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Spanish Burnout Inventory (SBI) Validation among University Professors During COVID-19

Validación del Inventario Español de Burnout (SBI) entre Profesores Universitarios Durante la COVID-19

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ABSTRACT:

The objective was to evaluate the evidence of the factorial structure of the CESQT in Mexican University Professors through their response patterns during the first peak of the COVID-19 Pandemic. The method considers the psychometric properties of the instrument by examining a sample of $n=600$ of Mexican University Professors. The scale featured a sociodemographic section and the CESQT questionnaire by Gil-Monte (2005). The inventory has 20 items grouped into 4 dimensions related to: Enthusiasm for work, Emotional Fatigue, Indolence and Guilt. Factor analysis, variance and covariance were performed using the maximum likelihood method with AMOS24[®]. The results of the study demonstrated that the instrument is valid and reliable to measure Burnout levels in teachers and significant differences were found with the Gil-Monte results. Cronbach's Alpha Coefficient was greater than 0.70 for the four scales of the instrument. The original value of this study contributes to the development of the body of knowledge about the scenario perceived by University Professors during the first peak of the COVID-19 Pandemic, about valid instruments to measure Burnout Syndrome in Spanish-speaking countries. It is concluded that the results provide evidence of the psychometric properties of the CESQT during the study of Burnout Syndrome in the Mexican cultural context, the first peak of the COVID-19 Pandemic. All the measurement scales satisfy the criteria of validity and reliability. The factorial analysis of the Theoretical model of each one of the dimensions of Gil-Monte in an empirical way.

KEYWORDS: COVID-19, Burnout Syndrome, CESQT, Psychosocial Risk Factors, University Professors.

RESUMEN:

El objetivo fue evaluar la evidencia de la estructura factorial del CESQT en Profesores Universitarios Mexicanos a través de sus patrones de respuesta durante el primer pico de la Pandemia de COVID-19. En el método se consideraron las propiedades psicométricas del instrumento examinando a una muestra de $n=600$ de Profesores Universitarios Mexicanos. La escala incluía una sección sociodemográfica y el cuestionario CESQT de Gil-Monte (2005). El inventario tiene 20 reactivos agrupados en 4 dimensiones relacionadas con: Ilusión por el trabajo, Cansancio Emocional, Indolencia y Culpa. El análisis factorial, la varianza y covarianza se realizaron usando el método de máxima verosimilitud con AMOS24[®]. Los resultados del estudio demostraron que el instrumento es válido y confiable para medir los niveles de Burnout en profesores y se encontraron diferencias significativas con los resultados de Gil-Monte. El Coeficiente de Alfa de Cronbach fue mayor a 0.70 para las cuatro escalas del instrumento. El valor original del presente estudio contribuye con el desarrollo del cuerpo de conocimiento acerca del escenario percibido por Profesores

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Universitarios durante el primer pico de la Pandemia de COVID-19, sobre instrumentos válidos para medir el Síndrome de Burnout en países de habla hispana. Se concluye que los resultados proveen evidencia de las propiedades psicométricas del CESQT para el estudio del Síndrome de Burnout en el contexto cultural mexicano durante el primer pico de la Pandemia de COVID-19. Todas las escalas de medición satisfacen los criterios de validez y confiabilidad. El análisis factorial confirmó el modelo Teórico de cada una de las dimensiones de Gil-Monte de manera empírica.

PALABRAS CLAVE: Síndrome de Burnout, CESQT, Factores de Riesgo Psicosocial, Profesores Universitarios.

INTRODUCTION

Burnout has been a problem of growing interest for academics and professionals for the last fifty years (Demerouti et al., 2021; Arvidsson, 2019; Freudenberger, 1974). As a result, there is a high level of understanding about its occurrence, theory building, indicators, and effects (Drüge et al., 2021). Research has shown evidence on its negative consequences such as depression, anxiety, fatigue, irritability, frustration, cynical attitudes, professional inefficacy, depersonalization, neglect, withdrawal from work, poor quality of life, overwhelming feelings, work detachment, dehumanization, impaired work performance, sleep disturbances, absenteeism, presentism, turnover, negative health outcomes, diminished professional efficacy and more than one hundred symptoms as Burnout indicators (Maslach et al., 2017; Bakker et al., 2017; Gil-Monte et al., 2009; Gil-Monte, 2019; Gil-Monte, 2016a; Gil-Monte, 2012; Grant et al., 2018). According to research pioneers, burned-out employees feel emotionally exhausted, developing negative perceptions and feelings about their clients, “experiencing crises in professional competence as a result of the emotional turmoil” (Maslach, 1981; Unda et al., 2020; Demerouti et al., 2021). Despite advances in the literature, Burnout research remains relevant.

Burnout is a psychological reaction to long-term work stress marked by Emotional Exhaustion, Depersonalization, and a sense of Low Personal Accomplishment, according to Maslach et al. (2017) Several studies have shown the impact of Burnout on health and productivity (Gil-Monte et al., 2009; Szigeti et al., 2017; Bianchi, 2021). Burnout is a psychological response to persistent work-related stress of an interpersonal and emotional type that appears in professionals in service organizations (Maslach et al., 2017; Maslach et al., 1981; Maslach et al., 2001; Aronsson et al., 2017). However, there is a gap in the literature due to the scarcity of cross-cultural studies (Puertas-Molero et al., 2018). To validate instruments that evaluate the Burnout Syndrome in languages other than English is of great relevance (Bianchi et al., 2017; Santa Maria et al., 2018; Misiolek-Marín, 2020).

Job stress among teachers has been identified as a widespread issue that has received considerable attention from researchers and its directly related to Burnout (Jandrić et al., 2021). While research shows that Burnout varies within and between persons, there exists an absence of research pertaining why Burnout evolves over time and if it is a lengthy or short-term circumstance (Aronsson et al., 2017). It has been estimated that a wide range of teachers, regardless of level, experience Burnout (Demerouti et al., 2021).

The pandemic has compelled all higher education institutions to rethink how they provide value to students while also ensuring that teachers and staff have the resources and support, they require to do their jobs safely and effectively. Stress, hopelessness, rage, and grief are all rampant among Faculty personnel. They feel their work-life balance has deteriorated as a result of their hefty workloads (Pyhältö et al., 2021; Salmela-Aro et al., 2019). The prevalence of Burnout in education contexts has been oscillating between 11 and 35.5% according to the country where the research is made (Llorca-Pellicer et al., 2021). After the pandemic first peak, labor conditions have changed. This change has created more exposure to psychological risks in Faculty professors. Work-related stress is causing disorders in families and organizations (Demerouti et al., 2021).

More than a third of Faculty professors during the Pandemic have pondered leaving their higher education jobs. The pandemic has taken a tremendous toll on the Faculty's life, with far-reaching repercussions for the future (Stawicki et al., 2020; Gómez-Dominguez et al., 2022). It's unsurprising that all Faculty members

have experienced increased stress and exhaustion during the pandemic, but they've also reported substantially higher sensations of other draining emotions like sadness and anger, and they expect those feelings to last for a long time (Al-Kumaim et al., 2021; Kim & Asbury, 2020). COVID-19 has posed a unique educational problem in dealing with the abrupt transition from traditional training to emergency remote teaching and hybrid. It had an effect on Faculty's professors well-being and mental health, emerging a higher rate of Burnout (Pereira et al., 2021). Before the pandemic, these professions had been extensively researched, and studies revealed a high level of work overload, which resulted in Burnout with an average of 13% and close to 30% (Chinga-Basurto et al., 2021).

In the academic context during the pandemic first peak, Faculty professors were exposed to unprecedented levels of Burnout during the fight against COVID-19, according to media reporting and empirical studies (González-Navarro et al., 2018; Lazarus, 2000; Pines and Maslach, 1978; Freudenberg, 1974). They had to cope not only with the dangers of the viral infection, but also with difficult working conditions such as online teaching, a lack of resources, job overload, students not being receptive, isolation, uncertainty, family sickness and dear member's loss. As a result, professors are now more vulnerable to psychological disorders like Burnout (Bansal et al., 2020; Pereira et al., 2021).

