Level of burnout syndrome in teachers of the Tecnológico Nacional de México campus Villahermosa in times of COVID-19

Nivel del síndrome del burnout en docentes del Tecnológico Nacional de México campus Villahermosa en tiempos de COVID-19

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Abstract

This research was carried out to determine the level of burnout syndrome in teachers of the Instituto Tecnologico de Villahermosa, showing the level of stress generated by the COVID-19 pandemic during virtual classes. The level of impact of the COVID-19 pandemic on mental, physical and emotional health will be analyzed using a qualitativequantitative, exploratory and descriptive approach, as well as the method of situational analysis supported by the Maslach Burnout Inventory (MBI) questionnaire. This analysis will contribute to the reflection of the consequences of developing a high level of stress. The type of sampling was simple random, where it was guaranteed that all sample elements have a priori the same probability of being selected to be part of the sample; the total population for the study corresponds to 245 teachers, performing the calculation of the sample a confidence level of 95% and a margin of error of 6% was obtained, obtaining a total of 128 teachers as a sample. The following results were obtained for each subscale: emotional exhaustion with 56%, physical exhaustion with 57% and psychological or mental exhaustion with 69%.

Resumen

Esta investigación se llevó a cabo para determinar el nivel del síndrome de burnout en los docentes del Instituto Tecnológico de Villahermosa, donde se muestra el nivel de estrés que generó la pandemia COVID-19 durante las clases virtuales. Se analizó el nivel de impacto de la pandemia COVID-19, en la salud mental, físico y emocional, utilizando una metodología bajo el enfoque, cuali-cuantitativo, de tipo exploratorio y descriptivo, así como el método de análisis situacional apoyado del cuestionario Maslach Burnout Inventory (MBI). Este análisis contribuirá en la reflexión de las consecuencias que trae consigo desarrollar el alto nivel de estrés. El tipo de muestreo fue aleatorio simple, donde se garantizó que todos los elementos muestrales tienen a priori la misma probabilidad de ser seleccionados para pasar a formar parte de la muestra; La población total para el estudio corresponde a 245 docentes, realizando el cálculo de la muestra, se obtuvo un nivel de confianza del 95% y un margen de error del 6%, obteniendo un total de 128 docentes como muestra. Se obtuvo el siguiente resultado por cada subescala: agotamiento emocional con un 56% agotamiento físico con un 57% y psicológico o mental con un 69%.

Pandemic, Burnout, Focus

Pandemia, Agotamiento, Enfoque

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Introduction

Burnout syndrome (BS), also known as burnout syndrome, is a mental health problem that can develop when an individual experiences high levels of stress and burnout at work. This syndrome can affect people in a wide variety of professions, including teachers. In the context of the COVID-19 pandemic, teachers at the Instituto Tecnológico de Villahermosa have experienced a number of unique challenges that can increase the risk of developing Burnout syndrome. For example, many of them have had to adapt quickly to online teaching, handling technological tools and digital platforms, which can require a lot of extra work and rapid learning of new technologies. The pandemic has increased the overall stress level in society, which can make it even more difficult for teachers to maintain their emotional balance.

At the Tecnológico Nacional de México Campus Villahermosa, it is important to understand the level of Burnout syndrome in teachers in times of COVID-19. By conducting research to assess the level of Burnout syndrome in the teachers of this campus, valuable information can be obtained about the state of health of teachers and the challenges they faced in their work in times of Covid-19, this analysis will allow the institution to identify the level of burnout, consequences that it generated in the physical, mental, psychological health of the teaching population, with the result obtained will guide us to design intervention strategies to support the teacher. In this document, we will explore the level of burnout syndrome in the teachers of the Tecnológico Nacional de México Campus Villahermosa during COVID-19.

The purpose of this analysis is to contribute to the reflection on the consequences of the high level of stress generated by the COVID-19 pandemic; it will allow us to understand the attitudes of the teachers in their performance in front of the group, their dealings with students, co-workers and the impact it has on the institution.

This article is integrated by the theoretical framework; where the theories and concepts that will allow to expand the knowledge about the level of burnout syndrome in teachers during Covid-19 will be known, it can be based on several existing theories and models related to burnout, stress and coping.

