Cross-cultural adaptation and factorial validity of Wright's scale "loneliness at work" in the Mexican population

Adaptación transcultural y validez factorial de la escala de "soledad laboral" de Wright en población mexicana

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Abstract

New work schemes, such as home-office, make it difficult for workers to establish solid social ties, giving place to a feeling of workplace loneliness that affects both their mental and physical health, as well as their job performance. This study aims to cross-culturally adapt and validate the Wright et al. (2006) Workplace loneliness scale in the Mexican population. For this purpose, a quantitative and instrumental type of research was carried out. A six-step cross-cultural adaptation process was used and then applied to a sample of 729 workers. The results show that the two-factor model proposed by the theory and by the exploratory factor analysis was contrasted using a Confirmatory Factor Analysis, and its goodness-of-fit indices (GFI=.979; AGFI=.973; CFI=.997; RMSEA=.017) confirming a significant fit of the data to the model and delivering optimal levels of reliability (Cronbach's Alpha >.90). It is concluded that the results guarantee the psychometric quality of the scale, considering it valid and reliable for the Mexican population to measure Workplace loneliness, composed of two factors and 16 items: F1. Emotional workplace loneliness (9) and F2. Social workplace loneliness (7).

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Resumen

Los nuevos esquemas de trabajo, como el home-office, dificultan que los trabajadores establezcan vínculos sociales sólidos, dando lugar a un sentimiento de soledad laboral que impacta tanto en su salud mental y física, como en su desempeño laboral. El objetivo de este trabajo es adaptar transculturalmente y validar la Escala de Soledad Laboral (ESL) de Wright et al. (2006) en población mexicana. Para este fin se efectuó una investigación de enfoque cuantitativo y de tipo instrumental. Se utilizó un proceso de adaptación transcultural de seis pasos para después aplicar la escala a una muestra de 729 trabajadores. Los resultados demuestran que el modelo de dos factores propuesto por la teoría fue contrastado mediante un Análisis Factorial Confirmatorio (GFI=.979; AGFI=.973; CFI=.997; RMSEA=.017) corroborando un ajuste significativo de los datos al modelo, y arrojando niveles óptimos de confiabilidad (Alpha de Cronbach >.90). Se concluye que los resultados confirman la calidad psicométrica de la ESL, considerándola válida y confiable en población mexicana, para medir la soledad laboral por dos factores y 16 reactivos: F1. Soledad emocional laboral (9) y F2. Soledad social laboral (7).

Código JEL: D21, J28, L2, M54, O15
Palabras clave: soledad laboral; adaptación transcultural; validez factorial; soledad emocional laboral; soledad social laboral

Introduction

Work stress represents a significant occupational health problem, so it has gained importance among academics and organizations seeking to research its effect on workers' physical and mental health (Patlán, 2019). According to Ghadi (2017), Wright (2005a), and Zhou (2018), isolation and loneliness are both cause and consequence of stress at work. In contrast, social relationships positively affect an individual's health. In Cohen's (2004) words, "beyond perceptions, the actual receipt of support could also play a role in stress buffering by providing a solution to the problem, by reducing the perceived importance of the problem, or by providing a distraction from the problem" (p. 678).

Loneliness in a work context stems from several factors, such as new work models, especially remote working and working from home, which were the immediate response of companies and the Ministry of Labor and Social Welfare to the health emergency caused by the SARS-CoV-2 virus (COVID-19). In the words of NOM-037-STPS-2023 (Spanish: Secretaría del Trabajo y Previsión Social), "remote work" is described as:

Form of subordinate labor organization that consists of the performance of paid activities in places other than the workplace, so it does not require the physical presence of the worker under the

category of remote work in the latter, using information and communication technologies for contact and command between the remote worker and the employer (p. 7).

According to the survey ¿Cómo conciliar el Home con el Office? [How to reconcile Home and Office?] (Mucharraz & Cano et al., 2020), before the COVID-19 pandemic, only 51% of Mexicans surveyed stated that their company did not offer remote working, 34% worked remotely once or twice a week regularly, 5% stated that their work activities did not allow them to do work from home, and 10% worked remotely on a full-time basis regularly.

That same survey showed that, based on the COVID-19 restrictions, 68% work their full workday remotely from home, for 26% it is the first time they have worked remotely full time from home, 11% mentioned that some days/weeks they go out to work and others they work remotely at home, and 3% said that due to the activity they perform they still work in person from their workplace. NOM-035-STPS-2018 (Secretaría del Trabajo y Previsión Social, 2018) defined "workplace" as "the place or places, such as buildings, premises, facilities and areas, where activities of exploitation, harnessing, production, or provision of services are carried out, in which people who are subject to an employment relationship work" (p. 87). This is what is colloquially known as an "office." Subsequently, NOM-037-STPS-2023 incorporated the concept of "workplace" and established it as the "fixed and private physical space, outside the workplace and different from it, agreed with the employer to carry out remote work" (Secretaría del Trabajo y Previsión Social, 2023, p. 16).

These data show that working remotely went from being an employment benefit for a few to forming a new flexible work system. According to Segura (2021), in the report Remote Work in Mexico: challenges for its implementation by KPMG Mexico, 63% of the companies plan to maintain a remote work option after the pandemic, and 40% consider that between 26% and 50% of their workforce will remain in this category once the pandemic is over. From this last percentage, 91% expect workers to continue working remotely two or more days a week.

