Prevalence of Burnout Syndrome in Teachers: Systematic Review Protocol

Prevalência da Síndrome de Burnout Em Professores: Protocolo de Revisão Sistemática
Prevalencia del Síndrome de Burnout en Docentes: Protocolo de Revisión Sistemática

RESUMO
Objetivo: Este protocolo de revisão sistemática visa analisar a prevalência da Síndrome de Burnout entre professores. **Método:** Registrado na PROSPERO (CRD420250651910) e seguindo as diretrizes PRISMA, incluirá estudos observacionais (transversais, de coorte e caso-controle) que utilizem instrumentos validados. A busca será realizada nas bases MEDLINE (PubMed), EMBASE, LILACS (BVS), PsycInfo e Google Acadêmico. A seleção e extração dos dados serão feitas por dois revisores independentes, com um terceiro para resolver discordâncias. O risco de viés será avaliado pelas ferramentas ROBINS-E e JBI. A síntese dos dados incluirá meta-análise com modelos de efeitos aleatórios e avaliação da qualidade da evidência pelo sistema GRADE. **Conclusão:** Esta revisão fornecerá uma visão global da prevalência do burnout em professores, identificando fatores associados e contribuindo para novas perspectivas sobre o tema.
DESCRITORES: Esgotamento psicológico; Docente; Prevalência.

ABSTRACT
Objective: This systematic review protocol aims to analyze the prevalence of Burnout Syndrome among teachers. **Method:** Registered in PROSPERO (CRD420250651910) and following PRISMA guidelines, it will include observational studies (cross-sectional, cohort, and case-control) that use validated instruments. The search will be conducted in the MEDLINE (PubMed), EMBASE, LILACS (BVS), PsycInfo, and Google Scholar databases. The selection and extraction of data will be carried out by two independent reviewers, with a third to resolve any discrepancies. The risk of bias will be assessed using the ROBINS-E and JBI tools. The data synthesis will include meta-analysis with random effects models and evaluation of the quality of evidence using the GRADE system. **Conclusion:** This review will provide a comprehensive overview of the prevalence of burnout among teachers, identifying associated factors and contributing to new perspectives on the topic.
DESCRIPTORS: Burnout, Psychological; Faculty; Prevalence.

RESUMEN
Objetivo: Este protocolo de revisión sistemática tiene como objetivo analizar la prevalencia del Síndrome de Burnout entre profAesores. **Método:** Registrado en PROSPERO (CRD420250651910) y siguiendo las directrices PRISMA, incluirá estudios observacionales (transversales, de cohorte y caso-control) que utilicen instrumentos validados. La búsqueda se realizará en las bases MEDLINE (PubMed), EMBASE, LILACS (BVS), PsycInfo y Google Académico. La selección y extracción de los datos serán realizadas por dos revisores independientes, con un tercero para resolver discrepancias. El riesgo de sesgo será evaluado por las herramientas ROBINS-E y JBI. La síntesis de los datos incluirá un meta-análisis con modelos de efectos aleatorios y una evaluación de la calidad de la evidencia mediante el sistema GRADE. **Conclusión:** Esta revisión proporcionará una visión global de la prevalencia del burnout en profesores, identificando factores asociados y contribuyendo a nuevas perspectivas sobre el tema.
DESCRIPTORES: Agotamiento Psicológico; Docentes; Prevalencia.

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INTRODUCTION

Burnout Syndrome is a psychological disorder resulting from chronic stress in the workplace, mainly affecting professionals exposed to high emotional demands. Recognized by the World Health Organization (WHO) in the International Classification of Diseases (ICD-11), the condition compromises both mental health and professional performance. [1] It is characterized by three dimensions: emotional exhaustion, depersonalization, and reduced personal fulfillment at work. Emotional exhaustion results from an overload of demands, while depersonalization manifests itself in distancing and negative attitudes toward colleagues and students. Reduced personal fulfillment is associated with feelings of incompetence and professional dissatisfaction. [2]

In the educational context, the syndrome is aggravated by factors such as excessive workload, lack of institutional support, low pay and precarious working conditions, negatively impacting the quality of education and resulting in high rates of absenteeism and demotivation. Initial symptoms include mood swings, impatience, difficulty concentrating and isolation, which can progress to anxiety, depression and physical problems such as insomnia, migraines and gastrointestinal disorders. [3]

Teaching is one of the professions most vulnerable to burnout syndrome. Since the 1980s, studies have indicated high levels of the condition among teachers, which led the International Labour Organization (ILO) to classify it as one of the most stressful occupations. [4] In Brazil, around 30% of workers suffer from chronic stress and Burnout, which is one of the main causes of professional absence. [5] Factors such as long working hours, interpersonal pressure, lack of resources and undervaluation contribute to the incidence of the syndrome.