Research method

Investigating Burnout Syndrome in teachers of the Tecnológico Nacional de México Campus Villahermosa in times of COVID-19, requires a rigorous and systematic approach. What is intended is to present general guidelines of the materials and methods that could be used for the research: Results, discussion and recommendations:

This section shows the results obtained with respect to the level of Burnout generated by the Covid-19 in the teachers of the Instituto Tecnológico de Villahermosa, during their academic performance; subsequently, the relevant recommendations are determined.

Theoretical framework

Hamad and Azeez (2023) indicate that the effects of the coronavirus pandemic on mental health, such as stress, fatigue, ill health and mental disorders, have received much attention from academics. (Daumiller et al., 2021) analysed the transition from traditional classroom instruction to online instruction.

In many countries, including Iraq, synchronous and asynchronous e-learning models have been combined. As a consequence of this situation, a large number of educators have been forced to modify their instructional practices in a short space of time, as well as to further develop their educational and technological competencies, and to assume more frequently the role of learning manager.

This resulted in teachers experiencing stress, leading to the development of fatigue syndrome and feelings of isolation, which negatively impacted on teachers' overall performance.

Martinez and Yeomans (2023) Online teaching is not new, the transition from a face-to-face to a remote learning process due to a pandemic such as COVID-19 is an element that needs to be studied due to the possible repercussions on both teachers and students.

It has been documented that online learning has some problems and virtues.

Some studies indicate that university students are a high-risk group for mental health problems.

According to Morales and Bustamante (2021), the pandemic accelerated the process of unlearning to learn, leaving very high costs, many families disintegrated when a family member died, and the incidence of abuse and violence increased. The lack of devices became an obstacle expelling some teachers and students from education, leaving as evidence that social isolation is also digital, despite the fact that technology is the solution to continue with education. (p.8)

Teaching strategies in pandemic

Morales and Bustamante (2021), in the application of this form of virtual teaching, teachers were faced with new technological tools and adapt new strategies to achieve the objective of the programme, it was the first time that the teaching staff had the need to teach online and in any other way, turning the virtual classroom into a mobile classroom, some had knowledge in the management of these technological tools and others the one but not the other; The virtual classroom is a mobile classroom, some had knowledge of these technological tools and some had knowledge of one but not the other, such as Classroom, Zoom, Edmodo, Moodle and digital audio/video resources such as Google Meet and even WhatsApp; at this early stage these are the most commonly used digital support methods. Virtualisation replaces the classroom; based on the topics to be addressed, teachers managed learning by using slides to make the relationship with knowledge didactic, making the virtual classroom attractive. The situation we lived through forced us to learn and improve as we went along, readapting ourselves to this way of teaching and learning. (p.9).

The simple fact of depending on a computer makes us be on alert, observing the panorama and being participants in the path towards the adaptation of this new normality; this gap is great and has to be redirected according to the course -leaving fear behind- to convert it into effective learning environments, above all, affective, where the educational contexts allow us to be included in this digital society of the great spheres of hegemony. (p.10).

Maintaining interest in virtual classes

Morales and Bustamante (2021), Education in pandemic is a challenge for teachers and students accustomed to a face-to-face modality, due to the application of new strategies and the havoc caused in the emotions that hit us all in a boomerang effect.

Teachers as well as students live a deep desire for transformation, which brings us closer to an effective and strengthened educational system, students, in our experience, express that online classes need a different spark to maintain enthusiasm in virtual sessions, demanding methodologies on our part, including in this area the need to use audiovisual resources, which forces us to reinvent ourselves and be part of the new digital skills that this hyperdigitalised world throws at us to be competent, those who try to survive in contingency; but in addition to the lack of experience in working online, we are faced with other major problems: the excessive workload and the stress of performing daily tasks as a permanent connectivity that has made life at home different. When and where do we take care of the family, when and where are they connected? (P.10)

Souza, Carballo, and Lucca (2023) point out in a study of teachers in Primary Education, especially in public schools, often go through physical and emotional suffering due to infrastructure problems and psychosocial factors at work that are related to high work demands, lack of autonomy, poor quality relationships and violence. These factors contributed to the development of SB.