A burned-out professor may experience anxiety, irritability, and despair, somatization symptoms such as sleep disturbances, migraines, gastrointestinal difficulties, alcohol and drug usage and fibromyalgia. Burnout is a complicated and multidimensional phenomenon that is caused by a combination of circumstances rather than a single source (Castro-Jimenez et al., 2020; Carlotto, 2002; Maslach, 1981). According to some theories, depletion is the initial stage of Burnout, and it is marked by emotional and physical exhaustion as a result of having too many expectations and not enough resources to meet them. Cynicism is the following stage, which is marked by an increase in apathy, a loss in empathy, and sentiments of hatred or blame for people involved in the educational process, such as administrators, parents, and students. The final stage of Burnout is a sense of failure, in which teachers believe their work is unbearable and they are no longer capable of teaching successfully. Furthermore, the possibility for concurrent effects of teacher efficacy and technology attitudes might be investigated (Sokal et al., 2020).

According to Gil-Monte, however, Burnout dimensions have shown four components. He presented the Spanish Burnout Inventory that includes Enthusiasm toward the Job, Psychological Exhaustion, Indolence and Guilt. Enthusiasm toward the job is understood as the wish to achieve goals at work because it is a source of personal pleasure. Psychological Exhaustion is described as the emergence of emotions and physical exhaustion at work due to the professors need to deal with students in daily situations. Indolence is the emergence of negative attitudes of indifference and Cynicism toward the students. Guilt is the emergence of self-blame feelings caused by negative attitudes that the professor has developed especially toward the students (Figueiredo-Ferraz et al., 2013; 2021).

Burnout has been related to emotions caused by work overload for example. Several studies discovered a negative relationship between tension and self-efficacy, manifested as Psychological Exhaustion. Pereira et al., (2021) discovered a correlation between Burnout and work overload; this variable was a predictor of Psychological Exhaustion. In her research, Unda (2020) discovered a negative correlation between Enthusiasm toward the Job and Psychological Exhaustion, Guilt, and Indolence. In addition, Xu (2019) identified among educational professionals, a correlation between role conflict and Psychological Exhaustion, and she stated that role conflict decreases motivation and Enthusiasm toward the Job. In addition, Xu (2019) discovered a correlation between role ambiguity and Psychological Exhaustion, as well as a negative correlation between role ambiguity and Enthusiasm toward the job.

Several researches related to Burnout (Pisaniello et al., 2012; Andela et al., 2015; Yilmaz et al., 2015; Llorca-Pellicer et al., 2021) have demonstrated the connection between Psychological Exhaustion and Burnout. According to Yilmaz et al. (2015), natural-felt emotions and surface behaving predicted Burnout and Psychological Exhaustion in teachers. Andela et al. (2015) also found that emotion suppression and

emotion dissonance were associated with Burnout. In their study, Wegge et al. (2010) demonstrated a positive association between emotional dissonance, Psychological Exhaustion and a negative relationship between emotional dissonance and Enthusiasm toward the Job. Negative correlations exist between resource variables and Burnout (Khan et al., 2018; Hatch et al., 2019).

In addition, certain sociodemographic characteristics, such as Gender (Lebares et al., 2018), Age (LaFaver et al., 2018), and Degree of Education (Langher et al., 2017), may be associated with Burnout. Alavinia and Ahmadzadeh (2012) and Leineweber et al. (2013) found that women have higher levels of Burnout than men in samples of teachers. In addition, a meta-analysis revealed that women are more likely than males to report Burnout (Purvanova and Muros, 2010). On the other hand, Job Autonomy, Social Support and Resources at Work were considered as protective dimensions against Burnout (Setti et al., 2016). Excess of Demands is negatively related to Burnout. Lastly, Age has shown a positive relation to Burnout.

Previous research on the Spanish Burnout inventory has provided evidence for the role of Guilt as a mediator in the relationship between the Burnout syndrome and psychosomatic symptoms in a sample of teachers from Spain and Portugal; these results add to the empirical validation of Gil-Monte's model. The results imply that Guilt should be included as a manifestation of burnout in order to assess burnout-affected individuals and profiles or patterns of burnout that distinguish it from other illnesses, such as depression. (Figueiredo et al., 2021; Castro-Jimenez et al., 2020; Serna et al., 2019).

Exploratory factor analysis (EFA) made by Gil-Monte (2009) in Chilean service professionals, yielded factor structures that accurately reflected the Spanish Burnout Inventory's four dimensions. 60.88 percent and 59.07 percent of the variance was explained by the four components, respectively, in these investigations. The four-factor structure model has been confirmed by confirmatory factor analysis (CFA) across countries and occupational groups in Spanish professionals working with intellectually disabled people ($n = 338$); Mexican doctors ($n = 110$); Mexican teachers ($n = 698$) and Brazilian teachers ($n = 714$) (Gil Monte et al., 2010). With a few exceptions, Cronbach's alpha internal consistency values have been satisfactory in all previous research, obtaining values more than 0.70. Cronbach's alpha values for the scale of indolence range from 0.66 (Gil-Monte et al., 2005) to 0.80 (Gil-Monte et al., 2010), whereas values for the scale of Enthusiasm toward the job range from 0.72 (Gil-Monte & Ziga-Caballero, 2010) to 0.90. (Gil-Monte et al., 2010; Serna et al., 2019).

Previous research (Peñaloza, 2008; Schaufeli, & Greenglass, 2001) showed a Cronbach alpha value of 0.748 for the SBI as well as for each of the domains, as follows: Enthusiasm toward the job, 0.754; Psychological Exhaustion, 0.806; Indolence, 0.715; and Guilt, 0.814 (52). In contrast, a previous study (Córdoba et al., 2011) used the Maslach Burnout Inventory-Human Services Survey (MBI-HSS) to test the adaptation and validation in a Spanish speaking sample and found the following internal consistency using Cronbach's alpha coefficient: 0.77 for the MBI-HSS, and 0.83 for Emotional Exhaustion, 0.52 for Depersonalization, and 0.57 for Low Personal Achievement. Of these, the latter two show an inadequately low coefficient for Burnout reliability using the MBI-HSS in the Spanish speaking sample (Schaufeli et al., 2020). Regarding scale reliability using Cronbach's alpha coefficient in the four domains as well as for the overall SBI result, adequate values above 0.7 were obtained.

Previous research conducted with Mexican and Brazilian teachers showed that item 11 (which belongs to the Indolence scale ($\lambda = .39$, $\lambda = .53$, and $\lambda = .25$, respectively) had the lowest item-factor relationship, while item 14 (I label or classify students based on their behavior ($\lambda = .52$ and $\lambda = .51$, respectively), which also belongs to the Indolence scale) had the lowest item-factor relationship.

In as much as Guilt motivates people to make amends to others (Figueiredo-Ferraz et al., 2021), excessive or inappropriate levels of guilt can produce a dysfunctional and disturbing perspective, as well as affective and somatic symptoms in some cases. Various studies have discovered positive and significant relationships among Guilt, anxiety, and somatization, as well as physical and mental health abnormalities (Pineles et al., 2006; Cândia and Szentagotai-Tata, 2018; Spillers et al., 2008; Luck and Luck-Sikorski, 2020). Quiles and

Bybee (1997) found positive and significant associations between Guilt and anxiety and somatization, and they indicated that chronic Guilt-related feelings may indicate the use of ineffective coping strategies and the inability to regulate emotions (Figueiredo-Ferraz et al., 2021).

Based on personality profiles, Guilt has been characterized as a social emotion associated with communal relationships. Guilt's origins, functions, and processes have complex interpersonal facets, as Guilt is a factor that strengthens interactional ties. The symbolic function of Guilt is to reinforce one's commitment to some other individual and the duty to care for him or her. Guilt encourages people to take amends with others, rectify their own mistakes, and ask redemption. Despite the fact that Guilt has altruistic effects, excess or inappropriate stages of guilt can result in a disrupted and injurious perception as psychological and/or somatic complaints for some situations (Pineles et al., 2006). Guilt seems to be involved in the burnout process, according to Gil-Monte's model.

