

**HIGH SCHOOL TEACHERS, SLEEP CHARACTERISTICS AND BURNOUT SIGNS:
INTEGRATIVE REVIEW****PROFESSORES DE ENSINO MÉDIO, CARACTERÍSTICAS DO SONO E SINAIS
DE BURNOUT: REVISÃO INTEGRATIVA****PROFESORES DE SECUNDARIA, CARACTERÍSTICAS DEL SUEÑO Y SIGNOS
DEL BURNOUT: REVISIÓN INTEGRADORA**

Carolina Pasquini Praxedes Salvi¹, Bruno Fernando Moneta Moraes², Larissa Dela Libera Miranda³, Sandra Soares Mendes⁴, Ademir Salvi Júnior⁵, Milva Maria Figueiredo De Martino⁶

How to cite this article: Salvi CPP, Moraes BFM, Miranda LDL, Mendes SS, Júnior SA, De Martino MMF. High school teachers, sleep characteristics and burnout signs: integrative review. Rev Enferm Atenção Saúde [Internet]. 2023 [access: ____]; 12(1):e202368. DOI: <https://doi.org/10.18554/reas.v12i1.5731>

ABSTRACT

Objective: identifying studies that evaluated sleep disorders and burnout in high school teachers. **Method:** integrative review, with search for articles in Portuguese, English and Spanish, published in the National Library of Medicine (PubMed), the Virtual Health Library (VHL), Scopus, Web of Science and EBSCOHOST databases, using the descriptors Sleep, Burnout, Psychological and School Teachers, and their synonyms. The search and selection of scientific evidence was carried out by three reviewers, simultaneously. **Results:** three articles were selected that evaluated sleep and Burnout for teachers, carried out in the European continent (66.7%) and the United States, published from 2018 onwards, which used three different instruments to assess variables related to sleep and Burnout. **Conclusion:** Exhaustion, fatigue, workload, excessive commitment, can be sources of sleep alterations and the presence of Burnout in the teaching profession, justifying the implementation of programs that promote the health promotion of this class.

Descriptors: Sleep; Burnout, Psychological; School Teachers; Work Hours; Mental Health

¹ Physiotherapist, Master (doctoral student), State University of Campinas/UNICAMP. Campinas, SP, Brazil. carolpraxedes@yahoo.com.br. <https://orcid.org/0000-0002-2998-1522>

CV:<http://lattes.cnpq.br/8663040171427472>

² RN, Master (doctoral student), State University of Campinas/UNICAMP. Campinas, SP, Brazil. brunofernando@uol.com.br. <https://orcid.org/0000-0001-8590-5746>

CV:<http://lattes.cnpq.br/2013575806291337>

³ RN, Master Student, State University of Campinas/UNICAMP. Campinas, SP, Brazil. ladelalibera@hotmail.com. <https://orcid.org/0000-0003-4448-8346>

CV:<http://lattes.cnpq.br/1821032946971092>

⁴ RN, PhD, State University Campinas/UNICAMP. Campinas, SP, Brazil. sandras.mendes@hotmail.com <https://orcid.org/0000-0002-4084-6858>

CV:<http://lattes.cnpq.br/7663002902154173>

⁵ Pharmacist, Doctor, Regional University Center of Espírito Santo do Pinhal/Unipinhal. Espírito Santo do Pinhal, SP, Brazil. salvi_fcfar@yahoo.com.br. <https://orcid.org/0000-0002-7635-4011>

CV:<http://lattes.cnpq.br/1399361614850282>

⁶ RN, PhD, State University Campinas/UNICAMP. Campinas (SP), Brazil. milva@unicamp.br. <https://orcid.org/0000-0002-3877-42184>. CV:<http://lattes.cnpq.br/7096939242634758>

RESUMO

Objetivo: identificar estudos que avaliaram alterações do sono e Burnout em professores de ensino médio. **Método:** revisão integrativa, com busca de artigos em português, inglês e espanhol, publicados nas bases de dados *National Library of Medicine* (PubMed), Biblioteca Virtual em Saúde (BVS), *Scopus*, *Web of Science* e EBSCOHOST, utilizando os descritores *Sleep*, *Burnout Psychological* e *School Teachers*, e seus sinônimos. A busca e seleção de evidências científicas foi realizada por três revisores, de forma simultânea. **Resultados:** foram selecionados três artigos que avaliaram sono e Burnout para docentes, realizados no continente europeu (66,7%) e Estados Unidos, publicados a partir de 2018, que utilizaram três instrumentos distintos para avaliação de variáveis relacionadas ao sono e Burnout. **Conclusão:** Esgotamento, fadiga, carga de trabalho, comprometimento excessivo, podem ser fontes geradoras de alterações de sono e presença de Burnout na profissão docente, justificando a implementação de programas que promovam a promoção da saúde dessa classe. **Descritores:** Sono; Esgotamento Psicológico; Professores Escolares; Jornada de Trabalho; Saúde Mental

RESUMEN

Objetivo: identificar estudios que evaluaron alteraciones del sueño y Burnout en docentes de enseñanza media. **Método:** revisión integradora, búsqueda de artículos en portugués, inglés y español, publicados en las bases de datos de la Biblioteca Nacional de Medicina (PubMed), Biblioteca Virtual en Salud (BVS), *Scopus*, *Web of Science* y EBSCOHOST, utilizando los descriptores Sueño, Burnout Psicológico y Escolar Maestros, y sus sinónimos. La búsqueda y selección de evidencia científica fue realizada por tres revisores, simultáneamente. **Resultados:** se seleccionaron tres artículos que evaluaron el sueño y el Burnout para docentes, realizados en el continente europeo (66,7%) y Estados Unidos, publicados a partir de 2018, que utilizaron tres instrumentos diferentes para evaluar variables relacionadas con el sueño y el Burnout. **Conclusión:** El agotamiento, la fatiga, la carga de trabajo, el compromiso excesivo, pueden ser fuentes de alteraciones del sueño y la presencia de Burnout en la profesión docente, justificando la implementación de programas que promuevan la promoción de la salud de esta clase.

