COMMON COMPETENCIES IN THE FIELD OF WORKER'S HEALTH FOR HEALTH PROFESSIONS: A QUALITATIVE METASYNTHESIS

COMPETÊNCIAS COMUNS NO CAMPO DA SAÚDE DO TRABALHADOR PARA AS PROFISSÕES DA SAÚDE: UMA METASSÍNTESE QUALITATIVA

COMPETENCIAS COMUNES EN EL ÁMBITO DE LA SALUD LABORAL PARA LAS PROFESIONES SANITARIAS: UNA METASÍNTESIS CUALITATIVA

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ABSTRACT: The aim of this study was to review the common competencies in the field of Worker´s Health (WH) in the health professions. For this, a qualitative metasynthesis was performed through searches in the portal of the Virtual Health Library (VHL) and in the PubMed database. Among the 13 articles included in this review, common competencies were identified that relate to clinical and care performance, risk management and in matters relating to professional ethical values. Although the results are close to the conception of occupational health, they can be explored as long as they are related to the guidelines of the WH of the SUS.

KEYWORDS: Competency-Based Education. Professional Competence. Worker's health.

***RESUMO**: O objetivo deste estudo foi revisar as competências comuns no campo da Saúde do Trabalhador (ST) nas profissões da saúde. Para isso, foi realizada uma metassíntese qualitativa, por meio de buscas no portal da Biblioteca Virtual em Saúde (BVS) e na base de dados PubMed. Entre os 13 artigos incluídos nesta revisão, foram identificadas competências comuns que dizem respeito a atuação clínico-assistencial, gerenciamento de riscos e em questões relativas aos valores éticos profissionais. Apesar dos resultados se aproximarem da concepção de saúde ocupacional, estes podem ser explorados desde que relacionados aos princípios e diretrizes da ST do Sistema Único de Saúde.*

***PALAVRAS-CHAVE**: Educação Baseada em Competências. Competência Profissional. Saúde do Trabalhador.*

***RESUMEN**: El objetivo de este estudio fue revisar las competencias comunes en el campo de la Salud del Trabajador (ST) en las profesiones de la salud. Para ello, se realizó una metasíntesis cualitativa a través de búsquedas en el portal de la Biblioteca Virtual en Salud (BVS) y en la base de datos PubMed. Entre los 13 artículos incluidos en esta revisión, se identificaron competencias comunes relacionadas con el desempeño de la atención clínica, la gestión de riesgos y las cuestiones relacionadas con los valores éticos profesionales. Aunque los resultados se acercan a la concepción de la salud ocupacional, pueden ser explorados siempre y cuando se relacionen con los principios y directrices de la ST en el Sistema Único de Salud.*

***PALABRAS CLAVE**: Educación Basada en Competencias. Competencia Profesional. Salud Ocupacional.*

Introduction

Competencies are constructs of articulated content characterized by dimensions known as: knowledge, skills and attitudes (Perrenoud, 1999). When skills are called 'common', this adjective defines a certain transversality that denotes the intersection between different professions, being, therefore, a way of expanding the scope of action of the different professional categories, relating them (Dallan, 2000; Romcy, 2018).

The construction of the 'common' in health professions must be conceived based on the recognition of a health practice which is necessary in all healthcare training. Practices related to humanization, ethics, continuing education, service management, among others, can be considered centers of 'production of the common' (Romcy, 2018). These practices, in addition to favoring interprofessionality (and, consequently, transdisciplinarity), require deliberate efforts promoted by levels of curriculum integration that facilitate this construction (Dallan, 2000; Romcy, 2018).

One of the fields of knowledge where the practice of 'production of the common' is little thematized is the field of Workers' Health (WH). In an attempt to break with the logics inherited from Occupational Medicine (MT) and Occupational Health (WH), Occupational Health (WH) has been constructed as a field of knowledge that goes beyond disciplinary or merely 'environmentalist' logic (Mendes; Dias, 1991).

These are practices that seek to understand and intervene in work environments and processes to reduce morbidity and mortality among workers, considering the influences arising from the capitalist mode of production and the successive social, economic and political dynamics that interfere in different situations and territories (Lacaz, 2007; Minayo-Gomes; Vasconcelos; Machado, 2018).

It is in this sense that the field of WH has been seen as a set of knowledge much more related to the 'common' scope of health professions than a practice of an isolated profession or mere intervention in work “facilities/equipment”.

