

Key words: job-related stress, stress, bank employees, banking sector, quality of life.

RIASSUNTO

Contesto. Lo scopo del presente studio è stato quello di analizzare i livelli di stress lavoro-correlato e il benessere percepito tra i dipendenti delle banche di credito cooperativo (BCC) nella regione Veneto (Italia). Il rischio di stress è stato valutato utilizzando il modello domanda-controllo di Karasek.

Metodi. È stato somministrato un questionario online anonimo via e-mail ai lavoratori iscritti ai sindacati, coprendo il 91% del totale dei lavoratori. Lo studio ha raccolto informazioni sociodemografiche e relative all'ambito lavorativo tra aprile e giugno 2021, mediante l'utilizzo dei seguenti questionari validati: *Bank Employee Stress Test-8* (BEST-8), *Job Content Questionnaire* (JCQ), *Short-Form (SF)-12 Health Survey* e *Positivity Scale* (PS). È stata effettuata un'analisi di regressione logistica per studiare le associazioni significative tra qualità della vita e potenziali fattori di stress.

Risultati. Sono stati raccolti in totale 1,506 questionari, con un tasso di risposta del 38%. Il 58% dei partecipanti era di sesso maschile e l'età media era di 45 anni (deviazione standard [DS]=8.2 anni). Per quanto riguarda la qualità della vita, il punteggio medio della componente fisica è risultato pari a 52.3 (intervallo di confidenza [IC] 95%: 51.9-52.7), mentre quello della componente mentale è stato di 35.9 (IC 95%: 35.5-36.6), significativamente inferiore alla media della popolazione italiana, solitamente compresa tra 48 e 51.7. Secondo il *Job Content Questionnaire*, i partecipanti hanno riportato una latitudine decisionale media di 65.7 e una domanda lavorativa media di 38.5. Complessivamente, il 24.3% dei lavoratori è risultato in una condizione di stress. Il modello di regressione ha evidenziato che lo stress è significativamente associato a: ansia per il mancato raggiungimento degli obiettivi di budget dovuto a potenziali trasferimenti o cambiamenti di ruolo, difficoltà di adattamento a un ambiente lavorativo frenetico, conflitto morale legato alle richieste di vendita o consulenza, e pressioni da parte di colleghi o superiori in merito alla flessibilità. Il modello ha mostrato un indice di bontà di adattamento del 46%.

Conclusioni. I "fattori di stress contestuali" identificati in questo studio sembrano essere legati alla cultura organizzativa, alle opportunità di carriera, all'autonomia decisionale e al livello di controllo concesso ai dipendenti. I "fattori di stress di contenuto", invece, sono associati all'intensità e al ritmo del lavoro. La qualità della vita tra i lavoratori è risultata significativamente inferiore alla media nazionale. Da un punto di vista epidemiologico, questi risultati offrono spunti preziosi per studi futuri volti a comprendere meglio la relazione causale tra fattori di stress e salute, e possono anche favorire l'implementazione di interventi di prevenzione e gestione dello stress.

Parole chiave: stress lavorativo, stress, impiegati bancari, settore bancario, qualità della vita.

Introduction

Work-related stress is an occupational risk that is becoming increasingly significant in the modern world of work.[1] In 2004, European social partners issued a document establishing guidelines for managing work-related stress in the workplace, which were later adopted at the national level in Italy in 2008.[2] This agreement was fully incorporated into Italian workplace safety legislation (Legislative Decree 81/2008 and subsequent amendments); today, therefore, work-related stress is recognized by law in Italy. According to this agreement (Art. 3, paragraph 1), work-related stress is defined as "a condition that may be accompanied by physical, psychological, or social disorders or dysfunctions and is a consequence of individuals feeling unable to meet the demands or expectations placed upon them".[2,3]

But how should stress be understood? Stress is a nonspecific, adaptive response of the organism and, as such, does not always have a negative connotation (eustress/distress). Distress occurs when individuals are subjected to situations that exceed their coping capacity over a period of time. In this sense, it is easy to recognize how all categories of workers may be affected. In particular, it is interesting to examine how workers in the service sector – including commerce, transportation, banking and insurance, and IT services – are affected by this issue, especially given the steady and ongoing growth of these sectors in recent decades.