Although this flexibility to work remotely benefits workers and companies, it also reduces their opportunities for interaction and relationships, generating social and emotional isolation among workers and, consequently, a feeling of loneliness, also social and emotional. Nevertheless, this perception of loneliness is not entirely related to the isolation of the individual since even working in an office does not guarantee meaningful connections with those with whom one shares a workplace. Seppälä and King (2017) stated that workplace loneliness results from social isolation and emotional exhaustion caused by work stress or burnout, so it is not limited, as previously thought, to executive or overworked staff. This makes it an occupational health problem that cuts across all professions and hierarchies throughout the organizational structure.

In Mexico, NOM-035-STPS-2018 (Secretaría del Trabajo y Previsión Social, 2018) establishes psychosocial risk factors as those that can cause anxiety, severe stress, and adjustment disorders "derived from the nature of the job functions, the type of workday and exposure to severe traumatic events or acts of workplace violence against the worker, due to the work carried out" (p. 87). Although NOM-035 does not refer to loneliness in the work environment, it is related to stress at work and its consequences, so it is mandatory to declare workplace loneliness as a relevant psychosocial risk factor.

The report Loneliness and the Workplace (Cigna, 2020)—created before the pandemic—revealed that although most workers have a sense of belonging and friendship in their workplace, one in three claims to have a general feeling of emptiness (35%) or disconnection with others (37%) when at work, and 39% feel the need to hide their true selves when they go to work. Furthermore, Escobar (2022) stated that the lack of interaction among workers generates psychological distancing since new work models, such as remote working and the hyper-specialization of tasks, cause individuals to be unaware of the activities performed by their colleagues, restricting their interaction and the possibility of establishing meaningful social work relations.

On the other hand, González (2022) studied loneliness at work as an occupational risk and argued that the radical technological evolution that has been taking place for decades is modifying work models and the environment where the individual works in all aspects from the way of living and relating to the jobs and the development of the tasks performed.

Although the increase in workplace loneliness is constantly associated with the social distancing caused by the COVID-19 pandemic, other factors that make it difficult for some workers to establish solid social and emotional ties that lead to workplace isolation should not be ruled out. Flinders (1988) postulated two conceptual orientations in studying this isolation type. The first defines isolation as a work-related condition, and the second defines it as a psychological state of the individual concerning their work environment. In the latter orientation, isolation depends more on how the person perceives and experiences interaction with other people than on the absolute amount of interaction in which they participate.

In a work context, isolation and loneliness can cause great psychological stress and mental harm to workers. The difference between each, as analyzed by Zhou (2018), is that "workplace isolation is an objective phenomenon in an organization's social environment, and workplace loneliness emphasizes a subjective feeling of employees in the organization" (p. 1008). Wright (2009) defined workplace loneliness as "the distress caused by the perceived lack of good quality interpersonal relationships between employees in a work environment" (p. 13). Therefore, this research aimed to cross-culturally adapt, validate, and estimate the psychometric properties of the Wright et al. (2006) Loneliness at Work Scale in the Mexican population, aimed at measuring the two factors of loneliness exhibited in the work context: F1. Emotional loneliness at work, and F2. Social loneliness at work.

Why is it relevant to study workplace loneliness?

Wahyuni and Muafi (2021) consider that workplace loneliness is not a new phenomenon; it has only become more prevalent, driven by the pandemic and remote working, so it has not been the subject of research, neither theoretically nor empirically, which is why the literature in Spanish regarding this construct is limited. As a premise to study loneliness, it is essential to understand that this feeling is subjective and varies from one person to another so that, in a work context, the worker does not need to be alone to feel lonely; this will depend on the level of support, closeness, and security that each one seeks in their interpersonal relations (Aytaç, 2015; Jones & Hebb, 2003).

According to Benenden Health (2022), workers may feel lonely in their work environment for multiple reasons: 1) life changes, including starting a new role, returning from maternity or sick leave, or approaching retirement, 2) organizational culture; this may discourage close relationships or prioritize certain relations over others, 3) lack of inclusion, 4) job functions; some jobs require more independence and less teamwork time, 5) type of contract; consultants or gig workers may be more likely to feel lonely because the short time spent interacting with others does not allow them to establish strong relationships, and 6) existing feelings of loneliness.

Loneliness is associated with depression, hostility, pessimism, social isolation, aloofness, and shyness; it is also concomitant with more serious disorders, such as clinical depression, borderline personality, and schizophrenia (Ernst & Cacioppo, 1999). In a work context, loneliness affects the psychological well-being of workers, causing anxiety, stress, impatience, indecision, hopelessness, and self-isolation (de Jong, 1998; Perlman & Peplau, 1982). According to Jenkins (2022), lonely workers are seven times less likely to be committed to their work, five times more likely to miss work due to stress or illness, and twice as likely to leave the company.

To understand workplace loneliness more accurately, it is not only necessary to consider the worker's personality and how they act in their work environment, but also how this environment acts on the individual. The presence or absence of some characteristics of the environment can lead to the emotional and social isolation of the worker, provoking and perpetuating the feeling of workplace loneliness.

Previous studies concerning loneliness in the workplace

Slater (1976) considered that cultural values and social institutions could exacerbate loneliness and found that companies and schools emphasize individualism and personal success through competition and independence, which go against the basic human needs of belonging, community, and commitment to

others. Hence, it is important to understand the consequences of isolation and loneliness in the work context.