Thus, the field began to be included within the scope of health policies in Brazil, especially in the 80s and 90s, when it assumed a fundamental role in the construction of the Unified Health System (SUS). Therefore, the field gains greater relevance with the implementation of the National Network for Comprehensive Occupational Health Care (Renast) in 2002, followed by the publication of the National Workers' Health Policy (PNSTT) (Brazil, 1988; 1990; 2017).

Even with these efforts, the field remains marginalized in the routine of health workers and in the institutional context of system management, being constantly confused with the old practices of MT and SO (Leão; Vasconcellos, 2011; Souza, 2021).

Among some hypotheses that justify the persistence of this confusion, is the scarcity of workers with clear common professional skills sufficient to develop these actions, above all, due to the absence of curricular components in degrees and specializations that address the transversality of WH in professional training (Souza, 2021).

Therefore, given the above, this study aims to analyze scientific publications on common professional competencies in the field of WH among health professions. The aim is to discuss how the dimensions of these common competencies (in terms of knowledge, skills and attitudes) can be organized according to the PNSTT.

Methods

This is a systematic literature review of the qualitative meta-synthesis type (Oliveira; Miranda; Saad, 2020), which followed the steps proposed by Francis-Baldesari (2006) from the UK Cochrane Center Oxford, which will be presented through a description integrated on the contents originating from national and international published articles.

The identification of articles was carried out from January to July 2023, on the Virtual Health Library (VHL) portal and in the PubMed (Medline) database. A search strategy was used by selecting key items from the research question (Cooper, 1984), which in this study was: “what is there in the scientific literature about 'common skills' (key item: object) in 'worker's health' (key item: qualifier) in 'degrees and specializations' (key item: range/limit) in the health area?”.

The key items identified were tested, considering grammatical variations, on controlled vocabulary portals using the search for “any term” applied in the Health Sciences Descriptors (DeCS) (VHL) and the search for “ Mesh Terms ” made on the Medical Subject website Heading (MeSH) Database (PubMed).

Therefore, a set of terms identified according to the groups was obtained: 'object', 'object qualifier' and 'amplitude/limit of the object'. In each of these three groups, the descriptors were combined using the Boolean operator “OR”, which formed search poles organized by each database. In the next step, advanced database search was used using the poles formed in the previous step, crossing them with the Boolean operator AND. The final syntaxes of each base

can be seen at this link: https://drive.google.com/drive/folders/1avs4XPL9dyiw2wNwYyhhTBcBPqmgHlcX?usp=sharing.

Thus, the final VHL syntax was applied on 04/15/2023, allowing the identification of 125 studies. The application of the final syntax on the PubMed portal was carried out on 07/23/2023, enabling the identification of 394 studies, totaling 519 studies in total: VHL and PubMed. Following *Preferred* recommendations *Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA) to carry out systematic reviews, the identification, selection, eligibility and inclusion phases were carried out (Figure 1).

In the identification phase, only one repeated study was noticed (BVS = 1) and was therefore removed in this process, leaving 518. In the selection phase, the type of material was identified (whether they were original scientific articles or whether they were of another nature: thesis, dissertation, among others), and, at this time, 31 studies (VHL = 2 | PubMed = 29) were removed. Still at this stage, 34 studies (VHL = 13 | PubMed = 21) did not have an abstract and, therefore, were excluded. Then, 15 studies (VHL = 0 | PubMed = 15) were excluded because they were not written in the languages chosen for this meta-synthesis (Portuguese, English or Spanish).

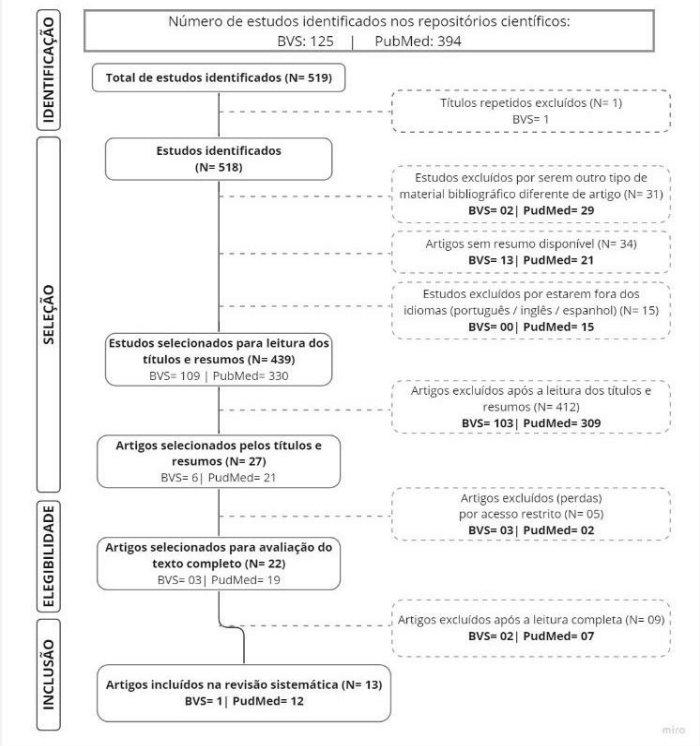
At the end of this selection phase, 439 articles were obtained (VHL = 109 | PubMed = 330) for reading the title and abstract. When reading the titles and abstracts, articles were taken into account whose title and/or summary content answered the research question, presenting the knowledge, skills and/or attitudes necessary for health professionals to guide the action of WH or correlated areas. Thus, 412 articles (BVS = 103 | PubMed = 309) that did not answer the question of this review were excluded, leaving only 27 articles (BVS = 6 | PubMed = 21) whose titles and abstracts answered the research question.

