Occupational Dentistry: the state of the art, indicating paths for health promotion in contemporary work contexts – scoping review

Odontologia do Trabalho: o estado da arte, indicando trilhas para a promoção da saúde em contextos contemporâneos de labor – revisão de escopo

Samara Maria Douets Vasconcelos Cunha Dias[a]
https://orcid.org/0000-0001-8434-8044
E-mail: douetsite@yahoo.com.br

Gilberto Alfredo Pucca Junior[a]
https://orcid.org/0000-0002-8781-9857
E-mail: gilberto.puccajr@gmail.com

Fernanda Campos de Almeida Carrer[b]
https://orcid.org/0000-0003-3745-2759
E-mail: fernandacsa@usp.br

Amanda Beatriz Gonçalves Vivacqua[a]
https://orcid.org/0000-0002-0827-4888
E-mail: mandybvivacqua@gmail.com

[a] Universidade de Brasília. Faculdade de Ciências da Saúde. Departamento de Odontologia. Brasília, DF, Brasil.

[b] Universidade de São Paulo. Faculdade de Odontologia. Departamento do Odontologia Social. São Paulo, SP, Brasil.

Abstract

The field of Occupational Dentistry has considered theoretical-scientific ballast. This scoping review aims to reveal the state of the art on the subject in seven indexed research bases, considering almost 100 years of publications (1921-2020). Of the 337 productions initially identified, a cut was made for the last six years (2015-2021/January), applying the methodology proposed by the PRISMA extension for scope reviews (PRISMA-ScR). However, rapid review platforms used for decision making in formulating public policies or in improving health systems accounted for only 20 publications, whereas the sample of 34 productions revealed peculiarities: research favors work regimes; associates the field of study and practice with the *stricto sensu* model of occupational health; disregards broad and humanizing concepts in the field of Worker's Health; tends to prioritize its own occupational dental health, and seems to reduce the concept of work accidents to illnesses. Such issues need to be overcome if the perspective is to remain at the forefront, promoting health and safety in contemporary work contexts, since, although the transversality of this field of knowledge and practices is evident, more is needed, daring to remove it from invisibility whether in private or public work organizations is necessary.

Keywords: Occupational Dentistry; Industrial Odontology; Occupational Health; Employee Health; Policy Making.

Correspondence
Samara Maria Douets Vasconcelos Cunha Dias
SQN 309, Bloco O, Apartamento 207. Brasília, DF, Brasil.CEP: 70755-150

Resumo

O campo da Odontologia do Trabalho tem considerado lastro teórico-científico. Esta revisão de escopo objetiva desvelar o estado da arte acerca do tema em sete bases de pesquisas indexadas, considerando quase 100 anos de publicações (1921-2020). Das 337 produções inicialmente identificadas, realizou-se recorte para os últimos seis anos (2015-2021/janeiro), aplicando-se metodologia proposta pela extensão do Prisma para revisões de escopo (Prisma-ScR). Contudo, plataformas de revisões rápidas usadas para tomada de decisões em formulações de políticas públicas ou em aperfeiçoamentos de sistemas de saúde responderam por apenas 20 publicações, enquanto a amostra de 34 produções revelou peculiaridades: pesquisas privilegiam regimes de trabalho; associam o campo de estudo e prática ao modelo stricto sensu da saúde ocupacional; desconsideram concepções amplas e humanizantes do campo da Saúde do Trabalhador; tendem a priorizar a própria saúde ocupacional odontológica e parecem reduzir o conceito do acidente de trabalho a doenças. Tais questões precisam ser superadas se a perspectiva for manter-se em vanguarda, promovendo saúde e segurança em contextos contemporâneos de trabalho, pois, embora seja evidente a transversalidade desse campo de saberes e práticas, é necessário mais, é preciso ousar para retirá-la da invisibilidade, seja em organizações privadas ou públicas de trabalho.
Palavras-chave: Odontologia do Trabalho; Odontologia industrial; Saúde Ocupacional; Saúde do Trabalhador; Formulação de Políticas.

Introduction

Occupational Dentistry (OD) has been dedicated to understanding how work conditions, environments and processes relate to workers' oral health (Hiroishi; Rosetti; Naressi, 2011). Its foundation in scientific literature was structured in the seventeenth century, deriving from reports of oral diseases arising from working conditions, presented by Bernadino Ramazzini (Abhirami, 2020; Feaver, 1988; Gomes, 2013; Lima, Buarque, 2019).

Although discussions about the competencies of this field of knowledge and practices have advanced, consensus regarding the best nomenclature in indexed scientific productions seems far from being reached: *Industrial Dentistry; Occupational Dentistry; Occupational Stomatology; Industrial Stomatology*, among others.

Historically, the first cases of injury and illness arising from working environment conditions date back to the nineteenth century in a British railway company, at the same time (1887) in which there was an emblematic workplace accident involving workers' stomatognathic system at an also British match factory (Feaver, 1988). This study, therefore, addresses the topic of OD in the scientific literature of rapid reviews, considering what is recommended by the World Health Organization (WHO) regarding the importance of these rapid review methodologies for making health decisions.

The guiding thread chosen for this analysis, which is not just numerical, will consider modern forms of work organizations, increasingly precarious in the world of work, masterfully revealed in the Sociology of Work (Antunes, 2009; 2020), and the expectation of finding evidence based on assumptions consistent with the historicity of the Occupational Health movement, long ago evoked to form the field of OD (Lamas, 2006; Lamas; Blank; Calvo, 2008), which maintain a certain logic to face the illness and current work dimensions.

The efforts undertaken, therefore, will be aimed at questioning whether scientific evidence in the OD field is robust and up-to-date enough for decision-making, whether in the formulation of public health policies or for advances in health

systems, without losing the focus on current illness scenarios in work situations.

Methodology

To achieve its proposal, the study adopted the scoping review methodology discussed by Peters et al. (2021). Considered a research method with excellent results for mapping broad themes such as OD (PHAM et al., 2014), the Prisma extension for scoping reviews was used, Prisma-ScR (Tricco et al., 2018), which will respond to the following research question: is there sufficient scientific evidence on OD on rapid review platforms that support health decision-making in an agile and consistent manner?

Eligibility criteria

The research is organized into two phases: the first phase refers to 100 years of indexed publications on the topic, considering publications by M'Cord (1921), Becker (1921), Humphrey (1923), and Millberry (1929) up to the year 2020; and the second one refers to the last six years of publications, therefore, from 2015 to 2021.

