

Systematic review on stress, insomnia, and burnout syndrome in secondary school teachers

Revisión sistemática sobre el estrés, el insomnio y el síndrome de burnout en profesores de secundaria

Revisão sistemática sobre estresse, insônia e síndrome de burnout em professores do ensino médio

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Abstract: This systemic review article aimed to analyze the symptoms of stress, insomnia, and burnout syndrome in secondary school teachers. The PICO methodology was adapted for the research question and the PRISMA methodology for the article review and selection process. As a result, it was found that professional stress occurs when there is dissatisfaction or restrictions in the environment in which it is exercised; when the preparation of the person has ceased before an elaboration of organizations, as well as the deterioration of the teacher's vitality because of the stress produced. Burnout syndrome is a reaction to chronic professional stress; the amplitudes that stand out in burnout syndrome are related to stress levels and insomnia. In conclusion, burnout syndrome tends to be more pronounced in teachers because they have direct contact with people; also, the current economic and political factors directly influence the development of their daily activity; in this way, when all these factors come together, it is possible to suffer from burnout.

Keywords: stress, burnout, teachers.

Resumen: El propósito de este artículo de revisión sistémica fue analizar los síntomas de estrés e insomnio y el síndrome de burnout en profesores de secundaria. Se utilizó la metodología PICO para la pregunta de investigación y, la metodología PRISMA para el proceso de revisión y selección de artículos. Como resultado, se obtuvo que el estrés profesional se presenta cuando existe insatisfacción o restricciones en el medio donde se ejerce; cuando la preparación de la persona ha cesado ante una elaboración de organizaciones, así como el deterioro de la vitalidad del docente. Como consecuencia, el estrés produce el síndrome de burnout, que es una respuesta al estrés profesional crónico. Las amplitudes que destacan en el síndrome de burnout están relacionadas con los niveles de estrés e insomnio. Como conclusión, el síndrome de Burnout tiende a ser más evidente en los docentes, ya que tienen un contacto directo con las personas y, además, los factores económicos y políticos actuales influyen directamente en el desarrollo de su actividad diaria; de esta manera, cuando se juntan todos estos factores, es posible padecer burnout.

Palabras clave: estrés, burnout, profesores.

Resumo: O objetivo deste artigo de revisão sistêmica foi analisar os sintomas de estresse, insônia e síndrome de burnout em professores do ensino médio. A metodologia PICO foi adaptada para a pergunta de pesquisa e a metodologia PRISMA para o processo de revisão e seleção de artigos. Como resultado, obteve-se que o estresse profissional ocorre quando há insatisfação ou restrições no ambiente em que ele é exercido; quando a preparação da pessoa cessou frente a uma elaboração das organizações, bem como a deterioração da vitalidade do professor devido ao estresse produzido. A síndrome de burnout é uma resposta ao estresse profissional crônico; as amplitudes que se destacam na síndrome de burnout estão relacionadas aos níveis de estresse e à insônia. Concluindo, a síndrome de burnout tende a ser mais evidente nos professores, pois eles têm contato direto com as pessoas; além disso, os fatores econômicos e políticos atuais influenciam diretamente o desenvolvimento de sua atividade diária; dessa forma, quando todos esses fatores se unem, é possível sofrer de burnout.

Palavras-chave: estresse, burnout, professores.

INTRODUCTION

Work-related stress is associated with overwhelming events in the work environment, with obligations that exceed the worker's capabilities, means, and needs. This syndrome can be caused by various situations, such as pressure to increase productivity or lack of training. In this sense, it can be said that the work environment is one of the main sources of work-related stress risks. Many surveys have emphasized that work can be a source of satisfaction for various human needs, such as self-realization, maintaining interpersonal relationships or making decisions, and an indispensable resource for workers (Seijas, 2019).

It is important to note that among the most frequent mental illnesses in the educational group is work stress; this is the imbalance between the demands of a job and the human intellect for its performance, where this precision leads to a basic point, activated by professional stress and related functions of cognitive effects (Párraga and Escobar, 2020).

The burnout syndrome is a response to professional stress; it is an ability made up of cognitions, sensations, and attitudes that deny the duty and the people with whom they are related through their work (Rivera-Porras et al., 2019). This condition has been identified as a threat to tasks related to working with individuals, such as education, vitality, and human interests. Teaching is recognized as a task that is prone to triggering this phenomenon, as it involves carrying out different actions inside and outside the classroom, such as going with classmates and students, transforming curriculum planning and evaluation, and participating in organizational activities (Rodríguez, 2017).

Various variables have been identified that may be involved in the individual's protective mechanisms against stressors. In the risk of burnout syndrome, the cause is considered multifactorial, given the dimension of antecedents that are directly or indirectly related to coping with work or teacher stress; however, the factors could be classified into personal and social variables. Personal variables are catalogued as those that determine a type of attitude to stress: gender, family organization, previous optimism before work and perhaps the predominant type of personality (Sabio et al., 2019).