Burnout has been of great interest for academics and professionals since 1960 (Gil-Monte, 2016a; Gil-Monte, 2016b; Gil-Monte, 2019; Gil-Monte et al., 2013; Gil-Monte, 2012; Gil-Monte et al., 2011; Gil-Monte, 2011; Gil-Monte et al., 2010; Gil-Monte et al., 2009; Gil-Monte, 2008a; Gil-Monte, 2008b; Maslach et al., 2017; Maslach et al., 2001; Maslach et al., 1981; de Beer and Bianchi, 2019; Schaufeli et al., 2020). It has been explained as a result of chronic job stress in employees that feel overwhelmed by the difficulties of the job. This Syndrome has been examined in a range of institutions, including medical staff, teachers, social workers, and financial sector employees. Some studies show an alarming Burnout prevalence rates of up to 68 percent in a specific population, such as 30 percent in teachers (Schaufeli et al., 2020; Gil-Monte et al., 2015); 31 percent in medical students (Rudow, 1999; Lubbadah, 2021), and 44 percent to 68.6 percent among medical personnel (Santen et al., 2010; Dyrbye et al., 2019; Al-asadi et al., 2018). Burnout is estimated to affect most of the working population of employees of service (Blanchard et al., 2010). These data imply that Burnout is a significant issue in today's culture. As a result, Burnout has gained a lot of attention in the media and popular science in recent years.

Despite the cultural importance and widespread usage of the term Burnout in every-day life, scientists and practitioners continue to disagree regarding what Burnout is, what symptoms are associated with it, and whether or not the Burnout Syndrome is a unique mental disorder. Burnout is still not widely recognized as a distinct mental condition in academia, and experts have questioned whether the term "Burnout" is a helpful diagnostic tool or merely "psychobabble" (De Clercq et al., 2019; Kant et al., 2003; Kaschka et al., 2011) pioneers initially described Burnout in 1974 as a process among professionals working with people and since then, hundreds of scientific researches on the mental disorder have been published. Conflicts at work, according to research, are the most common cause of Burnout as well as the continuous contact with people that create deterioration of mental health with frustration and ambiguity about the profession (Maslach et al., 2017; Castro-Jimenez et al., 2020; Demerouti et al., 2021).

Burnout models to track Burnout's growth in connection to Faculty professors' cognitive, emotive, and behavioral responses have been developed and used in several contexts and languages. The Maslach Burnout Inventory (MBI), proposed by Maslach and Jackson in 1981, is the most widely used questionnaire to diagnose Burnout. According to estimates, the MBI is used in 88 percent of all Burnout papers (Gil-Monte et al., 2011). As mentioned before, the MBI is made up of three factors: Emotional Exhaustion, Depersonalization, and a sense of Low Personal Achievement. The MBI-Human Service Survey (MBI-HSS) was later developed and adapted for educators (MBI-Educator Survey; MBI-ES) and medical workers (MBI-HSS-MP). This instrument was made exclusively for employees who work in dealing with customers (Maslach et al., 2017; Gil-Monte et al., 2015). They eventually created the same MBI-GS, a new instrument containing three additional components: Emotional Exhaustion, Cynicism, and Professional Efficacy (Maslach et al., 2017; Bianchi, 2017). However, The MBI's factorial validity is called into question. For example, De Beer and Bianchi (2019) found that the Emotional Exhaustion and Cynicism subscales appear to be a shared factor, whereas the Professional Efficacy scale appears to be a different, second element.

Moreover, the MBI's practical relevance for assessing individual Burnout is limited (Gil-Monte, 2009; Schaufeli et al., 2020). The fact that the MBI does not yield a single Burnout score that can be dichotomized in order to discriminate between burned-out and non-burned-out instances is a fundamental concern when it comes to normative and predictive validity. Moreover, this instrument presents some content and psychometric problems, which worsen when translated into other languages (Schaufeli et al., 2020; Bodenheimer and Shuster, 2020).

Despite the fact that a large number of alternative Burnout questionnaires have been proposed, most of them do not address all of the above difficulties. Some one-dimensional questionnaires, for example, limit Burnout to mere Exhaustion, ignoring its multifaceted aspect (e.g., Burnout Measure (BM); Shirom Melamed Burnout Measure [SMBM], and Copenhagen Burnout Inventory (CBI). Other multi-dimensional questionnaires (e.g., Bergen Burnout Inventory (BBI) use a similar conceptualization and subscales as the MBI, but the wording of the items differs (de Beer and Bianchi, 2019; Halbesleben, and Demerouti, 2005). In Mexico, EMEDO was developed as a valid and promising scale to measure burnout by Uribe-Prado et al., (2007), however it did not include Guilt as part of the Burnout development process.

On the other hand, The Spanish Burnout Inventory (SBI) is a 20-item test that is categorized into four dimensions: Enthusiasm toward the Job (5 items), which refers to anyone who seeks to accomplish professional goals because they can provide a feeling of accomplishment, it is a source of personal pleasure. This dimension is measured in a positive direction: low scores show higher levels of burnout; Psychological Exhaustion (4 items), describing as mental and somatic fatigue, emotional and physical exhaustion as a product of professional demands. Indolence (6 items) is understood as the presence of attitudes of indifference and Cynicism towards the students. Individuals scoring high in this dimension present insensitivity and indifference towards students' problems. Guilt (5 items) alludes to the development of negative beliefs, behaviors, and attitudes in the workplaces, particularly with individuals who interact in labor relations with feelings of Guilt about negative attitudes (Schaufeli et al., 2020). The SBI was developed by Gil-Monte (2005) as a response to the need of an additional scale in Spanish speaking countries, therefore, it is important to validate other instruments to measure job Burnout in Hispanic countries where the MBI and other scales had no good results (Gil-Monte, 2011; Unda et al., 2020).

The theoretical model that influenced Gil Monte's SBI relates to Karasek (1979) who attributed work-related stress to an imbalance between workplace psychological demands (e.g., workload, interpersonal issues, role ambiguity, and role conflict) and the employee's level of control of resources (e.g., autonomy, feedback, etc.). Social support was added later by Johnson and Hall (1988) as a third component of control. According to this paradigm, the employee's health or well-being was dependent on the equilibrium between work demands and personal resources. When the demands exceeded the available resources, the employee experienced work-related stress. Moreover, persistent work-related stress progressed as Burnout Syndrome (Backhaus et al., 2018; Engelbrecht et al., 2019; McCarty et al., 2019; Xu, 2019; Klein et al., 2020). Lately, research has shown a new component related to Faculty Professors: Conflicts with parents and students.

However, these theories did not analyze what factors predicted employees belonging to one level or another (Xu, 2019; Llorca-Pellicer, et al., 2021). In light of its frequency in recent years, the study of Burnout in the education sector has assumed more significance (Kim and Buric, 2019; McLean, D., et al., 2019; Schonfeld'et al., 2019). Most studies now emphasize the significance of Faculty professor's Burnout (Makikangas et al., 2020; Pyhältö et al., 2021) recognized as a risk that can negatively impact their well-being, effective teaching, interaction with students, motivation and reduce their ability to give support to students (McLean et al., 2019; Martínez-Monteagudo et al., 2019; Gu et al., 2020). Maslach Burnout Inventory (1986) explained that Burnout was integrated by 3 dimensions: Emotional Exhaustion, Depersonalization, and Reduced Personal Accomplishment. Gil-Monte dimensioned a new model adding Guilt as a new component to be able to understand the process of deterioration that creates negative attitudes as a coping strategy (Gil-Monte, 2005; 2009; 2011).