Inclusion criteria were systematized according to Table 1, while for exclusion we considered descriptors that presented more than 1000 results on the same database, duplications and productions that were not related to the topic of OD, and publications prior to 2015 or after January/2021, in the second phase.

Table 1 – Eligibility criteria

Phase	Item	Inclusion	Justifications
1st Phase	Databases	HSE; Cochrane; CADTH; Epistemonikos; PubMed; BVS e Scopus	Representative bases to meet the research objective.
	Descriptors	All selected descriptors, whose results, per database, did not exceed 1000 results.	Descriptors commonly used in OD and results above 1000 generally had duplicates and texts not relevant to the study.
	Titles	All those which refer to OD or are directly related to it.	Relevance to the theme
	Abstracts	All those which refer to OD or are directly related to it.	Relevance to the theme
	Types of study	All	To maximize search reach
	Language	All	To maximize search reach
	Countries	All	To maximize search reach
	Year	All until December 2020	Month and year of completion of the 1st phase extractions
2st Phase	Year	2015 until January 2021	Period of the 2nd study phase (last six years)
	Texts	All that refer to the topic	Allow analysis of texts over the last six years.
	Databases	All selected in the first phase	Representative bases to meet the research objective.
2st Phase	Descriptors	All selected descriptors, whose results, per database, did not exceed 1000 results.	Descriptors commonly used in OD and results above 1000 generally had duplicates and texts not relevant to the study.
	Types of study	All	To maximize search reach
	Language	All	To maximize search reach
	Countries	All	To maximize search reach

Source: Authors, 2022

Information sources

As for the databases, four rapid review platforms specialized in health were selected: HSE; Cochrane, CADTH, and Epistemonikos (CPDIGI-FOUSP, 2018), in addition to three indexed bases: PubMed (Medline); BVS (Bireme), and Scopus (Elsevier), accessed via Capes Portal.

Search

Extractions referring to the first phase (1921-2020) took place between November and December 2020, and each base was analyzed between January and February 2021. As for the second phase (2015-2021/January), the first extraction was used, applying criteria defined for the respective phase, and the production from January/2021 was included. Data analysis took place in March 2021.

To identify potential publications, 13 descriptors were defined that were closest to the topic of OD, considering the MeSH and DeCS platforms, as shown in Table 2.

Regarding search strategies, given that the topic is a compound term, the terms defined by MeSH and DeCS were used and the Boolean operators were not applied.

On databases that presented a great deal of results, the search was limited by the use of the exact term, using quotation marks ("") to maximize results, while on databases that presented few results, the same descriptors were used without quotation marks. The last data collection took place on February 5, 2021.

Table 2 – Selected Descriptors

Bases	Languages	Descriptors
MeSH	English	occupational dentistry
		dentistry occupational
		dentistries occupational
		occupational dentistry
MeSH	English	dentistry industrial
		dentistries industrial
		industrial dentistries
		industrial dentistry
DeCS	Portuguese	odontologia do trabalho
		odontologia industrial
		odontologia ocupacional
	Spanish	odontología del trabajo
	French	odontologie em médecine du travail

Source: Authors, 2022

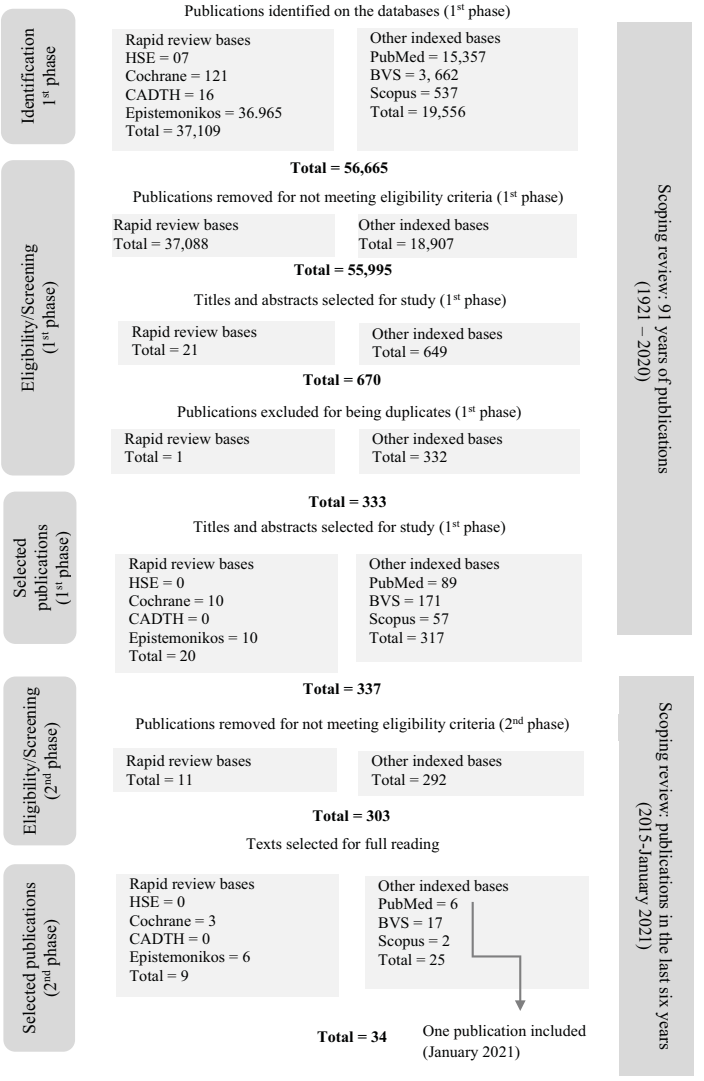
Screening and Selection

Initially, all inclusion criteria were applied and results available on rapid review platforms (HSE, Cochrane, CADTH, and Epistemonikos) were collected. Subsequently, there was exclusion of results above 1000 publications with the same descriptor and base, plus repetitions and publications that were not related to the topic. Those which remained were transferred to an Excel® spreadsheet and systematized according to author, title, country, year of publication, type of study, and database. This procedure was carried out initially, within each database searched and then considering intersections between databases, resulting in a total of 337 publications (1st phase).