Insomnia is the most common sleep disorder in general and one of the most pressing reasons for seeing a therapist during a psychiatric consultation. The assessment and treatment of insomnia are very challenging;

the arousal often goes unnoticed or unheard, which contributes to the aggravation of the therapeutic and psychological levels of those who suffer from it (Martínez, 2019).

It is estimated that about one third of the population suffers from insomnia (difficulty falling asleep or staying asleep). If only nocturnal symptoms are considered, this figure drops to 10% when daytime consequences are considered, so that the clinical syndrome can be considered complete. Chronic insomnia affects between 6% and 10% of the population (Martínez, 2019).

The inefficiency in the development and/or maintenance of sleep, as well as the aid to recovery or photo stimulation, has a significant impact on the subsequent sexual abstinence of the patient and can be the cause of various damages in the physical and partial state. This disorder is associated with mild cognitive impairment, particularly in attention to complex tasks, consolidation of sleep memory, and some aspects of executive function (Martínez, 2019).

Stress and anxiety are the body's natural response or awareness of imminent danger. They can create the alerts and triggers needed to deal with these risks or threats and find solutions (Ramos-Narváez et al., 2020). However, it becomes a problem when it is too intense or disproportionate to the stimulus, for too long (when the danger or challenge has passed or is no longer manageable), or too often. Arousal and the stimuli it triggers whose main purpose is to mobilize resources for survival, are incompatible with sleep. Therefore, when these feelings persist over time, they cause psychophysiological problems such as insomnia (Colorado Sleep Institute, n.d.).

To sleep well, you need good sleep hygiene and the right psychology. Stress or anxiety, even in its mildest form, can make it difficult to sleep. There is a physiological explanation for this: during periods of stress and anxiety, various hormones are produced to prepare the body to respond to the threat. Among other things, this altered state alters our circadian rhythms, which control various aspects of our daily metabolism. Lack of melatonin production, lack of adrenaline, and a busy mental state combine to make it impossible for our bodies and minds to relax (Campillo, 2020).

Similarly, sleep deprivation can lead to increased fatigue the next day, which leads to a deterioration in mood and attitude; over time, this leads to a variety of physiological problems that exacerbate these problems, so that insomnia can worsen and lead to more severe episodes of anxiety (Rivera-Porras et al., 2018).

METHOD

It is important to note that there are several research methods, but for this systematic review article the qualitative method was chosen because it is used to study how people observe, understand, and analyze a particular issue. In this sense, it is known that qualitative research is the science and art of describing a group or culture, that it is a particularly valuable approach because it problematizes how citizens constitute and interpret societies. In the same way, it is a means that facilitates the learning of cultures because it provides the researcher with forms of organizing knowledge, behavior, and skills, also using and interpreting their experiences (Hernández et al., 2014), in terms of sources of information. A selection of key DECS (Descriptors in Health Sciences) and MESH (Medical Subject Titles) terms was made (see Table 1).

TABLE 1
DECS and MESH descriptors

Source	Keyword	Related terms
DECS	Burnout, Psychological	Emotional exhaustion, Psychic exhaustion, Burnout
MESH	Burnout, Psychological	Psychological burnout, Burnout, Student, School burnout
DECS	Stress, Psychological	Life stress, Mental suffering, Psychological stress
MESH	Stress, Psychological	No records found.
DECS	Fatigue	Mental fatigue
MESH	Fatigue	No logs found
DECS	Initiation to sleep	No records found.
MESH	Initiation to sleep	No records found.
DECS	Insomnia	No records found.
MESH	Insomnia	No records found.
DECS	Tension	No records found.
MESH	Tension	No records found.
DECS	Maintenance Disorders	No records found.
MESH	Maintenance Disorders	No records found.
DECS	Sleep	Lack of sleep, Insomnia, Sleep initiation disorders and maintenance.
MESH	Sleep	No records found.
DECS	Masticatory apparatus	No records found.
MESH	Masticatory apparatus	No records found.
DECS	Psychological Adaptation	No records found.
MESH	Psychological Adaptation	No records found.
DECS	Job Satisfaction	Job satisfaction
MESH	Job Satisfaction	Job satisfaction Satisfaction, Work

Source: authors.

The bibliographical review of the research articles was carried out by searching various academic electronic databases, among which the scientific material search engines Scielo, Scopus, Redalyc, PubMed, and ProQuest are mentioned to carry out the research. The categories established for this research are stress, insomnia, and burnout syndrome, through a systematic review that allows orientation from psychology. It should be noted that to search for this information, a series of keywords mentioned in Table 1 were used, considering the publication base from 2015 to 2021. It should also be added that the languages found were English and Spanish. Some terms were included in the review because they could be translated. On the other hand, it is important to mention that for this review the PRISMA methodology was used, implementing thesauruses in the information search process, where the selection of the different studies was made by applying inclusion and exclusion criteria, which allowed the evaluation of the reliability and quality of the investigation, answering the research question (Beltrán, 2005; González and Balaguer, 2021) (see Table 2).