In the eligibility phase, 5 articles (BVS = 3 | PubMed = 2) were excluded due to restricted access (they were not included in the catalog of journals subscribed to by Unifesp), leaving 22 articles (BVS = 3 | PubMed = 19) for reading of the full text. After complete reading, 9 articles were excluded (VHL = 2 | PubMed = 7) because they did not focus their analyzes on any aspect that could possibly help answer the question of this review. Thus, 13 articles (VHL = 1 | PubMed = 12) were considered included for the metasynthesis of their contents, as they brought common skills that could be considered in the field of WH (Table 1). All these phases were carried out by two interdependent reviewers.

Next, the scientific articles were categorized according to author, country, year, relating themes on common competencies in the field of WH in health professions, and according to the design of competency-based curricula organized by thematic nuclei that articulate practical actions in WH contained in the PNSTT, which were discussed in light of the perspective of classic authors in the field (Laurell; Noriega, 1989; Mendes; Dias, 1991; Minayo-Gomes; Thedim-Costa, 2003; Lacaz *et al.,* 2013; Minayo-Gomes; Vasconcelos; Machado, 2018; between others).

Finally, the quality of the included articles was assessed following the guidelines of the *Critical instrument Appraisal Skills Program* (Casp), which enabled a detailed analysis of the structure of the included articles. Items related to article structures were classified as 'no' (unsatisfactory), 'yes' (satisfactory) or 'partial' (partially satisfactory). The analysis of each article can be seen at the link: https://drive.google.com/drive/folders/1GrqZwJX7vg_oKcJi7VvO6ZPA4pZksNYW?usp=sharing.

Figure 1 - PRISMA flowchart on the selection process of articles included in the meta-synthesis. April and July, 2023.



Source: Prepared by the authors.

Table 1 - Authors, country, year of publication and title of articles included in the meta-synthesis. April and July, 2023.

Code	Authors	Country	Year
VHL			
A1	Lugah *et al.*	Malaysia	2010
PubMed			
A2	Kirk.	UK	2012
A3	Stilz and Madan.	UK	2014
A4	Gual *et al.*	Spain	2014
A5	Verger *et al.*	France	2014
A6	Ljungquist *et al.*	Sweden	2015
A7	Nagata, *et al.*	Japan	2016
A8	Kubo *et al.*	Japan	2016
A9	Lalloo *et al.*	UK	2016
A10	Lalloo *et al.*	UK	2017
A11	Demou, Lalloo and Macdonald.	UK	2018
A12	Chakraborty *et al.*	Australia	2020
A13	Olszewski, Wolf and Wenskovitch	U.S	2021

Source: And work of the authors.

Results

In this review, 13 scientific articles were included with a broad representation of countries from different continents, including eight countries located on the European continent, three on the Asian continent, one in Oceania and one on the American continent. Among the articles included, it was not possible to identify any of national origin or from other South American countries. Therefore, there is no representation of Brazilian studies among the findings of this research.

The publications begin in 2010 and follow the years 2012, 2014 to 2018, 2020 and 2021, with objectives aimed at the perception, evaluation and knowledge of health professionals about competencies in worker health and safety/occupational health, considering the characteristics and theoretical concepts that underpin the field of studies and health care practices for workers in each country. Most of the articles used the Delphi method (widely used in studies in the area of education) and carried out a descriptive analysis of their findings.

