

## Worker's Health in the 25 years of the *Journal Ciência & Saúde Coletiva*

Francisco Antonio de Castro Lacaz (<https://orcid.org/0000-0001-7621-3756>)<sup>1</sup>  
 Patrícia Martins Goulart (<https://orcid.org/0000-0002-5080-9241>)<sup>2</sup>  
 Edvânia Ângela de Souza (<https://orcid.org/0000-0002-8997-7592>)<sup>3</sup>  
 Carla Andrea Trapé (<https://orcid.org/0000-0002-3272-6565>)<sup>4</sup>  
 Dimitre Sampaio Moita (<https://orcid.org/0000-0002-1814-7751>)<sup>5</sup>  
 Gabriela Mota-Sousa (<https://orcid.org/0000-0002-6710-773X>)<sup>6</sup>  
 Bruno Chapadeiro Ribeiro (<https://orcid.org/0000-0003-0167-0164>)<sup>1</sup>

**Abstract** *This paper addresses Worker's Health scientific production, specifically about how the Journal Ciência & Saúde Coletiva has contributed to the consolidation of this field. This is a qualitative and descriptive study based on a review of the Journal's collection from 1996 to 2019. We selected a final sample of 156 texts organized by thematic groups. The theme was designed with the predominance of Epidemiological and Public Policy studies, studies of a theoretical-methodological nature and related to World of Work Transformations. Approximately 60% of publications are concentrated in the 2009-2015 period. A significant decline in the number of works was observed as of 2016. The papers address Worker's Health in a comprehensive and diversified manner. There is a greater emphasis on research on work and environment, health issues, formulation and implementation of policies and programs. The journal significantly contributes to the national Worker's Health. Strengthening academic production in this field remains a challenge, especially in the face of the loss of rights.*

**Key words** *Worker's health, Work and health, Work and environment, Worker's health surveillance*

<sup>1</sup> Escola Paulista de Medicina, Universidade Federal de São Paulo (UNIFESP). R. Botucatu 740, Vila Clementino. 04023-062 São Paulo SP Brasil. [franlacaz@hotmail.com](mailto:franlacaz@hotmail.com)  
<sup>2</sup> Instituto Saúde e Sociedade, UNIFESP. Santos SP Brasil.  
<sup>3</sup> Faculdade de Ciências Humanas e Sociais, Universidade Estadual de São Paulo. São Paulo SP Brasil.  
<sup>4</sup> Escola de Enfermagem, Universidade de São Paulo. São Paulo SP Brasil.  
<sup>5</sup> Programa de Pós-Graduação em Psicologia, Universidade Federal do Ceará. Fortaleza CE Brasil.  
<sup>6</sup> Programa de Pós-Graduação em Saúde Coletiva, Escola Paulista de Medicina, UNIFESP. São Paulo SP Brasil.  
<sup>7</sup> Programa de Pós-Graduação em Psicologia da Saúde, Universidade Metodista de São Paulo. São Bernardo do Campo SP Brasil.

## Introduction

The importance of discussing Worker's Health (WH) is linked to studies on its incorporation into the Brazilian Unified Health System (SUS), union action in its establishment, and its supporting academic production<sup>1,2</sup>. It is a continuous construction process, as Minayo-Gomez<sup>3</sup> points out.

The theoretical furniture supporting the WH's theoretical and practical discourse stemmed from the essential need to advance in the debate on the relationship between work and health produced by Occupational Medicine (OM) and Occupational Health (OH). The common thread was incorporating the Latin American Social Medicine and Collective Health approaches<sup>1,4,5</sup>. Despite comparing OH's formulations, from an academic, political, and institutional viewpoint, the WH's approach transcends the analyses restricted to the monocausal paradigm, which situates the disease and a specific agent, or the multicausal, in which the disease is associated with a group of risk factors (physical, chemical, biological, and mechanical) in the work environment<sup>1,6</sup>.

The approach developed by the field is anchored in the appropriation of the work process category in its relationship with health. The work process concept based on the criticism of the political economy comprises the work production, management, and organization, which acts consciously and intentionally through human intervention and production to obtain a specific result and material or immaterial product<sup>7</sup>. In a capitalist society, the work process is geared to meeting the objective of accumulation (valorization process) and its environment (labor process) with specific work-wear and class confrontation, which, in turn, determine a particular reproduction pattern. When combined with wear, this pattern is a specific health-disease process for each social group, causing the workforce's wear expressed in accidents and diseases<sup>8</sup>.