TABLE 2
Search terms

Database	Search algorithm
	("Stress Disorders, Post-Traumatic" OR "Tension" OR "Anxiety" OR "Anguish" OR "Fatigue" OR "Exhaustion")
	("Burnout, Professional") DNA ("Absenteeism")
PubMed	("Insomnia" OR "Wakefulness" OR "Worry" OR "Restlessness" OR "Nervousness") AND ("Sleep Initiation")
Science Direct	("Tiredness" OR "Wasting" OR "Exhaustion" OR "Weakness" OR "Debilitation" OR "Reluctance" OR "Fatigue")
	("Mental Fatigue") AND ("Exhaustion")
REDALYC	("Behaviour" OR "Pattern" OR "Proceed" OR "Performance" OR "Tactics" OR "Custom" OR "Habit")
SCIELO	("Conduct") AND ("Adaptation, Psychological")
	("Antisocial Personality Disorder")
Dialnet	("Rejoicing" OR "Complacency" OR "Delight") AND ("Job Satisfaction") AND ("Personal Satisfaction")
Proquest	("Solitude" OR "Abandonment" OR "Withdrawal") AND ("Social Isolation")
Scopus	("Restlessness" OR "Anxiety" OR "Anguish" OR "Uneasiness" OR "Concern") AND ("Performance Anxiety")
	("Occupation" OR "Position" OR "Exercise" OR "Execution" OR "Practice" OR "Fulfillment" OR "Function") DNA ("Physical Functional Performance")
	("Identity OR "Character" OR "Temperament" OR "Genius" OR "Style")
	("Dissociative Identity Disorder")

Source: authors.

According to what is indicated in Table 2, it is possible to observe the different equations that have been used to obtain the necessary information to carry out this systematic review article, which was oriented in an English language and in Spanish, finding the databases mentioned above and considering the categories selected for the development of this article.

On the other hand, it was necessary to formulate the research question; for this purpose, the PICO tool was added, as it is very useful to improve the specificity and conceptual clarity of the clinical problems to be studied, as well as to improve the quality of the searches and the accuracy, which allows to address adequate and precise data to answer the problem question (Landa-Ramírez and Arredondo-Pantaleón, 2014). Considering the research question posed, the different components that make up the PICO strategy were identified, as can be seen in Table 3, which led to the following research question: What are the symptoms of stress and sleeplessness that influence burnout syndrome in secondary basic education teachers?

TABLE 3
Question PICO

Component	Description
Q: Patient or problem of interest (<i>Population</i>)	Teachers of secondary basic education
I: <i>Intervention</i>	Stress and insomnia
C: <i>Comparison</i>	N/A
O: Results (<i>Outcome</i>)	Burnout syndrome

Source: authors.

Data extraction process

To this end, an Excel spreadsheet was created by the authors, in which the key elements of each of the selected studies were listed.

Study characteristics

First of all, the behaviours, strategies and situations related to the identified research are associated, considering the characteristics assigned to the variables studied.

Information sources

The information used was obtained from the review of research published in high-impact journals in the following databases: PubMed, Science Direct, REDALYC, SCIELO, Dialnet, Proquest, and Scopus.

Eligibility criteria

Within the criteria of eligibility of information are the scientific evidence in a range of temporality of the last five years, considering the selection of variables related to stress and insomnia and burnout syndrome, sleep disorders, among others.

Search

The entire search was conducted in English and Spanish for SCIELO, REDALY, SCOPUS, PROQUEST, and PUMD, based on the mining of titles and abstracts using the search engines available in the databases used (see Table 4).

TABLE 4
Search equations according to the database

Databases	Search equations
PUBMED	("Post-Traumatic Stress Disorders" OR "Tension" OR "Anxiety" OR "Anxiety" OR "Fatigue" OR "Exhaustion") AND ("Professional Burnout") AND ("Absenteeism") AND ("Insomnia" OR "Wakefulness" OR "Worry" OR "Restlessness" OR "Nervousness") AND ("Initiation to sleep") AND ("Tiredness" OR "Wearing" OR "Exhaustion" OR "Weakness" OR "Weakness" OR "Reluctance" OR "fatigue") AND ("Mental fatigue") AND ("Exhaustion")
SCIELO	("Post-Traumatic Stress Disorders" OR "Tension" OR "Anxiety" OR "Anxiety" OR "Fatigue" OR "Exhaustion") AND ("Professional Burnout") AND ("Absenteeism") AND ("Insomnia" OR "Wakefulness" OR "Worry" OR "Restlessness" OR "Nervousness") ("Mental fatigue") AND ("Exhaustion") AND ("Behavior" OR "Pattern" OR "Proceed" OR "Performance" OR "Tactics" OR "Custom" OR "Habit") AND ("Behavior ") AND ("Adjustment, Psychological")
PROQUEST	("Antisocial Personality Disorder") AND ("Joy" OR "Complacency" OR "Delight") AND ("Job Satisfaction") AND ("Personal Satisfaction") AND ("Loneliness" OR "Abandonment" OR "Withdrawal") AND ("Social isolation") AND ("Anxiety" OR "Anxiety" OR "Distress" OR "Anxiety" OR "Worry") AND ("Performance anxiety")
SCOPUS	("Post-Traumatic Stress Disorders" OR "Tension" OR "Anxiety" OR "Anxiety" OR "Fatigue" OR "Exhaustion") AND ("Professional Burnout") AND ("Absenteeism") AND ("Insomnia" OR "Wakefulness" OR "Worry" OR "Restlessness" OR "Nervousness") AND ("Occupation " OR "Position" OR "Exercise" OR "Execution" OR "Practice" OR "Compliance" OR "Function") AND ("Physical functional performance") AND ("Identity OR "Character" OR "Temperament" OR "Genius") AND ("Dissociative identity disorder").
REDALYC	("Post-Traumatic Stress Disorders" OR "Tension" OR "Anxiety" OR "Anxiety" OR "Fatigue" OR "Exhaustion") AND ("Professional Burnout") AND ("Absenteeism") AND ("Insomnia" OR "Wakefulness" OR "Worry" OR "Restlessness" OR "Nervousness")