Descritores: Sueño; Agotamiento Psicológico; Maestros; Horas de Trabajo; Salud Mental

INTRODUCTION

The formation and learning process of an individual happens since birth, as it is present in human nature to teach and learn, through actions, repetitions and examples. Teachers are an important part of this process, structuring the pedagogical training of those who arrive at the school.

Teachers form a significant proportion of the workforce globally.¹ According to the Ministry of Education, according to the

2017 census, 1.4 million teachers work in primary education, and 509,800 teachers work in secondary education in Brazil.²

Working with education is difficult because teachers are required to have direct or indirect contact with students' violence and indiscipline. In addition, these professionals often perform their duties in physically and psychologically inappropriate environments³, and have to dedicate more time to work in order to be able to reconcile

demands in the classroom and others such as preparing classes and tests that will vary, according to the Organization for Economic Cooperation and Development (OECD), with the teaching level it teaches, class size and professional qualification.⁴

The teacher has long hours of work directly with students who have different characteristics and needs, research and preparation of classes in extra hours, jeopardizing rest and even leisure. The pace of work is usually intense, demanding attention and concentration, in addition to an emotional investment. Work is relevant in people's lives and when performed with satisfaction, it brings fulfillment, pleasure and joy.⁵

The teaching activity has been marked by significant challenges, reflections of the constant transformations related to the world of work. The conditions resulting from this scenario, and the multiple demands made on the teacher's role, have been increasingly associated with physical and mental health problems presented by these workers.⁶

Time pressure, professional devaluation, difficulty in contacting colleagues and lack of autonomy are some of the many factors that have contributed to the emergence of illnesses and dissatisfaction, such as symptoms of anxiety, depression and emotional exhaustion.⁷⁻⁹ These can affect sleep duration or sleep quality. Sleep quality is one of the important

factors for maintaining good physical and mental health.¹⁰

The constant technological, economic, political, cultural and social changes that occur in our society have a direct relationship with the world of work in its various segments, including education. These changes influence people's lives, promoting an acceleration of tasks, changes at work to try to keep up with this dynamic. It requires simultaneous energy and refreshment and can change the daily routine, quality of life, including sleep.¹¹ Modern society demands high performance at work, long shift work, commuting time and various leisure activities, which has changed significantly human sleep patterns.¹²

Sleep has a restorative function in the body and its alterations can compromise the professional activities of workers. Teachers are among the professionals subject to sleep disturbances due to work characteristics, such as number of classes, diversity of students, hours of research and extra-class hours, among others. Taking care of this diversity makes the teaching practice a constant learning to meet the demands of the classrooms. In addition to sleep disturbances, given the adversities faced on a daily basis to keep up with the changes, individuals can still have an increase in stress levels, compromising the health and well-being of workers and such manifestations appear in the context of work.¹¹

The relationship with students in the classroom, excessive demands, lack of time, competition, continuous technological and area of study updating give rise to an institutional fatigue that places the career as one of the most stressful in the market.¹³

For teachers, the responsibility for the teaching and learning process can be exhausting and, to perform their role effectively, the education professional must be psychologically well-prepared. This profession presents itself as one of the most rewarding professions, in which the result of effort and dedication can be seen, however, the number of educators who have physical and mental exhaustion, with the need to move away from the classroom, is alarming. in order to solve problems of this order.¹⁴

The burnout syndrome refers to this chronicity of work-related stress, manifesting itself as a long-lasting response to chronic emotional and interpersonal stressors at work.^{15,16} As suggested by several authors^{17,18}, burnout seems to have serious consequences both for workers and for the organizations to which they belong.¹⁹

In the specific case of teachers, burnout can negatively affect the effectiveness of teaching^{20,21,22}, teachers' interactions with students²³, their motivation to work²⁴, their ability to support students^{25,26} and absenteeism.²⁷ It can also affect the health and well-being of teachers at work, increasing the probability of

suffering from various pathologies such as depression²⁸ or insomnia²⁹, among others.

Given the above, this study is justified by the presence of sleep disorders and factors that cause stress resulting from the demands of the teaching career.

The objective of this review was to identify studies that evaluated sleep disorders and burnout in high school teachers.

METHOD

This is an integrative review study guided by the research anagram PICO30, as follows: Population of Interest or Health Problem (P), which corresponds to high school teachers; Intervention or Interest (I), corresponding to the assessment of sleep disorders and Burnout; Comparison (C), teachers who had or did not have sleep problems and burnout; Outcomes or Results (O), teachers who sleep poorly and have psychological exhaustion, impaired quality of life.

This study was carried out based on original research, based on a six-step procedure: identification of the theme and selection of the hypothesis, establishment of the research strategy, definition and data collection, analysis of the collected data, interpretation and presentation of the results.^{31,32}

The search and selection of scientific evidence for the review was carried out by

three reviewers, simultaneously, on September 10 and 17, 2020 in the National Library of Medicine (PubMed) databases, in the Virtual Health Library (BVS), Scopus, Web of Science and EBSCOHOST.

The following descriptors in Health Sciences (DeCs) were used to search the VHL databases: Sleep, Sueño, Sono; "Burnout, Psychological", "Psychological Exhaustion", "Psychological Exhaustion"; "School Teachers", Maestros, "School Teachers". For the search in PubMed, EBSCOHOST, Web of Science, Scopus databases, the MeSH Terms were used: Sleep, "Burnout, Psychological", "School Teachers", as well as their synonyms. For the advanced search of each term, the Boolean operator "OR" was chosen. For crossings, the Boolean operator "AND" was used.