Concerning academic production, noteworthy are Latin American Social Medicine affiliated authors, such as Laurell<sup>9,10</sup>, Laurell and Noriega<sup>8</sup>, and others who conceived the Italian Worker Model (IWM) proposal, developed in Italy in the 1960-70 period<sup>11</sup>, which influenced both union action and health services<sup>1</sup>.

Along this path, union action potentiated WH's development, especially in the claim, management, and social participation/control of workers in the Worker's Health Programs (PST),

which later became part of the Worker's Health Reference Centers (CEREST). The establishment of the Inter-Union Department for Studies and Research on Health and Work Environments (DIESAT) in 1980 contributed in an essential way to subsidizing this action<sup>12</sup>.

From the viewpoint of health policies, WH is a field of intervention and practices developed within public health<sup>4,5</sup>. Thus, it adopts the SUS principles, originated from the Brazilian Health Reform Movement (MRSB), namely, the universal right to health, comprehensive care, with an emphasis on prevention and health promotion, decentralized actions, and social participation. The expanded concept of health is also one of the SUS fundamentals and is necessary for transforming social practices far beyond health care.

Based on these principles, the National Worker's Health Comprehensive Care Network (RENAST) was created in 2002 within the Ministry of Health (MS) as an essential legal device, including a source of financing for the organization, institutionalization, and strengthening of WH actions in the SUS, both concerning care and health promotion and surveillance in the workplace. RENAST also ensured workers' participation in the monitoring of CEREST linked to the establishment and organization of management councils, ensuing union and popular participation<sup>13</sup>. In summary, the creation of RENAST gave rise to the National Worker's Health Policy (PNST) for the SUS, built in 2004, which aimed to 1) expand its coverage to serve all workers; 2) harmonize the rules and articulation of actions; 3) give precedence to prevention over reparation; 4) build the integrated WH information network; 5) structure WH training aiming at continuing training of workers who are going to operationalize the PNST; 6) promote the integrated agenda for WH studies and investigations<sup>13</sup>.

In 2012, the PNST earned a new version, when the National Worker's Health and Safety Policy (PNSTT)<sup>14</sup> was established, which among the principles and strategies for the WH's effectiveness in the SUS, highlights the development comprehensive worker's health care, with an emphasis on surveillance, aiming at the health promotion and protection and the reduction of morbimortality resulting from development models and production processes.

CEREST and Health Surveillance have been developing actions and guidelines for the planning and operationalizing surveillance actions in the work environment or worker's health

(VISAT) in the three spheres of government (municipal, state, and federal). Vasconcellos et al.<sup>15</sup> highlight that one of the PNSTT's lines is the expanded influence on work process-related health determinants and conditionants. CEREST supports care and surveillance actions and must "[...] collect, systematize and disseminate information to enable surveillance actions, facilitate the training and continuing education processes for SUS network professionals and technicians and social control"<sup>16</sup>. VISAT actions are characterized as intersectoral practices articulated by CEREST, which involve SUS services, in this case, surveillance (environmental, health and epidemiological), workers, union representatives<sup>17</sup>, and sectors of the Ministry of Labor, and the Labor Public Prosecutor's Office.

Also noteworthy are the persistent, elevated levels of occupational accidents and diseases, and some limitations, such as within the public policy, the small incorporation of WH actions by PHC<sup>16,18</sup>, the sparse WH education actions, a specialized back-end, and VISAT actions<sup>19</sup>.

Within the union movement, weak resistance to changes in the world of work that involve productive restructuring<sup>20</sup> and social deprotection, marked by new recruitment methods, such as outsourcing, subcontracting, self-employment, intermittent work, home office, and unemployment, represent widespread life insecurity, and affect its collective bargaining capacity<sup>21</sup>, with losses also for health and safety measures in the workplace and a widespread impact on work-related mental health<sup>22</sup>.