Source: Authors.

Selection of studies

The studies were selected by searching the databases using the specific variables of the study, to obtain an overall result of articles of different types of research.

Inclusion criteria

Articles related to the functioning and development of stress insomnia and burnout syndrome guide the characteristics of the bad habit faced by teachers exposed to a period of intensity that prevents performance, compliance, and satisfaction of daily life, mismanagement of stress viralizes various factors, generating depersonalization, emotional exhaustion, and lack of personal fulfillment both in the mental and physical health of the teacher.

Exclusion criteria

Articles on stress, insomnia, and burnout syndrome; articles that are conducted in contexts other than the intervention process; studies in the population of the health care environment and caregivers; descriptive studies.

Selection and analysis

First, we considered the preliminary selection of studies based on the review by inclusion criteria, population characteristics, study type, and year. Subsequently, an Excel registration table prepared by the authors was independently completed, specifying the key elements of each of the selected studies (see Tables 5, 6, and 7). Finally, the process of identification, screening, eligibility, and inclusion of articles was described in summary form, following the structure suggested by the PRISMA statement (Urrútia and Bonfill, 2010).

RESULTS

TABLE 5
Filters applied

Database	Total articles	Document Type	Time period	Incomplete and/or duplicate texts	No access	Non-compliance with criteria	Selected articles
PUBMED	2341	1237	617	122	109	241	15
PROQUEST	1235	701	133	165	159	74	3
SCIELO	3585	1897	896	448	224	119	1
REDALYC	1626	948	384	198	0	94	2
SCOPUS	2858	1623	629	298	179	120	9
Total	11645	6406	2659	1231	671	648	30

Source: Authors.

Table 5 shows the results obtained in the five databases used, where a total of 11645 documents were found, while in PUBMED the total number of articles found was 2341. These 15 articles were selected by applying the appropriate filter. In addition, PROQUEST yielded data from 1235 articles, from which three documents were selected, and SCIELO yielded 3585 documents. In REDALYC, 1626 manuscripts were found, and only two documents were selected after the filters. Finally, in SCOPUS 2858 manuscripts were found from which nine articles were selected, making a total of 30 documents taken as samples.