For Marshall et al. (2007), workplace isolation is conceptualized on a scale with two factors: 1) Colleagues, representing the perception of isolation from co-workers when the need for casual interactions, friendship, and camaraderie is not met or satisfied, and 2) Company, representing the perception of isolation from the organization itself when the need for job support, both from supervisors and from the company, is not satisfied. This scale uses a 7-point Likert scale, which, in the author's words, "fills an important gap in the ability to measure appropriately workplace isolation—a phenomenon that is pervasive among employees and is highly reflective of today's work environment" (p. 212).

Orhan et al. (2016) argued that most studies relating social isolation to virtuality have focused on interactions within a work team. When isolation is studied, the main emphasis is on the individual's interactions with peers, supervisors, and team members.

In other studies, Cubitt and Burt (2002) and Dussault and Thibodeau (1997) modified the UCLA Loneliness Scale (Russell et al., 1980) to measure workplace independence by adding the statement "At work" to the beginning of the questionnaire to ensure that respondents were thinking about their work while answering it. Respondents rate on a four-point scale the extent to which the statements accurately describe themselves at work. Similarly, the report Loneliness and the Workplace (Cigna, 2020) examined feelings of loneliness among participants by asking questions based on the UCLA Loneliness Scale and creating mean total loneliness scores across different demographic groups to gauge which populations are more likely to experience feelings of loneliness. Their results stipulate that the higher the score, the lonelier people are.

In another approach, Bell et al. (1990) used direct questions to measure loneliness in the organization since their research aimed to evaluate the hypothesis that people who are successful in their work are more likely to consider themselves lonely than less successful people. Similarly, Gonzalez (2022) used a questionnaire with direct questions to evaluate, preliminarily, the existence or not of loneliness at work to anticipate the possible risk to the psychosocial well-being of workers. This questionnaire contains questions such as: "Are you physically isolated? (Yes/No)," "Is the work carried out in a group or team environment? (Yes/Sometimes/Never)," and "Does the work environment favor frequent communication if necessary? (Yes/No)."

Definition of "loneliness"

Loneliness is a common and global human experience with emotional, cognitive, motivational, and behavioral dimensions. To quote de Jong et al. (2018):

Loneliness is a situation experienced by the individual as one where there is an unpleasant or inadmissible lack of quality of certain relationships. This includes situations, in which the number of existing relationships is smaller than is considered desirable or admissible, as well as situations where the intimacy one wishes for has not been realized (p. 485).

In psychological terms, there are multiple definitions of loneliness. Rogers (1970) assumed that society pressures individuals to act in restricted and socially approved ways. This leads to a discrepancy between the true inner self and the self that manifests itself to others, and loneliness occurs when individuals, having lowered their defenses to get in touch with their inner self, are rejected by others. Young (1982) expressed it as the real or perceived absence of satisfying social relationships that may be accompanied by manifestations of psychological distress. Perlman and Peplau (1982) referred to it as a discomforting experience that occurs when an individual's network of social relations is deficient. A socially lonely person experiences boredom and feelings of being socially marginal.

On the other hand, de Jong (1998) proposed two types of loneliness. Positive loneliness refers to the individual's voluntary detachment from their problems, and negative loneliness is associated with dissatisfaction resulting from inferiority compared to the expectations of the relations between the individual and the environment.

For Weiss (1973, 1974), who is recognized as the main researcher on loneliness, this construct is not only the consequence of personal or situational factors but the product of their combined effect. Weiss hypothesized that there are two different types of loneliness, which, from the author's perspective, have different backgrounds, affective responses, and symptomatologies of their own:

1) Emotional loneliness results from lacking a close, intimate, and affective bond with another person and unsatisfactory friendships. Its symptoms, in the words of Núñez et al. (2022), are: a global feeling of loneliness or abandonment, generalized anxiety, hyperactivity, a constant state of vigilance, fear, and propensity to a permanent valuation of one's own life.

2) Social loneliness is the response to the lack of satisfactory friendships and social relations where the person is part of a group of friends where interests and related activities are shared, i.e., a socially lonely person lacks a sense of community. The symptoms of this type of loneliness are a general experience of boredom, depression, lack or loss of goals, tendency to marginality, lack of meaning, and drive to seek the acceptance of others (Núñez et al., 2022).

Definition of "workplace loneliness"

For Wright (2009), workplace loneliness—initially referred to as "Loneliness in the Workplace"—is defined as "the distress caused by the perceived lack of good quality interpersonal relationships between

employees in a work environment" (p. 13). Subsequently, Ozcelik and Barsade (2018) conceptualized workplace loneliness as the feeling that social needs are unmet at work.

In the words of Wright (2009), the difference between "loneliness" and "workplace loneliness" is that the former involves a broader range of relationships, including a variety of interpersonal relationships in everyday life, but focuses on the relationships between the individual, friends, and family, while the latter focuses on the interpersonal relations experienced by the worker in their workplace. Since loneliness is a feeling or psychological state and not a psychological trait, it is easily affected by the influence of the individual's work situation.

The first group of authors believes that the feeling of workplace loneliness coincides, in essence, with the general feeling of loneliness, and its definition is transferred directly to the workplace or the context of how the individual works (Ayazlar & Güzel, 2014; Erdil & Ertosun, 2011; Lam & Lau, 2012). In this first group, González (2022) defined workplace loneliness as "the circumstance of a worker in which they lack—or perceive that they lack—any type of company or possibility of interaction in their position and that, when the individual becomes aware of it and experiences it negatively, can be constituted as a psychosocial risk" (p. 6). In contrast, a second group of authors takes the situational characteristics of the work environment as a basis, redefining the feeling of workplace loneliness, not only in the workplace but in a work context (Silman & Dogan, 2013; Wright, 2005a; Yilmaz, 2011). From the latter group, Wright (2005b) stated that the feeling of workplace loneliness "may create discrepancies between the desired quality of social contact and the actual development of work-based relationships" (p. 127).

