administrative sciences

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Development and Validation of a Brief Inventory of Psychosocial Factors Related to Organizational Changes and Occupational Stress

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Abstract

In recent decades, profound transformations in work organization, employment conditions, and organizational change processes have intensified workers' exposure to psychosocial risks, with significant consequences for occupational health and well-being. Despite the growing relevance of these risks, organizations often lack psychometrically robust instruments capable of capturing psychosocial stressors associated with change, Conflicts, and working conditions in an integrated manner. The purpose of this study was to develop and psychometrically evaluate a questionnaire designed to measure psychosocial factors related to organizational changes, interpersonal Conflicts, and occupational well-being. An instrumental study design was employed, following international standards for the construction and validation of psychological instruments. The sample consisted of 350 workers with a mean age of 33.19 years (SD = 9.18; range: 18–66) and an average organizational tenure of 6.71 years (SD = 8.61). The initial 48-item questionnaire was refined to a final version comprising 24 items distributed across 7 scales: Organizational Changes, Work Program, Job Security, Promotion, Training, Interpersonal Conflicts, and Lack of Participation. Preliminary analyses indicated that the data adequately met the assumptions for factor analysis (KMO = 0.81; Bartlett's test $\chi^2 = 4376.98$, $p < 0.001$). The results supported a seven-factor structure explaining 72% of the total variance, with clear and interpretable factor loadings consistent with the theoretical model. Internal consistency was acceptable to excellent across scales ($\alpha = 0.72$–0.91; $\omega = 0.84$–0.95), including short scales with three items. Inter-scale correlations were low to moderate, supporting discriminant validity and indicating that the dimensions, while related, represent distinct constructs. Overall, the findings provide strong evidence for the instrument's reliability and validity based on its internal structure, supporting its use for psychosocial risk assessment and research on organizational changes, interpersonal Conflicts, and occupational well-being.

Keywords: organizational changes; interpersonal conflicts; psychosocial risks; work; exploratory factor analysis; internal consistency; structural validity; work well-being

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Received: 14 January 2026
Revised: 12 February 2026
Accepted: 13 February 2026
Published: 27 February 2026

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1. Introduction

Organizational transformations have intensified in recent decades in response to increasingly dynamic economic, technological, and social environments. Processes such as restructuring, mergers, downsizing, changes in work systems, and management practices have become commonplace in many productive sectors. While these changes are often justified by the need to improve efficiency and competitiveness, empirical evidence shows that they also increase workers' exposure to conditions of uncertainty, insecurity, and psychosocial stress, with significant consequences for well-being and occupational health (Backhaus et al., 2024; Fløvik et al., 2019b; Jensen et al., 2019).

At the same time, interpersonal Conflicts at work have been identified as one of the most powerful social stressors within organizations. This type of Conflict includes relational tensions, recurring disputes, and emotionally charged disagreements between colleagues or with supervisors, and has been consistently associated with higher levels of emotional exhaustion, depressive symptoms, somatic complaints, and job dissatisfaction (Spector & Bruk-Lee, 2008; Bruk-Lee et al., 2013; Carlsson et al., 2014). Recent research highlights that the frequency and intensity of Conflicts, especially when they take a relational and chronic form, amplify their negative impact on employees' psychological well-being (Burnard et al., 2021; Meier et al., 2014).

The contemporary literature in administrative sciences and organizational psychology has moved toward integrative approaches that conceptualize these phenomena as part of a broader framework of psychosocial risks. From this perspective, psychosocial risks are defined as those conditions derived from the organization of work, the content of tasks, and social relationships that have the potential to negatively affect the physical and psychological health of workers (Gil-Monte, 2012; Finne et al., 2016). These risks include job insecurity, rigid work schedules, lack of development opportunities, limited participation in decision-making, and a deteriorating relational climate, among others.

Various theoretical frameworks allow us to understand how these factors relate to well-being at work. The Job Demands and Resources (JD-R) model posits that demands, such as poorly managed organizational changes or interpersonal Conflicts, consume energy and are associated with exhaustion and discomfort, while resources such as training, promotion, participation, and job security serve a protective and motivational function (Demerouti et al., 2001; Sonnentag et al., 2023). Complementarily, Resource Conservation Theory (RCT) argues that people seek to conserve valuable resources and that threats or losses associated with organizational changes generate more intense stress responses than equivalent gains, leading to spirals of attrition (Hobfoll, 1998; Meier et al., 2023).

From this perspective, organizational changes and interpersonal Conflicts should not be understood as isolated stressors, but as interrelated processes that interact with other structural and social factors at work. Longitudinal studies show that repeated changes, perceived as unfair or unparticipatory, increase the likelihood of Conflicts, insecurity, and deterioration of well-being, shaping trajectories of chronic stress (Fløvik et al., 2019b; Lunen et al., 2023). Likewise, approaches focused on social stressors emphasize that experiences such as interpersonal Conflicts or lack of recognition can be conceptualized as forms of relational devaluation, with direct effects on work identity and psychological health (Gerhardt et al., 2021).

Despite the extensive body of evidence, methodologies for measuring these phenomena have significant limitations. Many available instruments assess partial dimensions of psychosocial risks or focus on specific stressors, making it difficult to obtain comprehensive diagnoses in organizational contexts characterized by simultaneous changes and multiple sources of stress. Furthermore, conceptual overlap between constructs and inconsistencies

in their operationalization limit comparability between studies and the practical application of results (Teoh et al., 2020; Gerhardt et al., 2021).

In this context, there is a need for psychometrically sound instruments that allow for the integrated assessment of psychosocial factors associated with organizational changes, interpersonal Conflicts, and other structural conditions of work that influence well-being at work. Therefore, the present study aims to develop and psychometrically evaluate a questionnaire designed to measure key dimensions of the psychosocial work environment—including organizational changes, work schedule, job security, promotion, training, interpersonal Conflicts, and lack of participation—providing a valid and reliable tool for organizational diagnosis and research in administrative and labor sciences.

2. Theoretical Framework

Contemporary work is characterized by frequent restructuring processes, mergers, staff reductions, and changes in the way tasks and roles are organized, which increases employees' exposure to contexts of high uncertainty and relational tension (Backhaus et al., 2024; Fløvik et al., 2019a; Jensen et al., 2019). Studies such as those by Greubel and Kecklund (2011), Dahl (2011), and Schütte et al. (2014) show that a considerable proportion of workers report stress linked to changes in the workplace, associated with mental health disorders, sleep disturbances, increased use of medication, and decreased productivity.

At the same time, interpersonal Conflicts—whether related to relationships, tasks, or processes—are one of the most powerful social stressors in the workplace, with significant effects on depression, burnout, somatic complaints, and job dissatisfaction (Spector & Bruk-Lee, 2008; Bruk-Lee et al., 2013; Meier et al., 2014; Carlsson et al., 2014; Burnard et al., 2021). In recent decades, the literature has moved away from addressing these stressors in isolation to placing them within more complex relationships of psychosocial risks, resources, and coping processes that interact over time (Backhaus et al., 2024; Sureda et al., 2018; Gerhardt et al., 2021; Sonnentag et al., 2023).