Filters were not applied to identify all articles available in the databases and reduce the risk of publication bias. The reading and selection of the articles was performed by three reviewers independently, through the online selection platform Rayyan QCR33, starting with the titles, followed by the abstracts and full texts. In the selection of titles, all those that presented the term "Professores / School Teachers", "Profestores de Ensino Médio/ Middle School Teachers", "Professores secondary", "Sono / Sleep", "Estresse/ Stress", "Burnout" were included. The last stage of selection

was carried out by reading the full text of the articles.

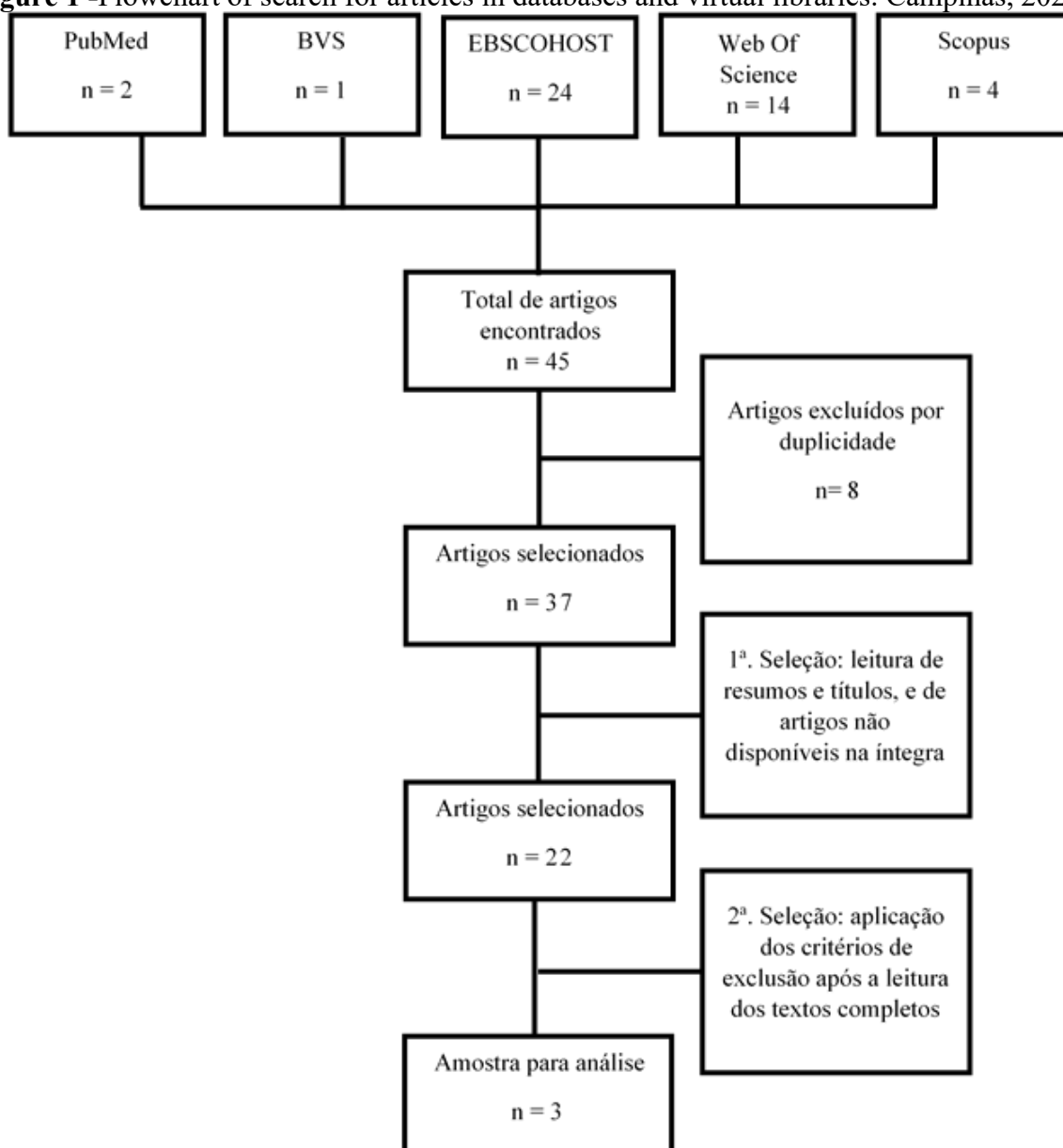
The extraction of data from the studies included in the sample was carried out with the construction of a spreadsheet, using the Microsoft Excel program, previously planned, containing the following information: authorship, year of publication, period of data collection, place of study, sample (n), sleep classification, instruments for assessing sleep quality and burnout. Because it is an integrative review with search in databases, this project did not require approval from the Research Ethics Committee.

For this review, studies carried out with high school teachers, published in English, Portuguese or Spanish, which brought evidence of poor quality or sleep disorders and Burnout, demonstrated by instruments, were included. Series and case reports, review studies and conference abstracts and studies unavailable in full were excluded. Also, duplicate articles were excluded, with inconsistency in results and statistical analyses.

A total of 45 articles were analyzed. The reading of the titles was used as a strategy for selection and, according to these, the analysis of the abstracts of the total sample, taking into account the inclusion and exclusion criteria. Thus, from the total of 45 articles found, 3 articles made up the

final sample. Figure 1 illustrates the search and refinement strategy.