Thus, it is assumed that there is a feeling of workplace loneliness when there are differences between the individual's real interpersonal relationships and those that the individual expects to find in the work context, together with the lack of ability to compensate for this difference between what is real and what is expected, in addition to insufficient interaction and good quality interpersonal communication between workers in the work environment.

Types of workplace loneliness

Based on the review of the literature mainly influenced by Weiss (1973, 1974) and the analysis with experts in the field of organizational psychology and Human Capital regarding the names of the factors of the Loneliness at Work Scale by Wright et al. (2006), it was decided to make an adaptation in the names of the types of loneliness instead of a translation.

Factor 1, originally called "Emotional deprivation," was modified to "Emotional workplace loneliness." According to de Jong and Raadschelders (1982), deprivation is linked to the nature of the

absent relationships, and its understanding is fundamental to obtaining information linked to those relationships that the subject considers relevant or meaningful to them (Montero & Sánchez, 2001). Simultaneously, factor 2, whose original name in English is "Social companionship," was adjusted to "Workplace social loneliness."

Although the construct "companionship" is usually opposed to "loneliness," Rook (1987) studied the relation between emotional support and loneliness and identified companionship as a central concept in understanding loneliness. To this end, social accompaniment focuses on the person's relations and connections as a strategy to mitigate loneliness. According to Núñez et al. (2022), group accompaniment training programs proved effective in improving empathy and reducing loneliness, showing that improving empathic skills positively affects well-being measured in a lower perception of loneliness.

Consequently, by using the construct "loneliness" instead of "Deprivation" and "Accompaniment" for the two factors of the Loneliness at Work Scale, loneliness is equated with the perception of an unpleasant situation or unacceptable quality of certain types of relationships, which can be emotional and social. Therefore, the two types of workplace loneliness considered in this research, which functioned as factors for the Wright et al. (2006) Loneliness at Work Scale, are F1. Emotional workplace loneliness and F2. Social workplace loneliness.

F1. Emotional workplace loneliness

Emotional workplace loneliness is underpinned by the "emotional loneliness" described by Weiss (1973, 1974) and is defined as "the perception of the emotional quality of one´s relationships at work" (Wright et al., 2006, p. 63). It alludes to how the inability to connect emotionally with others or to become attached to them can result in workers having several undesirable outcomes in a work context, such as a decline in organizational citizenship behavior and job performance (Lam & Lau, 2012), as well as impacting the quality of interpersonal relations in the work environment, although not necessarily within a workplace.

For this research and based on Wright's (2009) general conceptualization of workplace loneliness, emotional workplace loneliness was defined as the distress caused by the perceived, unpleasant, and unsatisfactory absence of meaningful interpersonal and intimate emotional relations between workers in a work context.

F2. Social workplace loneliness

Social workplace loneliness stems from the "social loneliness" detailed by Weiss (1973, 1974) but is adapted to a context of social relations in the work environment. This factor is defined as "the perception of the quantifiable social aspect of one´s relationships at work" (Wright et al., 2006, p. 63), hence the reference to the connection and commitment developed with the group of people with whom one works. This factor has been identified as positively predicting affective organizational commitment and negatively predicting the intention to seek a new job (Erdil & Ertosun, 2011). It has also been shown to predict intrinsic and extrinsic job satisfaction (Tabancali, 2016).

For this research and considering Wright's (2009) general conceptualization of workplace loneliness, social workplace loneliness was defined as the distress caused by the perceived, unpleasant, and unsatisfactory absence of meaningful social relations and support networks among workers in a work context.

Methodology

Type and research design

This research is quantitative in approach and, according to Ato et al. (2013), of an instrumental type since "it includes all those works that analyze the psychometric properties of psychological measurement instruments, whether new tests or the translation and adaptation of existing tests" (p. 1042). Thus, the present research consists of two stages. The first aimed to translate and cross-culturally adapt the instrument, and the second aimed to estimate its psychometric properties (construct validity and reliability) and present descriptive results.

Population and sample

The population was made up of workers from companies in Mexico City and the State of Mexico, with a range of employed personnel, according to the National Statistical Directory of Economic Units (INEGI, 2022; Spanish: Instituto Nacional de Estadística, Geografía e Informática), from 101 to 250 workers. The type of sampling was non-probabilistic by convenience, where the members of the target population met certain practical criteria: 1) easy accessibility, 2) geographic proximity, and 3) willingness to participate voluntarily (Etikan et al., 2016). Regarding the selection criteria, administrative personnel, middle

managers, and managers with a length of service in the company greater over months were included. Managers, directors, and operational personnel with less than three months in the company were excluded.

Workers from the four companies were sampled during 2022 and consisted of 729 workers in the service sector. 53.1% are women and 46.9% are men. Regarding age, 24.3% are up to 29 years old, 21% are between 30 and 36 years old, 22.5% are between 37 and 43 years old, 23.7% are between 44 and 50, and 8.5% are between 51 and 58. Regarding education, 7.5% of those surveyed have a technical qualification, 49.4% have a bachelor's degree, and 43.1% have postgraduate studies. Regarding position level, 82.3% are administrative personnel, 8.5% are middle management, and 5.2% have a managerial position. Regarding length of service in the company, 41.2% have been with the company for up to 5 years, 43.3% for 6 to 10 years, and 15.5% have been with the organization for 11 to 15 years. According to the number of remote working days per week, 22.9% work four days at home, 52.1% work three days, and 25% work two days.