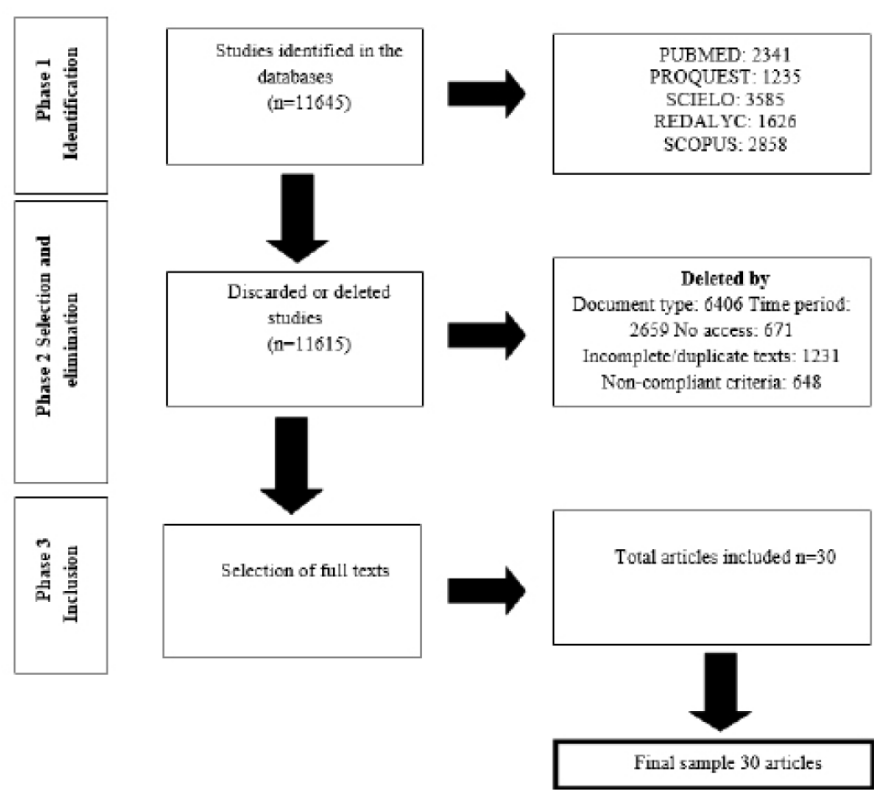


FIGURE 1
Flowchart of the study selection process
Source: Authors.

TABLE 6
Selected studies

Nº	Variables	Title	Database	Authors	Year	Contribution
1	Stress and insomnia, and burnout syndrome.	Density of the network of emotions in burnout.	SCOPUS	(Spiller et al., 2021)	2021	Negative emotions are associated with burnout. This highlights the importance of emotions and emotional exhaustion in responding to work-related distress in healthcare workers.
2	Exhaustion	Research on the correlation between burnout and depression.	SCOPUS	(Schonfeld et al., 2019)	2019	The link between burnout and depression can be viewed in at least two ways. One is that any redundancy between exhaustion and depression is essentially technical, produced by the fact that measures of depression often include symptoms of exhaustion.
3	Burnout syndrome	Prevalence of burnout syndrome in public school teachers in the Brazilian context: A systematic review.	REDALYC	(Montoya et al., 2021)	2021	They exhibit high levels of emotional exhaustion, accompanied by a prevalence of burnout, and regularly exhibit high or moderate levels of depersonalization and indolence.
4	Stress and insomnia, and burnout syndrome.	Insomnia is associated with worry, cognitive avoidance, and low academic engagement in Argentine college students during COVID-19 social isolation.	SCOPUS	(Scotta et al., 2022)	2022	The aim of this study was to analyze the relationship between insomnia, worry, coping strategies, and academic commitment in subjects who are pursuing a university career in Argentina during the first month of social isolation due to COVID-19.

5	Insomnia and exhaustion.	The impact of stress on sleep: the pathogenic reactivity of sleep as vulnerability to insomnia and circadian disorders.	PUBMED	(Kalmbach et al., 2018)	2018	Not only is the sensitivity of the sleep system related to cognitive and emotional processes. There is also preliminary evidence that the two forms of stress reactivity may interact to increase the risk of disease.
6	Mental fatigue and stress.	Objective assessments of mental fatigue during a condition of long-term continuous stress.	SCOPUS	(Zhang et al., 2021)	2021	This study examined changes in mental fatigue during a 5-day intellectually challenging competition. It found that mental fatigue accumulates over time in high-stress situations.
7	Well-being and behavior.	School-related subjective well-being promotes later adaptability, achievement, and positive behavioral behavior.	SCOPUS	(Putwain et al., 2020)	2020	School-related subjective well-being promotes adaptability, achievement, and positive behavior, and adaptability is also related to positive behavior. There may be educational benefits to students from attempts to promote well-being and adaptability.
8	Stress and job satisfaction.	Stress and job satisfaction of teachers in urban schools: unraveling influences at the individual, classroom, and organizational levels.	SCOPUS	(Ouellette et al., 2018)	2018	The findings point to organizational climate and teacher connectedness as potential levers for change, supporting previous work on teacher stress and satisfaction in schools. In urban school districts, the importance of focusing on organizational factors may be particularly relevant.

9	Stress and insomnia, and burnout syndrome.	Mindfulness, reinvestment, and rowing under pressure: evidence for moderate moderation of anxiety-performance ratio.	SCOPUS	(Sparks et al., 2021)	2021	This research provides initial support that mindfulness dispositions may benefit performance under pressure and that this may occur through the attenuation of reinvestment processes. Furthermore, the results show that mindfulness and nonjudgmental thinking can affect different reinvestment processes.
10	Exhaustion and associated risks.	Nurse burnout and associated risk factors during the COVID-19 pandemic: a systematic review and meta-analysis	PUBMED	(Galanis et al., 2021)	2021	Nurses experience high levels of burnout during the COVID-19 pandemic, with several socio-demographic, social, and occupational factors influencing this burnout.
11	Burnout syndrome.	Prevalence of burnout syndrome in public school teachers in the Brazilian Context: A systematic review.	PUBMED	(Montoya et al., 2021)	2021	There is a critical need to review current research practices and use a standardized measurement tool to assess burnout in these professionals. This will facilitate the comparison and management of data and, most importantly, the implementation of an evidence-based program developed from multiple studies on burnout.