For the second phase (34 results), the range of publications between 2015 and 2021 was selected in the "year of publication" column of the same Excel® spreadsheet. At this stage,

domains of analysis were considered by full text readings, observing work regime, work category, type of environment/work process, occupational risks, workplace accidents, and if there was mention of worker health. The selection of evidence sources in the first and second phases followed the procedure defined in the Selection and Screening Flowchart (Figure 1).

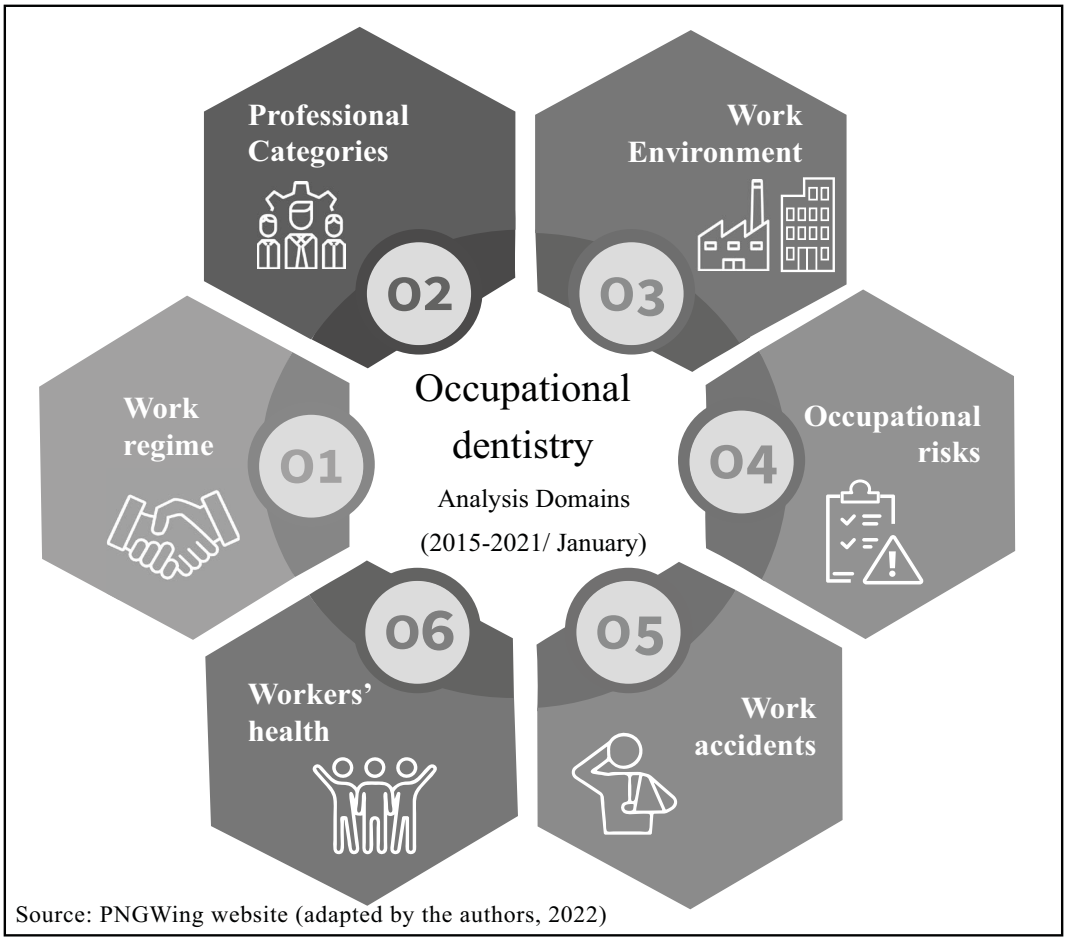
Figure 1 – Selection and Screening Flowchart



Analysis Domains

Mapping the texts (second phase), two authors (SD) and (GP) read the productions separately. A framework with six domains (Figure 2), all directly related to the broad process of worker health care, was established to guide the readings in full, and there was no disagreement between authors.

Figure 2 – Analysis Domains Framework (second phase)



Summary of Results

The synthesis of publications is in Table 3 in descending order of year.

Table 3 – Syntheses of Scientific Productions on Occupational Dentistry (2015-January 2021).

Titles	Authors	Year	Country	Method	Database
The Debate: What Are Aerosol-Generating Procedures in Dentistry? A Rapid Review.	Virdi, Durman, Deacon	2021	United Kingdom	Integrative Review	PubMed
Objectives: To review English and international dental guidelines on the SARS-CoV-2 pandemic considering the degree of consensus regarding the generation of aerosols in clinical procedures.					
Management of oral health care in the time of COVID-19.	Abreu, Gil	2020	Cuba	Cross-sectional	Scopus
Objectives: Treatment of occupational risks related to dental activity and management during the COVID-19 pandemic.					

continues...

Table 3 – Continuation.

Titles	Authors	Year	Country	Method	Database
Subjective Overload and Psychological Distress among Dentists during COVID-19.	Mijiritsky et al.	2020	Israel	Cross-sectional	PubMed
Objectives: To analyze psychological conditions of dentists from different countries during COVID-19 pandemic.					
Adaptation and validation in Spanish of the mapeto-br questionnaire to evaluate work posture in dental students.	Muñoz et al.	2020	Chile	Cross-sectional	Scopus
Objectives: To adapt and validate a questionnaire on physical posture aimed at dentistry students.					
Interventions to reduce contaminated aerosols produced during dental procedures for preventing infectious diseases.	Nagraj et al.	2020	Malaysia	Systematic review	Cochrane
Objectives: To evaluate the effectiveness of methods used in dental procedures to minimize aerosol production, reducing or neutralizing contamination.					
A digital-based education to improve occupational health and ergonomic conditions of dentists: an application of theory of planned behavior.	Aliakbari et al.	2019	Iran	Cross-sectional	Cochrane
Objectives: To analyze the effects of digital education on improving the dentists' occupational (ergonomic) health.					
Prevalence and policy of occupational violence against oral healthcare workers: systematic review and meta-analysis.	Binmadi, Alblowi	2019	Saudi Arabia	Systematic review/ Meta-analysis	Epistemonikos
Objectives: To analyze the prevalence of occupational violence, impacts and coping policies aimed at oral health professionals.					
Oral health in the context of prevention of absenteeism and presenteeism in the workplace.	Lima, Buarque	2019	Brazil	Integrative Review	PubMed
Objectives: To discuss oral health in light of absenteeism and presenteeism in public and private work processes.					
Planejamento e Reestruturação de Serviço de Saúde Bucal do Trabalhador – Relato de Experiência com Ênfase na Documentação Odontológica	Macarevich.	2019	Brazil	Case report	BVS
Objectives: to report experience of planning and restructuring an oral health service aimed at professionals in the Brazilian electricity sector, with an emphasis on dental documentation.					
Association between oral health-related quality of life and the work ability of administrative technicians in education: a cross-sectional study.	Palma, Leite, Greco	2019	Brazil	Cross-sectional	BVS
Objectives: To associate administrative technicians' work capacity, quality of life and oral health in higher education institutions.					

continues...