Instrument description

The original Wright et al. (2006) two-factor scale was used: F1. Emotional deprivation at work (Emotional loneliness) and F2. Social companionship (Social loneliness at work). These authors reported a statistically positive and significant correlation (r=.63) between the two factors of the instrument. The construct validity employed the Exploratory Factor Analysis (EFA), in which the Kaiser-Meyer-Olkin adequacy value (KMO test) was .96, and Bartlett's test of sphericity showed a significant value (approximate Chi-square=5190.86, df=120, p<.001). The two manifested factors had a cumulative explained variance percentage of 61.81%, with 53.44% for factor 1. "Emotional workplace loneliness" (9 items), and 8.37% for factor 2. "Social workplace loneliness" (7 items).

Structural equations were used for the Confirmatory Factor Analysis (CFA), where the goodness of fit indices with a two-factor model showed a GFI=.87, AGFI=. 83, CFI=.93 and RMSEA=.09. Finally, Cronbach's Alpha reliability was .93 for factor 1, and .87 for factor 2. The original instrument used a seven-point Likert-type response scale, from "1=Strongly disagree" to "7=Strongly agree." Nevertheless, a five-point Likert-type scale was used for this research, from "1=Strongly Disagree" to "5=Strongly Agree." This change corresponds to the fact that the companies involved in the study always use a five-point scale in their questionnaires, so it was decided, in conjunction with the human resources managers, to maintain this scale.

According to Dawes (2008), from the point of view of obtaining data from the same instrument, there are no significant changes between five-, seven- and ten-point scales. Therefore, "they are all comparable for analytical tools such as CFA or structural equation models" (p. 75).

Variables; operational definition

The two factors considered in this research, based on Wright et al.'s (2006) Workplace Loneliness Scale, are as follows:

F1. Emotional workplace loneliness

This factor measures qualitative aspects of relations with co-workers and comprises 9 items. These attach keywords such as feeling "isolated," "alienated," "disconnected," "abandoned," and other concepts that describe being "emotionally distant" (Wright, 2005a). Therefore, high scores indicate the presence of emotional workplace loneliness in the work context.

F2. Social workplace loneliness

This factor is associated with the quantitative aspects of relations with co-workers. It is made up of 7 items, which include phrases referring to "not being able to share," "not being able to spend time with," "not being part of a group," "not feeling included," and other phrases describing the lack of "reliable and abundant social companionship." Consequently, high scores indicate the presence of social workplace loneliness in the work context.

Procedure

The questionnaire was administered to the workers, who, with a preliminary confidentiality agreement between the companies and the researcher, participated voluntarily under the premise that their anonymity was guaranteed. Google Forms created the questionnaire, and Google Sheets stored the responses. Once all the data were collected, Jamovi 2.2.5 SPSS v.25 software was used for the EFA and reliability analysis, and AMOS v.23 for the CFA.

First stage results

Cross-cultural adaptation of the instrument

The first part of the present research was dedicated to adapting the instrument cross-culturally. For this purpose, the five possible application scenarios (see Table 1) of Guillemin et al. (1993) were reviewed, where the characteristics of the population—culture, language, and country—of the original instrument were examined in comparison with the population where the adapted version will be applied. Under the criteria of "Similar" or "Different," the application scenario and the type of adaptation required were determined, scenario five (5) being the one specified for the cross-cultural adaptation of this research.

Table 1
Cross-cultural adaptation scenarios

Application scenarios	Population characteristics			Adaptation required	
	Culture	Language	Country	Language	Culture
1	Similar	Similar	Similar	Not required	Not required
2	Different	Similar	Similar	Not required	Required
3	Different	Similar	Different	Not required	Required
4	Different	Different	Similar	Required	Required
5	Different	Different	Different	Required	Required

Source: created by the authors based on Guillemin et al. (1993)

Meanwhile, Arafat et al. (2016) argued that, to adapt an instrument, cultural, idiomatic, linguistic, and contextual aspects related to the population to which the questionnaire will be administered should be considered. Under these criteria, the original Wright et al. (2006) Loneliness at Work Scale required language, cultural, and country adaptation. Considering that the original instrument was made before the pandemic, an adjustment in the context was needed because the premise "at work" alluded to a workplace, a situation that changed with remote working.

Because of the above criteria, and from the literature review, it was identified that Beaton et al. (2000), Hambleton (2005), and Borsa et al. (2013) agreed on five steps in the cross-cultural adaptation process: 1) translation of the instrument from the source language to the target language, 2) synthesis of the translated versions, 3) analysis of the synthesized version by expert judges, 4) back translation, and 5) pilot study. Gjersing et al. (2010) also undertook a second synthesis of the translated versions before the pilot study. Therefore, the cross-cultural adaptation of the Wright et al. (2006) Loneliness at Work Scale followed a process with the following six steps.

1) Translation of the original instrument into the target language

The first thing to consider when adapting an instrument is the language and context to which it will be applied, so coherence must be maintained between the adapted version and the original. Therefore, a proper translation implies a balanced treatment of linguistic, cultural, contextual, and scientific information (Tanzer, 2005), which is why this step requires two translators.

2) Summary of translated versions

This process involves the comparison by the researcher of both translations to assess their semantic, idiomatic, conceptual, linguistic, and contextual differences, with the sole purpose of creating a new single synthesized version (Borsa et al., 2013).