His model describes the mediator role of feelings of Guilt in the relationship between Burnout and Psychosomatic disorders. (i.e., Indolence → Guilt → Psychosomatic disorders) as a good representation of the Burnout process and its relationship with psychosomatic disorders, and they provide support for the mediator role of feelings of Guilt in the relationship between Burnout (i.e., levels of Indolence) and psychosomatic disorders. On the other hand, contemporary Burnout theories have stated that physiological changes in the dopaminergic/motivational system due to overriding fatigue for prolonged periods of time may be fundamental in disorders like Burnout (Serna et al., 2019)

The theoretical Spanish Burnout Inventory Model separates two types of individuals that experience Burnout. Profile one causes a set of feelings and behaviors related to job stress that create moderate discomfort. Despite these issues, the individual is nonetheless capable of doing his duties, though he could do so more effectively. This profile is distinguished by a lack of Enthusiasm toward the Job, as well as significant levels of Psychological Exhaustion and Indolence; nonetheless, workers do not exhibit high levels of Guilt. Individuals who exhibit Profile Two are more impacted by such symptoms; they have difficulty performing their job properly, and tend to generate emotions of Guilt and more absenteeism (Gil-Monte, 2009; Figueiredo-Ferraz et al., 2021). Previous studies show that daily contact with students produces deterioration in professors' mental health, bringing up feelings of frustration, ambiguity about their profession, and in some cases, Guilt; developing Burnout. For this model, Burnout is a response to troubled work relationships developing a progressive loss of Enthusiasm toward the Job, Psychological Exhaustion, Indolence and withdrawal, as well as feelings of Guilt. The Spanish Burnout Inventory's theoretical model, according to (Serna et al., 2019) predicts the decline in cognitive and affective arousal (low scores in Enthusiasm toward the Job, and high Psychological Exhaustion) as a response to chronic labor stress, and later individuals will develop negative attitudes toward those they serve at work (high levels of Indolence).

In order to evaluate the profiles, the values on each dimension can be averaged into a single score. The estimated Profile one score is the mean of the 15 items comprising the dimensions Enthusiasm toward the Job (inverted), Psychological Exhaustion, and Indolence. The Profile two score is estimated by taking the mean of these 15 items and the mean of the Guilt subscale into account (Gil-Monte et al., 2013).

Research on the process of Burnout have included Feelings of Guilt as a stage in the development of this process (Price and Murphy, 1984). Faculty members notice when becoming harsh and dehumanized, and this emotion prompts them to reinforce their dedication to students and their responsibility to care for them, only to discover that work overload creates them to experience higher levels of Burnout and produces a loop of emotional distress increasing Burnout (Chang, 2009). This is true for numerous educators. Guilt is a negative emotion caused by emotional labor and poor student relationships (Figueiredo-Ferraz et al., 2021).

Gil-Monte (2005) concluded that Burnout progresses with synchronized low Enthusiasm toward the Job and Psychological Exhaustion to Indolence. The model describes the Burnout process in relation to the stress-strain-coping framework. Indolence is explained as a dysfunctional coping strategy that is used after the reappraisal stage. Gil-Monte describes the process of Burnout in two profiles. Profile one refers to teachers that distance from students who need their service. Teachers' distance is a strategy to face disillusionment with work and psychological deterioration. Profile one teachers show indolence, cynical behavior toward students and manage to keep a comfortable situation without further consequences in their health. According to Gil-Monte, this first group of teachers of profile one shows a set of feelings and behaviors related to job stress that create moderate discomfort. Despite these issues, the individual is nonetheless capable of doing his duties, though he could do so more effectively. This profile is distinguished by a low Enthusiasm toward the Job, as well as significant levels of Psychological Exhaustion and Indolence; nonetheless, workers do not exhibit high levels of Guilt (Figueiredo-Ferraz et al., 2021).

Gil-Monte (2005) describes Profile two teachers, however, as a totally different group of workers that could not find coping strategies to manage their problems. They feel guilty for approaching their students in a cynical way. Guilt appears as an interpersonal component due to the feeling of certain teachers of breaking

the organizational ethics and normativity. Profile two group develop negative consequences leading them to somatization and severe health related disorders such as depression, anxiety and absenteeism. Individuals who exhibit Profile two are more impacted by such symptoms, have difficulty performing their job properly, and tend to generate emotions of Guilt and more absenteeism (Gil-Monte, 2009; Figueiredo-Ferraz et al., 2021) that reinforce their working commitment only to fail again due to work overload and lack of autonomy and new and stronger feelings of Guilt emerge when becoming cold and distant.

Studies show that daily contact with students produces deterioration in professors' mental health, bringing up feelings of frustration, ambiguity about their profession, and in some cases, Guilt; developing Burnout (Maslach et al., 2001; Gil-Monte et al., 2013; Figueiredo-Ferraz et al., 2021; Gil-Monte et al., 2016a). The Spanish Burnout Inventory's theoretical Model, according to (Serna et al., 2019 and Gil-Monte, 2019) predicts the decline in cognitive and affective arousal (low scores in Enthusiasm toward the job, and high Psychological Exhaustion) as response to chronic labor stress, and later individuals will develop negative attitudes toward those they serve at work (high levels of Indolence).

The purpose of this study was to test the evidence of the factorial structure of the "Spanish Burnout Inventory (SBI) among Faculty professors of a higher education institution in Mexico exploring their response patterns during the first COVID-19 pandemic peak.

Hypothesis:

H1: There is evidence of the factorial structure of the SBI among Faculty professors of a higher education institution in Mexico in their response patterns (Gil-Monte, 2019).

H2: The invariance of Gender does not show significant differences between men and women (Figueiredo-Ferraz et al., 2021)

This research is structured in four sections. In the first section, the introduction is presented. In the second section, a brief review of the literature on Burnout is done. The third section includes the data, the instrument and model applied as well as the analyses done and the fourth section presents the descriptive and Structural Modeling results together. Finally, in the fifth section we present the discussion, conclusions, and comment on the limitations of our analysis and possible future research.

METHOD

This research was conducted as a cross-sectional study between April and May of 2020, thru an online survey of Faculty professors in Northern Mexico, obtaining a total of 600 answers, where 303 belong to the feminine gender and 297 to the masculine gender. 50.5 percent of our participants were female and 49.8 percent were male. 34.2 percent of the participants had tenure contracts and the majority had a part-time contract (55.5 percent). The length of work experience of more than 10 years was of 48.8 percent and 28 percent had accomplished a PhD degree. 49.8 percent were married and 33.9% of the population was less than 37 years old and 54 percent was less than 62 years old. It is noticeable that a new generation is taking over due to baby boomers' retirement.

Following, on Table 1 we can see the participant's description:

Table 1. Descriptive Statistics of Professors Sample description:

Gender	Frequency	Percent
Feminine	303	50.5
Masculine	297	49.5

Age	Frequency	Percent
23 - 42	292	48.7
43 - 57	235	39.2
Greater than 57	73	12.1

Marital status	Frequency	Percent
Single	159	26.5
Married	299	49.8

Educational level	Frequency	Percent
Bachelor's degree	104	17.3
Specialty	29	4.8
Master's degree	266	44.3
Doctorate	168	28
Postdoc	33	5.5

Total	600	100%
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Source: Self-research.

As noticed on Table 1, main participants educational level is Master's degree. Participants were mainly younger than 57 and almost 50% married. It is important to notice that generalization on the results has limitations to be considered due to the educational level differences.

In this research the SBI (Spanish Burnout Inventory) was applied to Faculty professors. The SBI is comprised of two sections, the first, to obtain demographic data of the sample and the second one, a total of 20 items distributed into four dimensions:

Enthusiasm toward the Job (five items: 1, 5, 10, 15 and 19) to identify the personal accomplishment that the professor reaches when performing his/her duty, the perceived allowance to perform his/her duty of education online and the level of positivism and challenges before a situation that faces when performing their work in pandemic circumstances.

Psychological Exhaustion, integrated by four items (8, 12, 17, 18) to identify the level of physical and emotional fatigue that the professor has when making the process of online education, as well as the level of oppression and saturation that he feels due to the conditions of his work.

Indolence, integrated by six items (2, 3, 6, 7, 11 and 14) to value the level of Cynicism that the professor develops when facing a situation with an unbearable attitude that makes him become pessimistic and ironic, in which he/she even could label the students with nicknames on the basis of their capacities of learning.

And the last, Guilt, integrated by five items (4, 9, 13, 16 and 20) to identify the culpability due to the situation exacerbated by the students, such as worry by the lack of customized treatment after reacting with anger and poor tolerance.

The words "patients" in items 2,6,7 and 11 of the Indolence subscale were replaced by "students" in the SBI version for Faculty professors applied.

The SBI used a Likert Scale with values ranking from 0 (never) to 4 (very frequent: every day). High scores of Psychological Exhaustion, Indolence and Guilt indicate high levels of Burnout (Gil-Monte et al., 2009).

The application of the SBI was done using the Question Pro software. The electronic version of the SBI was sent by email to the National Association of Universities and Institutions of Higher Education (ANUIES) that supported the project thru a massive e-mail to their educational pool. This study was approved by the ethical committee of the Faculty of Engineering, of the University of Baja California (Nom-0035) and consent was given by participants that answered the electronic version.