Table 3 – Continuation.

Titles	Authors	Year	Country	Method	Database
Stress factors and quality of life of dental students.	Rodrigues et al.	2019	Brazil	Integrative Review	Epistemonikos
Objectives: To study stress factors and quality of life among dentistry students.					
A Odontologia em Saúde do Trabalhador como uma Nova Especialidade Profissional: Definição do Campo de Atuação e Funções do Cirurgião-Dentista na Equipe de Saúde do Trabalhador	Midorikawa	2000	Brazil	Cross-sectional	BVS
Objectives: To present an updated view of the concept of dentistry in worker health.					
Is self-perceived oral health status related to non-carious cervical lesions in Brazilian adult workers?	Bomfim, Crosato	2018	Brazil	Cross-sectional	BVS
Objectives: To evaluate the relationship between non-carious cervical lesions, quality of life and work ability index in a group of Brazilian workers.					
The prevalence of occupational health-related problems in dentistry: A review of the literature.	Moodley, Naidoo, van Wyk	2018	South Africa	Integrative Review	Epistemonikos
Objectives: To analyze the prevalence of occupational health problems in dental surgeons and oral health teams.					
Ergonomic interventions for preventing musculoskeletal disorders in dental care practitioners.	Mulimani et al.	2018	United States	Systematic review	Cochrane
Objectives: To evaluate interventions to prevent musculoskeletal disorders in dental work.					
Incapacidade gerada pela dor osteomuscular em aluno de odontologia.	Santos et al.	2018	Brazil	Cross-sectional	BVS
Objectives: To assess disability due to pain and intensity and correlation in dentistry students.					
Nível de ruido de los procedimentos clínicos odontológicos	Castro	2017	Peru	Cross-sectional	BVS
Objectives: To determine noise level in clinical dental procedures at the National University of San Marcos, Naval Medical Center, and Hipolito Unanue National Hospital.					
Injecting "Patient Power" into Research and Policy.	Feine	2017	Canada	Editorial	PubMed
Objectives: To clarify the importance of works such as that of Spomer J. et al. (2017) in the evaluation of hearing aids for noise reduction in dental services.					
A Review of Mercury Exposure and Health of Dental Personnel.	Nagpal	2017	United Kingdom	Integrative Review	Epistemonikos
Objectives: To analyze the metallic mercury presence and effects on dental professionals.					

continues...

Table 3 – Continuation.

Titles	Authors	Year	Country	Method	Database
Oral condition of battery factory workers and the usage of dental services.	Aznar et al.	2016	Brazil	Cross-sectional	BVS
Objectives: To evaluate oral workers' conditions at battery factories in São Paulo.					
Absenteeism study in a steel industry of São José dos Campos, SP, Brazil.	Marote, Queluz	2016	Brazil	Cross-sectional	BVS
Objectives: To identify absenteeism factors in the steel industry in São José dos Campos, São Paulo, Brazil.					
Saúde bucal do trabalhador brasileiro no Japão	Medeiros, Maikuma	2016	Brazil	Cross-sectional	BVS
Objectives: To present the scenario of labor migration between Brazil and Japan and its possible effects on workers' oral health.					
Prevalencia de la disfunción temporomandibular en trabajadores de la industria. Asociación con el estrés y el trastorno del sueño	Martins et al.	2016	Colombia	Cross-sectional	PubMed
Objectives: To verify temporomandibular disorders, sleep disorders, stress, and their relationship with industrial workers in São Paulo.					
Systematic review: factors contributing to burnout in dentistry.	Singh et al.	2016	United Kingdom	Systematic review	Epistemonikos
Objectives: To identify, in the literature, significant factors associated with burnout syndrome in dentists and dentistry students.					
Quais são os principais problemas de saúde bucal relacionados ao trabalho dos professores?	Biblioteca Virtual em Saúde	2016	Brazil	Web text	BVS
Objectives: To clarify circumstances of teaching activity and impacts on the teacher's oral health.					
Prevalence and risk factors of non-carious cervical lesions related to occupational exposure to acid mists.	Bomfim et al.	2015	Brazil	Cross-sectional	BVS
Objectives: To evaluate the prevalence and risk factors for non-carious cervical lesions in Brazilian workers exposed and not exposed to acid fog and chemicals.					
Relations between oral health and work ability among administrative workers.	Bomfim, Crosato, Mazzilli	2015	Brazil	Cross-sectional	BVS
Objectives: To analyze the relationship between perception of quality of life, oral health, and work ability.					
Impact of expertise in labor sentence decision in health area.	Cavalcanti	2015	Brazil	Cross-sectional	BVS
Objectives: To review recent Labor Court judicial decisions, demonstrating the importance of medical and dental expert cases.					
Evaluating of oral and salivary conditions of two specific groups of workers.	Paula et al.	2015	Brazil	Cross-sectional	BVS
Objectives: To analyze oral changes in different groups of workers exposed and not exposed to occupational sugar.					

continues...

Table 3 – Continuation.

Titles	Authors	Year	Country	Method	Database
Problems of dental services in closed administrative units assessed by a survey of dentists.	Ujba et al.	2015	Russia	Cross-sectional	PubMed
Objectives: To search for reasons for oral health teams withdrawal and preventive work reduction in Russian schools and factories.					
Estudo de corte prospectivo das características do absenteísmo na administração pública: comprovação médica odontológica na saúde do servidor público.	Capelari	2015	Brazil	Cross-sectional	BVS
Objectives: To evaluate the profile of absenteeism in public administration based on the incidence of medical and dental certificates.					
The role of occupational dentist in the context of public policies on worker's health: article review.	Dantas et al.	2015	Brazil	Integrative Review	BVS
Objectives: To review the occupational dental surgeon's role in the context of public policies and Occupational Health.					
Absenteeism due to dental causes: a literature review related to absence from work and oral health of workers.	Mota et al.	2015	Brazil	Integrative Review	BVS
Objectives: To review dental absenteeism with an emphasis on the importance of the dental surgeon's work in public oral health policies.					
Perspectives in using ICF in workers oral health.	Togna et al.	2015	Brazil	Exploratory study	BVS
Objectives: To explore the ICF conceptual model to apply it to oral health workers.					