3) Back translation

The newly synthesized version of the instrument was translated into the original language, which made it possible to identify conceptual inconsistencies between versions. Beaton et al. (2000) emphasized that back translation should be performed by two translators unconnected with the first step and they should not generate a literal interpretation of the translated version so that two versions of the instrument were obtained at the end of this step.

4) Synthesis of back translations

In the same way as in the second step (synthesis of the translated versions), both versions were checked for possible discrepancies. At the end of this step, a new single version of the instrument was obtained.

5) Inter-judge validity

Subsequently, a committee of experts in the field of study was needed to evaluate the new single version of the instrument. This committee comprised 14 judges, including organizational psychologists, human capital specialists, and human resources managers. Borsa et al. (2013) indicated that the role of these experts was to review the structure, design, instructions, and adequacy of the expressions contained in the instrument. They aimed to review and validate each instrument item translated in the previous steps and

rate its clarity, consistency, and relevance. For the item to be accepted, it had to present an 80% agreement. In the end, all 16 items met this criterion and were accepted.

6) Pilot study

This step identified concepts and possible problems with the instrument that could make it difficult for the participants to understand and answer properly. To speed up this step, work was carried out with the HR department of the companies to ensure, among those involved, access to the online questionnaire and the subsequent contact with them to receive feedback from this exercise.

From the previous steps, an adjustment in the English concepts "at work" and "workplace" was determined since the worker associated the statement "at work" or "workplace" with the physical space where they work, i.e., their workplace (office), a situation that was reconsidered with remote working and working from home. Therefore, although the translation of the original construct "Workplace loneliness" and "Loneliness in the Workplace" is "Soledad en el lugar de trabajo," it was decided, from the documentary review in Spanish and consultation with experts in organizational matters, that the appropriate adaptation would be "Soledad laboral," since the Spanish word "labor," according to the RAE (2024) (Spanish: Real Academia Española), is pertaining or relating to work, in its economic, legal, and social aspect; but without being subject to the same space or place of work.

In addition, another concept to be adjusted was in item 2 with "alienated" or "alienado" in Spanish, since in the pilot study, there was much confusion and lack of knowledge about this word and its relation to loneliness; hence, it was changed to "ajeno." Nevertheless, to understand the nexus between "alienation" and "loneliness," Wright (2009) argued:

When people are alienated, they feel they do not belong in the social world. There is no necessary connection between the alienation one experiences at work and one's levels of loneliness, and as such, the concepts are quite distinct. However, similarly to aloneness and isolation, the experience of unwelcome alienation from colleagues could well lead to an associated increase in feelings of loneliness. (p. 14)

Once the required adaptations were completed and validated by the Human Resources managers of the companies and the researcher, the first stage was completed; therefore, it was established that the instrument is adequate for statistical analysis, that is, for its construct validity and reliability.

Second stage results

This section reports the second part of the research aimed at the construct validity of the cross-culturally adapted instrument and its reliability. The results are presented through the following statistical analyses.

1) Descriptive statistics and correlations

Table 2 shows the descriptive statistics and the analysis of Pearson's product-moment correlation between the factors of the Wright et al. (2006) Loneliness at Work Scale in the Mexican population.

Table 2
Descriptive statistics and Pearson's correlations

Factor	Mean	Median	Mode	SD	Minimum	Maximum	F1	F2
F1	3.486	3.556	3.444	.770	1.111	5.000	1	
F2	3.496	3.571	3.429	.672	1.286	5.000	.352**	1

F1=Emotional loneliness at work; F2=Social loneliness at work. **$p<.001$

Source: created by the authors based on the results of the research (2022)

It was observed that there is a statistically significant correlation between the two factors of the scale (r=.352; p<001). In the words of Jenkins (2022), someone can be in a crowded office or workplace and still experience loneliness. In contrast, a worker can function in isolation but still be engaged in their work and not experience a feeling of loneliness. The feeling of loneliness emerges when the worker becomes disconnected from their activities, the people they work with, the organizational culture, and him or herself.

Construct validity analysis of the wright et al. (2006) loneliness at work scale

Construct validity was first evaluated employing the EFA, where the number of factors from this analysis approximated the number of dimensions proposed by Wright et al. (2006). Subsequently, the CFA was performed using structural equations and designing the constructed model with its two factors. According to Lloret et al. (2014), while the EFA is used to "build" the theory, the CFA is applied to "confirm" the theory.

2) Exploratory factor analysis

Table 3 presents the results obtained in the EFA of the Wright et al. (2006) Loneliness at Work Scale using the principal components analysis method and Varimax rotation. The variance explained was 66.97%: 38.35% for factor 1, emotional workplace loneliness, and 28.62% for factor 2, social workplace loneliness. The Kaiser-Meyer-Olkin (KMO) test reported a value of .958, and Bartlett's test of sphericity highlighted a significant value (approximate Chi-square=7692.688, df=120, p<.001).