This research was made following the methods described by: Figueiredo-Ferraz et al. (2013); Figueiredo-Ferraz et al., (2013); Gil-Monte and Figueiredo-Ferraz, (2013); Gil-Monte, Figueiredo-Ferraz and Valdez Bonilla, (2013).

These studies compared their model fit with other alternative models, accordingly to a four model proposal: M1) the one-factor model, which assumes that all SBI items load on a general composite Burnout factor; M2) the two factor model, where the Psychological Exhaustion, Indolence, and Enthusiasm toward the Job items cluster into one factor and the Guilt items constitute the second factor; M3) The three-factor model where the Psychological Exhaustion and Indolence items cluster into one factor, the Enthusiasm Toward the Job items constitute the second factor, and the Guilt items constitute the third factor; and M4) the four-model, which corresponds to the SBI model.

Data were subjected to confirmatory factor analysis to validate the SBI. A Structural Equation Modeling with latent variables using the robust maximum likelihood estimation method was used. We were able to represent a path diagram and equation system using a SEM. For the SEM, we used R Studio. The diagram was created using IBM SPSS version 25 for Windows and AMOS.

RESULTS

As noticed on Table 2 below, Descriptive statistics for the items are shown. the highest mean values of the items were obtained in the Enthusiasm toward the Job subscale, the highest was item 10 ($M=3.51$, "I think that my work brings me positive things"), while the lowest was item 1 ($M=3.11$, "My job is a stimulating challenge". The item with the highest mean score was 8 ($M= 2.06$, "I think I'm overwhelmed by work", while the lowest was 18 ($M= 1.56$, "I feel emotionally drained ". In the Psychological Exhaustion subscale. Regarding the subscale of Indolence, the highest mean score was in 2 ($M= 0.51$, "I don't feel like serving some students". Lastly, in Guilt, the highest score was in 4 ($M= 0.60$, "I am concerned about the way I have treated some people at work", while the lowest was 20 ($M= 0.37$, "I feel bad about some things I've said at work".

Table 2. Descriptive Statistics of Spanish Burnout Inventory (SBI) Items.

Subscale item	M	SD	Corrected item scale correlations	Skewness	Alpha if item deleted	Alpha	Omega
Enthusiasm toward the job							
1. My job is a stimulating challenge	3.11	0.962	0.648	-1.00	0.923	0.91	0.91
5. I see my work as a source of personal fulfillment	3.44	0.847	0.823	-1.65	0.880		
10. I think that my work brings me positive things	3.58	0.715	0.824	-1.94	0.884		
15. I find my work rewarding	3.51	0.756	0.820	-1.77	0.882		
19. I feel excited about my work	3.4	0.845	0.803	-1.55	0.884		
Psychological exhaustion							
8. I think I'm overwhelmed by work	2.06	1.25	0.790	-0.03	0.909	0.92	0.92
12. I feel overwhelmed by work	1.69	1.24	0.855	0.27	0.887		
17. I feel physically tired at work	1.72	1.26	0.846	0.36	0.890		
18. I feel emotionally drained	1.56	1.28	0.791	0.51	0.909		
Indolence							
2. I don't feel like serving some students	0.51	0.86	0.59	1.93	0.81	0.83	0.83
3. I think many students are unbearable	0.40	0.75	0.68	2.31	0.78		
6. I think that the relatives of the students are annoying	0.16	0.58	0.51	4.14	0.82		
7. I think I treat some students with indifference	0.31	0.65	0.64	2.49	0.79		
11. I feel like being ironic with some students	0.34	0.72	0.67	2.62	0.78		
14. I label or classify students according to their behavior	0.48	0.79	0.53	1.95	0.82		
Guilt							
4. I am concerned about the way I have treated some people	0.60	0.98	0.58	1.79	0.93	0.90	0.9
9. I feel guilty about some of my attitudes at work	0.47	0.81	0.82	2.08	0.87		
13. I have remorse for some of my behavior at work	0.38	0.77	0.81	2.50	0.87		
16. I think I should apologize to someone for my behavior	0.39	0.75	0.83	2.51	0.87		
20. I feel bad about some things I've said at work	0.37	0.75	0.81	2.63	0.87		

Source: Self-research.

As shown in Table, 2, the total corrected item correlations achieved values higher than 0.50 in all the subscales. Regarding Enthusiasm toward the Job, the lowest value of coincidences was achieved by item 1 ($r = 0.648$) and the maximum value in item 10 ($r = 0.824$); in regards to Psychological Exhaustion, the minimum value was shown in item 8 ($r = 0.790$) and the maximum value was shown in item 12 ($r = 0.855$); Regarding Indolence, the minimum value was shown in item 14 ($r = 0.53$) and 2 ($r = 0.59$), and the highest value was shown in item 11 ($r = 0.67$); finally, in the Guilt factor, the minimum value was shown in item 4 ($r = 0.58$) and the maximum value was obtained in item 16 ($r = 0.83$). For more detail, please see Table 1.

As for Cronbach's Alpha, if the item was eliminated, all the items of the subscales were correct. With regards to the skewness, it is observed that there were items in a higher range of ± 2 : For Indolence, we found items 3 ($Sk=2.31$), 6 ($Sk=4.14$), 7 ($Sk= 2.49$) and 11 ($Sk=2.62$). For Guilt, we found items 9 ($Sk=2.08$), 13 ($Sk=2.50$), 16 ($Sk=2.51$) and 20 ($Sk=2.63$). This could be due to the fact that the application of the inventory was during the the COVID 19 Pandemic peak.

Regarding the weights of the coefficients of the reagents of each subscale, Enthusiasm toward the Job has shown the following items: the one that had the highest weight was item 5 ($\lambda = 0.89$) and the one that had the lowest weight was 19 ($\lambda = 0.66$). Psychological Exhaustion's item that had the highest weight was 17 ($\lambda = 0.90$), while those with the lowest weight were 18 ($\lambda = 0.84$) and 8 ($\lambda = 0.84$); Indolence's, item with the highest weight was 2 ($\lambda = 0.58$) and 7 ($\lambda = 0.59$) and Guilt's item with the lowest weight was 20 ($\lambda = 0.59$) and the one with the highest weight was 9 ($\lambda = 0.91$). We decided not to eliminate any of the items of the Indolence and Guilt subscales even though they were below 0.70 not to affect the content validity and taking into consideration that our results were higher than the ones presented in previous research by Gil-Monte et al. (2013) in a Mexican sample of teachers where even though his correlations among subscales were statistically significant and in the expected direction, their values among some of the dimensions were unusually low. Previous results were similar in studies made by Figueiredo-Ferraz, Gil_Monte, and Grau_Alberola, (2013); Gil-Monte, and Figueiredo-Ferraz, (2013) and Gil_Monte, Figueiredo-Ferraz and Valdez-Bonilla, (2013).

To assess the factorial validity of the SBI, four alternative models were tested. As shown in Table 2, the fourth model showed the best statistical result compared to the other three: $\chi^2 (164) = 606.49$, $p < 0.001$, RMSEA = 0.067, 90% confidence intervals (CIs) [0.061, 0.073], GFI = 0.909, NFI=0.927, CFI=0.945, and AIC= 698.49. All the factor loadings were statistically significant, and all the relationships among the SBI dimensions were statistically significant $p < 0.001$ (see Figure 1).

M4 fit data was significantly better than the other models. The Chi-square difference values were: M1 vs. M2: $\chi^2 (0) = 1393.922$, $p < 0.001$; M2 vs. M3: $\chi^2 (3) = 1773.543$, $p < 0.001$, and M3 vs. M4: $\chi^2 (3) = 1153.168$, $p < 0.001$, about the AIC index, M4 got the smallest AIC value. The difference AIC value between M3 and M4, was 1187.168.

Previous results were similar in studies made by Figueiredo-Ferraz, Gil_Monte, and Grau_Alberola, (2013); Gil-Monte, and Figueiredo-Ferraz, (2013) and Gil_Monte, Figueiredo-Ferraz and Valdez-Bonilla, (2013).