Studies indicate that Brazil is the second country with the highest incidence of occupational diseases, behind only Japan. Approximately 32% of workers are affected, resulting in absences and early retirement. [1] In the case of teachers, the impact of Burnout Syndrome directly affects the educational system, compromising the quality of teaching and increasing rates of occupational illness.

In light of this scenario, it is essential to conduct a systematic review of the literature to investigate the prevalence of Burnout Syndrome among teachers, considering variables such as demographic characteristics, level of education, geographic context and main risk factors. The analysis of these data will allow us to identify patterns, deepen our knowledge about the severity of Burnout and its comorbidities, and provide support for effective strategies to prevent and manage the syndrome.

A preliminary search carried out in databases such as PROSPERO, Medline (PubMed), EMBASE, PsycInfo, LILACS (VHL) and in the gray literature of Google Scholar did not identify any systematic reviews published on the subject. However, an initial search in PubMed, using the Health Sciences Descriptors (DeCS), indicated the existence of relevant studies that meet the inclusion criteria. Thus, this systematic review protocol aims to analyze the prevalence of Burnout Syndrome among teachers.

METHOD

The protocol was registered with PROSPERO (CRD420250651910), and the review will be reported according to the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines. [6]

Eligibility criteria

This review will include observational studies (cross-sectional, cohort or case-control) that investigate burnout syndrome in teachers, regardless of age, gender or educational level (primary, secondary or higher education). The selected studies should address the following aspects: Prevalence of burnout syndrome among teachers; Risk factors associated with the development of burnout, such as excessive workload, lack of institutional support, violence in the workplace, low income, among others; Consequences of burnout, including impacts on mental health, absenteeism, turnover, professional performance, among others.

The studies may involve teachers from different contexts, such as public and private schools and universities, and should use validated instruments to measure burnout syndrome. Among the accepted instruments are: Maslach Burnout Inventory [7], the Copenhagen Burnout Inventory [8], the Oldenburg Burnout Inventory [9], the Teacher Burnout Characterization Scale [10], the Burnout Assessment Tool [11], in addition to other recognized and validated tools for assessing the syndrome.

The following types of studies will be excluded: Randomized clinical trials or experimental studies; Studies published in languages other than English, except in the LILACS database (VHL); Case reports,

case series or qualitative studies that do not present quantitative data on prevalence or risk factors; studies that do not specifically focus on teachers, such as those involving professionals from other areas or the general population; studies that do not use validated instruments for diagnosing burnout syndrome; systematic reviews, meta-analyses or secondary studies that do not present primary data; studies that address other mental health conditions, such as depression or anxiety, with no direct link to burnout syndrome; and studies focused on interventions for treating burnout, unless they also provide data on prevalence or risk factors.

Sources of information

The review will include the following databases and sources: MEDLINE (PubMed), EMBASE, LILACS (VHL), PsycInfo, as well as Google Scholar, which will be used to search for gray literature. These sources were chosen to ensure the comprehensiveness and relevance of the studies in the area.

Research Strategy

A search strategy based on the acronym PEO (Population, Exposition, Outcomes) was developed to identify relevant keywords and locate articles in databases and gray literature. The strategy aims to locate original studies published since the inception of the database to the present, in any language. If necessary, a professional translator will be used to translate the studies into English. The P component refers to the study population (teachers), E corresponds to the exhibitor (burnout syndrome) and O represents the outcome (prevalence). To combine the key terms, Boolean operators will be used: the "OR" operator will be used to connect terms from the same PEO category, and the "AND" operator will be used to connect terms from different categories.