Results

This scoping review originally identified 56,665 publications available on databases from the selected descriptors. The first phase covered almost a century of publications about OD, mapping 337 productions that met the criteria of this research; 20 publications were found on rapid review platforms, and a massive number of publications (317) on other indexed bases.

The dense reference extracted (first phase) required the authors to time-frame the research to allow for a more significant and qualitative corpus of publications from the six years (2015-January 2021) that preceded the study, resulting in 34 scientific productions, nine of which are available on rapid review platforms, and 25 on other indexed bases, summarized as shown in Table 3.

The analysis of the 34 publications indicated that the majority of the collection is Brazilian (19 results), followed in smaller number by English publications and publications from other nationalities. The most applied methodological design was cross-sectional studies (19), followed by integrative reviews (7), and systematic reviews (4), among other methodologies, in smaller number.

As for platforms, less than a third of the publications analyzed are on rapid review platforms (9), including Cochrane (3), and Epistemonikos (6). Considering the analytical perspective based on the developed framework, some outcomes were observed regarding the publication profile.

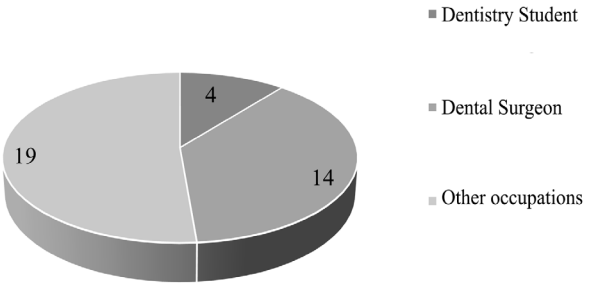
Work Regimes

The publication set showed a tendency to report working conditions in the private sphere (21 results) to the detriment of analyzes in public organizations (12 results). Although texts referred to both work regimes, 10 publications did not clearly indicate the work regime they were talking about.

Professional categories

As for the professional categories mentioned, publications from the last six years were organized into three groups: (1) publications that addressed different worker categories in private or public organizations (19); (2) publications that dealt exclusively with the dental professional category (14), and (3) publications that studied the Dentistry student category (4) (Figure 3).

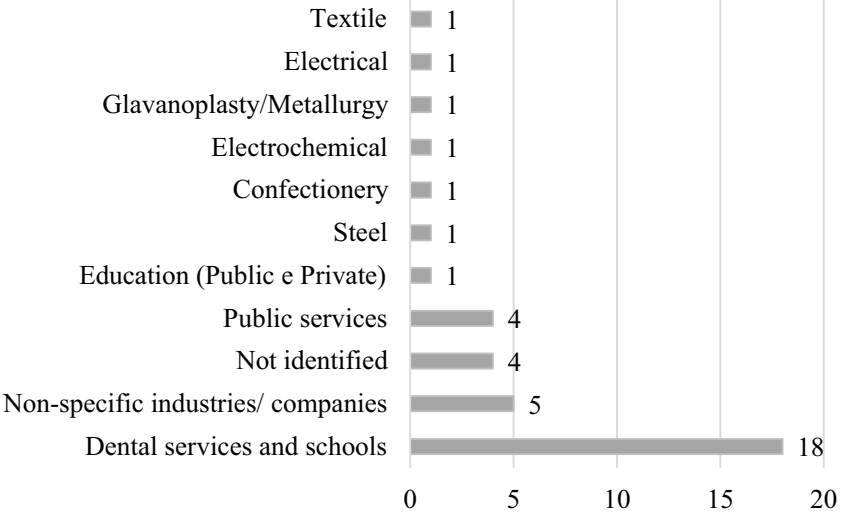
Figura 3 – Occupational Dentistry and Professional Categories



Work environment

In this domain, four publications did not define their physical locus of study; however, the other studies managed to make clear the vast possibility of environments, processes, and working conditions in which OD can act and certainly contribute to health promotion and prevention of diseases and injuries that may involve the oral and maxillofacial complex of workers (Figure 4).

Figura 4 – Occupational Dentistry and Work Environments



Occupational risks

Regarding the nature of occupational risks in public and private work organizations, whose scope of publications is OD, the analyses demonstrated an emphasis on psychosocial/organizational risk such as stress, anxiety, exhaustion, and burnout syndrome, among others (10). Chemical, physical, biological, and ergonomic risks were also mentioned, but, in the dentistry field, risks such as noise, stress, musculoskeletal disorders, and chemical contamination by mercury were the most reported.

Workplace Accidents

For this domain, publications tended to discuss illnesses (29) resulting from work, with manifestations in the oral and maxillofacial complex, other publications (4) referred to the topic of workplace accidents in a more general manner, while three texts mentioned typical accidents, but always relating the event to the worker's loss of concentration. Commuting accidents were not addressed in any publication selected in this study and five texts did not refer to workplace accidents.

Worker Health

In this context of analysis, only six texts, all Brazilian, sought to introduce discussions considering the assumptions of the Occupational Health field for OD interventions.

These publications were included on indexed databases, but not on rapid review platforms.

Discussion

Based on the results, it is inferred that there is an important base of scientific evidence that deals with the OD field throughout all continents, but the majority of these publications are available on the indexed PubMed/Medline, VHL, and Scopus databases.

The insufficient number of pieces of evidence on rapid review platforms, combined with the timid number of four systematic reviews on the topic—considering this to be the gold standard of methodologies to guide decision-making (Brazil, 2020)—defines an important gap in this field of knowledge, despite the efforts made so far.

Notably, on the platform considered the most complete in syntheses of evidence specialized in health policies and systems—HSE (CPDIGI-FOUSP, 2018)—no publications on OD were found based on the descriptors defined by DeCS and MeSH.