In this new configuration, psychosocial risks are defined as working conditions and organizational factors that have the potential to threaten the psychological or physical health of employees, including high demands, low autonomy, job insecurity, ambiguity, role Conflicts, organizational injustice, interpersonal Conflicts, and work–life imbalance (Gil-Monte, 2012; Finne et al., 2016; Lee et al., 2016; Kuručev et al., 2024).

From an individual perspective, occupational stress associated with psychosocial risks may manifest through a broad range of physiological, emotional, cognitive, and behavioral reactions. These include somatic complaints, sleep disturbances, fatigue, anxiety, irritability, depressive symptoms, and difficulties in concentration and decision-making, as well as maladaptive behaviors such as withdrawal, reduced initiative, or avoidance (Dahl, 2011; Schütte et al., 2014; Gil-Monte, 2012). Beyond its impact on employees' health, occupational stress also entails significant organizational consequences. Empirical research consistently shows that elevated stress levels are associated with reduced work engagement, lower performance and productivity, increased absenteeism, higher turnover intentions, greater incidence of Conflicts and errors and, ultimately, a deterioration of organizational climate and corporate image, both internally and externally (Loretto et al., 2009; Jensen et al., 2019; Backhaus et al., 2024).

Organizational changes is understood as the set of processes that alter work structures, practices, and roles—for example, restructuring, mergers, cutbacks, technological innovations, or management changes—and that can profoundly reshape the work experience (Backhaus et al., 2024; Fløvik et al., 2019b; Jong et al., 2016). Interpersonal Conflicts, on the other hand, are conceptualized as a set of negatively charged social interactions—for example, disputes, tensions, and recurring disagreements—that affect the social climate,

emotions, and well-being of workers (Spector & Bruk-Lee, 2008; Kuriakose et al., 2019a, 2020; Enehaug et al., 2016).

It should be emphasized that organizational changes and interpersonal Conflicts do not operate independently. Both situations increase the likelihood of role Conflicts, ambiguity, and interpersonal tensions, which in turn are associated with workplace harassment, burnout, psychological distress, and absenteeism (Baillien & Witte, 2009; Skogstad et al., 2007; Verhaeghe et al., 2006; Loretto et al., 2009). Furthermore, repeated changes that are poorly communicated or perceived as unfair seem to have cumulative effects on mental health, leading to chronic stress (Fløvik et al., 2019a; Backhaus et al., 2024; Lunen et al., 2023). This evidence highlights the need for integrated theoretical frameworks and assessment tools capable of simultaneously capturing exposure to such changes, the dynamics of interpersonal Conflicts, and outcomes of well-being and stress.

From a theoretical perspective, stress and coping models based on the cognitive assessment of demands and available resources indicate that responses to change depend largely on how employees interpret the nature of the event—namely, as a threat, loss, or challenge—and on the coping strategies they activate (Terry & Jimmieson, 2003; Callan et al., 1994; Broadbent, 2002). In this sense, having specific information about the change, participating in the process, and perceiving high self-efficacy related to the change is associated with better levels of psychological adjustment and lower stress (Terry & Jimmieson, 2003; Jimmieson et al., 2004; Rafferty & Jimmieson, 2010).

Along the same lines, Resource Conservation Theory (RCT) (Hobfoll, 1998) posits that people seek to obtain, conserve, and protect valuable resources such as time, support, status, or security. Given the above, resource losses associated with change—for example, increased workload, loss of control, or deterioration of relationships—have a stronger impact on well-being than equivalent gains, generating spirals of attrition that are difficult to reverse (Meier et al., 2014, 2023).

Complementarily, the Job Demands and Resources Theory (JD-R) (Demerouti et al., 2001) offers a particularly useful framework for integrating structural and psychosocial factors. This theory proposes that all job characteristics can be grouped into demands—aspects that require sustained effort and are associated with costs, including overload or role ambiguity—and resources—aspects that facilitate the achievement of objectives, reduce the impact of demands, and promote growth, including social support, participation, or organizational justice (Finne et al., 2016; Teoh et al., 2020; Sonnentag et al., 2023). In other words, demands are related to mental distress, exhaustion, and physical symptoms, while resources are associated with positive affect, engagement, and greater overall well-being (Lunen et al., 2023; Rodrigues et al., 2024). In this framework, organizational changes and interpersonal Conflicts can be understood as specific configurations of high demands and threatened resources, especially when the organization does not implement compensatory strategies.

Furthermore, frameworks such as social identity theory and social stressor models emphasize the roles of group membership, professional identity, and power relations in the experience of change and Conflicts (Dick et al., 2018; Gerhardt et al., 2021). Many social stressors—such as interpersonal Conflicts, unfair treatment, or lack of recognition—can be conceived as experiences of relational devaluation that directly impact self-esteem, well-being, and health (Gerhardt et al., 2021; Bruk-Lee et al., 2013). These approaches help to explain, for example, why relationship Conflicts tends to have more harmful effects than task Conflicts, or why changes perceived as unfair or threatening to professional identity generate more intense reactions of resistance and discomfort (Rafferty & Griffin, 2006; Rafferty & Jimmieson, 2017; Dziedzic, 2024).

Empirically, organizational changes—especially when they are multiple, recurrent, or involve deep cuts and restructuring—are associated with increased stress, higher levels of depressive symptoms, greater use of mental health medication, and increased sick leave (Backhaus et al., 2024; Fløvik et al., 2019a; Dahl, 2011; Verhaeghe et al., 2006; Jensen et al., 2019; Jong et al., 2016). However, not all changes have uniformly negative effects. Especially when linked to innovation or organizational improvement and managed with clear communication, participation, and adequate support, they can have neutral or even positive effects on engagement and well-being (Kiefer et al., 2015; Loretto et al., 2009; Franco et al., 2022).

When interpersonal Conflicts arises between colleagues—and, especially, with supervisors—they are associated with greater depression, *burnout*, somatic complaints, and reduced affective well-being (Spector & Bruk-Lee, 2008; Bruk-Lee et al., 2013; Carlsson et al., 2014; Meier et al., 2013; Fan et al., 2018). The intensity and frequency of Conflicts modulate these effects: chronic and high-intensity Conflicts tend to amplify negative impacts on health and job satisfaction (Burnard et al., 2021; Meier et al., 2014). Therefore, differentiating between relationship, task, and process Conflicts allows us to observe that relationship Conflicts—namely, those centered on personal and emotional aspects—show the strongest associations with psychological distress (Bruk-Lee et al., 2013; Kuriakose et al., 2019a). Even so, in certain contexts, task Conflicts can be functional if managed constructively, contributing to innovation and improved performance (Andersen, 2006; Stoetzer et al., 2009).

For their part, coping strategies and social support play critical roles as resources that can cushion the effects of these stressors. Problem-focused coping—for example, seeking specific information, actively participating in the design of change, or using problem-solving strategies in the face of Conflicts—is associated with better adjustment and lower stress (Terry & Jimmieson, 2003; Callan, 1993; Eatough, 2010). In contrast, certain forms of emotion-focused coping, such as prolonged avoidance or rumination, are linked in some studies to greater stress and poorer well-being outcomes (Eatough, 2010; Kato, 2015; Meier et al., 2014).