It was possible to show that the most committed teachers, with low resilience and selfesteem, and who presented symptoms of anxiety and depression were at greater risk of BS, although it was not possible to establish a causal link produced by the cross-sectional patterns of the selected studies. Regarding sociodemographic factors, the most relevant factor evidenced by the studies refers to gender. Women proved to be more susceptible to burnout. Other factors (age, marital status, length of time in the profession) presented varied results, and it was not possible to draw a scenario.

Teachers' emotional intelligence as a protective factor

Geraci et. al, (2023). In recent studies, scientific research has focused on the Emotional Intelligence (EI) of teachers, because teaching is a highly emotional profession, and EI can be a crucial factor.

Self-report scales have also been designed on the EI-ability model, which excludes traits or competencies related to emotions and shows a weak association with personality dimensions, unlike a test of peak performance, which measures actual abilities, self-report EI-ability scales measure individuals' perceptions of their own emotional abilities, i.e., self-reported EI or Perceived EI Performance-based and self-report measures of minimal convergent validity, suggesting that these two different measurement methods " are most likely tapping into different mental processes.

EI is a psychological factor that could help buffer the effect of psychological distress. Before the pandemic, some studies already showed that EI and EI are positively associated with work engagement and self-efficacy and negatively associated with burnout. However, from a recent systematic review, it became most studies that assessed relationship between teachers' EIP and burnout, while only one study used MSCEIT to measure EI. Similarly, four studies conducted during the pandemic showed that teachers with higher levels of EIP had lower levels of burnout. To our knowledge, no study investigated the role of EI in teachers' ability to cope with adversity during the COVID-19 pandemic. Therefore, this study represents the first to employ both performance and self-report measures to assess PEI and EI. (pp. 2-3)

The new modality: virtual classes

Cortés (2021), The psychological and social impact of this pandemic is indisputable. The incorporation of the new teaching modality generated radical changes in educational interaction. Both teachers and students adapted the new classrooms at home. Some struggled because they did not have the technological resources to fulfil their purpose. Some teachers were overcome with a feeling of helplessness when they heard their students say that they were unable to access the virtual classes because they lacked the means to continue their studies.

To avoid drop-outs, some teachers demonstrated their professionalism and looked for ways to support those who showed a need. They looked for ways to get students to comply with the programme and complete the period.

A very commendable task implemented by the teachers was the doubling of working hours, which included adapting the contents of their classroom subjects to emergency remote learning, the prolonged use of virtual platforms, the assignment of tasks, the way of evaluating them and the delivery of results; all these aspects that influenced the success of the assignment resulted in an exhausting task for the whole teaching staff, the physical and emotional wear and tear was greater, which generates a mental state that brings with it high psychological and emotional consequences.

Triggering factors of stress in teaching in times of pandemic

Cortés (2021), The trigger for work-related stress in teachers in times of Covid-19 is due to several factors. One of them is the modification of the activities they usually performed, because the adaptation of their subjects to the virtual plane entails double the effort and exposes them to situations in which some teachers had to resolve technological situations. The use of new working tools with which they are not familiar resulted in exhausting working days due to the emerging changes.

Social confinement is another important factor, because it was implemented as a measure to safeguard the health of the university community. This resulted in the lack of student-teacher interaction that occurs in the face-to-face mode, which is an essential element for optimal learning; another usual activity that the teacher developed was the social interaction between coworkers.

Coexistence between human beings is necessary to generate healthy relationships that balance the assigned workload, so that social distancing is assimilated in a negative way, causing a decrease in psychological well-being and physical health. Within the adaptation process, there were other circumstances that hindered the emotional stability of the teachers. Uncertainty and fear were highly negative elements, the incessant arrival of news where the outlook far from improving worsened, the concern for their health or that of a loved one were situations that placed the human being at risk of developing mental illnesses such as stress disorders, anxiety and depression (pp.5-6 and 9-10). (pp.5-6 and 9-10).