The included articles presented content on the common competencies (knowledge, skills and attitudes) of health professionals in the area of OR, with the presence of elements corresponding to the field of WH, with the most frequent content being those related to the dimension of skills and the least frequent are those associated with the knowledge necessary to carry out actions in the field.

It is also noted that, in general, the results focus on skills aimed at clinical-assistance performance based on classic models of care, the management of risks arising from work processes and environments and issues related to professional ethical values, including interpersonal and management relationships.

Although the studies were aimed at the uniprofessional performance of doctors and nurses specialized in the field of OR, their results can be explored in the construction of common professional skills to promote comprehensive health care for workers(as) in different areas of activity, taking into account the multi- and interdisciplinarity of the field.

Thus, the metasynthesis of the results on the common competencies of health professionals in the field of WH was organized based on the practical understanding of the field, which are systematized into four thematic groups ('Historical and sociological aspects of worker health', 'worker health surveillance', 'worker health care and assistance' and 'transversal aspects of worker health').

In this sense, the dimensions of competencies related to the historical aspects of worker health and its operationalization refer to the need to: know, consider and act on legislation, regulations, codes and guidelines on occupational health and safety in each country, including the development of health policies for workers. In relation to the common skills identified as worker health surveillance practices, it was possible to observe the emphasis on know-how relating to occupational risks, the identification of work-related illnesses, considering their notification and the establishment of solutions to eliminate problems originating from work environments.

Concerning worker health care and assistance, it is clear that common competencies guide the collection of the workers' complete occupational history, the assessment of the worker's health status, the provision of providing health guidance to workers and implementing evidence-based care.

Finally, common competencies that refer to common practices across the field include communication actions, information on worker health, the preparation of health professionals to work in WH and the promotion of well-being among workers). This metasynthesis can be viewed at the link: https://drive.google.com/drive/folders/1qd7p8nQmxrRmHa9gD0b5bIuDIuU62Ldl?usp=sharing.

Discussion

About knowledge

In the context of professional skills, knowledge (competence resources) consists of theoretical-practical knowledge acquired through an education system or that can be developed in the life experiences, social, work and cultural relationships of individuals (Fleury; Fleury, 2001; Rezer, 2020).

For Perrenoud (1999, p. 07), the meaning of knowledge (knowledge) is conditioned to the instrumentalization of knowledge to do it, moving it inexorably towards an adjusted logic, with a practical purpose and which needs to be applicable to the problems existing in the world of work.

As a consequence of this model, knowledge assessed as 'not applicable' is now considered unnecessary in the structuring of professional skills, resulting in gaps in critical-reflective content in the curricula of professionals trained in this conception and in low scientific production on the subject (Mascarello; Rezer, 2020).

Thus, in this study, only five articles – A1, A4, A9, A10 and A12 – present in their content knowledge for the construction of knowledge applied to the scenario of practices within the health-work binomial relationship.

In summary, the findings refer to a set of knowledge – constituted in 'knowledge cores' – anchored in the areas of MT and SO that address concepts on occupational risk management, ergonomics, exposure routes, health and safety regulations of work, health promotion in the workplace, personal protective equipment and health problems among workers arising from work environments and processes.

This may suggest that there is a lack of scientific framework on the location of this knowledge in the field of WH, highlighting the lack of interest of international organizations in issues surrounding the health of workers in the context of the capitalist mode of production and conceptual inconsistencies in the structuring of professional skills.

Consequently, the theoretical restriction of the international scenario on the conduct of professional training at a higher level in WH (and not in 'MT' or 'OS'), can determine the political-strategic relevance regarding what knowledge is necessary to do so and the being in WH, limiting scientific production on the subject.

Although these macropolitical challenges exist, national scientific production in WH, mainly related to historicity, contributes to the structuring of the knowledge necessary for the field, albeit briefly.

For example, classic authors such as Minayo-Gomes, Vasconcelos, Machado (2018) address the degree of complexity of the knowledge necessary to promote interventions in the work scenario, contemplating different contexts that demand deep articulations with institutions responsible for scientific production, such as universities, for each type of production chain and that may be identified during these actions.

Furthermore, during the execution of intervention actions in work environments, all the knowledge produced by workers must be considered, considering that they have unique experiences to bring to light the specificities of organizational processes, many times not seen by those who do not live the reality in question (Vasconcelos; Minayo-Gomes; Machado, 2014; Minayo-Gomes; Vasconcelos; Machado, 2018, Laurell; Noriega, 1989; Sato, 1996).