For these reasons, Legislative Decree 81/2008 requires employers to assess all risks, including those related to work-related stress (Art. 28). To eliminate any ambiguity, Article 2 also provides the definition of health to be used as a reference, which is "a state of physical, mental, and social well-being and not merely the absence of disease or infirmity".[3]

Literature shows that stress is a major cause of workplace absenteeism and is associated with health problems such as cardiovascular diseases, musculoskeletal disorders, and repetitive strain injuries.[4] One in four workers is affected by this issue, and an estimated 50-60% of all lost working days are due to stress.[4] The impact of stress on workers' quality of life (QoL) is therefore no longer negligible.

What is QoL from a scientific standpoint? Studies on QoL highlight that it is not only linked to well-being[5] and living conditions but also to economic status,[6] social relationships, and health. Some argue that it reflects a "capability to flourish", or the ability of people to pursue their goals,[7,8] and the sustainability of the environment on which they depend.[9] Therefore, there is no universally accepted definition of QoL. However, there is a general consensus on three core dimensions of QoL: socio-cultural, environmental, and economic.[10]

It is also essential to mention the impact of the recent SARS-CoV-2 pandemic on the working world and the emergence or intensification of stress-related factors. Although known since 1984, technostress is now increasingly present.[11] The pandemic introduced or intensified work activities requiring the use of technology, and if not properly regulated, these can represent additional stressors. According to a recent review by Chiappetta *et al.*,[12] the rapid evolution of technology often fails to align with human spatiotemporal dimensions, which may lead to psychological pressure, discomfort, and frustration. Symptoms include anxiety, mental fatigue, depression, nightmares, and, in some cases, outbursts of anger caused by difficulties with software, system malfunctions, or work interruptions.

Despite this, the workplace remains a privileged setting for the prevention of stress and the promotion of physical and mental health. It is therefore crucial to investigate all factors that contribute to a balanced work environment and the psychophysical well-being of employees.

The aim of this study is to assess possible stressors related to QoL and stress risk in employees working in the banking sector, specifically among workers in cooperative credit banks (BCCs) in the Veneto region.

Materials and Methods

This is a cross-sectional observational study involving employees working in BCCs in the Veneto region.

Data collection

Data were collected through a strictly anonymous, self-administered online questionnaire. To meet the study's objectives, the questionnaire included tools designed specifically for this worker population, as well as internationally recognized instruments. It comprised four validated questionnaires and an initial section collecting general socio-demographic and work-related information, structured as follows:

1. A set of questions on socio-demographic and work-related data.
2. Bank Employee Stress Test 8 (BEST8), a questionnaire to assess stressors specific to the banking sector.[13]
3. Short-Form (SF)-12 Health Survey (for QoL assessment).[14]
4. Job Content Questionnaire (JCQ) by Karasek, measuring job demand and control.[15]
5. Positivity Scale (PS).[16]

The specific features of the questionnaires listed in points 2-5 are detailed below.

BEST8 is a questionnaire developed specifically by a panel of experts[13] for banking employees. It includes 8 items representing potential sources of stress in the banking context, with dichotomous responses (agree/disagree). The total score ranges from 0 to 8, with higher scores indicating greater perceived distress. The tool is useful for identifying distress situations and providing companies with an "alert" to prompt further clinical or psychological investigation and, if necessary, plan interventions to manage work-related stress. Previous studies have shown significant associations between BEST8 and the internationally used JCQ.[17] Due to its brevity, it can be easily integrated with other instruments.

SF-12 is a short-form health survey assessing perceived general health. Validated in many languages, including Italian, it is the shorter version of the SF-36.[14] It consists of 12 items that generate two scores from 0 to 100: the physical component score (PCS) and the mental component score (MCS). Very low PCS scores (<20) indicate "substantial limitations in self-care, physical, social, and personal activities; significant physical pain; frequent fatigue; poor perceived health". Low MCS scores signal "frequent psychological distress; serious social and personal disability due to emotional problems; poor perceived mental health".[18]

Its strengths include brevity, ease of use, and broad applicability across various contexts.