Concerning the confirmatory factorial analysis (CFA), Table 1 shows each item correctly integrated into its dimension, with a factor loading greater than 0.70 in all dimensions except in Indolence (item 2 with 0.58, item 7 with 0.59 and 14 with 0.68), Enthusiasm toward the Job (item 19 with 0.66) and Guilt (item 20 with 0.59). These results show similarity with previous authors in item 14 of Indolence, showing a lower value of 0.70 (0.31, 0.57, 0.53).

Table 3. Model Fit for the Spanish Burnout Inventory.

Model	Chi	df	RMSEA	(90% CI)	GFI	NFI	CFI	AIC
M1 (1 Factor)	4927.123	170	0.216	(0.211, 0.221)	0.473	0.405	0.412	5007.123
M2 (2 Factors)	3533.201	170	0.182	(0.177, 0.187)	0.549	0.574	0.585	3613.201
M3 (3 Factors)	1759.658	167	0.126	(0.121, 0.132)	0.69	0.788	0.803	1885.658
M4 (4 Factors)	606.49	164	0.067	(0.061, 0.073)	0.909	0.927	0.945	698.49

Source: Self-research

Note: df = degrees of freedom; RMSEA (CI) = root-mean-square error of approximation [90 % confidence intervals]; GFI = goodness-of-fit index; NFI= normed fit index; CFI = comparative fit index; AIC = Akaike information criterion. For all chi-square values, $p < 0.001$.

Gender invariance through multi-group CFA and levels of equivalence were assessed (i.e., configural invariance, metric invariance, scalar invariance and error variance invariance) using changes in CFI and Standard Root Mean Residual (SRMR; $1 < 0.010$) as criteria for determining whether measurement invariance was established (Cheung and Rensvold, 2002) the gender invariance analysis for model 4 showed the following results:

Women (n = 303); $\chi^2 (164) = 567.539$, $p < 0.001$, GFI=0.845, NFI=0.845, CFI=0.884, IFI=0.885, RMSEA=0.09, 90% CIs [0.082, 0.098]; data fit was acceptable for the Men subsample (n=297); $\chi^2 (164) = 322.925$, $p < 0.001$, GFI=0.901, NFI=0.933, CFI=0.966, IFI=0.966,

RMSEA = 0.057, 90% CIs [0.048, 0.066]. All factor loadings were statistically significant at $p < 0.001$ in both subsamples. The results of the invariance test can be seen in table 4:

Table 4. Fit indices for Invariance Tests.

Model	X2	x2/DF	df	P.	RMSEA	(90% CI)	CFI	IAC	Comparison Criteria	x2	P.	df	CFI	RMSEA
M1 Configural invariance	78.777	2.46	32	0	0.041	(0.039, 0.043)	0.935	1907.731			0			
M2 Metric invariance	73.077	1.83	40	0.001	0.04	(0.038, 0.042)	0.933	1900.808	M2 vs M1	5.7	0.001	8	-0.002	0.001
M3 Scalar invariance	74.072	3.70	20	0	0.04	(0.038, 0.043)	0.93	1934.88	M3 vs M2	0.995	0	20	-0.003	0
M4 Error variance invarian	107.959	2.70	40	0	0.04	(0.038, 0.042)	0.925	1962.839	M4 vs M3	33.887	0	20	-0.005	0

Source: Self-research.

Note: df = degrees of freedom; RMSEA (CI) = root-mean-square error of approximation [90 % confidence intervals]; CFI = comparative fit index; CFI AIC = Akaike information criterion. For all chi-square values, $p < 0.001$.

As noticed on Table 4, the configural invariance model showed a good fit to the data: RMSEA = 0.041, CFI= 0.94, $\chi^2/df = 2.46$ indicating the same factor structure for the two samples. The factor pattern coefficients were constrained to be equal in order to test for metric invariance. The metric model differences of the configured model CFI and the CFI of the metric model were CFI=0.002; with a value of less than 0.01 significant. Results indicate a good fit for this model, supporting that there is a strong relationship between the elements of the subscales, and the underlying constructions were the same between groups.

the scalar model versus the metric model showed differences in chi-square that were significant, $\Delta\chi^2 (20) = 0.995$, $p < 0.001$, difference of CFI=0, showed a value of less than 0.01; and the $\Delta AIC = 0.34.072$ was higher than 10. The two different sets of intercepts were not invariant. these results were similar to those reported by Figueiredo- Ferraz, Gil_Monte, and Grau-Alberola (2013); Gil_Monte and Figueiredo-Ferraz, (2013) and Gil-Monte, Figueiredo-Ferraz and Valdez-Bonilla, (2013).

The reliability was evaluated by assessing the internal consistency (Cronbach's, α) of each subscale and the composite. If an item was deleted, Cronbach's, α reliability index remained greater than 0.70 for all remaining items. Each dimension seemed to have an Alpha Cronbach coefficient higher than 0.70. Furthermore, the Alpha Cronbach reliability coefficient exceeded 0.70 in each of its components, confirming the inventory reliability. Enthusiasm toward the Job ($\alpha = 0.91$), Psychological Exhaustion ($\alpha = 0.92$), Indolence ($\alpha = 0.83$) and Guilt ($\alpha = 0.90$). All correlations between the SBI subscales were significant.

Significant correlations were found according to the theoretical model of the SBI, where: Enthusiasm toward the Job was significantly inversely correlated with Psychological Exhaustion ($r = -0.26$), with Indolence ($r = -0.32$) and with Guilt ($r = -0.27$). While the correlations were positive between Indolence and Psychological Exhaustion ($r = 0.34$), Indolence and Guilt ($r = 0.61$), and between Psychological Exhaustion and Guilt ($r = 0.23$). This can be seen in Table 5

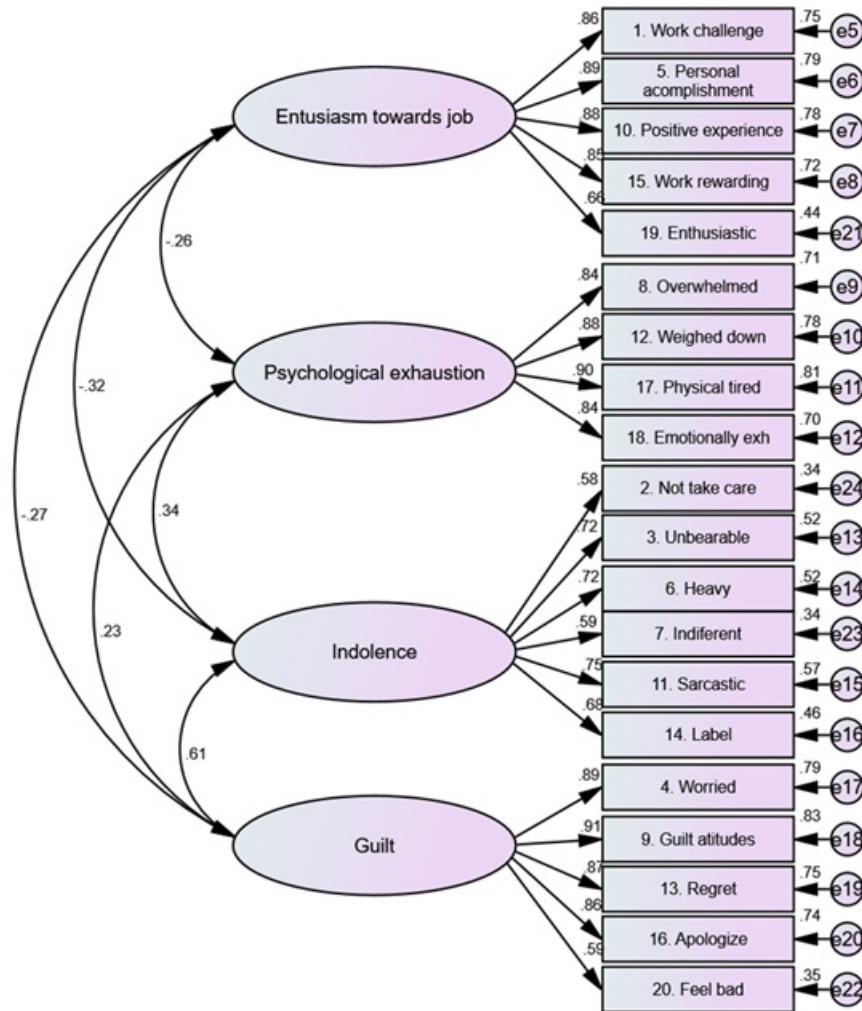
Table 5. Descriptive Statistics for the Spanish Burnout Inventory Dimensions and Correlations between Dimensions.