In terms of personal resources, specific self-efficacy for change and resilience can moderate the relationship between organizational changes and stress, reducing the negative impact of high demands and facilitating adjustment (Nguyen, 2016; Han et al., 2023; Jimmieson et al., 2004). Similarly, social support—whether from supervisors, colleagues, or external sources—repeatedly appears as a key buffer in both the relationship between Conflicts and distress and the impact of change on psychological distress (Vallone & Zurlo, 2024; Kuriakose et al., 2019b; Lawrence & Callan, 2011; Abas et al., 2018; Guidetti et al., 2018).

In this context, there is a clear need to develop a specific questionnaire that allows for the integrated assessment of psychosocial factors linked to organizational change and interpersonal Conflicts, as well as their effects on stress and well-being at work. A review of the literature demonstrates that organizational changes and interpersonal Conflicts are central and recurring stressors which are present in multiple sectors and cultural contexts, showing strong associations with psychological distress, stress, burnout, and physical health problems (Backhaus et al., 2024; Vallone & Zurlo, 2024; Lunen et al., 2023; Schütte et al., 2014). Second, it reveals that the nature of these stressors is complex and dynamic, as they interact with factors such as organizational justice, social support, coping strategies, professional identity, and personal resources (Terry & Jimmieson, 2003; Gerhardt et al., 2021; Juanmei et al., 2025; Guidetti et al., 2018). Finally, it is evident that the conceptualization and measurement of many of these constructs present inconsistencies and overlaps, which makes it difficult to compare studies and construct comprehensive

diagnoses in specific organizational contexts (Gerhardt et al., 2021; Fan et al., 2018; Finne et al., 2016; Teoh et al., 2020).

This emphasis on loss–gain asymmetry reinforces the importance of systematically evaluating both available resources and perceived risks in situations of organizational change.

An ad hoc instrument, built on this theoretical framework, is expected to enable the systematic operationalization of dimensions such as psychosocial risks at work, instability or organizational changes, lack of clarity in functions and roles, interpersonal Conflicts, participation and communication, opportunities for development, training and promotion, and issues relating to work-related stress, satisfaction, and mental load.

3. Materials and Methods

This study is instrumental in nature. It focuses on the development and psychometric validation of a questionnaire to assess psychosocial factors associated with organizational changes, interpersonal Conflicts, and their relationship with stress and well-being at work. The methodological objective was to analyze the internal structure of the instrument and estimate its internal consistency using Cronbach's alpha and McDonald's omega coefficients. The research followed the recommendations established by the *Standards for Educational and Psychological Testing* (American Educational Research Association et al., 1999, 2014) and included the phases of theoretical review, systematic item development procedures, pilot application, empirical refinement and factor analysis, internal consistency analysis, reliability estimation, and validation of the internal structure of the instrument.

3.1. Participants

Non-probability convenience sampling was used. The inclusion criteria were: (a) having been with the organization for at least six months, (b) holding a current employment contract, and (c) agreeing to participate voluntarily. All participants signed an informed consent form guaranteeing the confidentiality of the data and the exclusively academic use of the information, in accordance with the Declaration of Helsinki and the corresponding institutional ethical standards.

The sample consisted of 350 workers employed in public and private organizations across different economic sectors in Mexico. Participants included employees from private companies, government institutions, and the public and private healthcare sector, including physicians and nurses. This sectoral diversity increased the variability of organizational contexts and working conditions represented in the sample.

The average age was 33.19 years (SD = 9.18), ranging from 18 to 66 years. In terms of work history, 319 participants reported their organizational tenure, with an average of 6.71 years (SD = 8.61; range: 0.08–58 years). The mean tenure in the current position was 4.54 years (SD = 6.68). This heterogeneity in age, sector, and organizational experience provided sufficient variability for psychometric evaluation of the instrument.

3.2. Measures

The development of the questionnaire followed a sequential mixed-methods approach combining qualitative exploration and quantitative psychometric refinement.

Initially, semi-structured interviews were conducted based on conceptual definitions derived from the literature on psychosocial risks, occupational stress, and well-being at work, integrating the Demand–Control–Support, Job Demands–Resources (JD-R), Effort–Reward Imbalance, Stress and Coping, and Conservation of Resources models. Subsequently, focus groups were organized with workers from diverse economic sectors to

explore their experiences regarding organizational changes, interpersonal dynamics, and work-related stressors.

From this qualitative phase, an initial pool of 309 statements was generated, distributed across 16 preliminary scales containing between 8 and 21 items each. To strengthen content validity, a panel of subject-matter experts reviewed the item pool and evaluated the clarity, relevance, and conceptual alignment of each statement. Items that reached a minimum agreement level of 50% among experts were retained for preliminary quantitative testing.

Based on this expert review, a reduced preliminary version of the instrument was constructed and subsequently subjected to empirical evaluation.

The instrument was originally developed and administered in Spanish for use in organizational contexts.

An initial pool of Likert-type items was developed using a four-point response format (1 = strongly disagree to 4 = strongly agree). The four-point scale was intentionally selected to reduce central tendency bias and encourage more decisive responses, which is particularly relevant in applied organizational and occupational health settings. The pilot version of the questionnaire consisted of 48 items distributed across 12 dimensions.

Following the initial pilot administration, the instrument underwent a multi-stage, empirically guided refinement process. Early versions of the questionnaire were evaluated in successive applications, and item-level decisions were informed by classical psychometric criteria, including internal consistency estimates (Cronbach's alpha), item–total discrimination indices, and changes in scale reliability when individual items were removed. Items showing low discriminatory power (e.g., item–total correlations below 0.20), weak contribution to internal consistency, or conceptual redundancy were considered candidates for elimination.

In addition to item-level screening, entire dimensions were excluded when their items consistently failed to reach acceptable psychometric thresholds or showed insufficient conceptual differentiation from other scales. This iterative process of empirical evaluation and theoretical review resulted in progressive reduction of the instrument from the initial 48-item structure across 12 dimensions to a more parsimonious and psychometrically robust solution.

Although formal expert-based content validity indexing (CVI) or structured cognitive interviews were not conducted during the early development stages, content validity was supported through the theoretical grounding of the initial dimensions, expert review, and systematic empirical assessment of item performance across applications. This approach is consistent with iterative instrument development practices commonly used in applied organizational and occupational health research.

Item retention was based on a combination of empirical and theoretical criteria. Items were retained when they demonstrated (a) salient factor loadings on the intended dimension (generally ≥ 0.40), (b) absence of problematic cross-loadings that hindered interpretability, and (c) adequate communalities. In addition, the retained items and dimensions were required to demonstrate conceptual coherence with the theoretical definition of each construct. Dimensions that showed insufficient psychometric support or substantial conceptual overlap with other factors were excluded.

Items worded in the opposite direction (identified with the suffix "i") were reverse-coded prior to all analyses so that higher scores consistently reflected higher levels of the underlying psychosocial risk factor.

The final structure of the questionnaire consisted of seven scales (organizational changes, work program, job security, promotion, training, interpersonal Conflicts, and lack of participation), comprising 24 items in total (see Appendix A). Table 1 presents the final dimensions, their summary definitions, and the items included in each scale.

Table 1. Final dimensions of the questionnaire and the items that comprise them.