Table 3
Factor analysis of the Wright et al. (2006) Loneliness at Work Scale factors

Items	F1. Emotional workplace loneliness	F2. Social workplace loneliness	Commonalities
R1_F1_1	.796	.155	.657
R2_F1_2	.818	.156	.694
R3_F1_3	.811	.120	.673
R4_F1_4	.805	.168	.677
R5_F1_5*	.827	.161	.709
R6_F1_6*	.813	.115	.674
R7_F1_7	.828	.167	.713
R8_F1_8	.823	.142	.698
R9_F1_9	.819	.152	.693
R10_F2_1*	.176	.798	.667
R11_F2_2*	.171	.786	.647
R12_F2_3*	.101	.799	.649
R13_F2_4	.137	.783	.631
R14_F2_5*	.132	.794	.647
R15_F2_6*	.163	.764	.611
R16_F2_7*	.128	.811	.675
% of variance explained	38.35%	28.62%	
% of variance explained cumulative	38.35%	66.97%	
*Inverse items			

Source: created by the authors based on the results of the research (2022)

3) Confirmatory factor analysis

The CFA of the Loneliness at Work Scale of Wright et al. (2006), adapted to the Mexican population, was performed using a structural equation analysis with the maximum likelihood method. Table 4 presents its goodness of fit indices, where the confirmatory factor structure of the scale (see Annex A) corroborates a significant fit of the data to the model, showing 16 items with standardized coefficients higher than .70, an X^2=124.482, 103 degrees of freedom (df), and a p=.074 value.

Table 4
Results of the confirmatory factor analysis of Wright et al.'s (2006) Loneliness at Work Scale

X^2= 124.482; df=103; p=.074					
GFI	AGFI	CFI	RMR	SRMR	RMSEA
.979	.973	.997	.015	.0195	.017

Chi-Square (X^2), df=Degrees of Freedom, GFI=Goodness of Fit Index, AGFI=Adjusted Goodness-of-Fit statistic, CFI=Comparative Fit Index, RMR=Root Mean Square Residual, SRMR=Standardized Root Mean Square Residual, RMSEA=Root Mean Square Error of Approximation

Source: created by the authors based on the results of the research (2022)

Importantly, EFA and CFA were performed on the same sample (n=729), although Fokkema and Greiff (2017) argued that screening and confirmation using the same data generate overly optimistic and misleadingly significant results. Consequently, applying such procedures to data sets from real-world studies will also produce overly optimistic results, so splitting the sample in two and performing cross-validation is recommended. Nevertheless, this division to perform EFA and CFA leads to the reduction of the original sample size, and as this research is a cross-cultural adaptation of an already existing scale and not the construction of a psychometric scale, splitting the sample was not considered.

4) Reliability analysis of the wright et al. (2006) loneliness at work scale

Table 5 shows the reliability through Cronbach's Alpha and McDonald's Omega for factor 1. "Emotional workplace loneliness," with 9 items, was α=.943 for factor 2. "Social workplace loneliness," with 7 items, α=.909, and for the global scale, with 16 items, α=.922.

Table 5
Reliability coefficients of the Wright et al. (2006) Loneliness at Work Scale factors

Loneliness at Work Scale Factors	Items	Cronbach's Alpha	McDonald's Omega
F1. Emotional workplace loneliness (n=729)	9	α= .943	ω= .943
F2. Social workplace loneliness (n=729)	7	α= .909	ω= .909
Global (n=729)	16	α= .922	ω= .922

Source: created by the authors based on the results of the research (2022)

As expressed by Hair et al. (2019), "the generally agreed-upon lower limit for Cronbach's alpha is .70, although it may decrease to .60 in exploratory research" (p. 115). With these results, the cross-cultural adaptation of the Wright et al. (2006) Loneliness at Work Scale in the Mexican population is guaranteed adequate internal consistency.

Discussion

Existing research on workplace loneliness focuses on a cross-sectional design. This research responds to the fact that, as a psychological state, loneliness is a feeling mostly influenced by the situations or environments in which the worker performs (Zhou, 2018). In such a way, the same individual can experience different loneliness for a short period. From this perspective of constant change, it is of great theoretical and empirical importance to study the internal oscillations of short-term workplace loneliness, and for new organizational policies to be developed for the benefit of the worker and the company.

Although several scales and methodologies allow loneliness to be measured in a work context, for this research the cross-cultural adaptation of the scale of Wright et al. (2006) was necessary due to its theoretical support from Weiss (1973, 1974). Thus, to fulfill the first part of this research, focused on the translation and cross-cultural adaptation of the instrument, it was first necessary to work on the original construct "Workplace loneliness" and "Loneliness in the Workplace." Nevertheless, based on the documentary review in Spanish and the dialogue with organizational psychology and human capital specialists, it was decided that the appropriate translation would be "Soledad Laboral." Simultaneously, the Spanish names of the two factors of the scale were adapted as F1. Emotional workplace loneliness, originally F1. Emotional deprivation, and F2. Social workplace loneliness for F2. Social companionship.

The results of the second part of the research confirmed the psychometric quality of the Loneliness at Work Scale of Wright et al. (2006), adapted cross-culturally to the Mexican population.

In construct validity, as the sample size was 729 cases, the saturations were above .750, ranging from .764 to .828, and the number of items per factor was above 6, being 9 for "F1. Emotional workplace loneliness," and 7 for "F2. Social workplace loneliness." Considering Lloret et al. (2014), it can be

affirmed that the optimal conditions for obtaining accurate coefficient estimates in the EFA were met. Furthermore, with the indices reported in the AFC (GFI=.979; AGFI=.973; CFI=.997; RMSEA=.017), a meaningful fit of the data to the model was confirmed, manifested in 16 items and 2 factors. With the reliability coefficients found (Cronbach's Alpha >.90; McDonald's Omega >.90), it can be affirmed that the adapted instrument (see Annex B) is adequate and reliable for its application to Spanish-speaking workers.

Limitations

The main limitation lies in the sample and its representativeness since, as it is non-probabilistic by convenience, it restricts the extrapolation of the results achieved with the current sample (n=729). In addition, only companies with a range of employed personnel, according to the National Statistical Directory of Economic Units (INEGI, 2022), from 101 to 250 workers were considered, excluding workers from SMEs. Therefore, it is recommended that future research be conducted with samples of companies of different sizes.