JCQ was developed in 1985 by Robert A. Karasek and translated into 20 languages, including Italian.[19] It is the most widely used instrument for assessing job stress. The questionnaire uses a 4-point Likert scale and is based on the Job Demand-Control (JDC) model. This model evaluates two dimensions: i) Job Demand (JD), which includes work pace, workload, and consistency of demands (score range: 12-48); and ii) Decision Latitude (DL), which comprise skill discretion – the degree to which a job allows the use and development of various skills –

and decision authority – the degree of autonomy in organizing and planning work (score range: 24-96, with higher scores indicating greater autonomy).

By combining JD and DL, the JDC model identifies four scenarios: i) high-strain job (high demand, low control) – high distress risk; ii) active jobs (high demand, high control); iii) low-strain jobs (low demand, high control); and iv) passive jobs (low demand, low control).

PS[16] is designed to assess "positivity", understood as the tendency to view life and experiences in a positive light. It also measures self-esteem, life satisfaction, and optimism.

Self-esteem refers to overall self-acceptance,[20] a key evaluative component of self-concept;[21] life satisfaction refers to individuals' overall evaluation of their existence;[22] optimism pertains to expectations about the future.

These three constructs are correlated within the PS to yield results reflecting individual well-being, understood as health, work success, and positive interpersonal relationships.[23]

The PS was included in the questionnaire to explore potential links between these psychological dimensions and work-related stress, as either confounders or effect modifiers. It consists of 8 items rated on a 5-point Likert scale, producing a score from 8 to 40; higher scores indicate a more positive outlook on life and experiences.

Administration procedure and sample size

As of 2020, the number of employees of BCCs in the Veneto region was 4,349, according to union sources related to cooperative credit institutions operating in the area.

In agreement with the Regional Secretariats and Regional Coordinating Committees of the following trade unions – FABI, FIRST/CISL, FISAC/CGIL, and UILCA/UIL of Veneto – an e-mail was sent to all registered union members containing information about the study and an invitation to complete an online questionnaire, with a request to share it with their colleagues.

The total number of emails sent was 4,001, covering 91% of the total employee population. The initial email was sent on March 30, 2021, followed by three reminders, approximately 20 days apart. The final reminder was sent on June 14, 2021.

No random sampling was planned, as the intention was to reach the entire population targeted by the study. Since it was not possible to contact about 9% of employees by email, participants were encouraged to share the questionnaire link with colleagues not affiliated with the mentioned unions or involved in other organizations.

Statistical analysis

Statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS), version 25.0.

A descriptive analysis of demographic and work-related characteristics was performed, reporting means and standard deviations (SD) for quantitative variables, and absolute and relative frequencies for qualitative variables.

Descriptive statistics were also conducted for variables related to self-perceived health and workplace well-being, including calculation of the following numerical scores: BEST8, JD, DL, PCS, MCS, and PS.

Univariate analyses were carried out to explore possible associations between worker typology (active, passive, distressed, not stressed) and socio-demographic variables (gender, age, marital status, *etc.*) as well as work-related variables (commercial role, job title, BEST8 score).

Chi-square tests were applied for these comparisons, with *post hoc* analyses based on standardized residuals used to identify discrepancies between observed and expected values and to assess statistical significance across groups.[24]

Finally, bivariate correlation analyses were conducted between the BEST8 score and the DL and JD scales, using Spearman's or Pearson's correlation coefficients, depending on the normality of the variables, as determined by the Kolmogorov-Smirnov test.

A logistic regression model was used to examine possible characteristics associated with workers experiencing high distress, as defined by the JDC model. Predictors included the eight BEST8 items, PCS, MCS, and PS scores. In addition, gender, age, and work-related factors were included to control for confounding or effect-modifying variables. A stepwise approach with backward elimination was employed. Odds ratios (ORs) and 95% confidence intervals (95% CIs) were calculated. Variables included in the model were those with a $p<0.20$ in univariate analysis, as recommended by Hosmer and Lemeshow,[25] except for gender and age, which were included regardless.

A graphical analysis of the JDC model was carried out by creating a scatter plot to represent the JD and DL dimensions, with the origin set at the sample's mean values.

The statistical significance threshold was set at $p<0.05$. For *post hoc* analysis, the significance level was adjusted according to the complexity of the frequency tables.