12	Depression, insomnia, and burnout syndrome.	Burnout, depression, anxiety, and insomnia of internists and primary care physicians during the COVID-19 pandemic in Japan: a cross-sectional survey.	SCOPUS	(Kuriyama et al., 2022)	2022	About 30% of Japanese internists and primary care physicians who participated in this study had symptoms of exhaustion, anxiety, and insomnia, while 15% were depressed during the COVID-19 pandemic. Interventions are needed to reduce mental disorders among internists and family physicians.
13	Performance and mood.	Trait energy and fatigue modify caffeine's effects on mood, cognitive and fine motor task performance: a post-hoc study.	REDALYC	(Fuller et al., 2021)	2021	The aim of this study was to determine the influence of physical and mental energy characteristics and fatigue on mood and performance on cognitive and fine motor tasks when participants consumed caffeine in comparison to a placebo today.
14	Burnout syndrome and associated factors.	Burnout syndrome and associated factors in medical students.	SCIELO	(Merchán-Galvis et al., 2018)	2018	It is considered necessary to provide continuous psychological support throughout the training process, enabling students to face stressful situations and thus avoid the onset of the syndrome and its consequences.

15	Insomnia	Brain mechanisms of insomnia: new perspectives on causes and consequences.	PUBMED	(Van Someren, 2021)	2021	Although insomnia is the second most common mental disorder, progress in understanding the underlying neurobiological mechanisms has been limited. This review addresses the definition and prevalence of insomnia and examines its subjective and objective characteristics throughout the 24-hour day.
16	Job dissatisfaction	Job dissatisfaction, psychosocial aspects, personal satisfaction, and mental health of male and female health workers.	PUBMED	(Sousa et al., 2021)	2021	The aim was to evaluate the relationship between job dissatisfaction and the occurrence of common mental disorders (CMD), considering the psychosocial aspects of job and personal satisfaction. Cross-sectional study, with a sample of 3,084 health workers from five municipalities in Bahia.

17	Job performance	Cognitive reflection, Life satisfaction, Emotional balance, and Work performance.	PUBMED	(Lado et al., 2021)	2021	The validity of individual difference variables in predicting important life phenomena, such as job performance, has been studied for more than a century. However, how some of them are related to one another has remained largely unexplored. This article presents a study of the relationship between cognitive reflection (CR), life satisfaction (SWL), and emotional balance (EB) with job performance.
18	Job satisfaction	Management of happiness, subjective well-being, and job satisfaction.	PUBMED	(Ramírez et al., 2020)	2020	These findings suggest the need to focus more directly on organizational social contextual factors as a way of improving teacher stress and satisfaction, particularly in urban schools serving minority, low-income, and at-risk students.
19	Occupational health	The impact of organizational communication satisfaction on the work commitment of health professionals.	PUBMED	(Abu Dalal et al., 2021)	2021	It can be concluded that it is necessary to design and implement preventive educational interventions for the early detection of possible cases, as well as for the adequate management of episodic stress situations, despite the low level of burnout among the workers in the sample.

20	Burnout and job satisfaction	Factors associated with burnout and job satisfaction in Chinese hospital pharmacists.	PUBMED	(Zhao et al., 2020)	2020	This study suggests that personality is a negative 2-dimensional predictor of burnout (emotional exhaustion and depersonalization), while the work environment, particularly work demands, is a predictor of burnout and greater emotional exhaustion.
21	Mental health in workers.	COVID-19 pandemic: taking care of the mental health of our health workers.	SCOPUS	(Choudhury et al., 2020)	2020	We found that burnout among nurses is a critical issue during the COVID-19 pandemic. There is an urgent need for better preparation of nurses for the COVID-19 pandemic.
22	Mental fatigue	Mental fatigue affects endurance performance: a physiological explanation.	PROQUEST	(Martin et al., 2018)	2018	Mental fatigue reflects a change in the psychobiological state caused by prolonged periods of demanding cognitive activity. It is well-documented that mental fatigue affects cognitive performance. More recently, however, it has been shown that endurance performance is also affected by mental fatigue.
23	Job burnout and mental fatigue	Effect of job strain on job burnout, mental fatigue, and chronic illness among civil servants in China's Xinjiang Uygur Autonomous Region.	PROQUEST	(Guan et al., 2017)	2017	Work-related stress refers to a state of physical and mental strain caused by an imbalance between the rigors of the job and an inadequate ability to adapt and cope. Today, different types of workers are exposed to a variety of job stressors.

24	Mental fatigue	Efficiency, workload, occupational health, and safety in the construction industry in the main cities of Ecuador.	PROQUEST	(Gallegos and Castillo, 2022)	2022	The balance between work and rest is important not only for the well-being of the worker but also for creativity, innovation, and efficiency in the task at hand. When this balance is achieved, physical fatigue disappears quickly. Experts explain fatigue as a physiological state of reduced mental and physical performance that can result from sleep deprivation or prolonged wakefulness.
25	Insomnia and performance	Insomnia and Cognitive performance	PUBMED	(Brownlow et al., 2020)	2019	This article updates and summarizes recent literature investigating cognitive impairment in people with insomnia and identifies cognitive domains that are consistently impaired.
26	Sleep and insomnia, and depression	Sleep, insomnia, and depression	PUBMED	(Riemann et al., 2020)	2020	This article links current understanding of sleep regulatory mechanisms with knowledge of physiological changes in depression. The review aims to draw attention to current and future strategies in research and clinical practice regarding the benefits of sleep therapy and depression.