Figure 1 -Flowchart of search for articles in databases and virtual libraries. Campinas, 2020



Each article selected in the final sample was classified according to the level of evidence based on the research design, according to the following classification: level 1, results from meta-analysis of multiple randomized controlled clinical studies; level 2, evidence resulting from

individual studies with experimental design; level 3, results of quasi-experimental studies; level 4, evidence from descriptive studies, including cross-sectional ones, or with a qualitative approach; level 5, case or experience reports; and, level 6, evidence based on expert opinions.³⁴

RESULTS

The articles selected in the sample were published in English. Of the total, 2 studies (66.7%) originated in the European continent, France and Spain, and one study in the American continent, in the United States.

It was observed that the journals that brought publications were from the field of psychology (66.7%) and the medical field (33.3%).

In Table 1, it is possible to see that the studies are recent, published from 2018. Regarding the study design, cross-sectional studies prevailed (66.7%), followed by a longitudinal study (33.3%). As for the level of evidence, studies with level 4 prevailed.

Table 1: Distribution of studies (n=3) according to year of publication, design and level of evidence of the study. 34 Campinas-SP, 2020

Variable	n	%
Year	2018	33.33%
	2019	33.33%
	2020	33.33%
Outline	Transversal	66.70%
	Longitudinal	33.30%
level of evidence	Level 3	33.30%
	Level 4	66.70%

Table 2 shows the number of studies according to variables related to sleep, as well as the main instruments used for this evaluation. Subjective sleep quality and sleep disorders and problems were evaluated in these studies. For this sleep assessment, the following instruments were found in the studies: a single item from the Spanish version of the Pittsburgh Sleep Quality

Index, Patient-Reported Outcome Measurement Information System (PROMIS-29) and four items developed by Jenkins, Stanton, Niemczyk and Rose (1988). For the assessment of Burnout Syndrome, the Burnout Clinical Subtype Questionnaire, Maslach Burnout Inventory-ES, and Maslach Burnout Inventory-GS were used.

Table 2: Number of studies according to variables related to sleep, and instruments used to assess sleep and burnout. Campinas-SP, 2020

Main variables related to sleep	Subjective sleep quality ³⁶	33.30%
	Sleep disorders/problem/disorders ^{35,37}	66.70%
Instruments used to assess sleep	<i>Pittsburgh Sleep Quality Index</i> (PSQI) ³⁶	33.33%
	PROMIS-29 ³⁷	33.33%
	Jenkins et al. ³⁵	33.33%
Instruments used to assess Burnout	Burnout Clinical Subtype Questionnaire ³⁶	33.33%
	Maslach Burnout Inventory-ES ³⁷	33.33%
	Maslach Burnout Inventory- GS ³⁵	33.33%

Chart 1 provides a description of the studied population, as well as the main results and a summary of the conclusions of the studies chosen for this review.

Table 1: Description of the studied population, objective, main results and summary of the conclusions of each study chosen for this review. Campinas-SP, 2020.

Title	First author/sample (year)	goal	Main results	Conclusion
<i>Towards a more refined understanding of the interplay between burnout and engagement among secondary school teachers: A person-centered Perspective</i> ³⁶	Angel Abós n= 584 (2019)	Studying, in a sample of high school teachers, how the three subtypes of Farber burnout (ie, frantic, unchallenged, and burnout) and engagement could be grouped together by adopting a person-centered perspective.	Five profiles were identified, showing a co-occurrence of frenetic burnout and engagement in three of these profiles. Furthermore, experiencing moderate levels of engagement appeared to be more adaptive than experiencing high levels of engagement combined with moderate levels of frantic exhaustion.	Coexistence of burnout and engagement, highlighting how different profiles can differ and affect how well teachers function at work.
<i>Impact of Mindfulness Training on the Well-Being of Educators</i> ³⁷	Devina J. Dave n= 236 (2020)	To measure the short- and long-term impact of an 8-week MBSR training program on self-reported burnout, depression, anxiety, self-compassion, and	Multiple linear regression analysis of short-term cohort data yielded statistically significant improvements in mindfulness, self-	They defend the need to implement programs that help educators to better manage the stressors of their

		mindfulness.	compassion, and personal fulfillment and decreases in isolation, anxiety, fatigue, and emotional exhaustion. In the long-term cohort, repeated measures regression showed that self-compassion and mindfulness continued to significantly improve, while negative fatigue and sleep disturbances showed statistically significant decreases.	lives and occupations.
<i>Effects of workload on teachers' functioning: A moderated mediation model including sleeping problems and overcommitmen</i> ³⁵	Tiphaine Huyghebaert n= 884 (2018)	To investigate the mediating role of sleep problems in the relationship between workload and outcomes (emotional exhaustion, presenteeism, job satisfaction and performance), and to examine overcommitment as a moderator in the relationship between workload and sleep problems.	The positive indirect effects of workload on emotional exhaustion and presenteeism, and the negative indirect effects of workload on job satisfaction and performance, via sleep problems, were significant only among overcommitted teachers. Workload and overcommitment were also directly related to all four outcomes, precisely, both were positively related to emotional exhaustion and presenteeism and negatively to job satisfaction and performance.	It offers some guidelines for increasing teachers' job satisfaction and performance and reducing their sleep problems, emotional exhaustion, and presenteeism.

DISCUSSION

In this search, articles were found that evaluated sleep, stress and tension at work, but in view of the objective of this study, articles that evaluated sleep and Burnout at some point were selected, making up a total

of three studies, demonstrating the scarcity of research in this scenario.

The absence of studies from Latin America was noted, observing a study from North America³⁷ and two from Europe.^{35,36} This data exposes a little-explored scientific production with an

approach to sleep and Burnout in this population in other regions, including Brazil. Also, no studies were observed with a higher level of evidence that could contribute to the understanding of this issue, which portrays a fragility of studies focused on this aspect of workers' health in the area of education.