Duplicate citations will be eliminated after collection and entry into Rayyan (Qatar Computing Research Institute, Doha, Qatar). Two reviewers (NC and TM) will independently screen titles, abstracts, and keywords against the inclusion criteria (population, exposure, and outcomes). Studies will be classified as "yes" (meets criteria), "maybe" (uncertain), or "no" (does not meet criteria). Discrepancies will be resolved by consensus or by a third reviewer (BM). Reasons for exclusion will be documented at all stages (title/abstract screening and full-text selection). To ensure consistency, a preliminary review of a subset of studies will be performed, and procedures will be adjusted as necessary. Two emails will be sent to authors to request additional information, if necessary. The selection process will be recorded in a PRISMA flowchart.[6]

Data collection process

Two reviewers (NC and TM) will independently extract data using a custom spreadsheet. Data will include study characteristics (authors, year, country, design), participant characteristics (age, gender, role, sample size), and associated risk factors (excessive workload, lack of institutional support, workplace violence, low income, work-life imbalance, among others). Secondary outcomes such as mental health impacts (depression, anxiety), absenteeism, job turnover, reduced performance, and overall quality of life will also be collected. Authors of articles will be contacted twice to obtain missing information. After 30 days, discrepancies or missing information will be noted in the evaluation report.

Item data

All research outcomes will be listed and defined, including methods for deciding which outcomes to collect. Additional variables, such as participant characteristics, interventions, and funding sources, will also be listed. Assumptions for dealing with missing or unclear information will be described.

Risk assessment

The risk of bias will be assessed by two

TABLE 1: Search strategy	
POPULATION:	"School Teachers"[Mesh] OR "School Teacher" OR "Teacher, School" OR OR "Teachers, School" OR "Middle School Teachers" OR "Middle School Teacher" OR "School Teacher, Middle" OR "School Teachers, Middle" OR "Teacher, Middle School" OR "Teachers, Middle School" OR "Elementary School Teachers" OR "Elementary School Teacher" OR "School Teacher, Elementary" OR "School Teachers, Elementary" OR "Teacher, Elementary School" OR "Teachers, Elementary School" OR "High School Teachers" OR "High School Teacher" OR "School Teacher, High" OR "School Teachers, High" OR "Teacher, High School" OR "Teachers, High School" OR "Pre-School Teachers" OR "Pre-School Teacher" OR "Pre School Teachers" OR "Teacher, Pre-School" OR "Teachers, Pre-School"
Exposition:	"Burnout, Psychological"[Mesh] OR "Psychological Burnout" OR "Burnout" OR "Psychological Burn-out" OR "Burn-out Psychological" OR "Psychological Burn out" OR "Burnout" OR "Burnout Syndrome" OR "Burn-out Syndrome" OR "Burn out Syndrome" OR "Burnout, Student" OR "Burnout, School" OR "School Burnout" OR Student Burnout
Outcome:	"Prevalence"[Mesh] OR Prevalences OR "Point Prevalence" OR "Point Prevalences" OR "Prevalence, Point" OR "Period Prevalence" OR "Period Prevalences" OR "Prevalence, Period" AND "Epidemiology"[Mesh] OR "Social Epidemiology" OR "Epidemiologies, Social" OR "Epidemiology, Social" OR "Social Epidemiologies"

In the first step of creating the search strategy, MeSH phrases were used to identify the most relevant terms, with PubMed being the first database searched. For PubMed, a detailed search strategy was developed, using MeSH terms to index relevant publications. Each database in this review will have a specific version of the search strategy (Appendix I), including all recognized keywords and indexing terms.

Selection Process

independent reviewers (NC and TM) using the ROBINS-E tool for non-randomized clinical trials [12] and the JBI checklist for cross-sectional studies. Discrepancies will be resolved by consensus or consultation with a third reviewer (BM). [13-14] Authors of articles will be contacted for additional information if necessary. The results of the evaluation will be presented in tables and text format.

Effect measures

For each outcome, weighted or standardized mean differences (for continuous data) and relative risk or odds ratios (for dichotomous data) will be used.

Synthesis method

Eligible studies for synthesis will be selected based on intervention characteristics and planned groups. Methods for handling missing data, data conversions, and other preparations will be detailed. Individual results and syntheses will be presented clearly. Statistical meta-analysis will be performed using Stata v. 17, with random-effects models to account for between-study variation. Heterogeneity will be assessed with χ^2 and I^2 tests, and subgroup analyses or meta-regression will be performed to explore causes of heterogeneity. Sensitivity analyses will assess the robustness of the results. [15]

Assessment of reported bias

Methods for assessing the risk of bias due to missing results in a synthesis (information bias) will be described.