Another significant characteristic for the definition of knowledge in WH is the incorporation of work as an educational principle (Gramsci, 2006), capable of overcoming the division between workers and scientists – intellectuals –, to expand the conceptions of training of health professionals concerning the 'development of tasks' for a critical understanding of the world (Reis; Mendonça, 2013).

Minayo-Gomes and Thedim-Costa (2003) discuss the contributions of social sciences in the production of knowledge in WH from the perspective of the relevance of work in social production and in determining this category for the production of health-disease, based on the production reflections on the construction of the WH field; WH policy and its operationalization in the SUS; comprehensive approaches; gender issues and themes arising from the precariousness of the labor market.

Geraldi and collaborators (2022) also present some common knowledge essential for teaching WH within the scope of health degrees, corresponding to the establishment of the relationship between illness and work, participation and social control, the regulations of the social security and social assistance sectors, labor legislation, policies related to the field, tools for interventions in working conditions and definitions of lines of care.

Finally, despite the limitations found on WH knowledge in the included articles, these can support the definition of professional skills in the field, as long as they are articulated with the normative references that guide WH actions and the classic theoretical references that influenced the construction of WH public policy in Brazil.

About skills

The dimension of skills in the context of competency-based pedagogy represents the articulation of knowledge put into action by professionals in their work routines (Ramos, 2002). Doing is usually used to summarize the definition of competencies, especially because it is presented as a set of capabilities translated into 'being capable', which end up being written to meet the execution of an activity (Maglaive, 1995, p. 122).

In the context of the findings of this research, most articles present content related to doing as the main resource for developing skills in the field of WH, without considering that the incorporation of professional doing must be preceded by principles based on knowledge.

In general, the skills identified in articles A4, A8, A9, A11 and A13 refer to the application of tools for management, investigation, assessment and intervention of risks in work environments, including 'does' related to health care of workers – articles A2, A6, A9 and A12 –, with an approach on return to work – A3, A5 and A7 –, on information management – A4 –, the assessment of needs for health promotion – A5 and A9 – and strategic planning – A3 and A7.

In this way, some reflections were carried out in the Brazilian scientific literature with the aim of strengthening and expanding the understanding of the competence resource on the skills necessary to guide the work of professionals in the field of WH.

Thus, the study developed by Vasconcelos, Minayo-Gomes and Machado (2014a) was identified, which describes the need to include among professional skills the execution of surveillance actions applied in the context of the work-health relationship. The incorporation of surveillance skills in WH needs to be based on the concept of health promotion, so that it is possible to produce more assertive responses to the challenges experienced by workers (Alves, 2003).

Among the metasynthesized articles, only A7 mentions the term **health surveillance** among the skills identified. This describes the professional's ability to:

> plan health surveillance actions; interview and examine subjects in health surveillance actions; present opinions on fitness for work based on health surveillance data; analyze health surveillance data and recommend necessary measures for improvement. (A7, p. 281, our translation).

This result confirms some notes made by Luchesi, Mourão and Kitamura (2010), which highlight the importance of 'doing' centered on adapting the workers' work environment, using planning, monitoring and and evaluation for structuring permanent intervention programs in

work environments, through action between different professional categories.

Surveillance skills in WH for intervention in work environments and processes require a keen eye to identify work-related illnesses and injuries, to enable timely and appropriate care, reduce absences from work and expand working conditions life and work of workers (Borges *et al.,* 2014; Lacaz *et al.,* 2013a; Lucca; Kitamura, 2012).

Another essential aspect to guide work in WH consists of developing skills to collect and analyze the clinical and professional history of workers, including the description of the history of occupational exposure – A2 and A9. Authors like Lucca; Kitamura (2012) and Dias *et al*. (2006) corroborate the importance of professional skills over occupational history (interviews with workers about their work) to identify factors that led or could lead to work-related illness.

In conclusion, Duarte (2015) adds that skills related to the creation of permanent spaces for qualified listening and sharing of information of interest to workers should be created, given the relevance of safe environments for exchanging experiences and construction of collective strategies to overcome the challenges present in work environments and processes.

About attitudes

Competence resources concerning attitudes consist of aspects related to the personality of professionals, which materialize in behaviors considered 'appropriate', which must be applied to work environments and processes (Fleury; Fleury, 2001; Ramos, 2002).

When analyzing this resource in this meta-synthesis, seven articles describe attitudes in their structure related to 'being' professional, presenting some important categories to guide the actions of health professionals in the field marked by conflicts arising from the work-health relationship. However, only two articles brought relevant content for research.