Scale	Acronym	Summary Definition	Final Items *
Organizational changes	OC	Degree of effort required of the employees due to internal changes in the organization.	OCi18, OCi28, OCi45
Work program	WP	Rigidity and workload: shifts, long working hours, unpredictable or demanding schedules.	WP5, WPi15, WP25, WP35
Job Security	JS	Perception of stability or uncertainty regarding the contract and future employment in the organization.	JSi10, JSi21, JS47
Promotion	PRO	Difficulty or absence of clear opportunities for promotion and development within the organizational hierarchy.	PROi8, PROi19, PROi29, PROi38
Training	TR	Lack of training, skills development, or support to perform tasks adequately.	TRi1, TRi11, TRi23
Interpersonal Conflicts	IC	Quality of relationships with coworkers and presence of relational tensions or Conflicts.	ICi26, ICi36, ICi44
Lack of participation	LP	Degree to which the organization restricts employee initiative, consultation, and participation.	LP3, LPi13, LP24, LPi42

* Items marked with "i" were reverse-coded prior to analysis (1 ↔ 4; 2 ↔ 3), such that higher scores consistently reflected greater presence of the corresponding risk factor.

3.3. Procedure

The study was conducted in Mexico between January 2025 and August 2025. Data were collected in participating organizations during this period.

The questionnaire was administered collectively at the workplace at times agreed upon with the participating organizations. The instrument was self-administered in paper-and-pencil format, with a trained administrator present to clarify any questions regarding item comprehension. The average completion time was approximately 15 min.

Participation was voluntary and anonymous. All participants were informed about the objectives of the study and provided informed consent prior to completing the questionnaire. Data were treated confidentially and used exclusively for research purposes.

Data Analysis

Data were initially collected from 380 participants. Prior to analysis, the database was reviewed to identify missing values, outliers, and anomalous response patterns. Given the relatively small proportion of incomplete responses, cases with missing data were excluded using listwise deletion, resulting in a final analytic sample of 350 complete cases. Although no formal imputation procedures were implemented, the limited amount of missing data suggests that the risk of bias due to case exclusion is likely minimal.

Data processing and statistical analyses were performed using IBM SPSS Statistics version 30. Given that the instrument employed a four-point Likert-type response format and that item distributions were approximately symmetrical, items were treated as quasi-continuous variables in accordance with standard practices in psychometric research. This decision was guided by common practice in applied psychometric research, where Likert-type scales with four or more response categories are frequently analyzed using continuous-data methods in exploratory and confirmatory factor analyses. Nevertheless, the use of ordinal estimators and polychoric correlation matrices represents a valid alternative approach and is acknowledged as an important direction for future research.

Factor retention was examined using multiple criteria. In addition to the Kaiser criterion (eigenvalues greater than 1), parallel analysis (Horn, 1965) was conducted based

on 1000 randomly generated correlation matrices and the 95th percentile criterion. The results supported the retention of seven factors, as the first seven empirical eigenvalues exceeded the corresponding random eigenvalues, whereas the eighth did not.

An exploratory factor analysis (EFA) was performed to evaluate the internal structure of the instrument. Prior to factor extraction, the adequacy of the correlation matrix was assessed using the Kaiser–Meyer–Olkin (KMO) index and Bartlett's test of sphericity. Principal axis factoring was used as the extraction method, as the primary objective was to identify the underlying latent structure rather than to reduce the data.

The internal consistency of each resulting scale was assessed using Cronbach's alpha and McDonald's omega coefficients. In addition to Cronbach's alpha, McDonald's omega was computed as a composite reliability index, as it provides a more robust estimate of internal consistency when factor loadings are heterogeneous.

Finally, correlations among the resulting scales were calculated to examine discriminant validity and to explore the conceptual relationships among the psychosocial factors comprising the instrument. All procedures were conducted in accordance with methodological recommendations for the development and initial validation of instruments in occupational health and organizational psychology.

4. Results

First, descriptive statistics were calculated for each of the items, including the mean, standard deviation, skewness, and kurtosis.

Regarding the distribution of the items (Table 2), the values of skewness and kurtosis remained within the ranges considered acceptable for Likert-type scales. Most items showed mild to moderate asymmetry (between −0.5 and +1.0), indicating a slight deviation from symmetry, but without reaching levels that would compromise subsequent analyses. Similarly, kurtosis was predominantly platykurtic, a common pattern in ordinal data, and remained within the recommended limits for samples larger than 300 cases. Only one item (OCi28) showed higher values of asymmetry and kurtosis; however, these are still within tolerable ranges and do not pose a threat to the assumptions of normality. Consequently, the observed distributions do not affect the psychometric adequacy of the instrument or the application of factor analyses.

As a preliminary analysis for the exploratory factor analysis (EFA), the adequacy of the correlation matrix was evaluated using the Kaiser–Meyer–Olkin (KMO) index and Bartlett's test of sphericity. The overall KMO value was 0.81, indicating commendable sampling adequacy (Kaiser, 1974), and Bartlett's test was statistically significant ($\chi^2 = 4376.98$, df = 276, $p < 0.001$). These results indicate that the correlation matrix contained a sufficient proportion of common variance and that the data were suitable for factor analysis.

With regard to the internal structure of the instrument, the analysis of the eigenvalues of the correlation matrix showed that seven factors had eigenvalues greater than 1 (6.00, 2.76, 2.43, 1.92, 1.53, 1.37, and 1.27), while the eighth eigenvalue fell below this threshold (0.77). Together, these seven factors explained approximately 72% of the total variance. The principal axis factoring solution with varimax rotation accounted for around 62% of the common variance, as shown in Tables 3 and 4. This pattern is consistent with the proposed seven-dimensional theoretical structure of the inventory.

To further examine the assumption of correlated dimensions, the exploratory factor analysis was replicated using principal axis factoring with oblique rotation (promax). The resulting pattern matrix showed salient loadings on the intended dimensions without problematic cross-loadings. The factor correlation matrix revealed low to moderate correlations between factors ($|r| = 0.06$–0.55), indicating that the dimensions are related but empirically

distinct. This pattern is consistent with the correlated-factors structure specified in the confirmatory factor analysis.

Table 2. Descriptive statistics.

Item	Mean	SD	Skewness	Kurtosis	n
TRi1	2.12	0.94	0.56	−0.53	350
TRi11	2.30	1.00	0.35	−0.91	350
TRi23	2.17	0.97	0.52	−0.64	350
OCi18	1.60	0.59	0.58	0.35	350
OCi28	1.27	0.49	1.63	1.78	350
OCi45	1.43	0.57	1.01	0.57	350
WP5	2.24	1.07	0.13	−1.36	350
WPi15	2.34	1.11	0.29	−1.25	350
WP25	2.61	1.08	−0.28	−1.20	350
WP35	2.48	1.07	−0.15	−1.25	350
JSi10	2.48	1.17	0.00	−1.47	350
JSi21	2.21	1.35	0.40	−1.68	350
JS47	2.27	1.38	0.30	−1.78	350
PROi8	2.81	1.00	−0.17	−1.18	350
PROi19	2.76	1.03	−0.15	−1.22	350
PROi29	2.75	1.02	−0.10	−1.22	350
PROi38	2.73	1.02	−0.06	−1.25	350
ICi26	1.57	0.67	0.88	0.11	350
ICi36	1.51	0.62	0.95	0.60	350
ICi44	1.43	0.59	1.11	0.66	350
LP3	2.77	0.90	−0.33	−0.66	350
LPi13	2.11	0.83	0.68	0.17	350
LP24	2.12	0.92	0.14	−1.17	350
LPi42	2.01	0.85	0.73	0.15	350

Table 3. Eigenvalues and percentage of variance explained based on the correlation matrix (24 items).