Conclusions

If Wright's (2009) definition of workplace loneliness is taken as "the distress caused by the perceived lack of good quality interpersonal relationships between employees in a work environment" (p. 13), it is suggested that, with the increase of remote working, and therefore, of emotional and social distancing, the feeling of workplace loneliness among workers may increase. In addition to addressing the psychosocial risk factors and remote work established in NOM-035-STPS-2018 and NOM-037-STPS-2023, the measurement of workplace loneliness in Mexico is a priority. Although these regulations do not include such a concept, Zhou (2018) reveals that loneliness in workers makes it difficult for them to communicate and interact effectively with other staff members with whom they work, potentially causing a series of negative effects on their mental and physical health. In addition, Bartholomeusz et al. (2021) argue that workplace loneliness is a significant predictor of worker engagement since, when there are no friends or meaningful social networks to share ideas and opinions, workers feel helpless and alone, which could hinder their performance at the individual, group, and organizational levels.

Consequently, it is recommended "to carry out diverse studies to learn about properties, possibilities of use and above all to ensure that the proposals of the STPS can serve to improve the life of the worker and the productivity of companies" (Uribe et al., 2020, p. 30). The most appropriate intervention to alleviate the loneliness of an individual in their work environment depends on its cause, so

the gap between real and desired interpersonal relationships must be closed, promoting a work culture of inclusion and empathy.

With the adaptations made in the first stage, considering language, culture, country, and context, the Loneliness at Work Scale was validated by experts. Subsequently, in the second stage, the scale was declared functional in the pilot study through the confirmation of its psychometric properties, with it being found appropriate for its application in future research. Finally, with the cross-culturally adapted Loneliness at Work Scale, academics and companies will be able to evaluate, with a high level of objectivity, validity, and reliability, the perception of workplace loneliness of Spanish-speaking workers, even when they work remotely or from their workplace, in addition to expanding theoretical and empirical research on workplace loneliness, occupational health, and psychosocial risks.

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Annex

Annex A

Results of the CFA of the Loneliness at Work Scale of Wright et al. (2006) in the Mexican population
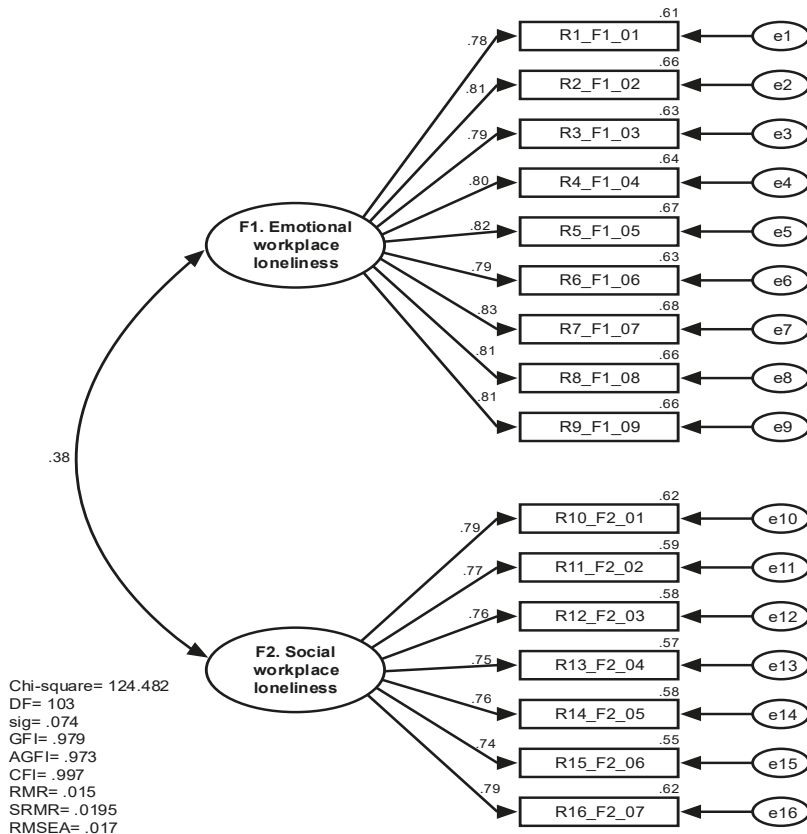
Annex B

Items from the Loneliness at Work Scale of Wright et al. (2006) cross-culturally adapted for the Mexican population.

A Likert-type response scale with five options is used: 1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree.

Factor 1. Emotional deprivation

1.	I often feel abandoned by my co-workers when I am under pressure at work
2.	I often feel alienated from my co-workers
3.	I feel myself withdrawing from the people I work with
4.	I often feel emotionally distant from the people I work with
5.	I feel satisfied with the relationships I have at work*
6.	There is a sense of camaraderie in my workplace*
7.	I often feel isolated when I am with my co-workers
8.	I often feel disconnected from others at work
9.	I experience a general sense of emptiness when I am at work

Factor 2. Social companionship

10.	I have social companionship/fellowship at work*
11.	I feel included in the social aspects of work*
12.	There is someone at work I can talk to about my day-to-day work problems if I need to*
13.	There is no one at work I can share personal thoughts with if I want to
14.	I have someone at work I can spend time with on my breaks if I want to*
15.	I feel part of a group of friends at work*
16.	There are people at work who take the trouble to listen to me*

Note: *Reverse items