The first was A4, which identifies attitudes essential to the professional's behavior, considering their relationship in the work environment and with the worker regarding impartiality, confidentiality, ethics, independence, leadership, conviction, empathy, proactivity, curiosity, self-criticism and encouragement for the active participation of workers.

The second was A8, which describes a set of attitudes related to the professional's conduct in the context of the work institution, their personal development and the workers 'objects of their action'.

Thus, the emerging content states that professionals **at the institutional level** must respect the rules as a member of an organization, demonstrate expertise at work, conduct

activities in accordance with management philosophy and policy; in the **personal context,** you must acquire life experience through work, seek personal improvement, take advantage of personal strengths (e.g. qualifications, skills, etc.), reconcile professional life with private life; **in its performance professional towards the worker** must act as a defender of the workers; empower workers; be in charge of the workers; work freely at your own pace – A8.

Even given the scarcity of studies that deal directly with the topic, it was possible to identify in Vasconcelos' production; Minayo-Gomes and Machado (2014) some characteristics that the professional must possess to develop WH actions, related to public, political, social commitment and the defense of life and health at work.

Other essential components linked to professionals' attitudes correspond to knowing how to act at different times, mobilizing necessary resources to execute actions, working as a team in a collaborative and interprofessional way (Griggio *et al.,* 2020), assume responsibilities (when applicable), communicate and share information in WH and, finally, have a strategic vision for identifying opportunities to promote the health of workers (Fleury; Fleury, 2001).

The conclusions of the reviewed studies

The reviewed articles present results from the international conception of health care for workers with strong influences on the WH model, and reflect the limitations in the scope of action of health professionals to mere activities restricted to work environments and processes.

Nevertheless, the potential present in the results of the studies is recognized. After all, work in WH is based on an interdisciplinary understanding of the field and the diversity of knowledge, skills and attitudes necessary to promote effective health interventions in the work context.

Therefore, the notes made in articles A4, A7, A8, A9, A10 and A13 stand out, which suggest that the training of health professionals in the field of WH should be implemented with the incorporation of new contents and approaches, aiming to the construction of a political and reflective profile, capable of acting from a broader health perspective to promote health among workers.

However, the studies conclude that the common professional competencies identified in the research results are directed towards clinical-care activities, centered on the work of specialized medical and nursing categories, with an emphasis on traditional practices focused on the disease, opposing the reflections produced by the field from WH.

It is worth highlighting the emphasis on common professional skills in managing the risks present in work environments, which are based on positivist theories anchored in the

understanding of the multicausality of the health-disease process and not in the understanding of health as a socially determined process (Mendes; Dias, 1991).

Although the research findings reflect workers' health care practices, weaknesses are perceived in the definition of lines of care in different characteristics of illness, especially in work-related mental health situations, since the determination of work processes based on productivity-based remuneration systems is outside the governability of the professionals responsible for care actions, thus bringing implications for the intervention of the illness cycle. Another highlight is the lack of skills focused on managing policies and programs; however, the conclusions of the studies reinforce the importance of developing leadership, articulation and management attitudes.

Furthermore, the meta-synthesized data tend to direct professional performance in the field restricted to the execution of activities, which are not the result of pedagogical teaching-learning processes. This statement is evidenced by the absence of content on WH knowledge in around 60% of the articles included for analysis, demonstrating that the apprehension of scientific concepts is something that is not necessary for the foundation of professional skills.

In Brazil, the study conducted by Geraldi *et al.* (2022) reports that the curricular structures of undergraduate courses in the health area present weaknesses in the definition of their common professional competencies on topics of interest to WH, being separated in the systematization of contents that consider the impacts of the 'work' category on the lives of people and their communities.

It is necessary to recognize that these results reflect the problems that the field of WH faces worldwide, and it is not possible to visualize a horizon of changes in professional training that is capable of transforming the essence of work as a tool of 'capital' for the exploitation of bodies of workers, leading to illness, loss of years of life and even death.

On the other hand, one cannot lose sight of the importance of the field of WH as a political, counter-hegemonic and revolutionary space for promoting the right to health (Lacaz, 2007) and a critical-radical ethics of the effects of work on health (Carnut; Rodrigues, 2020). From this perspective, efforts to build paths to overcome each challenge, including the challenge of preparing professionals from different areas of knowledge, must be expanded, so that substantial actions are incorporated into the agendas of the Brazilian State.