Factor	Eigenvalue	% Variance	% Cumulative Variance
1	6.00	25.00	25.00
2	2.76	11.51	36.50
3	2.43	10.13	46.63
4	1.92	7.99	54.62
5	1.53	6.38	61.00
6	1.37	5.73	66.72
7	1.27	5.27	71.99
8	0.77 (below 1.00) *	3.20	75.19

* Eigenvalue below 1.00 was not considered in subsequent interpretations.

In exploratory factor analysis, the sign of factor loadings is arbitrary and depends on factor orientation; therefore, factor interpretation was based on the conceptual content of the items rather than on the sign of individual loadings.

The seven factors with eigenvalues greater than 1 were therefore retained. The principal axis factoring solution with varimax rotation produced a highly interpretable pattern of factor loadings. Each group of items was predominantly grouped into a factor consistent with its theoretical dimension.

In most cases, absolute factor loadings were greater than 0.60, with communalities (h^2) generally above 0.45, indicating that the items share a substantial amount of variance with their corresponding factor. Only a few moderate cross-loadings were observed (e.g., TRi23 and JSi10); however, as none of them reached a level that compromised the interpretation of the dimensions, they were considered acceptable in the context of scale development.

Table 4. Rotated factor loadings (varimax) and communalities for the 24 items [1].

Item	OC	WP	JS	PRO	TR	IC	LP	h^2
OCi18	−0.62							0.49
OCi28	−0.66							0.47
OCi45	−0.73							0.54
WP5		0.86						0.75
WPi15		−0.73						0.54
WP25		0.74						0.57
WP35		0.73						0.53
JSi10			0.58	−0.30				0.54
JSi21			0.95					0.91
JS47			−0.77					0.60
PROi8				−0.91				0.84
PROi19				−0.88				0.80
PROi29				−0.90				0.82
PROi38				−0.88				0.77
TRi1					0.80			0.65
TRi11					0.84			0.71
TRi23				−0.32	0.61			0.47
ICi26						0.59		0.49
ICi36						0.88		0.79
ICi44						0.84		0.71
LP3							−0.55	0.40
LPi13							0.75	0.66
LP24							−0.48	0.36
LPi42							0.70	0.54

[1] Only loadings with $|\lambda| \geq 0.30$ are shown.

Table 4 below shows the rotated factor loadings (varimax) and communalities. Loadings with $|\lambda| < 0.30$ are omitted for ease of reading.

In the principal axis solution with varimax rotation, the sum of squared loadings per factor and the percentage of variance explained are presented in Table 5.

Table 5. Variance explained by factor in the principal axis solution (EFA, 7 factors).

Factor	Sum of Loadings [1]	% Variance	% Cumulative Variance
PRO	3.35	13.98	13.98
WP	2.27	9.47	23.45
IC	2.00	8.34	31.79
JS	1.94	8.07	39.86
OC	1.45	6.04	45.90
TR	2.04	8.50	54.41
LP	1.82	7.60	62.00

[1] Scale scores were computed as the mean of the corresponding recoded items.

With regard to internal consistency, Table 6 summarizes the reliability indices obtained for each scale. Cronbach's alpha coefficients ranged from 0.72 (Organizational changes) to 0.91 (Promotion), while McDonald's omega coefficients ranged from approximately 0.84 to 0.95. These values indicate internal consistency ranging from acceptable to excellent, which is particularly relevant considering that several scales consist of only three items.

All α coefficients are in the acceptable–excellent range (0.72–0.91), and the ω coefficients are consistently somewhat higher, as expected in congeneric models.

With regard to discriminant validity and the analysis of the conceptual relationship between psychosocial factors, Table 6 shows the Pearson correlation matrix between the

seven dimensions. In general, low to moderate associations were observed, indicating that the scales are related—as would be expected between different psychosocial risks—but are not redundant.

Table 6. Reliability of scales (n = 350) [1].

Scale	Items	k	α	95% CI α	ω	95% CI ω
Training	TRi1, TRi11, TRi23	3	0.862	0.806–0.901	0.916	0.878–0.944
Organizational changes	OCi18, OCi28, OCi45	3	0.725	0.639–0.797	0.847	0.782–0.895
Work program	WP5, WPi15, WP25, WP35	4	0.805	0.756–0.846	0.876	0.836–0.907
Job security	JSi10, JSi21, JS47	3	0.825	0.770–0.869	0.889	0.850–0.919
Promotion	PROi8, PROi19, PROi29, PROi38	4	0.909	0.885–0.929	0.938	0.919–0.953
Interpersonal Conflicts	ICi26, ICi36, ICi44	3	0.817	0.759–0.863	0.895	0.858–0.923
Lack of participation	LP3, LPi13, LP24, LPi42	4	0.786	0.730–0.832	0.842	0.800–0.876

[1] Scale scores were computed as the mean of the corresponding recoded items.

The highest correlations were found between Promotion and Training (r = 0.51), and between Lack of Participation with Promotion (r = 0.42) and Training (r = 0.45), which is consistent with the idea that the absence of opportunities for development and progress is often accompanied by low participation. The dimensions of Interpersonal Conflicts and Organizational changes showed moderate correlations with Lack of Participation (r = 0.26), suggesting that contexts with little employee voice also tend to concentrate relational tensions and discomfort with change (Table 7).

Table 7. Correlation matrix between the scales of the questionnaire.

	OC	WP	JS	PRO	TR	IC	LP
OC	1.00						
WP	0.13	1.00					
JS	0.04	0.18	1.00				
PRO	0.08	0.10	0.27	1.00			
TR	0.16	0.10	0.19	0.51 *	1.00		
IC	0.29	0.11	0.10	0.13	0.17	1.00	
LP	0.26	0.21	0.19	0.42 *	0.45 *	0.26	1.00

* $p < 0.05$.

Collectively, these results indicate that the questionnaire has an internal structure consistent with the theoretical framework, adequate internal consistency across all scales, and a pattern of correlations consistent with what would be expected between different psychosocial risk factors and occupational well-being.

Finally, in order to evaluate the proposed internal structure of the inventory, a confirmatory factor analysis (CFA) was conducted using the maximum likelihood estimation method in AMOS. A model composed of seven correlated factors was specified, consistent with the theoretical structure of the instrument. The results showed satisfactory fit indices that exceeded the criteria commonly recommended in the psychometric literature.

The chi-square statistic was significant, $\chi^2(230) = 368.92$, $p < 0.001$; however, given its sensitivity to sample size, additional fit indices were considered. The normalized chi-square (CMIN/DF) was 1.60, indicating an excellent fit (values below 3 are generally considered acceptable). In terms of absolute fit indices, the RMR was 0.058, the GFI was 0.919, and the AGFI was 0.895, which was at the threshold of acceptability. Incremental fit indices also indicated robust model performance, with NFI = 0.918, RFI = 0.901, IFI = 0.967, TLI = 0.960, and CFI = 0.967, all exceeding the recommended criterion for excellent fit.