Results

A total of 1,506 questionnaires were collected, out of 4,359 emails sent, yielding a response rate of 37.7%. Among the respondents, 97% reported being members of a trade union, while the remaining 3% declared not being affiliated with any organization.

Table 1 describes the sample. Specifically, 58% of the participants were male, 75% were married, and 72% had at least one child. The mean age was 45 years (SD=8.2), with a range of 23 to 72 years.

Regarding employment status, 98% of respondents had a permanent contract. Most participants were employees (72%), while 28% held managerial positions (levels I-IV). Two-thirds of the sample (66%) had a commercial role. In terms of branch size, 25% worked in small branches (fewer than four employees), 39% in medium-sized branches (4-7 employees), and 36% in medium-large branches.

Table 2 reports the results for the scales related to stress (JD, DL, BEST8), QoL (PCS, MCS), and positivity (PS). Notably, in six out of the eight BEST8 items, the level of agreement exceeded 60%. The highest agreement was observed for item 5, "The continuous company reorganizations cause me discomfort" (80%); item 4, "It makes me uncomfortable to recommend a product to clients solely because it is part of my sales target" (76%); item 2, "Failure to meet budget targets may lead to mobility or role change, which makes me anxious" (75%).

Concerning QoL scores, the mean PCS was 52.3 (95% CI: 51.9-52.7), while the mean MCS was 35.9 (95% CI: 35.5-36.6).

The mean DL was 65.7 (SD=9.9; 95% CI: 65.2-66.2) and the mean JD was 38.5 (SD=5.8; 95% CI: 38.2-38.8).

Figure 1 and Table 3 illustrate the JDC model. The origin of the graph corresponds to the mean values of DL (65.7) and JD (38.5). Workers were distributed as follows: high strain (distressed): 24.3% (n=361); low strain: 29.0% (n=425); active: 26.0% (n=382); passive: 22.0% (n=320).

The univariate analysis based on the four worker typologies from the JDC model is shown in Table 3. The first part presents associations with sociodemographic and occupational variables, while the second part examines associations with the BEST8 items.

Table 1. Descriptive statistics of the demographic and work-related characteristics of the study sample.

Variables		n	%	Missing data
Gender	M	875	58	0
	F	631	42	
Married	Yes	1135	75	0
	No	371	25	
Children	No	421	28	0
	Yes	1085	72	
Age (years)	<40	382	25	1
	40-45	396	26	
	46-50	279	19	
	>50	448	30	
Daily smoker	No	1225	81	0
	Yes	281	19	
Current or past use of tranquilizers/sedatives/antidepressants	No	1082	72	0
	Yes	424	28	
Job permanent contract	Yes	1471	98	0
	No	35	2	
Level	Employee	1088	72	0
	Managerial level I-IV	418	28	
Commercial role	No	507	34	0
	Yes	999	66	
Agency size (number of employees)	<4	331	22	3
	4-7	586	39	
	8-12	190	13	
	>12	396	26	

Table 2. Description of variables related to work-related stress (BEST8, JD-DL), quality of life, and positivity in the sample.

BEST8 items		n	%	Missing data
1 - In terms of safety, the thought of a possible robbery at my counter makes me uncomfortable	Disagree	574	38	0
	Agree	932	62	
*2 - Failure to achieve budget targets may result in territorial mobility and/or role change issues This causes me anxiety.	Disagree	380	25	0
	Agree	1126	75	
3 - The pace of changes in the workplace exceeds my capacity to adapt	Disagree	618	41	0
	Agree	888	59	
*4 - I feel uneasy recommending products to clients solely because they are included in my sales targets	Disagree	360	24	0
	Agree	1146	76	
*5 -Frequent organizational restructurings cause me discomfort	Disagree	307	20	0
	Agree	1199	80	
6 - The demands made in sales and/or consulting conflict with what I consider morally right	No	752	56	159
	Yes	595	44	
7 - I have enough time for my hobbies, passions, or sports	No	531	35	7
	Yes	968	65	
8 - Colleagues or superiors urge me to be 'flexible' in carrying out my tasks	No	562	39	52
	Yes	892	61	
Summary quantitative scores (range scores)		**Mean**	**SD**	
BEST8 score (0-8)		5.3	2.1	199
PCS12 (0-100)		52.3	7.2	0
MCS12 (0-100)		35.9	11.5	0
Job Demand (12-48)		38.5	5.8	18
Decision Latitude (24-96)		65.7	9.9	0
Positivity Scale (8-40)		24.8	4.3	0

BEST8, Bank Employee Stress Test 8; PCS, physical component score; MCS, mental component score; SD, standard deviation; *agreement percentages equal to or greater than 75%.