Few results were obtained in this review that presented contributions from different instruments for the evaluation of sleep and Burnout in high school teachers.

It was found the use of three different instruments to evaluate variables related to sleep in teachers, where these instruments do not correspond to a gold standard of evaluation for this issue. One of the studies used a single item from the Spanish version of the Pittsburgh Sleep Quality Index³⁶, another study applied the Patient-Reported Outcome Measurement Information System (PROMIS-29)³⁷, which measures the functionality of physical and mental health and presents among its items, one that assesses sleep disorders, the third study used the four items developed by Jenkins, Stanton, Niemcryk and Rose (1988)³⁵ to measure sleep problems during the last 4 weeks. According to Bertolazi³⁸, the PSQI is a questionnaire that is easy to understand and apply, which guarantees the reliability of the answers obtained. The PSQI-BR and the original PSQI presented, through Cronbach's Alpha evaluation, an internal consistency of

0.73 and 0.75, respectively, when applied to a group of bilingual individuals.³⁸

The same occurred for the instruments used to assess Burnout, where one study used the Spanish version of the Burnout Clinical Subtype Questionnaire³⁶ and the other two studies used the Maslach Burnout Inventory, often referred to as the gold standard burnout measure, in one, the specific version for educators³⁷, where the difference consists in replacing the word "recipient" with "student" in all items where this term appears, and the other the General Survey version³⁵, emphasizing that only 5 items of the questionnaire were used. According to the systematic review by Dalcin and Carlotto, the instrument most used to evaluate the Burnout Syndrome was the Maslach Burnout Inventory (MBI), developed by Maslach and Jackson (1981), confirming the literature that has referred that, regardless of the occupational characteristics of the sample or its origin, the MBI is the most used instrument to assess burnout.³⁹

Still, according to Maslach and Jackson, the internal consistency of the three dimensions of the inventory is satisfactory, as it presents a Cronbach's alpha ranging from 0.71 to 0.90 and the test and re-test coefficients range from 0.60 to 0.80 in periods of up to one month.⁴⁰

In the study that sought to understand burnout and involvement among high school

teachers³⁶, results were observed in which the three subtypes of Burnout were positively related to anxiety, depression and the intention to quit smoking, and negatively to sleep quality. On the contrary, involvement was negatively related to anxiety, depression and intention to quit smoking and positively related to sleep quality. A study with university professors, indicates that subjective sleep quality is closely associated with work exhaustion and poor sleep quality can lead to professional burnout.⁴¹

The study, which assessed the impact of mindfulness training on educators' well-being, found differences in anxiety, depression, fatigue, sleep disturbance, and social satisfaction. A statistically significant decrease was found in fatigue and sleep disturbances six months after the intervention, when compared with the baseline of the study.³⁷

The third study, which looked at the effects of workload on teacher functioning, highlighted that workload, overcommitment, and their interaction had positive effects on sleep problems. It also showed that the regression line for sleep problems during workload was significantly positive when overcommitment was high, but not significant when overcommitment was low. In addition, workload, overcommitment, and sleep problems were positive, related to emotional exhaustion. Workload,

overcommitment, and sleep problems had positive relationships with presenteeism. In addition, workload, excessive commitment, and sleep problems negatively related to job satisfaction. Finally, workload, overcommitment, and sleep problems had negative effects on performance.³⁵

It was highlighted that exhaustion, fatigue, workload, excessive commitment, can be sources of sleep problems.^{35,37} A study with Australian teachers demonstrated results that suggest that high-quality sleep is the most important resource to help teachers recover from work demands, resulting in reduced fatigue and increased engagement.⁴²

In the longitudinal study that carried out the implementation of a Stress Reduction Program based on Mindfulness³⁷, it was revealed the need to implement programs that nurture classroom configurations from the perspectives of the educator and the student, in addition to providing educators with skills that enhance the quality of your personal and classroom experience. The results of this study demonstrate the positive impact of mindfulness training on reducing depression, fatigue, isolation, anxiety, self-judgment, and increasing self-compassion and social satisfaction among educators.

Research carried out by Huyghebaert et al.³⁵ offered some guidelines to increase teachers' job satisfaction and performance and reduce their sleep problems, emotional

exhaustion and presenteeism, indicating the importance of considering the conditions in which teachers' workload teachers could be reduced or more appropriately distributed, especially for overcommitted teachers, in order to offer them the possibility of psychological detachment from work and increase their opportunities for recovery.³⁵ Swedish teachers agreed that work consumes energy and depletes strength to take care of chores at home, reported problems relaxing in free time due to constant thoughts about work, they also reported that problems at work make them irritable at home and a good part of them have trouble sleeping due to constant worries about work.⁴³

Abós et al.³⁶ used a person-centered approach, examining which configurations of the three Farber Burnout subtypes (ie, frenzied, underappreciated, and worn out), with work involvement, emerged among teachers and which resulting profiles produced the most common pattern. adaptive behavior of teachers (psychological, physical and work-related functioning), reaching results that support the coexistence of Burnout and engagement, highlighting how different profiles can affect differently the good functioning of teachers at work.

The studies had some limitations, such as using an instrument to concept of Burnout less explored so far, while most recent studies are based on the definition of

Maslach, the most used and the assessment of sleep quality measured with a single item of the Pittsburgh Sleep Quality Index, recommending caution in interpretation of results.³⁶

In the study that implemented a program, there was no control group and had partial responses from some participants, limiting the results obtained.³⁷ Cross-sectional data collection, use of self-report measures and samples from a single location also limited the study, and resulted in the indication for future research with the use of actigraphy to monitor sleep and other samples of teachers from different cultures.³⁵

In the Spanish study³⁶, there was a sample with the same proportion of male and female teachers, however when we look at the actual numbers we can observe that the majority were female, as well as in the American³⁷ and French study.³⁵ This is an interesting question that could be explored in future studies addressing the female gender in the teaching profession, facing the double journey, professional and personal life.