Furthermore, by exercising the overcoming of concepts and practices that are paradoxically contrary to assumptions adopted in recent times for worker health care, as proposed by Lamas, Blank and Calvo (2008), the analysis of the most recent content does not seem to differ greatly from other texts of the last 100 years, and point to exponential challenges for OD field of knowledge and practices.

Health care in the OD field needs to be expanded to work conditions beyond productive forms in private contexts. It is urgent to pay attention to contemporary management scenarios of the New Public Management (NPM) type, which produces, in an equal manner, harmful consequences for civil servants' physical and mental health, public employees, and outsourced workers (Antunes, 2020; Ramos, Macêdo, 2018; TST, 2017).

The robust centrality of scientific productions in recent years around guidelines aimed at the Dentistry professional category denotes an almost "self-absorbed" tendency in the field; therefore, future research should consider the demands of other work situations, given the OD cross-sectional nature, fundamental in the processes of health and safety at work and, therefore, in decision-making that formulates public policies and qualifies health systems.

From the point of view of workplace accidents with impacts on the oral and maxillofacial complex, the OD perspective seems to prioritize, and with some reason, occupational or work-related illnesses that impact the stomatognathic system. However, this concern should reach, with the same intensity, other types of accidents (typical and commuting), considering all as public health issues.

In this review, the absence of discussions about typical workplace accidents and commuting

accidents shows a certain epidemiological incoherence, given the topographic vulnerability of the stomatognathic system in the face of numerous risk situations during working hours.

Additionally, the expansion of work in the modern world is characterized by precarious, digitally attentive labor relations, which increasingly demand more and more hours of work from the worker, therefore, a flank open to the occurrence of accidents and, however, commuting accidents were not even mentioned in the texts with an emphasis on OD.

However, a decade since the publication of the National Occupational Safety and Health Policy, Brazilian OD productions need to advance in assumptions that underlie the Occupational Health field, especially to prioritize health promotion and understand the subject in a work situation, in its historical and social perspective.

In summary, even considering the gaps, this study is encouraging as the last decades have promoted the discussion about OD especially in Latin America—with Brazil leading the publications—Europe, Central America, the Middle East and North America.

Although most research still focuses on classically recognized, tangible, and quantifiable risks (physical, chemical, biological, and ergonomic), there appears to be a movement in OD towards understanding the impacts of psychosocial and organizational risks of work on the stomatognathic system, fundamental when one intends to intervene in contemporary forms of work, intensely marked by inequities, precariousness, and collective demobilization (Antunes, 2009, 2020; Rocha; Bussinguer, 2016), in which the stomatognathic system conditions do not go unharmed.

Study limitations

This scoping review has the following limiting aspects: searches carried out on rapid review platforms and indexed databases, therefore, unconventional literature was not considered; searches occurred based on descriptors close to the topic of OD and exclusively indicated by DeCS and MeSH; due to the significant number of repeated results, the authors agreed not to include those whose descriptor/platform intersection had more than a thousand results; and considering the inclusion criteria applied, it is possible that some production will be left out of the selection, but the authors are confident that any additional publication will not alter the results of this study.

Final considerations

The review was sufficient to answer the research question, as it identified gaps in the set of publications on OD on rapid review platforms. In this sense, although the PubMed/Medline, BVS and Scopus databases present the topic of OD on the rise across continents, the need to converge efforts to enable new research to occur in accordance with methodological guidelines and form rapid review platforms remains, as indicated by the WHO.

Furthermore, the moment is opportune as work issues, in the post-pandemic context, seem to conspire to make working and living conditions precarious, and OD has a unique chance to say what it is for, from a collective perspective of Health Promotion

References

ABHIRAMI, An. Occupational Hazards in Dentistry. *Acta Scientific Dental Sciences*, Hyderabad, v. 4, n. 8, p. 128-134, 2020.

ABREU, E. A. G.; GIL, A. M. C. Gestión de la atención de salud bucal en tiempos de la COVID-19. *Revista cubana estomatología*, Habana, v. 57, n. 4, e3442, 2020.

ALIAKBARI, R. et al. A digital-based education to improve occupational health and ergonomic conditions of dentists: na application of theory of planned behavior. *International Journal of Health Promotion and Education*, Abington, v. 58, n. 5, p. 268-281, 2019. DOI: 10.1080/14635240.2019.1687316

ANTUNES, R. As configurações do trabalho na sociedade capitalista. *Katálysis*, Florianópolis, v. 12, n. 2, p. 131-132, 2009.

ANTUNES, R. (Org.). *Uberização, trabalho digital e Industria 4.0*. São Paulo: Boitempo, 2020.

AZNAR, F. D. et al. Oral condition of battery factory workers and the usage of dental services. *Revista brasileira de medicina do trabalho*, São Paulo, v. 14, n. 2, p. 127-133, 2016. Disponível em: https://pesquisa.bvsalud.org/portal/resource/pt/biblio-1827?src=similardocs Acesso: 20 dez. 2022.

BECKER, J. P. Industrial Dentistry. *The Dental Register*, Amsterdam, v. 75, n. 2, p. 76-85, 1921.

BIBLIOTECA VIRTUAL EM SAÚDE. NÚCLEO DE TELESSAÚDE SANTA CATARINA. *Quais os principais problemas de saúde bucal relacionados ao trabalho dos professores?* São Paulo, 2016. Disponível em: https://aps.bvs.br/aps/quais-os-principais-problemas-de-saude-bucal-relacionados-ao-trabalho-dos-professores/?l=en_US Acesso: 20 dez. 2022.

BINMADI, N. O.; ALBLOWI, J. A. Prevalence and policy of occupational violence against oral healthcare workers: systematic review and meta-analysis. *BMC Oral Health*, Saudi Arabia, v. 19, n. 279, p. 1-8, 2019. Disponível em: https://bmcoralhealth.biomedcentral.com/articles/10.1186/s12903-019-0974-3 Acesso: 20 dez. 2022.