Specifically, workers with high distress were significantly more likely to: i) have used or be using antidepressants (35%, p<0.0025); ii) hold employee rather than managerial roles (20% *vs.* 16%); and iii) be in commercial roles (28% *vs.* 20%).

In the second part of Table 3, significant associations are shown between BEST8 items and high distress (p<0.006), with the exception of item 7 ("I have the opportunity to engage in hobbies or physical activity"), which was more frequently endorsed by active workers (29%, p<0.006).

A positive correlation was observed between BEST8 and JD (Spearman's r = 0.439, p<0.001), and a negative correlation between BEST8 and DL (r=−0.404, p<0.001).

The logistic regression model is presented in Table 4. The dependent variable was dichotomized into two categories: high distress *vs.* all other worker types (active, passive, low strain). Significant predictors of high distress included: i) agreement with "Failure to meet budget targets may lead to mobility or role change, which makes me anxious" (OR=1.84; 95% CI: 1.12-3.01); ii) "The pace of workplace change exceeds my capacity to adapt" (OR=1.625; 95% CI: 1.14-2.32); iii) "Sales or consulting demands conflict with my moral values" (OR=1.672; 95% CI: 1.22-2.29); and iv) "Supervisors or colleagues ask for 'flexibility' in task execution, which causes discomfort" (OR=1.776; 95% CI: 1.27-2.50).

Conversely, protective factors against high distress included: i) holding a managerial position (OR=0.663; 95% CI: 0.47-0.94); ii) higher scores on the PCS (OR=0.956; 95% CI: 0.94-0.97); and iii) higher scores on the MCS (OR=0.950; 95% CI: 0.94-0.96).

The model's goodness of fit, based on the Hosmer-Lemeshow test, was satisfactory (p=0.462).

Discussion

In the present study, it was observed that the majority of the BEST8 items – *i.e.*, six aspects considered sources of stress in the working context of employees in the banking and insurance sectors – were endorsed by at least 60% of respondents. In the univariate analysis, all items were significantly associated with being in a condition of job strain, according to the JDC model definition.

The three items with the highest level of agreement (≥75%) are consistent with those identified in a previous survey conducted in 2018 on bank workers in the province of Pisa,[17] confirming their continued relevance: "I am distressed by the constant corporate reorganizations"; "It bothers me to recommend a product to clients solely because it is included in my sales targets"; "Failing to meet budget objectives may lead to relocation and/or changes in role. This causes me anxiety".

The mean values of the two JDC constructs calculated in the present study (JD=38.5; DL=65.7) are not significantly different from those reported in Mannocci *et al.*'s research (JD=37.9; DL=62.0), with p>0.05.[17] At the international level, two studies conducted in Canada and France propose threshold values for interpreting JD and DL scores: JD values ≥24 are indicative of high job demands, while DL values ≤72 are classified as low decision latitude. Although these studies are not recent, they were considered relevant for comparison since the populations involved were composed of similar occupational groups, generically defined by the authors as "white-collar workers".[23,24] The average values found in our sample fall within these "critical" ranges for both constructs, suggesting a potentially stressful organizational context.

Regarding QoL, the average PCS score among Veneto BCC workers is consistent with the national values reported by ISTAT for the 2005-2013 period (49.2-52). However, the average MCS score is lower than the national average and falls outside the 95% CI estimated by ISTAT data (48-51.7),[18] indicating relatively compromised psychological well-being in the sample under study.

The logistic regression analysis showed that subjects classified as "stressed" according to the JDC model do not differ significantly in terms of demographic characteristics such as gender, age, marital status, or having children. Similarly, no significant associations emerged with the positivity-related constructs (PS), such as self-esteem, optimism, and life satisfaction, contrary to some scientific evidence.[26]

However, the regression model identified a significant association between work-related distress and the perception of specific organizational stressors, such as frequent reorganizations, lack of autonomy, pressure from performance targets, and ethical conflicts in the commercial role. These results confirm the central role of organizational factors in the development of occupational stress.