Two studies^{35,36} presented data collection through a virtual questionnaire made available by email or through posts in community teaching groups, on social networks, demonstrating a trend in times when these online tools are available to achieve better reach of the research target

population. The academic environment has adapted to the new reality through the application of websurveys, which despite having limitations, are characterized by practicality, low cost, speed of the result and eliminate the need for an intermediary.^{44,45}

In this way, sleep problems and signs of Burnout are relevant issues, present in the daily life of high school teachers, which can be further explored to help the subject in coping with stress, depression and anxiety, seeking to promote health and increase quality of life.

CONCLUSION

It was found that exhaustion, fatigue, workload, excessive commitment, can be sources of sleep problems and the presence of signs of Burnout in the teaching profession.

The importance of early identification of sleep problems and the presence of Burnout in the academic environment by managers and educators is emphasized, so that these health problems can be recognized or minimized, and the work as a teacher can be more productive and less exhausting, providing a favorable teaching environment for teachers and students.

It points out the need to implement programs that nourish classroom configurations from the perspectives of the educator and the student, in addition to providing educators with skills that improve

the quality of their personal experience and in the classroom, providing the promotion of health.

Among the gaps in the investigated topic, the absence of studies carried out in Brazil stands out, which suggests that the characteristics of the teaching work process may differ in Brazilian schools.

It is concluded that studies with better elaborated methodological designs are necessary for the evaluation of sleep quality and the presence of Burnout in high school teachers who face an intense work routine in their daily lives.

The review presents as limitations the number of publications that seek to present scientific evidence on sleep problems and signs of Burnout in high school teachers, and this study can open the dialogue of this discussion, arousing the interest of researchers.

Foment/Acknowledgment: This research was developed with financial support from the Coordination for the Improvement of Higher Education Personnel (CAPES).

REFERENCES

1 Musa NA, Moy FM, Wong LP. Prevalence and factors associated with poor sleep quality among secondary school teachers in a developing country. *Ind health*. [Internet]. 2018 [citado em 16 out 2020]; 208(56):407-18. doi:10.2486/indhealth.2018-0052

- 2 Ministério da Educação (Brasil). Censo escolar 2017: notas estatísticas [Internet]. Brasília, DF: Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira; 2018 [citado em 25 jul 2019]. Disponível em: http://download.inep.gov.br/educacao_basica/censo_escolar/notas_estatisticas/2018/nota_s_estatisticas_Censo_Escolar_2017.pdf
- 3 Bisserra MP. Voz e trabalho: estudo dos condicionantes das mudanças a partir do discurso de docentes. *Saúde Soc.* [Internet]. 2014 [citado em 16 ago 2019]; 23(3):966-78. Disponível em: <http://www.revistas.usp.br/sausoc/article/view/88580/91467>
- 4 Organization for Economic Co-operation and Development (OECD). Education at a glance 2017: OECD indicators [Internet]. Paris: OECD; 2017 [citado em 16 ago 2019]. Disponível em: <https://www.oecd-ilibrary.org/docserver/eag-2017-en.pdf?expires=1565970333&id=id&accname=guest&checksum=EBD419C27A7D241F842CF9017AB5621F>
- 5 Teixeira LN, Rodrigues AL, Silva FM, Silveira RCP. As possíveis alterações no estilo de vida e saúde de professores. *Rev Enferm Cent-Oeste Min.* [Internet]. 2015 [citado em 16 ago 2019]; 5(2):1669-1683. doi:<http://dx.doi.org/10.19175/recom.v0i0.876>
- 6 Cruz RM, Lemos JC, Welter MM, Guisso L. Saúde docente, condições e carga de trabalho. *Revista Electrónica de Investigación y Docencia* [Internet]. 2010 [citado em 16 ago 2019]; 147-60. Disponível em: <https://docplayer.com.br/5693997-Saude-docente-condicoes-e-carga-de-trabalho-roberto-moraes-cruz-1-jadir-camargo-lemos-marisete-m-welter-luciane-guisso.html>
- 7 Fontana RT, Pinheiro DA. Condições de saúde autoreferidas de professores de uma universidade regional. *Rev Gaúch Enferm.* [Internet]. 2010 [citado em 16 ago 2019]; 31(2):270-6. Disponível em: <https://www.scielo.br/j/rgenf/a/Q7mybMNzFNYScpVLd8qWfRw/?lang=pt>
- 8 Gasparini SM, Barreto SM, Assunção AA. O professor, as condições de trabalho e os efeitos sobre sua saúde. *Educ Pesqui.* [Internet]. 2005 [citado em 16 ago 2019]; 31(2):189-99. Disponível em: <http://www.scielo.br/pdf/ep/v31n2/a03v31n2.pdf>
- 9 Reis EJFB, Araújo TM, Carvalho FM, Barbalho L, Silva MO. Docência e exaustão emocional. *Educ Soc.* [Internet]. 2006 [citado em 16 ago 2019]; 27(94):229-53. Disponível em: <http://www.scielo.br/pdf/es/v27n94/a12v27n94.pdf>
- 10 Thoits PA. Mechanisms linking social ties and support to physical and mental health. *J Health Soc Behav.* [Internet]. 2011 [citado em 16 ago 2019]; 52(2):145-61. doi: 10.1177/0022146510395592
- 11 Ligabue R. Prevalência de alterações de sono e estresse em docentes do ensino superior de uma instituição de ensino privada de Porto Alegre/RS [dissertação]. Canoas: Centro Universitário La Salle; 2017. 81p. Disponível em: <http://dspace.unilasalle.edu.br/handle/11690/710>
- 12 Briançon-marjollet, A et al. The impact of sleep disorders on glucose metabolism: endocrine and molecular mechanisms. *Diabetol Metab Syndr.* [Internet]. 2015 [citado em 16 ago 2019]; 7(1):25. Disponível em: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4381534/>
- 13 Frota GB, Teodósio ASS. Profissão docente, profissão decente?: estratégias de professores frente ao sofrimento no trabalho em um ambiente de inovação pedagógica. In: XXXVI Encontro EnANPAD; 22-26 set 2012; Rio de Janeiro. Rio de Janeiro: ANPAD; 2012 [citado em 03 jan 2023]. p. 2-16. Disponível em: http://www.anpad.org.br/admin/pdf/2012_GPR2020.pdf
- 14 Pomiecinski JAS, Pomiecinski CM. Gestão escolar: uma reflexão sobre a saúde emocional do professor - entre o stress e a síndrome de Burnout. *Colóquio Internacional de Educação* [Internet]. 2014 [citado em 16 ago 2019]; 2(1):217-30. Disponível em:

- <https://portalperiodicos.unoesc.edu.br/coloquiointernacional/article/view/5188/3160>
15 Maslach C, Schaufeli WB, Leiter MP. Job Burnout. *Ann Rev Psychol*. [Internet]. 2001 [citado em 6 set 2022]; 52:397–422. Disponível em:
<https://pubmed.ncbi.nlm.nih.gov/11148311/>
16 Maslach C, Goldberg J. Prevention of burnout: new perspectives. *Appl Prev Psychol*. [Internet]. 1998 [citado em 6 set 2022]; 7(1):63–74. Disponível em:
<https://www.sciencedirect.com/science/article/pii/S096218499880022X>
17 Mojica-Crespo R, Morales-Crespo MM. Pandemia COVID-19, la nueva emergencia sanitaria de preocupación internacional: una revisión. *Med Fam SEMERGEN* [Internet]. 2020 [citado em 6 set 2022]; 46(Suppl 1):65–77. Disponível em:
<https://www.sciencedirect.com/science/article/pii/S1138359320301714?via%3Dihub>
18 Cifuentes-Faura J. Crisis del coronavirus: impacto y medidas económicas en Europa y en el mundo. *Occup Med*. [Internet]. 2020 [citado em 6 set 2022]; 9(18). Disponível em:
<https://journals.openedition.org/espacoeconomia/12874>
19 Gil-Monte P. Manual de psicología aplicada al trabajo y a la prevención de los riesgos laborales. Madrid: Pirámide; 2014.
20 Kaur B, Singh A. Burnout among school teachers in relation to their psychological well-being. *Indian J Health Wellbeing* [Internet]. 2014 [citado em 6 set 2022]; 5(3):375–78. Disponível em:
<https://www.proquest.com/openview/6958a840d9ae0beac23795ec52e324a6/1?pq-origsite=gscholar&cbl=2032134>
21 Schonfeld IS, Verkuilen J, Bianchi R. Inquiry into the correlation between burnout and depression. *J Occup Health Psychol*. [Internet]. 2019 [citado em 6 set 2022]; 24(6):603–616. Disponível em:
<https://pubmed.ncbi.nlm.nih.gov/30945922/>
22 Yerdelen S, Sungur S, Klassen RM. Türkiye’deki Fen Bilgisi Öğretmenlerinin Mesleki İyilik Durumlarının Bazı Demografik ve Kontekst Değişkenleri ile İlişkisi: Çok Değişkenli Analiz. *Educ Sci*. [Internet]. 2016 [citado em 6 set 2022]; 41:147-61. Disponível em:
<http://egitimvebilim.ted.org.tr/index.php/EB/article/view/4257>
23 Travers C. Current knowledge on the nature, prevalence, sources and potential impact of teacher stress. In: McIntyre T, McIntyre, S, Francis D, Editores. *Aligning perspectives on health, safety and well-being*. Cham, Switzerland: Springer; 2017 [citado em 6 set 2022]; p. 23-54. Disponível em:
https://link.springer.com/chapter/10.1007/978-3-319-53053-6_2
24 McLean L, Taylor M, Jimenez M. Career choice motivations in teacher training as predictors of burnout and career optimism in the first year of teaching. *Teach Teach Educ*. [Internet]. 2019 [citado em 6 set 2022]; 85:204-14. Disponível em:
<https://www.sciencedirect.com/science/article/abs/pii/S0742051X18312058?via%3Dihub>
25 Jennings PA, Greenberg MT. The prosocial classroom: teacher social and emotional competence in relation to student and classroom outcomes. *Rev Educ Res*. [Internet]. 2009 [citado em 6 set 2022]; 79(1):491-525. Disponível em:
<https://journals.sagepub.com/doi/10.3102/0034654308325693>
26 Zapf D, Vogt C, Seifert C, Mertini H, Isic A. Emotion work as a source of stress: the concept and development of an instrument. *Eur J Work Organ Psychol*. [Internet]. 1999 [citado em 6 set 2022]; 8(3):371-400. Disponível em:
<https://www.tandfonline.com/doi/abs/10.1080/135943299398230>
27 Makhdoom IF, Atta M, Malik NI. Counterproductive work behaviors as an outcome of job burnout among high school teachers. *Bull Educ Res*. [Internet]. 2019 [citado em 6 set 2022]; 41(2):79-92. Disponível em:
https://www.researchgate.net/publication/338139544_Counterproductive_Work_Behaviors_as_an_Outcome_of_Job_Burnout_among_High_School_Teachers
28 Martínez-Monteağudo MC, Inglés CJ, Granados L, Aparisi D, García-Fernández JM. Trait emotional intelligence profiles, burnout, anxiety, depression, and stress in