27	Fatigue and exhaustion	Compassion fatigue and exhaustion, the interventions of an institution	PUBMED	(Lee et al., 2019)	2019	Compassion is a complex abstract concept and is usually perceived as an emotional response to the vulnerability and suffering of another person that motivates an individual to want the best for the sufferer. It is seen as a virtuous and inherent quality of nursing. Nurses are exposed to various stressors at work, caused by a myriad of complex professional and organizational challenges.
28	Burnout syndrome and demotivation	Burnout syndrome and demotivation in health personnel. handling stressful situations: the importance of teamwork	PUBMED	(García-Campayo et al., 2016)	2017	Stress is the second leading cause of absenteeism in the European Union. Around 12% of European workers are currently suffering from burnout.
29	Job burnout	Physical, psychological, and occupational consequences of burnout: a systematic review of prospective studies.	PUBMED	(Salvagioni et al., 2017)	2017	Conflicting results have been observed. In conclusion, several prospective, high-quality studies have shown physical, psychological and work-related consequences of burnout.
30	Burnout in the workplace	A systematic review including a meta-analysis of the work environment and symptoms of burnout.	PUBMED	(Aronsson et al., 2017)	2017	It provides systematically graded evidence linking working conditions to the development of burnout symptoms shortly.

Source: authors.

Findings found

Stress and insomnia

A link has been found between stress and insomnia, and as this affects people, sleep reactivation is associated with the disposition to stress that interrupts sleep, which translates into difficulty falling asleep and staying asleep (Spiller et al., 2021; Ouellette et al., 2018). High sleep reactivity is also associated with the risk of shift work disorder, depression, and anxiety. It is important to emphasize that worry and work are related to stress, which can exploit sensitive sleep systems, increasing the pathogenicity of sleep reactivity. Now we can identify those people at risk of insomnia in the future; the aim is to identify a population to intervene and promote this problem caused by overwork and long shifts (Kalmbach et al. 2018).

Stress and burnout

Stress can be defined as an unpleasant experience associated with a particular environment and can include feelings of anger, tension, frustration, and anxiety. Stress can have a negative effect on people's lives in relation to work or the environment in which they live; it develops in excessive work demands with low and little emotional support; job satisfaction has been associated with a high level of stress because the long hours of work and the work and cognitive load that the human being can maintain in his daily life generate excessive stress. Several factors have been identified that influence good job satisfaction and are able to generate personal coping strategies and social support, although most of the identified predictors of stress and satisfaction can be classified as predictors at the individual level (age, experience, self-efficacy) or at the organizational level (culture and work environment, workload, principal's leadership style and role management). Work-related stress and burnout continue to increase as teachers are faced with increasingly difficult student behaviors to manage (Ouellette et al., 2018; Schonfeld et al. 2019; Zhang et al. 2021).

Insomnia and burnout

In recent years there has been an increase in mental health problems related to insomnia, worry, environmental strategies, and academic engagement due to levels of worry and cognitive avoidance strategies. Job burnout can lead to sleep problems. The prevalence of insomnia is due to the high hours of overwork that a person can observe in his or her job; therefore, insomnia and burnout have a certain relationship; one predicts the other and can cause a loss of sleep due to the work exploitation acquired by the teacher. Insomnia, one of the most common sleep disorders, is the inability to initiate or maintain sleep or to achieve sufficient sleep duration and quality to restore normal energy and alertness (García-Campayo et al., 2016; Matsuyama et al., 2021; Kuriyama et al., 2022). Worry is a cognitive component of the anxiety response that processes and organizes information to cope with future-threatening situations. In addition, insomnia and worry have been associated with reduced work and academic engagement, which is a positive, sustained, emotional, and cognitive state related to a specific task. Stressful situations can affect teachers psychologically, putting their cognitive, emotional, and physical parts at risk (Imran et al., 2020; Campillo, 2020).

DISCUSSION

In this sense, it is known that professional stress occurs when there are dissatisfactions or restrictions in the environment where the person carries out his/her work; his/her preparation faces ineffective situations, with

the effect of stress reserve; but the deterioration of the teacher's vitality as a consequence of this produces the burnout syndrome, which is a response to chronic professional stress. The amplitudes that stand out in the burnout syndrome are related to episodes of stress and alertness, which in turn cause emotional exhaustion, depersonalization, and failures in personal performance at work (Putwain et al., 2020; Sousa et al., 2021; Galanis et al., 2021).