BOMFIM, R. A. et al. Prevalence and risk factors of non-carious cervical lesions related to occupational exposure to acid mists. *Brazilian Oral Research*, São Paulo, v. 29, n. 1, p. 1-8, 2015. DOI: 10.1590/1807-3107BOR-2015.vol29.0085

BOMFIM, R. A.; CROSATO, E.; MAZZILLI, L. E. Relations between oral health and work ability among administrative workers. *Brazilian Journal of Oral Science*, São Paulo, v. 14, n. 1, p. 41-45, 2015. DOI: 10.1590/1677-3225v14n1a09

BOMFIM, R. A.; CROSATO, E. Is self-perceived oral health status related to non-carious cervical lesions in Brazilian working adults? *Archives of Health Investigation*, [s.l.], v. 7, n. 9, p. 358-363, 2018. DOI: 10.21270/archi.v7i9.3131

BARRETO, J. *Metodologias para produção de sínteses de evidências (revisões rápidas)*. Brasília, DF: Ministério da Saúde, 2020.

CAPELARI, M. M. *Estudo de Coorte Prospectivo das Características do Absenteísmo na Administração Pública*: Atestação médico-odontológica na Saúde do Servidor. 2015. 381 f. Tese (Doutorado em Odontologia) – Faculdade de Odontologia de Bauru, Universidade de São Paulo, Bauru, 2015. Disponível em: <https://teses.usp.br/teses/disponiveis/25/25144/tde-03092015-105351/pt-br.php> Acesso: 20 dez. 2022.

CASTRO, F. E. Nivel de ruido de los procedimientos clínicos odontológicos. *Revista Estomatológica Herediana*, Lima, v. 27, n. 1, p. 13-20, 2017.

CAVALCANTI, A. P. *Impact of expertise in labor sentence decision in health area*. 2015. 110 f. Dissertação (Mestrado em Odontologia) – Faculdade de Odontologia de Bauru, Universidade de São Paulo, Bauru, 2015. Disponível em: https://www.teses.usp.br/teses/disponiveis/25/25144/tde-03022016-080627/pt-br.php Acesso: 20 dez. 2022.

CPDIGI-FOUSP – Centro de Produção Digital Edmir Matson. Faculdade de Odontologia da Universidade de São Paulo. XXIV Reunião de Pesquisa da Faculdade de Odontologia da Universidade de São Paulo. Workshop Novas Bases de Dados e Métodos de "Rapid View". Palestrante: Jorge Otávio Maia Barreto. São Paulo; 2018. Vídeo: 4:18:54 seg. Disponível em: https://www.youtube.com/watch?v=5W3W1z70omA&t=2341s. Acesso: 20 dez. 2022.

DANTAS, J. P. et al. O papel do cirurgião-dentista do trabalho no contexto das políticas públicas em saúde do trabalhador: artigo de revisão. *RFO*, Passo Fundo, v. 20, n. 1, p. 115-121, 2015. Disponível em: http://revodonto.bvsalud.org/scielo.php?script=sci_arttext&pid=S1413-40122015000100021 Acesso: 20 dez. 2022

FEAVER, G. P. Occupational Dentistry: a review of 100 years of dental care in the workplace. *Occupational Medicine*, Oxford, v. 38, p. 41-43, 1988. DOI: 10.1093/occmed/38.1-2.41

FEINE, J. S. Injecting "Patient Power" into Research and Policy. *JDR clinical and translational research*, Thousand Oaks, v. 2, n. 4, p. 328-329, 2017. DOI: 10.1177/2380084417726986

GOMES, S. F. A importância e aplicabilidade da Odontologia do Trabalho na exposição ambiental ao chumbo. *Revista Brasileira de Odontologia*, Rio de Janeiro, v. 70, n. 1, p. 85-88, 2013.

HIROISHI, W. K.; ROSETTI, E.; NARESSI, S. C. Odontologia do trabalho: um novo olhar sobre a saúde bucal do trabalhador. *Brazilian Dental Science*, São José dos Campos, v. 14, n. 3/4, p. 66-76, 2011.

HUMPHREY, R. I. Industrial dentistry's contribution to oral hygiene. *The Dental Register*, Amsterdam, v. 77, n. 10, p. 453-457, 1923.

LAMAS, A. E. *Saúde bucal coletiva e saúde do trabalhador*: repensando as práticas dos serviços públicos para um novo modelo de atenção. 2006. Dissertação (Mestrado em Odontologia) – Universidade Federal de Santa Catarina, Florianópolis, 2006.

LAMAS, A. E.; BLANK, V. L. G.; CALVO, M. C. M. Saúde do Trabalhador e a Atenção Odontológica: entre um novo modelo de atenção e a superespecialização. *Saúde e Sociedade*, São Paulo, v. 17, n. 4, p. 103-110, 2008.

LIMA, R. B.; BUARQUE, A. A saúde bucal no contexto da prevenção de absenteísmo e presenteísmo no trabalho. *Revista Brasileira de Medicina do Trabalho*, São Paulo, v. 17, n. 4, p. 594-604, 2019.

MACAREVICH, A. Planejamento e reestruturação de um serviço de saúde bucal do trabalhador – Relato de experiência com ênfase na documentação odontológica. *Revista Brasileira de Odontologia Legal*, Ribeirão Preto, v. 6, n. 2, p. 69-81, 2019. DOI: 10.21117/rbol.v6i2.250

MAROTE, I. A.; QUELUZ, D. P. Absenteeism study in a steel industry of São José dos Campos, SP, Brazil. *Brazilian Journal of Oral Sciences*, Limeira, v. 15, n. 2, p. 124-130, 2016. DOI: 10.20396/bjos.v15i2.8648754

MARTINS, R. J. et al. Prevalencia de la disfunción temporomandibular en trabajadores de la industria. Asociación con el estrés y el trastorno del sueño. *Rev de Salud Pública*, Bogotá, v. 18, n. 1, p. 142-151, 2016.

M'CORD, C. P. Industrial Dentistry. *The Dental Register*, Amsterdam, v. 75, n. 1, p. 30-37, 1921.

MEDEIROS, U.; MAIKUMA, C. Saúde bucal do trabalhador brasileiro no Japão. *Revista Brasileira de Odontologia*, Rio de Janeiro, v. 73, n. 1, p. 69-75, 2016.

MIDORIKAWA, E. T. *A odontologia em saúde do trabalhador como uma nova especialidade profissional*: definição do campo de atuação e funções do cirurgião-dentista na equipe de saúde do trabalhador. 2000. 337 f. Dissertação (Mestrado em Odontologia) – Faculdade de Odontologia, Universidade de São Paulo, 2000. Disponível em: https://www.teses.usp.br/teses/disponiveis/23/23142/tde-01072019-091239/publico/EDWARDTOSHIYUKIMIDORIKAWAVersaoOriginal.pdf Acesso: 20 dez. 2022.