Among the occupational characteristics investigated, the only one significantly associated with distress was job role: employees were found to be at higher risk of distress compared to middle managers ("*quadri*"). This result, already reported in the literature,[17,27] may be interpreted from multiple perspectives, including differences in decision-making autonomy, remuneration, and level of responsibility.

Table 3. Distribution of the workers according to the JDC model.

JDC model	n	%
High distress	361	24.2
Low distress	425	28.6
Active worker	382	25.7
Passive worker	320	21.5
Total	1488	100
Missing data	18	-

JDC, Job Demand-Control.

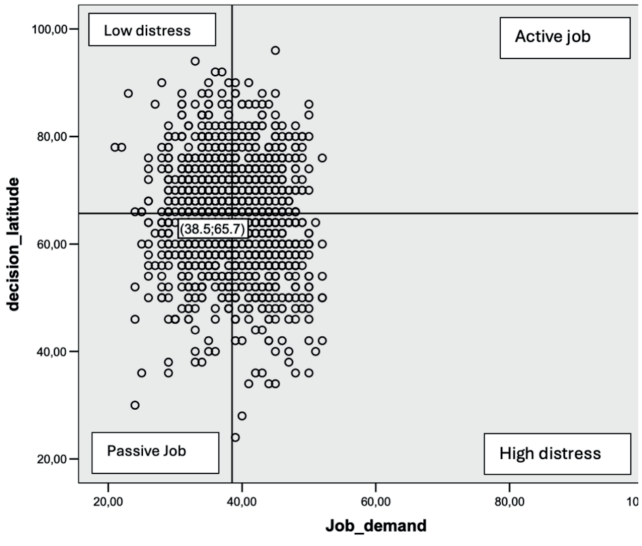

Figure 1. JDC Model.

In contrast to previous findings,[17] no significant associations were observed in our sample between high stress levels and the use of antidepressant or anxiolytic medications.

Finally, the regression analysis supports a well-established finding in the literature: the association, though not necessarily causal, between job-related distress and the perception of low QoL, both physical and mental.[27,28]

Limitations

There are several limitations to this study, primarily related to its observational design, which does not allow for causal relationships to be established between specific conditions and the presence of distress or psycho-physical discomfort.

It was also not possible to verify whether some participants may have completed the questionnaire more than once, although efforts were made to minimize this risk by sending three reminder emails emphasizing that the questionnaire should only be completed and submitted once.

The response rate was 37.7%, which may have introduced selection bias into the results; it is possible that only those more sensitive to the issue chose to participate, potentially leading to an overestimation of the prevalence of stress-related phenomena.

Furthermore, stress was measured using a tool based on the subjective perception of the respondents, without incorporating objective indicators potentially related to stress, such as the number of absences, sick leave, injuries.[10]

An additional factor that may have influenced the results – but was not accounted for in the study design – is the historical context during which the survey was conducted, namely the COVID-19 pandemic. This may have affected bank employees' stress levels in ways that are not possible to assess.[29]

Table 4. Association between the JDC model and demographic variables, work characteristics of the sample, and BEST8 factors.