Theories and models of Burnout Syndrome

According to Gil-Monte and Peiró (1999, as cited in Bravo and Elizondo, 2022), there are various explanatory models of burnout syndrome, which allow us to establish the antecedents and consequences of the symptom, establishing the way in which individuals suffer the process, the models can be classified into four research groups, which are reviewed below: Models related to the socio-cognitive theory of the self.

In these models, cognitions assume a central role, because they influence the way reality is observed, and can be transformed in this process. In addition, these models argue that the emotional consequences of actions are determined by the individual's self-confidence.

The second group contains the models of social exchange theories, which propose that the syndrome is due to individuals' perceptions of unfairness in the establishment of interpersonal relationships.

The third group contains ideas from organisational theory, which are based on the role of stressors in the organisational context, characterised by variables such as role functions, structure, climate and organisational culture, in relation to coping with threatening situations.

The fourth group is related to aetiological models based on structural theory, which suggest that burnout can be explained by personal, interpersonal and organisational causes (pp.3-4). (pp.3-4).

Theoretical currents of burnout Burnout

López and Ortega (2004, cited in López, 2017). Ultimately, theoretical models relating to Burnout focus on answering the questions raised by feelings of burnout and, ultimately, articulating a theory appropriate to the aetiology of Burnout.

López and Ortega (2004, cited in López, 2017). Within each of the following theories, various explanatory models of Burnout are integrated. (Quinceno, 2012) Socio-cognitive Self Theory:

Harrison's Competition Model (1983) Pines' Model (1993)

Cherniss Model (1993)

Thompson, Page and Cooper's Self-Control Model (1993)

Social exchange theory

Buunk and Schaufeli's Social Comparison Model (1993)

Hobfoll and Freedy's Conservation of Resources Model (1993))

Organisational theory

Golembiewski, Munzenrider and Carter model (1983) Cox, Kuk and Leiter model (1993) Winnubst model (1993)

Structural theory

Model of Gil-Monte, Peiró and Valcarcel (1995) Theory of Labour Demands and Resources Demerouti et al. (Demerouti et al., 2001) (p. 32-33).

Table 1 Theories and models

Material and methods

Antoniou et. al, (2023) Burnout syndrome can be described as a state of frustration and exhaustion that is usually caused by devotion to a specific cause or that appears when work stressors become long-term unresolved issues.

Investigating Burnout Syndrome in teachers at the Tecnológico Nacional de México Campus Villahermosa in times of COVID-19 requires a rigorous and systematic approach.

Below are some general outlines of the materials and methods that could be used for such an investigation:

Material

There are several validated scales and questionnaires that can be used to measure Burnout Syndrome; and for this research it was determined to use the test measurement tool according to Maslach and Jackson (1986), Maslach Burnout Inventory (MBI), the items were adapted to the needs required for the integration of the project information, this selected tool was reviewed and validated for use. Demographic work and information questionnaire: includes basic demographic information, such as: age, gender and years of teaching experience, as well as information on workload, work demands and resources available to cope with stress, the COVID-19 Impact Ouestionnaire: includes questions related to the impact of COVID-19 on teaching practices, workload, work demands and personal life.

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Also, audio interviews were conducted where they recount following the Maslach Burnout Inventory (MBI) items.

Methods

The research was developed under the approach according to Sampieri et al. (2010), qualiquantitative, exploratory and descriptive type, as well as the method of situational analysis, (p. 4), and life history, supported by the questionnaire according to Maslach and Jackson (1986), Maslach Burnout Inventory (MBI), validated.

Sampling: 128 teachers from the Tecnológico Nacional de México Campus Villahermosa were selected using a random sampling technique.

Data collection: Data collection was carried out using the online survey platform, Microsoft Forms. Participants were informed about the purpose and nature of the study and were asked for consent to use their information; 11 audio interviews were also conducted; Data analysis: Descriptive statistics were used to summarise demographic and work-related information, as well as the impact of Covid-19. Ethical considerations: Ethical considerations were taken into account, including ensuring confidentiality and anonymity of participants, obtaining informed consent, and complying with ethical guidelines for conducting research with human subjects.

Results

The Maslach Burnout Inventory (MBI) instrument was used as a guide to measure Burnout Syndrome. This instrument was modified to fit the population under study, in this case for teachers at the Tecnológico Nacional de México Campus Villahermosa.