Articulation of common competencies to define dimensions of knowledge and practices in occupational health

When seeking a new synthesis for the organization of common competencies in WH

that overcome the uniprofessional tendencies found in the reviewed articles and move towards a WH reorganized according to the parameters of the PNSTT, the common competencies of health professionals identified were carefully analyzed in the studies. A rearrangement of the findings was proposed, based on the OR area, in relation to the thematic categories in WH characterized as an object of action in the SUS (Figure 2).

As described below, theoretical-practical associations were established between the contents identified and the objectives standardized in the SUS PNSTT (Brasil, 2017). These associations allowed the systematization of knowledge, skills and attitudes in dimensions arising from the branches of 'social sciences', 'epidemiology', the areas of 'health care and surveillance', 'public administration, public policies and health management' related to the field of collective health.

Thus, the dimensions were reorganized according to (Figure 2):

a) Historical sociological aspects of worker health

The organization of common competencies in the dimension of historical aspects identified in articles A1, A9, A10 and A12, aligns with the needs of understanding normative acts in the area of health and safety at work, as well as understanding the health and lifestyle of employees workers, aiming to develop public health and safety policies, as identified in the articles reviewed in this research.

Thus, the incorporation of this dimension is related to the need to promote in-depth dialogues with the field of social sciences and collective health, in an attempt to contextualize the role of workers in the evolution of issues that mark the work-health relationship in the world, from the hegemonic rupture with the MT and SO areas (Mendes; Dias, 1991; Minayo-Gomez; Thedim-Costa, 2003). Furthermore, common competencies should be considered to be the discussion of the history of workers' health, epistemological differences with other areas and their relationships; the category 'work' as the center of the process of determining health-disease in individuals and communities; the role of participation and social control in worker health; and questions about the institutionalization of the field in the SUS, among others (Brasil, 2017).

Finally, such concepts are crucial for understanding the origin of impacts on workers' health, considering the social, technical, economic and political categories, which relate to work processes as conditions of health and disease in worker collectives (Minayo-Gomez; Thedim-Costa, 2003).

b) Worker health surveillance

To structure this dimension, the synthesis of the contents of the common competencies

of articles A1, A2, A3, A4, A7 – A13 was considered, articulating the concept presented by Machado (2011), which defines worker health surveillance in a set of transversal knowledge and practices, with the objectives of preventing morbidity and mortality and promoting health among workers, through the implementation of intervention actions in work environments and processes (Machado, 2011).

Thus, aspects related to management, control hierarchy and occupational risk reduction were considered common competencies, including data analysis activities, application of technical assessment and intervention tools in work environments, in addition to guidance on surveillance actions in health and the definition of measures for changes in work systems.

Furthermore, issues relating to the identification of productive activities in the territory may be added to the know-how of health professionals, through the analysis of the workers' health situation; the handling of health information systems; the development and evaluation of health indicators; notification and investigation of work-related illnesses and injuries; the production of technical documents; the development of interventions in work environments and processes, among others, as long as they are articulated with the principles of the WH field for action in the SUS and contribute to the operationalization of the actions foreseen in the PNSTT (Brazil, 2017).

c) Worker health care and assistance

The dimension of worker health care is related to a group of common professional skills organized according to reception behaviors, diagnosis and guidance on returning to work identified in articles A2, A3, A5, A6, A9, A10 and A12. The definition of this dimension emerged in an attempt to overcome the biomedical care model to stimulate care for workers based on an expanded understanding of health, on an interprofessional basis, considering the characteristics of illness and its relationship with aspects of the work.

Thus, the common skills identified in the articles, from an WH perspective, were adapted according to the contents of the PNSTT, being systematized in the definition of lines of care; unique therapeutic projects in Health Care Networks (RAS); in the development of assistance and collective care actions, aiming at the complete recovery of workers; in shared care, with respect for workers' knowledge about their bodies and their work processes; in the development of clinical protocols that consider work as a social determinant of health; among other common skills that enable the qualification of care practices developed at different levels of SUS health care, considering Renast and the RAS (Brasil, 1990; 2017).