The RMSEA value was 0.042, with a 90% confidence interval ranging from 0.034 to 0.049, indicating an optimal fit. In addition, the PCLOSE value (0.964) suggested that the RMSEA did not significantly differ from the ideal value (0.05), further supporting the model's adequacy. The parsimony indices (PNFI = 0.765; PCFI = 0.806) indicated an appropriate balance between model fit and complexity. The Hoelter index indicated critical sample sizes of 252 ($p = 0.05$) and 268 ($p = 0.01$), suggesting that the available sample size was more than sufficient for model stability. Moreover, the standardized root mean square residual showed good absolute model fit (SRMR = 0.059).

To further examine the stability of the CFA solution, a bootstrap-based cross-validation procedure (2000 resamples) was conducted. The results indicated stable discrepancy values and consistent model fit across resamples, supporting the robustness of the proposed factor structure.

Finally, given concerns about potential method effects associated with reverse-worded items, an alternative CFA model allowing correlated residuals among reverse-coded items within the same factor was tested. This model did not result in a substantive improvement in model fit compared to the original model (ΔCFI < 0.01), indicating that method effects were negligible. Therefore, the more parsimonious model was retained.

Overall, these findings empirically support the proposed internal structure of the instrument and confirm the factorial validity of the model.

5. Discussion

The main objective of this study was to develop and psychometrically evaluate a questionnaire that measures psychosocial factors linked to organizational changes, interpersonal Conflicts, and occupational well-being. The results support a coherent seven-factor structure and high levels of reliability (α and ω), contributing to a growing body of research that, in recent decades, has moved from analyzing stressors in isolation to understanding these complex configurations of demands, resources, and coping processes holistically (Backhaus et al., 2024; Gerhardt et al., 2021; Sonnentag et al., 2023).

In line with the findings of recent studies, the results support the idea that organizational changes constitute a fundamental core of psychosocial risks at work. The dimensions of Organizational change (OC) and Work Program (WP), which together reflect restructuring, rigid schedules, and demands for work reorganization, correspond to evidence showing that restructuring, mergers, staff reductions, and task modifications are associated with increased stress, mental distress, use of psychotropic medication, and absenteeism, as proposed by Greubel and Kecklund (2011), Dahl (2011), Jensen et al. (2019), Backhaus et al. (2024), and Fløvik et al. (2019a).

For their part, some longitudinal studies—such as those by Jong et al. (2016) and Lunen et al. (2023)—are consistent with the proposed instrument, demonstrating that it is

not just a matter of specific events but, rather, cumulative processes of change that shape trajectories of chronic stress. In other words, repeated exposure to organizational changes is related to a progressive deterioration of the psychosocial environment and a higher probability of mental health problems.

However, the fact that the questionnaire distinguishes between burden, stability, and quality of change management allows, in future applications, for differentiation between changes perceived as threats and changes perceived as opportunities—something that the literature considers critical for understanding the diversity of responses (Rafferty & Griffin, 2006; Rafferty & Jimmieson, 2017).

On the other hand, the questionnaire presented shows a solid structure for the Interpersonal Conflicts (IC) and Lack of Participation (LP) scales, consistent with evidence identifying social stressors as robust predictors of psychological distress from Spector and Bruk-Lee (2008), Bruk-Lee et al. (2013), Meier et al. (2014), Carlsson et al. (2014), and Burnard et al. (2021).

Furthermore, recent research proposes integrating these types of stressors under the concept of relational devaluation, understood as experiences of unfair treatment, lack of recognition, or Conflicts that threaten a person's identity and social status at work (Gerhardt et al., 2021). Therefore, the presence of a specific factor of Interpersonal Conflicts in the questionnaire is consistent with this perspective; it is not merely a byproduct of work demands but, rather, a domain of psychosocial risk with its own weight in the conception of discomfort.

On the other hand, studies such as those by Skogstad et al. (2007) and Baillien and Witte (2009) show that organizational changes can independently predict phenomena such as workplace harassment, insecurity, and burnout, suggesting different risk pathways. The empirical results, which differentiate between Organizational changes, Lack of Participation, and Interpersonal Conflicts, align with this idea of multiple pathways to the deterioration of well-being.

Taken together, these findings suggest that the identified dimensions do not operate in isolation, but rather reflect broader configurations of psychosocial demands and resources.

The seven-factor structure identified fits naturally into theoretical frameworks such as the Job Demands–Resources Model (JD-R) and Conservation of Resources Theory (COR). Several studies have shown that demands—such as overload or rumors of change—are associated with mental distress, while resources—such as social support, participation, and control—are related to positive affect, engagement, and better well-being (Finne et al., 2016; Lee et al., 2016; Sonnentag et al., 2023; Rodrigues et al., 2024).

Within this theoretical context, the proposed factor structure is consistent with contemporary extensions of the Job Demands–Resources (JD-R) model, which emphasize the role of both organizational demands and available resources in explaining occupational stress and burnout. In this framework, the "Work Program" dimension captures temporal and organizational demands related to workload intensity, scheduling, and work absorption. While this dimension does not aim to represent the full spectrum of job demands, it reflects a core set of pressures that are particularly relevant in applied organizational contexts.

From a pragmatic perspective, the instrument focuses on learning opportunities, participation, promotion, and interpersonal relations as key protective factors. Other resources frequently highlighted in recent JD-R research—such as autonomy or organizational justice—were not included in this initial version in order to maintain parsimony and practical applicability. Future studies may extend the instrument by incorporating additional resource dimensions to address emerging contexts, such as digital transformation and AI adoption at work.

Building on this distinction, scales such as Work Program, Organizational changes, Job Security, and Interpersonal Conflicts can be conceptualized as demands, while Training, Promotion, and Lack of Participation (understood as autonomy and voice) are dimensions that represent the presence or absence of fundamental resources. This distinction is consistent with the literature that highlights the importance of analyzing the specific combination of demands and resources together, rather than their isolated effects (Finne et al., 2016; Jimmieson et al., 2016).

From a complementary theoretical perspective, COR theory argues that losses of resources have a stronger impact than equivalent gains, generating spirals of attrition (Meier et al., 2014, 2023). The inclusion of dimensions such as Job Security and Promotion in the instrument allows these perceptions of loss or threat (e.g., temporary contract, lack of career prospects) to be captured, which recent studies have linked to greater distress, cynicism, and lower well-being (Lavoie-Tremblay et al., 2010; Juanmei et al., 2025; Torkelson & Muhonen, 2008).

Although the factors showed low to moderate correlations, varimax rotation was chosen as an initial exploratory step. As shown in the Results, complementary analyses using oblique rotation were also conducted, and future studies should further rely on oblique rotations and confirmatory models that allow for more accurate estimation of the interrelationships between factors.

From a psychometric point of view, the findings of high internal consistency (α between 0.72 and 0.91 and ω between 0.84 and 0.95) are in line with what is expected of well-constructed instruments in the area of psychosocial risks, and are comparable to those reported in questionnaires such as the COPSOQ or specific scales of effort–reward and demands–control (Lavoie-Tremblay et al., 2010; Kuručev et al., 2024; Lee et al., 2016). It is particularly relevant that brief three-item scales, such as Training or Job security, achieve high coefficients, indicating adequate conceptual homogeneity.