Assessment of confidence level

The quality of evidence will be assessed using the GRADE system and GRADEpro GDT 2024 software (McMaster University, ON, Canada). [16] The summary of results will include absolute risks, relative risk estimates and a rating of the quality of the evidence based on risk of bias, directionality, heterogeneity, precision and risk of publication bias.

CONCLUSION

This systematic review will provide a global overview of the prevalence of burnout syndrome in teachers of different educational levels and continents, identifying associated factors and contributing to a new perspective on the subject.

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APPENDIX I - Search strategy in the databases Medline (Pubmed), EMBASE, LILACS (BVS), PsycInfo, Google Scholar.
Medline (PUBMED)
((School Teachers[Mesh] OR School Teacher OR Teacher, School OR Teachers, School OR Middle School Teachers OR Middle School Teacher OR School Teacher, Middle OR School Teachers, Middle OR Teacher, Middle School OR Teachers, Middle School OR Elementary School Teachers OR Elementary School Teacher OR School Teacher, Elementary OR School Teachers, Elementary OR Teacher, Elementary School OR Teachers, Elementary School OR High School Teachers OR High School Teacher OR School Teacher, High OR School Teachers, High OR Teacher, High School OR Teachers, High School OR Pre-School Teachers OR Pre-School Teacher OR Pre School Teachers OR Teacher, Pre-School OR Teachers, Pre-School) AND (Burnout, Psychological[Mesh] OR Psychological Burnout OR Burn-out OR Psychological Burn-out OR Burn-out Psychological OR Psychological Burn out OR Burnout OR Burnout Syndrome OR Burn-out Syndrome OR Burn out Syndrome OR Burnout, Student OR Burnout, School OR School Burnout OR Student Burnout) AND (Prevalence[Mesh] OR Prevalences OR Point Prevalence OR Point Prevalences OR Prevalence, Point OR Period Prevalence OR Period Prevalences OR Prevalence, Period OR Epidemiology[Mesh] OR Social Epidemiology OR Epidemiologies, Social OR Epidemiology, Social OR Social Epidemiologies))
PsycInfo
(Any Field: "school teacher*" OR Any Field: "middle school teacher*" OR Any Field: "elementary school teacher*" OR Any Field: educator* OR Any Field: instructor* OR Any Field: "school staff") AND (Any Field: "burnout psychological" OR Any Field: "burnout syndrome" OR Any Field: "professional exhaustion" OR Any Field: "work-related stress" OR Any Field: "occupational burnout") AND (Any Field: "prevalence" OR Any Field: "epidemiology" OR Any Field: "frequency" OR Any Field: "occurrence" OR Any Field: "distribution")
EMBASE
('school teacher' OR 'middle school teachers' OR 'elementary school teachers') AND 'burnout, psychological' OR 'burnout syndrome') AND 'prevalence' AND 'epidemiology'
LILACS (BVS)
Docentes OR Faculty OR "Corpo Docente" OR Docente OR Educador OR Educadores OR Professor OR Professores OR "Professor Universitário" OR "Professores Universitários" OR "Professores de Ensino Superior" OR "Professores do Ensino Superior" OR "Professor de Ensino Terciário" OR "Docentes Universitários" AND "Esgotamento Psicológico" OR "Agotamiento Psicológico" OR "Burnout, Psychological" OR "Burn-out" OR Burnout OR "Síndrome do Esgotamento" OR "Esgotamento do Estudante" OR "Esgotamento da Escola" OR "Exaustão da Escola" OR "Exaustão do Estudante" AND epidemiologia OR epidemiología OR epidemiology OR epidemia OR frequência OR vigilância OR morbidade OR ocorrência OR surtos OR prevalência OR endemia
Google acadêmico
Docentes OR Faculty OR "Corpo Docente" OR Docente OR Educador OR Educadores OR Professor OR Professores OR "Professor Universitário" OR "Professores Universitários" OR "Professores de Ensino Superior" OR "Professores do Ensino Superior" OR "Professor de Ensino Terciário" OR "Docentes Universitários" AND "Esgotamento Psicológico" OR "Agotamiento Psicológico" OR "Burnout, Psychological" OR "Burn-out" OR Burnout OR "Síndrome do Esgotamento" OR "Esgotamento do Estudante" OR "Esgotamento da Escola" OR "Exaustão da Escola" OR "Exaustão do Estudante" AND epidemiologia OR epidemiología OR epidemiology OR epidemia OR frequência OR vigilância OR morbidade OR ocorrência OR surtos OR prevalência OR endemia