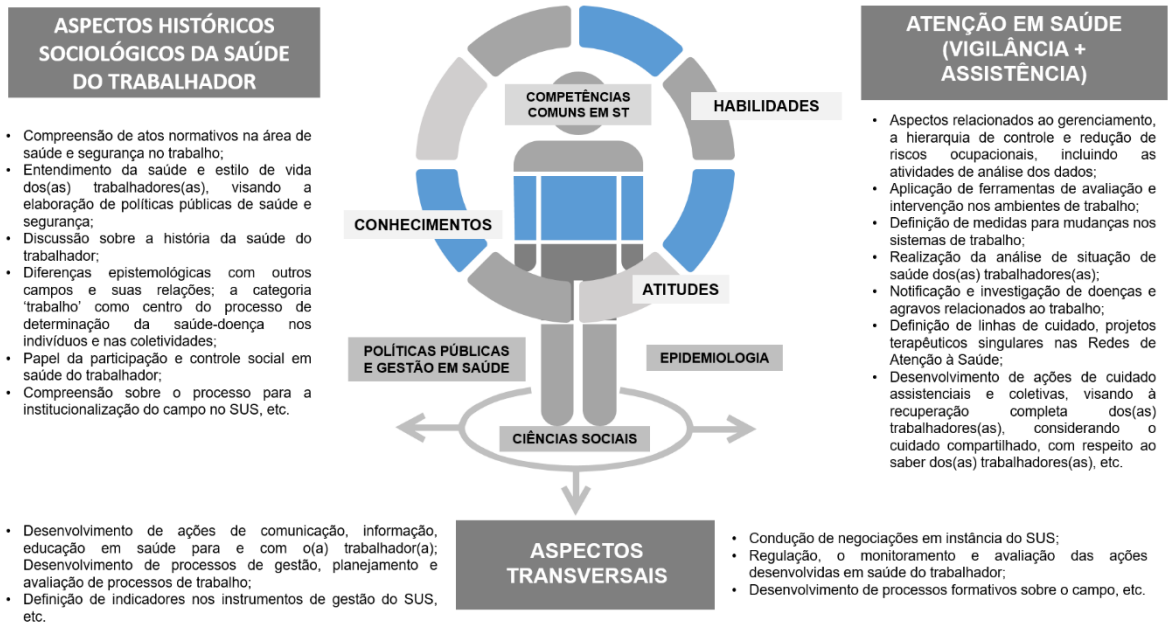
d) Cross-cutting aspects of worker health

Finally, the contents that address the areas of knowledge that permeate the know-how and how to be a professional in different contexts of work in the SUS were classified into transversal dimensions in the area of SO and in the field of WH. For example, there are competencies that present characteristics regarding the development of communication, information and health education actions for and with the worker, especially concerning the management, planning and evaluation of work processes identified in articles A2, A4, A7, A8, A9 – A13.

The importance of classifying the set of common competencies into transversal aspects allowed visualization of the diversity of areas of knowledge considered internationally as necessary for know-how among health professionals and which can be improved to cover other needs.

In addition to the common competencies identified in the reviewed articles, we can add the definition of indicators in the SUS management instruments; conducting negotiations within the SUS; the regulation, monitoring and evaluation of actions developed in occupational health; development of training processes in the field; among others that span the different areas of knowledge and can be viewed on PNSTT (Brasil, 2017).

Figure 2 – Diagram of the new logic integrating common competencies in WH according to the PNSTT parameters. April and August, 2023.



Source: Prepared by the authors.

Final remarks

The operationalization of WH actions in Brazil continues to be a challenge for the SUS, considering the gaps in the definition of common competencies in the field in the curricula of professionals who work in public health services.

In this sense, this study sought to contribute to filling these gaps, aiming to identify notes in the literature that can guide the design of curricula based on common skills that can support the training of health professionals for the development of WH practices.

The systematic search for common competencies of health professionals in WH allowed the verification of international hegemony over the SO model as a guide for the actions of health professionals in the face of issues surrounding the work-health relationship.

Although this finding represents a challenge, the identification of content on the subject among the articles reviewed provided the opportunity for the systematization of common transdisciplinary skills related to health promotion, health surveillance, identification and management of occupational risks, the definition of intervention measures, protection applied to workers and the conduct of care with the participation of the worker, from collecting the occupational history to returning to work.

It is worth emphasizing that, during the organization of the research results, it was necessary to make theoretical approximations between the findings and the structuring contents of the PNSTT, given the importance of this instrument as a marker of common competencies in the field of WH at a national level.

Some aspects that must be emphasized correspond to the low representation of national production on the topic of WH training during the review, recognizing the limitations that may have contributed to this absence regarding the choices of descriptors that guided the systematic search.

Another perceived limitation concerns the difficulty in the lack of scientific parameters to guide the comparison of findings, requiring a broad theoretical exercise with studies by classic authors that address pertinent issues about the knowledge, skills and attitudes in WH that helped guide the organization of training processes for health professionals, articulating scientific production on the competency-based curriculum. Finally, it is expected that these results will contribute to stimulating other scientific productions on the topic and expanding the discussion on WH training in Brazil.

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