MIJIRITSKY, E. et al. Subjective Overload and Psychological Distress among Dentists during COVID-19. *International Journal of Environmental Research and Public Health*, Basel, v. 17, n. 14, p. 1-10, 2020. DOI: 10.3390/IJERPH17145074

MILLBERRY, G. Industrial Dentistry: its trend-including some observations on European practice. *California and Western Medicine*, Sacramento, v. 30, n. 1, p. 21-23, 1929.

MOODLEY, R; NAIDOO, S; VAN WYK, J. The prevalence of occupational health-related problems in dentistry: A review of the literature. *Journal of occupational health*, London, v. 60, n. 2, p. 111-125, 2018. DOI: 10.1539/joh.17-0188-RA

MOTA, J. N. et al. Absenteeism due to dental causes: a literature review related to absence from work and oral health of workers. *RFO*,

Passo Fundo, v. 20, n. 2, p. 264-270, 2015. Disponível em: http://seer.upf.br/index.php/rfo/article/view/4466 Acesso: 20 dez. 2022.

MULIMANI, P. et al. Ergonomic interventions for preventing musculoskeletal disorders in dental care practitioners. *Cochrane Database of Systematic Reviews*, Abingdon, v. 10, n. 10, p. 1-38, 2018. DOI: 10.1002/14651858.CD011261.pub2

MUÑOZ, M. F. et al. Adaptation and validation in Spanish of the MAPETO-br questionnaire to evaluate work posture in dental students. *Revista Cubana de Investigaciones Biomédicas*, Havana, v. 39, n. 4, p. 1-11, 2020.

NAGPAL, N. A Review of Mercury Exposure and Health of Dental Personnel. *Safety and health at work*, Amsterdam, v. 8, n. 1, p. 1-10, 2017. DOI: 10.1016/j.shaw.2016.05.007

NAGRAJ, S. K. et al. Interventions to reduce contaminated aerosols produced during dental procedures for preventing infectious diseases. *Cochrane Database of Systematic Reviews*, Hoboken, n. 10, 2020. DOI: 10.1002/14651858.CD013686.pub2

PALMA, P. V.; LEITE, I. C.; GRECO, R. M. Association between oral health-related quality of life and the work ability of administrative technicians in education: a cross-sectional study. *Cadernos de Saúde Coletiva*, Rio de Janeiro, v. 27, n. 1, p. 100-107, 2019. DOI: 10.1590/1414-462X201900010089

PAULA, N. C. et al. Evaluating of oral and salivary conditions of two specific groups of workers. RSBO, Joinville, v. 12, n. 1, p. 50-55, 2015. Disponível em: https://www.semanticscholar.org/paper/Evaluating-of-oral-and-salivary-conditions-of-two-Paula-Bruzamolin/52e309e0d0d903371aa2b6c37c27e92db64aa240 Acesso: 20 dez. 2022

PETERS, M. D. et al. Scoping reviews: reinforcing and advancing the methodology and application. *Systematic Review*, v. 10, p. 1-6, 2021. DOI: 10.1186/s13643-021-01821-3

PHAM, M. T. A scoping review of scoping reviews: advancing the approach and enhancing the consistency. *Research Synthesis Methods*, New York, v. 5, n. 4, p. 371-385, 2014.

RAMOS, L. F.; MACÊDO, K. B. Reflexões sobre o adoecimento dos servidores técnico-administrativos em educação. *Argum*, Vitória, v. 10, n. 3, p. 107-122, 2018. DOI: 10.18315/argumentum.v10i3.16911

ROCHA, S. H.; BUSSINGUER, E. C. A invisibilidade das doenças mentais ocupacionais no mundo contemporâneo do trabalho. *Pensar*, Fortaleza, v. 21, n. 3, p. 1104-1122, 2016. DOI: 10.5020/2317-2150.2016.v21n3p1104

RODRIGUES, M. I. et al. Stress factors and quality of life of dental students. Revista da ABENO, São Paulo, v. 19, n. 1, p. 49-57, 2019. DOI: 10.30979/rev.abeno.v19i1.620

SANTOS, R. R. et al. Incapacidade gerada pela dor osteomuscular em aluno de Odontologia. Archives of Health Investigation, [s.l.], v. 7, n. 9, p. 369-374, 2018. DOI: 10.21270/archi.v7i9.3148

SINGH, P et al. Systematic review: factors contributing to burnout in dentistry. *Occupational Medicine*, Oxford, v. 66, n. 1, p. 27-31, 2016. DOI: 10.1093/occmed/kqv119

TOGNA, G. R. et al. Perspectives in using ICF in workers oral health. *Revista Brasileira de Saúde Ocupacional*, São Paulo, v. 40, n. 132, p. 228-236, 2015. DOI: 10.1590/0303-76570000087813.

TRICCO, A. C. et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): checklist and explanation. Annals of Internal Medicine. 2018; 169: 467-473. Disponível em: https://www.acpjournals.org/doi/pdf/10.7326/M18-0850 Acesso: 20 dez. 2022.

TST - Tribunal Superior do Trabalho. Conferência Saúde Psíquica e Trabalho Judicial. Brasilia, 2017. 1 video (1:45:26 seg). Disponível em: https://www.youtube.com/watch?v=3IZ0TYZY4SM Acesso: 20 dez. 2022.

UJBA, V. V. et al. Problems of dental services in closed administrative units assessed by a survey of dentists. *Stomatologiia*, Moskou, v. 94, n. 6, p. 5-7, 2015. DOI: 10.17116/stomat20159465-7

VIRDI, M.K.; DURMAN, K.; DEACON, S. The Debate: What Are Aerosol-Generating Procedures in Dentistry? A Rapid Review. *JDR Clinical & Translational Research*, London, v. 6, n. 2, p. 115-127, 2021. DOI: 10.1177/2380084421989946

Authors' contribution

Dias: research conception and design, data analysis and interpretation, and article writing. Pucca Junior: research conception and design, data analysis and interpretation, critical manuscript review and approval of the version to be published. Carrer: research conception and design, critical manuscript review and approval of the version to be published. Vivacqua: research design, data acquisition, extraction, analysis, and interpretation.

Received: 3/22/2023
Re-submitted: 3/22/2023
Accepted: 3/28/2023