		Job Demand-Control Model					
		High distress	Low distress	Active	Passive		
Characteristics		n (%)	n (%)	n (%)	n (%)	Tot.	p[b*]
Gender	Male	197 (23)	263 (30)	211 (24)	194 (22)	865	0.091
	Female	164 (26)	162 (26)	171 (27)	126 (20)	623	
Age (yrs)	<40	88 (24)	103 (28)	118 (32)[a]	66 (18)	375	
	40-45	89 (23)	106 (27)	115 (29)	84 (21)	394	**<0.001**
	46-50	85 (31)	79 (29)	66 (24)	44 (16)	274	
	>50	98 (22)	137 (31)	83 (19)[a]	126 (28)[a]	444	
Civil status	Not married	89 (24)	100 (27)	93 (25)	84 (23)	366	0.862
	Married/cohabiting	272 (24)	325 (29)	289 (26)	236 (320)	1122	
Children	No	113 (27)	104 (25)	113 (279	86 (21)	416	0.154
	Yes	248 (23)	321 (30)	269 (25)	234 (22)	1072	
Daily smoker	No	286 (24)	343 (28)	307 (25)	276 (23)	1212	0.089
	Yes	75 (27)	82 (30)	75 (27)	44 (16)	276	
Use of antidepressants/tranquilizers	No	214 (20)[b]	360 (34)[b]	266 (25)	229 (21)	1069	**<0.001**
	Yes	147 (35)[b]	65 (16)[b]	116 (28)	91 (22)	419	
Job position	Employer	294 (27)[b]	257 (24)[b]	271 (25)	253 (24)[b]	1075	**<0.001**
	Manager	67 (16)[b]	168 (41)[b]	111 (27)	67 (16)[b]	413	
Commercial role	No	98 (20)[b]	164 (33)	73 (14)[b]	168 (33)[b]	503	**<0.001**
	Yes	263 (28)[b]	261 (27)	309 (31)[b]	152 (15)[b]	985	
BEST8							
BEST8 item 1	Disagree	102 (18)[b]	201 (35)[b]	153 (27)	114 (20)	570	**<0.001**
	Agree	259 (28)[b]	224 (24)[b]	229 (25)	206 (22)	918	
BEST8 item 2	Disagree	29 (8)[b]	180 (48)[b]	95 (25)	71 (19)	375	**<0.001**
	Agree	332 (30)[b]	245 (22)[b]	287 (26)	249 (22)	1113	
BEST8 item 3	Disagree	67 (11)[b]	279 (45)[b]	132 (22)[b]	136 (22)	614	**<0.001**
	Agree	294 (34)[b]	146 (17)[b]	250 (29)[b]	184 (21)	874	
BEST8 item 4	Disagree	36 (10)[b]	159 (44)[b]	103 (29)	60 (17)	358	**<0.001**
	Agree	325 (29)[b]	266 (23)[b]	279 (25)	260 (23)	1130	
BEST8 item 5	Disagree	31 (10)[b]	158 (52)[b]	67 (22)	48 (16)	304	**<0.001**
	Agree	330 (28)[b]	267 (23)[b]	315 (26)	272 (23)	1184	
BEST8 item 6	No	106 (14)[b]	284 (38)[b]	212 (28)	141 (19)	743	**<0.001**
	Yes	232 (40)[b]	83 (14)[b]	145 (25)	127 (21)	587	
BEST8 item 7	No	274 (28)[b]	207 (22)[b]	278 (29)[b]	200 (21)	174	**<0.001**
	Yes	85 (16)[b]	215 (41)[b]	103 (20)[b]	119 (23)	522	
BEST8 item 8	No	67 (12)[b]	230 (41)[b]	129 (23)	130 (23)	556	**<0.001**
	Yes	285 (32)[b]	180 (21)[b]	245 (28)	171 (19)	881	

BEST8, Bank Employee Stress Test 8; *p-value χ^2 test; [a]significant at the level of $\alpha<0.003$, adjusted using the *post-hoc* chi-square test; [b]this significant at the level of $\alpha<0.006$, adjusted using the *post-hoc* chi-square test; bold, $p<0.05$.

Table 5. Multivariate logistic regression model regarding the categorization of workers with high stress.

Covariates		Worker with high stress according to the JDC model		
		OR	95% CI	
Gender	M*	1		
	F	0.94	0.693	1.274
Children	No*	1		
	Yes	0.738	0.542	1.005
Married/cohabiting	No*	1		
	Yes	1.353	0.926	1.978
Commercial role	No*	1		
	Yes	1.185	0.852	1.647
Job position	Employer*	1		
	Managerial	**0.663**	**0.469**	**0.938**
Use of antidepressants/tranquilizers	No*	1		
	Yes	0.832	0.6	1.154
BEST8 item 1	Disagree*	1		
	Agree	1.176	0.854	1.618
BEST8 item 2	Disagree*	1		
	Agree	**1.835**	**1.12**	**3.006**
BEST8 item 3	Disagree*	1		
	Agree	**1.625**	**1.139**	**2.318**
BEST8 item 4	Disagree*	1		
	Agree	1.522	0.961	2.409
BEST8 item 5	Disagree*	1		
	Agree	1.034	0.63	1.699
BEST8 item 6	No*	1		
	Yes	**1.672**	**1.219**	**2.293**
BEST8 item 7	No*	1		
	Yes	1.073	0.769	1.497
BEST8 item 8	No*	1		
	Yes	**1.776**	**1.265**	**2.495**
Age (yrs)		1.008	0.988	1.029
PCS		**0.956**	**0.939**	**0.973**
MCS		**0.950**	**0.936**	**0.964**
PS		0.981	0.943	1.02
Hosmer-Lemeshow's test		0.462		