From an applied and organizational perspective, compared to comprehensive batteries commonly used in occupational health research (e.g., COPSOQ, MBI/BAT, ProQOL), the present instrument was designed as a concise and integrative tool for psychosocial risk screening and organizational diagnosis. Its purpose is not to replace exhaustive assessment batteries but, rather, to provide a practical alternative for contexts in which time, resources, or respondent burden limit the feasibility of longer instruments.

Direct empirical comparisons with established measures would be valuable to examine incremental validity and to clarify conditions under which the instrument may function as a complementary or preliminary assessment tool. Future studies should explicitly compare the present questionnaire with comprehensive batteries to evaluate overlap, added value, and practical substitution versus complementarity.

As with most initial validation studies, the present research shares certain limitations that are common in the literature, including its cross-sectional design and the exclusive use of self-report measures. Although a confirmatory factor analysis was conducted and supported the proposed structure, additional confirmatory evidence is still needed, particularly through longitudinal designs, multilevel approaches, and triangulation with objective health and performance indicators (Sureda et al., 2018; Gerhardt et al., 2021; Teoh et al., 2020; Nielsen et al., 2011; Marchand et al., 2013; Lunen et al., 2023). This questionnaire is not immune to these limitations, but it forms part of a broader effort to improve the quality of psychosocial risk measurement.

Beyond cross-sectional validation, future research should examine the temporal and predictive validity of the instrument using longitudinal designs. Dynamic modeling approaches increasingly emphasize the importance of capturing changes in psychosocial demands and resources over time. In this context, the present questionnaire may be particu-

larly suitable for longitudinal research aimed at forecasting relevant occupational outcomes such as burnout, sickness absence, and employee turnover. Testing predictive relationships across time would further strengthen the instrument's utility for organizational monitoring and preventive intervention.

6. Conclusions

The findings of this study provide initial evidence that the questionnaire demonstrates adequate reliability and validity, based on its internal structure, for the assessment of psychosocial factors associated with organizational changes, interpersonal Conflicts, and occupational well-being. The seven-factor structure obtained is consistent with contemporary demand–resource and conservation of resources frameworks (Finne et al., 2016; Sonnentag et al., 2023; Meier et al., 2014), as well as with empirical evidence highlighting the impacts of organizational changes, Conflicts, and perceived injustice on mental health, absenteeism, and work performance (Backhaus et al., 2024; Dahl, 2011; Spector & Bruk-Lee, 2008).

From a conceptual perspective, the questionnaire offers an integrative approach by jointly capturing structural demands, social stressors, and organizational resources within a single instrument. This responds to longstanding recommendations to address psychosocial risks from a systemic rather than fragmented perspective (Gerhardt et al., 2021; Kuručev et al., 2024). In practical terms, this integration facilitates the identification of critical nodes within work systems—such as organizational structure, change management, social climate, and professional development—where psychosocial risks and resources tend to concentrate.

At the same time, the present validation should be regarded as an initial stage in the development of the instrument. Several avenues for future research emerge from this work. From a psychometric standpoint, additional confirmatory evidence is required, including further confirmatory factor analyses, tests of measurement invariance, and the examination of alternative correlation matrices (e.g., polychoric correlations). Temporal stability could not be assessed due to the cross-sectional design; therefore, future studies should examine test–retest reliability and longitudinal stability, as well as predictive validity for relevant occupational outcomes such as burnout, depression, and absenteeism.

In addition, convergent and discriminant validity with external benchmark instruments was not examined in the present study, as the primary objective was to establish the internal structure and initial psychometric properties of a newly developed questionnaire. Future research should examine associations with well-established measures of psychosocial demands and resources (e.g., COPSOQ, ERI), as well as indicators of occupational strain and burnout (e.g., MBI, BAT, ProQOL), in order tofurther substantiate construct validity and incremental validity.

Measurement invariance across sociodemographic and occupational groups (e.g., gender, age, tenure, and sector) was also beyond the scope of the present study, as the available sample size did not permit stable multi-group analyses. Future studies should explicitly test configural, metric, and scalar invariance, including partial invariance when necessary, to support meaningful subgroup comparisons. Similarly, descriptive statistics and reliability indices by subgroup should be examined in larger and more diverse samples, thus further evaluating the stability of the instrument across contexts.

Finally, future research should address cross-language and cross-cultural adaptation of the instrument following established guidelines for test adaptation. Examining measurement invariance across linguistic and cultural groups will be essential to ensure score comparability and to support the broader international use of the questionnaire.

Taken together, these conclusions indicate that the instrument meets acceptable psychometric standards and aligns with current debates on occupational stress and well-being,

providing a solid foundation for psychosocial risk assessment, organizational diagnosis, and intervention planning in contexts characterized by ongoing change.

Practical Implications

The instrument developed offers multiple practical applications, reinforcing the applied value of the present research. First, it can be used as an organizational diagnostic tool to identify psychosocial factors that require intervention, such as interpersonal Conflicts, unclear promotion practices, or poorly managed organizational changes. In this sense, the questionnaire facilitates the development of psychosocial risk maps, which are useful both for compliance with labor regulations and for the design of primary prevention strategies.

In the field of human resources, the instrument allows for the assessment of critical areas related to job satisfaction, commitment, and occupational well-being, helping to identify risk patterns that may contribute to turnover, absenteeism, and reduced performance. In addition, it can be employed to monitor the effects of organizational interventions, training programs, internal promotion policies, and occupational mental health initiatives over time.

Beyond its psychometric properties, the effectiveness of the instrument in applied settings depends critically on the conditions under which it is implemented. In particular, trust-related factors—such as perceived confidentiality, transparency in data use, and protection from potential power asymmetries between employees and management—are essential for obtaining valid and reliable responses. Organizations are therefore encouraged to clearly communicate the purpose of the assessment, ensure anonymity, and establish explicit safeguards regarding data access and use.

In line with emerging research on digital and organizational well-being assessment infrastructures, employees' trust in the assessment process has been shown to materially affect response quality and data validity. Accordingly, the present instrument should be embedded within participatory, transparent, and ethically grounded assessment practices, reinforcing trust as a prerequisite for meaningful psychosocial risk diagnosis and intervention.

From a methodological perspective, recent discussions have explored the use of synthetic data generated by large language models (LLMs) for early-stage psychometric prototyping, particularly during item generation and refinement. While such approaches may support exploratory phases of instrument development, current evidence indicates that they cannot replace validation based on empirical human data due to potential distributional mismatches and systematic biases. Therefore, future research may cautiously consider synthetic data as a complementary tool for iterative item refinement, while maintaining human-based data collection as the cornerstone of psychometric validation.

Finally, as a brief instrument with a clear structure and demonstrated reliability, the questionnaire is accessible to organizations of different sizes and sectors. Its regular implementation can contribute to the development of healthier work environments, the prevention of chronic stress, and the promotion of organizational well-being. By jointly addressing dimensions related to organizational changes and interpersonal Conflicts, the instrument provides a practical framework for ongoing psychosocial risk mapping and for monitoring the effects of preventive or corrective interventions over time. This integrative perspective supports its use not only as a diagnostic tool, but also as a resource for evaluating organizational change processes and intervention outcomes.