	Subscales	M	(SD)	Sk	Ku	Range	1	2	3	4
1	Enthusiasm toward job	3.41	(-0.71)	-1.56	2.82	0 - 4	0.91			
	Men	3.34	(-0.78)	-1.57	2.81					
	Women	3.47	(-0.63)	-1.4	1.7					
2	Psychological exhaustion	1.76	(-1.13)	0.28	-0.79	0 - 4	-0.26**	0.92		
	Men	1.54	(-1.14)	0.5	-0.73		-0.30**			
	Women	1.97	(-1.07)	0.20	-0.73		-0.27**			
3	Indolence	0.37	(-0.53)	2.58	8.98	0 - 4	-0.32**	0.34**	0.83	
	Men	0.44	(-0.62)	2.34	6.97		-0.29**	0.44**		
	Women	0.29	(-0.43)	2.53	9.17		-0.34**	0.27**		
4	Guilt	0.44	(-0.69)	2.34	6.73	0 - 4	-0.27**	0.23**	0.61**	0.90
	Men	0.51	(-0.76)	2.17	5.52		-0.22**	0.27**	0.67**	
	Women	0.37	(-0.61)	2.46	7.86		-0.34**	0.23**	0.48**	

Source: Self-research.

The coefficients of the discriminant validity presented in the main diagonal were higher than 0.70 in all subscales. For more detail, review Table 5.

Figure 1. Results of the Factorial Model of the Mexican Version of the Spanish Burnout Inventory for Faculty Professors during Covid-19 peak. Factor Loading: Four -Factor Model.



Source: Self-research.

DISCUSSION

The aim of this paper was to test the evidence of the factorial structure of the “Spanish Burnout Inventory (SBI) among a sample of 600 Faculty professors of a higher education institution in Mexico exploring their response patterns during the first COVID-19 pandemic peak. The importance of this research is that it provides evidence for the valid psychometric properties of the SBI as an alternative burnout measure for Spanish speaking countries. It is important to use instruments designed for a different cultural context and different language since most of the questionnaires used to assess Burnout were designed in English speaking countries and adapted to Spanish or other languages.

The corrected item-scale correlation scores of this study were high, indicating that the subscales of the SBI show a lineal function of its items. The estimated fit indices for CFA acceptably confirm the hypothesis of the overall SBI fit in the observed data, primarily for RMSEA, CFI, and TLI, which is consistent with Gil-

Monte's findings for CFA with 9080 participants using the maximum likelihood method (ML) in 2011, with adequate model fit and the following overall fit results: $\chi^2=3126.75$ ($p = 0.001$; $df: 164$); $RMSEA = 0.045$; $CFI = 0.947$; $NFI: 0.945$; and $GFI: 0.965$ (Jandric et al., 2020; Fang-Fang, 2007).

Model 4 fit data was significantly better than the other models in this study. The Chi-square difference values were: M1 vs. M2: $\chi^2(0) = 1393.922$, $p < 0.001$; M2 vs. M3: $\chi^2(3) = 1773.543$, $p < 0.001$, and M3 vs. M4: $\chi^2(3) = 1153.168$, $p < 0.001$, about the AIC index, M4 got the smallest AIC value. The difference AIC value between M3 and M4, was 1187.168. These results confirm the hypothesized four-factor structure of the Model, consistent with Gil-Monte's original Spanish Model. It can be concluded that the factorial model properly represents the theoretical model of the SBI. Its structure strongly reinforces the theoretical model of the SBI of the process of four symptoms of Burnout: Enthusiasm toward the Job, Psychological Exhaustion, Indolence and Guilt. We also tested the subsamples of men and women, showing results that support gender invariance configural model where men and women conceptualize the constructs in the same way, confirming Hypothesis 2 and presenting similarities to previous research made by Gil-Monte et al., (2013)

In regards to the correlations among dimensions, all of them were statistically significant and in the expected direction. As shown in Table, 1, the total corrected item correlations achieved values higher than 0.50 in all the subscales. Regarding Enthusiasm toward the Job, the lowest value of coincidences was achieved by item 1 ($r = 0.648$) and the maximum value in item 10 ($r = 0.824$); in regards to Psychological Exhaustion, the minimum value was shown in item 8 ($r = 0.790$) and the maximum value was shown in item 12 ($r = 0.855$); Regarding Indolence, the minimum value was shown in item 14 ($r = 0.53$) and 2 ($r = 0.59$), and the highest value was shown in item 11 ($r = 0.67$); finally, in the Guilt factor, the minimum value was shown in item 4 ($r = 0.58$) and the maximum value was obtained in item 16 ($r = 0.83$). We decided not to eliminate any of the items of the Indolence and Guilt subscales even though they were below 0.70 not to affect the content validity and taking into consideration that our results were higher than the ones presented in previous research by Gil-Monte et al. (2013) in a Mexican sample of teachers where even though his correlations among subscales were statistically significant and in the expected direction, their values among some of the dimensions were unusually low. Previous results were similar in studies made by Figueiredo-Ferraz, Gil_Monte, and Grau_Alberola, (2013); Gil-Monte, and Figueiredo-Ferraz, (2013) and Gil_Monte, Figueiredo-Ferraz and Valdez-Bonilla, (2013).

Concerning the confirmatory factorial analysis (CFA), Table 1 showed each item correctly integrated into its dimension, with a factor loading greater than 0.70 in all dimensions except in Indolence (item 2 with 0.58, item 7 with 0.59 and 14 with 0.68), Enthusiasm toward the Job (item 19 with 0.66) and Guilt (item 20 with 0.59). These results show similarity with previous authors in item 14 of Indolence, showing a lower value of 0.70 (0.31, 0.57, 0.53). In previous research, the Indolence scale on item 14 (I label or classify customers according to their behavior) showed the highest value on the scale means, which differs a little from our research that showed 0.68. but we can affirm that similar results were obtained. On the Guilt scale, the highest item score was presented by item 9 differing from Gil-Monte's and other results where item 4 presented the highest score, but we consider that item 9 too (Guilt attitudes) contributes significantly to the variance of this scale.

Over all, our results indicated that the SBI psychometric properties are adequate for the study of Burnout in Mexican Faculty professors as a significant occupational issue. The importance of this research is that it gives extra evidence of the adequate psychometric properties of an alternative Burnout measure in Mexican professors. Psychosocial risks at work can affect professors' health, productivity and organizational quality of service as stated. Burnout stands out among the highest effects. For Faculty Professors, this issue is particularly relevant. Future studies should attempt to generalize results comparing other groups of workers besides professors. Also, cut-off scores of the SBI should be established to have statistics that show the impact of burnout after the COVID-19 pandemic.

This article aids with the conceptualization and implementation of Burnout. It demonstrates the authenticity and dependability of the SBI. Despite the fact that Burnout is a well-studied topic, its operationalization remains one of the least-explored topics of Burnout research and a matter of debate (Schaufeli et al., 2020). Despite its conceptual, psychometric, and practical flaws, the MBI is still used in the majority of burnout research (Marques-Pinto et al., 2021). As a result, we wanted to validate a credible alternative for Spanish-speaking nations.

Maslach and Jackson created the MBI in 1981, that included Emotional Exhaustion, depersonalization, and low personal achievement (Maslach et al., 2017). Its limitations included a lack of a common cutoff criterion for diagnosing Burnout and the depersonalization domain had a low reliability index; the Spanish language version had psychometric weaknesses and low discrimination validity (Gil-Monte et al., 2011).

The construct of Guilt psychometric results as part of the Burnout development process confirms Gil-Monte's findings. Guilt is a cultural emotion as mentioned by Figueiredo-Ferraz et al., (2021), it is not easy to measure and/or to find similar concepts, accordingly to the geographic zone or the religion. The results of the study suggest that this is valid for the Burnout Syndrome development process. Even though, we think that due to COVID-19, Enthusiasm towards the Job was a little lower than Psychological Exhaustion, that presented the higher scores, both subscales developed in a parallel way followed by Cynicism and Guilt, confirming the Gil-Monte's Model and Process of Burnout.