The instrument used has 25 items and the following subscales:

- 1. Emotional exhaustion with 8 items.
- 2. Physical exhaustion with 12 items.
- 3. Psychological or mental exhaustion with 5 items.

The type of sampling was simple random, where it was guaranteed that all sample elements have a priori the same probability of being selected to form part of the sample.

To calculate the sample, the population of 245 teachers was taken into account with a confidence level of 95% and a margin of error of 6%, the total sample of teachers who answered the questionnaire was 128 teachers.

To measure the reliability or consistency of the set of questions of the measuring instrument, Cronbach's Alpha coefficient was used, giving a result of 0.96 for the whole scale and for each subscale, which gave the following result:

Subscale	Reliability coefficient	Level of reliability			
Emotional	0.76	Excellent			
exhaustion		reliability			
Physical	0.91	Excellent			
exhaustion		reliability			
Psychologic	0.76	Excellent			
al or mental		reliability			
exhaustion		-			
The study sample consisted of 128 teachers, 59% of					
whom were male and 41% female.					

Table 2 Frequency and percentage of ages. Results of the survey applied

Age range	Frequency	Percentage	
18 a 30	6	5%	
31 a 40	22	17%	
41 a 50	32	25%	
51 a 60	36	28%	
61 a 70	25	19%	
71 a 80	8	6%	
More about 80	1	1%	

Table 3 Frequency and percentage of ages. Results of the survey

The ages of the teachers range from 18 to over 80 years old.

Department of Attachment	Frequency	Percentage	
Economic-Administrative	37	28%	
Sciences			
Systems and Computing	14	11%	
Earth Sciences	21	16%	
Industrial Engineering	18	14%	
Basic Sciences	19	15%	
Chemical, Biochemical	21	16%	
and Environmental			
Engineering			

Table 4 Frequency and percentage of teachers assigned to the Academic Departments. Results of the survey applied

The level of Burnout of the teachers is presented below, taking into account the subscale defined in the survey:

These results are particularly worrying

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Subscale	Under	Medium	High
Emotional exhaustion	15%	28%	56%
Physical exhaustion	28%	15%	57%
Psychological or mental	0%	31%	69%
exhaustion			

Table 5 Level of Burnout of teachers by subscale, Result of the survey applied

The results provided show the level of teacher burnout according to the subscales of emotional exhaustion, physical exhaustion and psychological or mental exhaustion. Each subscale is divided into three categories: low, medium and high. The results will be discussed below:

Emotional exhaustion:

15% of the teachers show a low level of emotional exhaustion.

28% of the teachers show a medium level of emotional exhaustion.

56% of the teachers show a high level of emotional exhaustion.

These results indicate that more than half of the teachers experience a high level of emotional exhaustion, suggesting that they may be experiencing a high emotional burden and burnout in their work.

A) Physical exhaustion:

28% of teachers show a low level of physical exhaustion.

15% of the teachers show a medium level of physical exhaustion.

57% of the teachers show a high level of physical exhaustion.

These results reveal that more than half of the teachers experience a high level of physical exhaustion. This may indicate that they are experiencing physical fatigue and burnout due to the physical demands associated with their work.

B) Psychological or mental exhaustion:

No teachers are observed with a low level of psychological or mental exhaustion.

31% of the teachers show a medium level of psychological or mental exhaustion.

69% of teachers show a high level of psychological or mental burnout.

ISSN: 2444-3204 ECORFAN® All rights reserved. because they indicate that the vast majority of teachers are experiencing a high level of psychological or mental exhaustion that can lead to burnout syndrome. This implies that they may be facing a significant emotional and cognitive burden in their work, which can have negative consequences their well-being on performance.

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Conclusión

Overall, the results suggest that teachers are experiencing significant levels of burnout in all subscales considered. **Emotional** exhaustion and psychological or mental exhaustion seem to be the most prominent aspects of burnout among teachers at the Technological Institute of Villahermosa.

These findings highlight the importance of addressing and planning prevention strategies to counteract burnout syndrome and improve the physical well-being and mental health of teachers.

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