People with burnout syndrome have similar cognitions, sensations, and prohibitions, such as feelings of failure, disappointment, nervousness, and work inefficiency, among others. The dysfunctions presented by the syndrome are physical and psychological. A teacher suffering from burnout syndrome presents at maximum frequency according to his/her official time strength, because of the attention and contributions he/she presents between the students and the educational committee. Depending on the negative actions presented, it will be the level of the developed syndrome. It should be noted that it is important to admit stress to indicate the progress of emotional commitments so that a negative reaction to burnout syndrome does not develop. Educational institutions should organize plans for the promotion and prevention of the vitality of their staff (Torres, 2021).

The concept of burnout has caused much debate due to the confusion it causes when distinguished from other concepts, but Van Someren (2021), Kalmbach et al. (2018), and Salvagioni et al. (2017) state that burnout does not overlap with other psychological constructs.

It is also necessary to mention how burnout differs from other psychological concepts; it can be pointed out that this syndrome is different from general stress, work stress, physical fatigue, depression, sadness, boredom, or depression with job dissatisfaction and significant events and crises in the East. Long life, although some similar symptoms or developmental processes are involved (Lee et al., 2019).

Work stress is understood as the interaction between the high psychological demand, under control (decision) on work, and under social support that the individual receives from other workers and headquarters; that is, an unpleasant, tense environment and conflictive relationships. Stress can infer the relationship between satisfaction and pleasure that the individual has with work and the quality of life of this same; sometimes high levels of stress tend to reduce the quality of life of the individual, creating risk factors it associated with their work environment. The lack of mechanisms to adapt to work situations can become a problem product of chronic wear and tear on the person (Vidotti et al., 2019; Theorell et al., 2015; Brownlow et al., 2020).

Burnout syndrome is characterized by a set of symptoms that indicate the worker's burnout, manifested by a lack of physical and mental energy (mental exhaustion), loss of interest in work (reduced personality), and feelings of weakness and self-esteem (low professional accomplishment). The consequences of the syndrome are detrimental to individuals and organizations due to reduced psychosocial well-being, absenteeism, and job dissatisfaction, as well as putting the safety of staff and patients at risk (Vidotti et al., 2019; Párraga and Escobar, 2020; Sparks et al., 2021).

CONCLUSIONS

Sleep deprivation and insomnia are very common disorders due to a variety of causes, including stress, environmental, and emotional factors. Anxiety, on the other hand, is usually restlessness or agitation associated with an acute illness. Insomnia is the subjective feeling that you can't sleep when you want or as much as you want. It is the most common sleep disorder and has many causes. The duration of insomnia is the most important guide to its assessment and treatment. Temporary insomnia (within a few nights) or short-term insomnia (within three weeks) can be associated with a variety of medical conditions (Lozano, 2020).

Work-related stress has been studied and different explanatory models have been proposed because different social conditions can act as stressors and change people's health (Pereiro and Rodríguez, 2008),

as well as the impact of stress triggers, including socio-demographic variables such as age, income level and gender, and other everyday variables in which workers have negative stress-related experiences.

Repeated periods of stress often precede burnout and are interpreted as burnout at work. It results from the interaction of variables in the work and personal environment, involving a variety of symptoms and emotions associated with work stress. These symptoms are characterized by emotional distress, lack of energy, detachment and ridicule, incompetence, poor professional self-image and hostile attitudes towards work, various psychological symptoms such as nervousness, anxiety, sadness, low self-esteem and job dissatisfaction, and physical symptoms such as respiratory diseases and allergies (Aguirre et al., 2018).

Burnout syndrome is a major problem among teachers of formative use, which has become very popular in our country in recent years. In the course of this study, it was found that professional stress increases the number of events at the physical and psychological level for teachers and workers who are involved in long periods of work. In addition to this, their way of life and the way they carry out their daily tasks are reduced, and there is also a prevalence of disturbed sleep, commonly referred to as wakefulness, which leads to an imbalance in the physical and cognitive functioning of the individual.

In terms of socio-demographic characteristics, we have a young population with an average age of 34.83 years, which varies as 71.1% are men and only 28.9% are women. However, although burnout syndrome is more common in women than in men, due to the double burden of work and family, no relationship was found between the presence of burnout syndrome and gender. Schools should apply the MBI as a strategy to control the possible appearance of the syndrome, periodically and for teachers who have been in the exercise of their work for many years; that is, where you can diagnose and seek solutions if you are suffering, thus improving the quality of life of teachers (Aguirre et al., 2018; Torres, 2021; Merchán-Galvis et al., 2018).

In conclusion, it can be said that burnout syndrome tends to be more pronounced among teachers since they have direct contact with people, and the economic and political factors of today have a direct influence on the development of their daily activities. In this way, when all these factors come together, one can suffer from burnout. For this reason, preventive measures should be taken in educational institutions to avoid more burnt-out and stressed professionals (Torres, 2021).

CONFLICT OF INTEREST

The authors of this article declare that they have no conflict of interest in the work presented.

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