To facilitate its adoption in applied contexts, a complete version of the instrument and basic scoring instructions are provided as Appendix A. Interpretation guidelines, such as percentile norms or risk thresholds, will require further validation in larger and more diverse samples and should be established in future research.

Ethical and practical considerations are central to the responsible deployment of psychosocial assessment tools. Ensuring data confidentiality and anonymity is essential to

promote honest responses and to protect employees from potential power asymmetries. Moreover, the value of psychosocial assessment depends on the existence of clear feedback loops, whereby aggregated results are communicated back to employees, and on genuine managerial commitment to act upon the findings.

Without transparent communication and concrete follow-up actions, psychosocial risk assessments risk becoming symbolic exercises rather than effective drivers of organizational improvement. Accordingly, the present instrument should be implemented as part of an ethically grounded assessment–feedback–intervention cycle aimed at improving employee well-being and organizational health.

Author Contributions: B.A.-U.: conceptualization and methodology, writing—review and editing. A.C.M.-H.: conceptualization, writing—review and editing. N.G.-R.: conceptualization, methodology, writing—original draft, formal analysis, writing—review and editing. E.S.-S.-B.: conceptualization and methodology, writing—review and editing. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki. The study was conducted at the University of Guanajuato, specifically within the Faculty of Industrial Relations. The research involved the collection of anonymous survey data, on a voluntary basis, without any experimental intervention, manipulation, or collection of sensitive or personally identifiable information. According to the institutional ethical framework of the University of Guanajuato, and in line with the procedures established by its Ethics Committee for Research (CEPIUG), non-interventional studies based on anonymized questionnaires and involving minimal risk may be conducted without requiring a formal Ethics Committee or Institutional Review Board approval.

Informed Consent Statement: Informed consent was obtained from all individual participants included in the study.

Data Availability Statement: The data presented in this study are available from the corresponding author upon reasonable request. The data are not publicly available due to the need to provide appropriate methodological context to ensure accurate interpretation and responsible reuse.

Acknowledgments: We are grateful to the participants and collaborators who made this study possible.

Conflicts of Interest: The authors declare no conflicts of interest.

Appendix A

Brief Inventory of Psychosocial Factors Related to Organizational Changes and Occupational Stress.

Note: The instrument was originally developed and administered in Spanish. Item wording is presented in the original language to ensure correspondence with the reported psychometric analyses.

(A) Instrument

Instrucciones

A continuación, se presentan una serie de afirmaciones relacionadas con su experiencia laboral. Por favor, indique con qué frecuencia cada afirmación refleja su situación actual en el trabajo, marcando una sola opción en cada caso.

No existen respuestas correctas o incorrectas. Responda de manera honesta de acuerdo con su experiencia personal.

Escala de respuesta

1 = Nunca, 2 = Casi nunca, 3 = A veces, 4 = Siempre

A. Ítems del cuestionario por dimensión

Nota: Los ítems identificados con el sufijo "i" están redactados en sentido inverso.

Dimensión 1: Cambios organizacionales (Organizational changes, OC). Grado de esfuerzo requerido por el trabajador como consecuencia de cambios internos en la organización.

- Reacciono bien ante los cambios que surgen al interior de la organización*.
- Trato de acoplarme a los cambios que surgen en la institución*.
- Asimilo los cambios que surgen al interior de la organización*.

Dimensión 2: Programa de trabajo (Work Program, WP). Rigidez y carga del programa laboral: horarios extensos, turnos exigentes o absorbentes.

- Mi horario de trabajo me parece pesado.
- Mi horario de trabajo es flexible*.
- Mi horario de trabajo es absorbente.
- Mi horario es cansado.

Dimensión 3: Seguridad en el empleo (Job Security, JS). Percepción de estabilidad o incertidumbre respecto al contrato y la continuidad laboral.

- Al término de mi contrato me darán la planta (empleo fijo/base)*.
- Mi trabajo es de planta (empleo fijo/base)*.
- Mi contrato de trabajo es temporal.

Dimensión 4: Promoción (Promotion, PRO). Dificultad o ausencia de oportunidades de promoción y desarrollo profesional.

- La empresa promueve y/o asciende a los empleados según el rendimiento*.
- La empresa promueve y/o asciende a los empleados de acuerdo con su desempeño*.
- La empresa promueve y/o asciende a los empleados dependiendo de su capacidad*.
- La empresa promueve y/o asciende a los empleados en base al nivel académico de cada uno*.

Dimensión 5: Capacitación (Training, TR). Disponibilidad de formación, aprendizaje y apoyo para el desempeño del trabajo.

- Me dan capacitación para actualizar mi trabajo*.
- Me dan cursos de capacitación para aprender actividades nuevas relacionadas con mi puesto*.
- La organización me apoya para el aprendizaje de nuevas actividades*.

Dimensión 6: Conflictsos interpersonales (Interpersonal Conflictss, IC). Calidad de las relaciones laborales y presencia de tensiones o Conflictsos con compañeros.

- Existe comunicación entre los compañeros de trabajo*.
- La relación que existe con mis compañeros es buena*.
- La relación con los compañeros es cordial*.

Dimensión 7: Falta de participación (Lack of participation, LP). Grado en que la organización limita la iniciativa, consulta y participación del trabajador.

- Las sugerencias que yo hago pasan por un proceso muy largo.
- Mis sugerencias son tomadas en cuenta*.
- Me abstengo de dar sugerencias.
- Mis sugerencias son consideradas siempre y cuando sea para mejorar mi trabajo*.

(B) Reversed items

In exploratory and confirmatory factor analyses, items marked with * were formulated in the opposite direction to the construct being evaluated and recoded beforehand. The sign of the factor loadings depends on the orientation of the factor and does not affect the substantive interpretation of the dimensions, which was based on the conceptual content of the items.

This was performed in advance to ensure that higher scores reflect a higher level of the psychosocial factor being assessed.

Recoding rule applied:

- 1 <--> 4
- 2 <-> 3

(C) Calculation of scores

The scores for each dimension are obtained as the arithmetic mean of the items that comprise it, once the inverted items have been recoded. The use of the mean allows the original response metric (1–4) to be maintained and is consistent with the reliability estimate using α and ω.

- OC = media(OCi18, OCi28, OCi45)
- WP = media(WP5, WPi15R, WP25, WP35)
- JS = media(JSi10R, JSi21R, JS47)
- PRO = media(PROi8R, PROi19R, PROi29R, PROi38R)
- TR = media(TRi1R, TRi11R, TRi23R)
- IC = media(ICi26R, ICi36R, ICi44R)
- LP = media(LP3, LPi13R, LP24, LPi42R)

In this initial validation phase, no cut-off points or interpretative rules are proposed. The interpretation of the results should be descriptive or comparative within each organization. The establishment of percentile rules or risk thresholds will require additional studies with larger and more diverse samples.

(D) Use of the Instrument

The questionnaire is designed for psychosocial assessment, organizational diagnosis, and research purposes, and can be used in different work contexts provided that ethical principles of confidentiality, anonymity, and responsible use of information are respected.

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