JDC, Job Demand-Control; OR, odds ratio; CI, confidence interval; BEST8, Bank Employee Stress Test 8; PCS, physical component score; MCS, mental component score; PS, Positivity Scale; bold, p<0.05, meaning the result is significant with an error level below 5%; *reference group.

Strengths

The invitation to participate in the study reached all workers affiliated with the unions that promoted the survey (representing approximately 91% of the workforce), as well as a portion of non-affiliated workers. This is supported by the presence of participants who stated they did not belong to any organization (n=41.3%), indicating that the questionnaire was widely circulated and accessible.

Additionally, the dataset has a low rate of missing values. Among the 36 items included in the survey, only six have missing data, ranging from 0.06% to 3.5%. One exception is a single item with 159 missing responses out of 1,506 (10.6%).

The BEST8 and JDC instruments are significantly correlated, which contributes to the internal validity of the study. Moreover, the results are consistent with those obtained in previous research[13] conducted in Italy using the same measurement tools, thereby supporting the significant associations found and enhancing the external validity – or generalizability – of the findings to the target population.

Finally, the variables included in the logistic regression model appear to be suitable for explaining, at least in part, the perceived stress among workers (Hosmer-Lemeshow test, p=0.462).

Conclusions

In the literature, several factors associated with work-related stress have been studied. Some are closely tied to the individual and are non-modifiable (such as gender and age), while others are related to the work environment and are conventionally categorized into content and context factors.[30] The eight sources of stress proposed in the BEST8 questionnaire are inspired by both of these dimensions. At the univariate analysis level, all sources were found to be associated with the stress condition, confirming, on the one hand, that these fall within the panel of risk factors that could trigger or alter stress status among bank workers, including those employed in Veneto's BCCs; and on the other,

that the stressors appear to originate from both content- and context-related factors.

In particular, among context-related factors – namely, those working conditions that can shape the professional domain – emerging aspects include organizational culture, such as the perceived pressure to meet sales targets; career development or role change opportunities, for instance as expressed in item 2 concerning the risk of territorial mobility; and decision-making autonomy, as highlighted in item 6 related to the selection of commercial products. As for content-related factors, a noteworthy element is the work pace, perceived as "hardly" sustainable, as inferred from items 3 and 8, which refer to the "ability to adapt to demands" and being "flexible".

Therefore, this survey seems to highlight deficiencies in the availability of social support, problem-solving strategies, or cognitive restructuring, as well as a lack of active listening to workers.[27,31]

Another important aspect to consider, as emphasized in a recent systematic review, is that occupational stress is now recognized as a significant cause of disease even among workers in this sector.[27]

Although this study cannot demonstrate the direct health effects of stressors, it does confirm the coexistence of stress and poor well-being in the workforce. In fact, workers classified as stressed according to the JDCM model are those with a poorer QoL, both mentally and physically (as shown by MCS and PCS scores). Furthermore, the MCS value calculated for the entire sample is significantly lower than the national average.

From an epidemiological perspective, as well as in terms of health promotion and workplace well-being, this observation offers a starting point for further investigation. Longitudinal studies could help clarify both the actual causal relationships and their impact on workers' health and productivity. Moreover, where relevant, it would be possible to assess the outcomes of implementing organizational changes or the effectiveness of targeted training programs aimed at stress prevention and management (*e.g.*, courses designed to enhance coping strategies), while also considering different types of workers.

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Conflict of interest: the authors have no conflict of interest to declare.

Ethics approval and consent to participate: not required.

Availability of data and materials: the datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Received: 16 June 2025. Accepted: 24 July 2025.

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Giornale Italiano di Medicina del Lavoro ed Ergonomia 2025; 47:725. doi:10.4081/gimle.2025.725
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