- secondary education teachers. *Pers Individ Dif*. [Internet]. 2019 [citado em 6 set 2022]; 142:53-61. Disponível em: <https://www.sciencedirect.com/science/article/abs/pii/S0191886919300480?via%3Dihub>
- 29 Gómez RAF, Valle CMZ. Impacto psicológico en los docentes de educación primaria a causa de la COVID-19. *ACADEM*. [Internet]. 2021 [citado em 6 set 2022]; 8(2):129-39. Disponível em: <https://revistacientifica.uamericana.edu.py/index.php/academo/article/view/533>
- 30 Santos CMC, Pimenta CAM, Nobre MRC. A estratégia PICO para a construção da pergunta de pesquisa e busca de evidências. *Rev Latinoam Enferm*. [Internet]. 2007 [citado em 13 set 2020]; 15(3). doi:<https://doi.org/10.1590/S0104-11692007000300023>
- 31 Mendes KDS, Silveira RCCP, Galvão CM. Revisão integrativa: método de pesquisa para a incorporação de evidências na saúde e na enfermagem. *Texto Contexto Enferm*. [Internet]. 2008 [citado em 04 set 2020]; 17(4):758-64. doi: <https://doi.org/10.1590/S0104-07072008000400018>
- 32 17 Whittmore R, Knafl K. The integrative review: updated methodology. *J Adv Nurs*. [Internet]. 2005 [citado em 04 set 2020]; 52(5):546-53. doi:<https://doi.org/10.1111/j.1365-2648.2005.03621.x>
- 33 18 Mourad O, Hossam H, Zbys F, Ahmed E. Rayyan - a web and mobile app for systematic reviews. *Syst Rev*. [Internet]. 2016 [citado em 04 set 2020]; 5:210. doi: 10.1186/s13643-016-0384-4
- 34 Souza MT, Silva MD, Carvalho, R. Integrative review: what is it? How to do it? *Einstein* [Internet]. 2010 [citado em 6 set 2022]; 8(1):102-6. doi:<https://doi.org/10.1590/s1679-45082010rw1134>
- 35 Huyghebaert T, Gillet N, Beltou N, Tellier F, Fouquereau E. Effects of workload on teachers' functioning: a moderated mediation model including sleeping problems and overcommitment. *Stress health* [Internet]. 2018 [citado em 11 set 2020]; 34:601-11. doi: <https://doi.org/10.1002/smi.2820>
- 36 Abós Á, Sevil-Serrano J, Haerens L, Aelterman N, García-González L. Towards a more refined understanding of the interplay between burnout and engagement among secondary school teachers : a person-centered perspective. *Learn Individ Differ*. [Internet]. 2019 [citado em 11 set 2020]; 72:69-79. doi:<https://doi.org/10.1016/j.lindif.2019.04.008>
- 37 Dave DJ, McClure LA, Rojas SR, De Lavalette O, Lee DJ. Impact of mindfulness training on the well-being of educators. *J Altern Complement Med*. [Internet]. 2020 [citado em 10 set 2020]; 26(7):645-51. doi:10.1089/acm.2019.0451
- 38 Bertolazi NA, Fagundes SC, Hoff LS, Dartora EG, Miozzo ICS, Barba MEF, et al. Validation of the brazilian portuguese version of the Pittsburg Sleep Quality Index. *Sleep Med*. [Internet]. 2011 [citado em 13 set 2020]; 12(1):70-5. doi:<https://doi.org/10.1016/j.sleep.2010.04.020>
- 39 Dalcin, L, Carlotto MS. Síndrome de burnout em professores no Brasil: considerações para uma agenda de pesquisa. *Psicol Rev*. [Internet]. 2017 [citado em 13 set 2020]; 23(2):745-71. doi:<http://dx.doi.org/10.5752/P.1678-9563.2017v23n2p745-770>
- 40 Maslach C, Jackson SE. The measurement of experienced Burnout. *J Occup Behav*. [Internet]. 1981 [citado em 13 set 2020]; 2:99-113. Disponível em: <https://onlinelibrary.wiley.com/doi/epdf/10.1002/job.4030020205>
- 41 Wu J, Dong Y, Zhao X, He S, Zhang X. Burnout in university faculty: an interaction between subjective sleep quality and the OXTRrs2268498 polymorphism. *J Affect Disord*. [Internet]. 2020 [citado em 13 set 2020]; 276:927-35. doi:<https://doi.org/10.1016/j.jad.2020.07.094>
- 42 Garrick A, Mak AS, Cathcart S, Winwood PC, Bakker AB, Lushington K. Non-work time activities predicting teachers' work-related fatigue and engagement: an

- effort-recovery approach. *Aust Psychol.* [Internet]. 2018 [citado em 13 set 2020]; 53(3):243-52. doi: <https://doi.org/10.1111/ap.12290>
- 43 Schad E, Johnsson P. Well-being and working conditions of teachers in Sweden. *Psychol Russ.* [Internet]. 2019 [citado em 13 set 2020]; 12(4):23-46. doi:10.11621/pir.2019.0402
- 44 Joncew CC, Cendon BV, Ameno N. Websurveys como método de pesquisa. *Inf Inf.* [Internet]. 2014 [citado em 13 set 2020]; 19(3):192-218. doi:10.5433/1981-8920.2014v19n3p192
- 45 Boni, RB. Websurveys in the time of COVID-19. *Cad Saúde Pública* [Internet]. 2020 [citado em 13 set 2020]; 36(7). doi:10.1590/0102-311X00155820

RECEIVED: 03/08/21

APPROVED: 12/05/22

PUBLISHED: 03/2023