Our results presented small differences to the two samples in Spain and Portugal made by Gil-Monte et al. (2011) and Figueiredo-Ferraz et al. (2013); the descriptive analysis shows that the highest mean was obtained for the variable Psychological Exhaustion and the lowest mean was found for the variable Guilt. Even though, as mentioned before, the difference was minimum, showing parallel evolution of Enthusiasm toward the job and Psychological Exhaustion, our findings coincide with the findings of Gil-Monte (2012), as they indicate that it is possible to establish a relationship between Enthusiasm toward the Job and Psychological Exhaustion and Indolence and Guilt. Therefore, the results support the specification of the Burnout process based on the model designed by Gil-Monte of a synchronized development of the dimensions (2005).

According to these results, we can conclude that due to COVID-19 the progression of Burnout developed from Enthusiasm toward the Job and Psychological Exhaustion to apathy in an almost parallel way (Figueiredo-Ferraz et al., 2021). Our results have replicated the results from the study by Gil-Monte (2012), given that it seems advisable to establish a relationship from both Enthusiasm toward the Job and Psychological Exhaustion to Indolence, and from Indolence to Guilt.

Limitations

This study has limitations. First, the Data collection was completed in an online format and through self-reported measures, which can create bias in the results. Second, the population object of this study is formed by professors from different levels of education, which must be taken into account in the generalization of the results.

Future Research

New research is suggested since different phases of the pandemic have passed, in order to compare same variables, observing the evolution of the health crisis, as well as the evolution of the Burnout Syndrome; Thus, longitudinal studies aiming to observe changes and further develop the evaluated constructs may also be relevant in the future. Also, recovery resources need to be investigated in more detail to build new models (Bauernhofer et al., 2018). Lastly, research is suggested to continue the analysis of feelings of Guilt and its contribution to Burnout in Latin American Countries. Also, research could measure psychosomatic symptoms associated with burnout to include them as a criterion of somatization level and profile classification.

Practical Implications due to Covid-19 Pandemics:

As practical implications of this research, the validation of the SBI could be of help to measure the risk of employees affected by the Syndrome in Latin America, where the psychological risks are not considered

as a disability. On the basis of the theoretical model underpinning the SBI (Gil-Monte et al., 2005, 2012) two Burnout profiles can be differentiated. This finding brings light in the sense of understanding Indolence as a coping mechanism as a response to low job Motivation and high Psychological Exhaustion. The differentiation of profile 1, where coping mechanisms of Indolence develop, and profile 2 where feelings of Guilt and depression develop as a result of self-blame and aggression to others in individuals who used to be outstanding and with high commitment is crucial for understanding the process. Research has shown as a result, positive and significant relationships between Guilt, anxiety and somatization for profile 2 (Câdea and Szentagotai-Tăta, 2018). These feelings could be alleviated by helping others, however, a loop over time and stressful conditions produce a disruptive experience causing increase of Guilt and Burnout.

COVID-19 has affected the way Faculty professors perform their jobs (Canadian Association of University Teachers (CAUT) 2020), these studies are relevant and needed. Researchers have discovered that COVID-19 has changed the way academics carry out their duties. In the first place, there's been a significant impact on research. Two-thirds of professors and instructors did not conduct any research anymore during the Pandemic and after (Eaton et al., 2021; Fox et al., 2020; Jandic et al., 2020). Lack of access to labs or offices, inability to perform in-person research, dependent care, lack of conference space, and teaching requirements are the top five reasons for this.

Sixty-eight percent of those polled were concerned about the influence of COVID-19 on teaching quality. Furthermore, the majority of respondents believe that remote learning will lead to new pedagogical approaches. Eighty-four percent of those polled said their stress levels were moderate to high. They had a lot on their plates and still do since the Pandemics may have a new peak: the worry about the pandemics that seems endless; work/family/childcare juggling; teaching/research balancing; job insecurity; depression, isolation and uncertainty that leads to Burnout (Eaton et al., 2021; Fox et al., 2020; Jandric et al., 2020; Miguel, 2021).

To conclude, we have examined the Spanish Burnout Inventory and its validity in a sample of Mexican Faculty professors. Results show that the questionnaire is valid and reliable to measure levels of Burnout in Professors and we found some significant differences with Gil-Monte's results, which we consider are mainly due to the Pandemics. The results of our study provide evidence for a of Burnout assessment tool in Latin America and Spanish speaking countries. Evidence shows a good reliability, factorial and construct validity. It resolves two important flaws in the MBI as mentioned before (conceptualization and psychometric shortcomings), it has shown its fit to use in burnout research and in the assessment of Burnout in practice in Spanish speaking countries. The SBI can be seen as a viable, alternative Burnout measure, that assesses Burnout, its main components and symptoms. Lastly, the SBI should contribute to a better understanding of the problem.

Conclusions can be derived in terms of factorial validity. Our four-factor structure hypothesis for the SBI has been proven. The model was a second-order model where the core and secondary dimensions were split, achieved an ideal fit in this research. Nonetheless, the core dimensions were found to be closely related to one another in a study of latent correlations. Previous research looked into the validity of the SBI and found comparable results (Peñaloza, 2008; Anagioti, 2018; Marques-Pinto et al., 2021).

It is important to mention that significant differences were found in the subscales of the SBI in men and women in the study; standardization had to be established for each of them during the COVID 19 pandemic. We found that using the SBI four core dimensions, the obtained results prove that its factor structure is acceptable during pandemic working conditions, moreover when the overall Burnout level was higher during the quarantine than before. Hence, the SBI proved to be a sound, short, and practical instrument to assess Burnout. Thus, the SBI has favorable psychometric properties. The internal consistency of the total scale and each of the factors is adequate, therefore the general fit is acceptable (García-Borrero et al., 2017). the purpose of validating the instrument was to approach Burnout's present reality during the Pandemic. As a syndrome linked to the work environment of professors, Burnout will continue to evolve with it, accumulating new

factors workers must cope with that may also lead to Burnout and that need to be observed in future research, since the Pandemic has brought a new spectrum of symptoms and different situations (Kim and Asbury, 2020)

The importance of this research is the evidence of an adequate psychometric properties alternative instrument to measure Burnout, having a broader concept of Burnout than the MBI. This instrument describes different types of Burnout, including Guilt as a symptom. Also, its contribution to literature is valuable by adding a broader conceptualization of the syndrome that can diagnose and treat teachers and personnel with Burnout stress and Burnout in Faculty professors have shown excellent results, social support from work mates and superiors and physical and leisure activities have proven to alleviate the symptoms (Ahola et al., 2017). Motivational models have shown good results too (Al-Kumaim et al., 2021; Watanabe & Suzuki, 2021). Burnout needs to be taken seriously as a condition that deteriorates the quality of service and the quality of life of professors leading to depression and other severe illnesses (Bianchi, 2017, Bianchi et al., 2021). The organization Burnout Syndrome early detection will have benefits at the work place improving the quality of service, productivity, employee wellbeing and quality of life.

AUTHOR CONTRIBUTIONS

Conceptualization, Blanca Rosa Garcia-Rivera. and Ignacio Alejandro Mendoza Martínez; Data curation, David Hemsworth; Formal analysis, David Hemsworth Blanca Rosa Garcia-Rivera., Investigation, Blanca Rosa Garcia-Rivera; Methodology, Ignacio Alejandro Mendoza Martínez.; Blanca Rosa Garcia-Rivera.; Project administration, Blanca Rosa Garcia-Rivera; Software Ignacio Alejandro Mendoza-Martínez; Supervision, Blanca Rosa Garcia-Rivera ; Validation, Ignacio Alejandro Mendoza-Martínez; Writing—original draft, Blanca Rosa Garcia-Rivera and Ignacio Alejandro Mendoza-Martínez; Writing Review and Editing, Blanca Rosa Garcia-Rivera; David Hemsworth. All authors have read and agreed to the published version of the manuscript.

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INFORMACIÓN ADICIONAL

JEL Codes: I23, I31, J81.