The complex scenario and challenges imposed on WH research are well known, given the technical-scientific advancement of computing, advanced industrial automation, interactivity on social networks, and the internet, among other aspects in processes called Industry 4.0<sup>23</sup>. *Pari passu*, the constraints experienced by workers are exacerbated due to social deprotection and new management types, conditions, and work organization<sup>21</sup>.

Thus, this paper aims to present the WH production published in the *Journal Ciência & Saúde Coletiva (C&SC)*, with two objectives: 1) to outline the behavior of WH publications from 1996 (year of C&SC establishment) to 2019; 2) to present themes and approaches that characterize WH publications.

## Methods

The review included reading the titles of all published papers and editorials of the thematic issues addressing WH available on the *Journal C&SC*'s homepage, from 1996 to 2019, except letters, reviews, and panelists' comments.

First, WH papers were selected, using the Boolean operator "AND" in the association between Portuguese descriptors *Saúde do Trabalhador* and *Trabalho e Saúde*, out of a total of 4,928 publications. This procedure aimed to outline papers' behavior in that period and their numerical expression compared to the total number of papers.

A total of 291 papers were selected after reading the titles, keywords, and, in some cases, abstracts and full-texts. We observed that several manuscripts addressed work and health but did not use the descriptors mentioned above or used the descriptors but did not consider the discussion from the WH's perspective, as outlined in the introduction. Thus, without sticking to the descriptors, the abstracts and full texts were read in full by four of the seven authors of this paper independently, reducing the sample to 263 texts. The exclusion criterion was failure to consider the relationship between work and health as the primary study object. Of the 263 papers, the sample was shortlisted to 156 works after comparing the researchers' information under the same exclusion criteria mentioned earlier, such as for example, a paper that studied the pesticides' issue but did not examine them concerning worker's health. The final sample was organized into thematic groups (TG), according to the methodological strategy adopted by Minayo-Gomez and Thedim-Costa<sup>24</sup>, described below.

The material's approach consisted initially of elaborating an overview that considered the nature of the studies, the approaches in the formulation and management of issues, the predominant themes, new objects, and approached theoretical trends. Given the set of contents and themes addressed in the papers, we decided to concentrate them on thematic groups that could configure an initial analysis framework.

This process was evaluated by a researcher, who acted as a "judge" in the delimitation of the final format of the TG, namely: 1) *Epidemiological Studies*: papers with epidemiological profiles of worker's health issues related to working conditions, processes, and organization; 2) *Studies on the transformations in the world of work*: papers discussing the transformations in the world of

work in Brazil since 1990, in the context of neo-liberalism, which led to productive restructuring, with new organizational and technological standards, new works social organization and new 'participatory' methods; 3) *Theoretical-methodological studies*: papers proposing theoretical and methodological approaches or criticizing existing approaches for the investigation of the work-health relationship; or those proposing to analyze theories that epistemologically support the field. 4) *Studies on Public Policies*: papers that specifically aim to study government programs, particularly their emergency conditions, their operating mechanisms, and their possible impacts on the social and economic order. These papers address WH public policies in their various aspects, such as intersectoral actions, social control, and VISAT.

## Results

Figures 1 and 2 are shown to outline the behavior of the WH publications in the *C&SC* journal in the 1996-2019 period, according to the four TGs.

It is observed that 61% of the analyzed publications are concentrated in the 2009-2015 period, double the amount of selected texts in the first thirteen years of the Journal (29%). As of 2016, a decline in WH publications was noted, and only 16 papers have been published since, equivalent to 10% of the sample. Noteworthy that *C&SC* has not published any WH papers in 1996, 1997, 1999, and 2007.

The most significant frequency of papers occurs when thematic issues on WH are published, namely: Issue 4 of 2003, dedicated to the debate on the integration of WH and environmental health actions; Issue 4 of 2005, published on the occasion of the Third National Conference on Worker's Health (Third CNST); Issue 8 of 2011, which addresses health, work, and the environment; Issue 3 of 2013, dedicated to the health of public safety professionals; Issue 11 of 2013, dedicated to the WH knowledge production; and issue 12 of 2014, dedicated to VISAT.

The following figure shows a comparison between the total number of papers published by *C&SC* (excluding editorials, letters, reviews, and comments by panelists), represented by the line, and the percentage of WH papers against the total number of papers each year, shown in the columns.

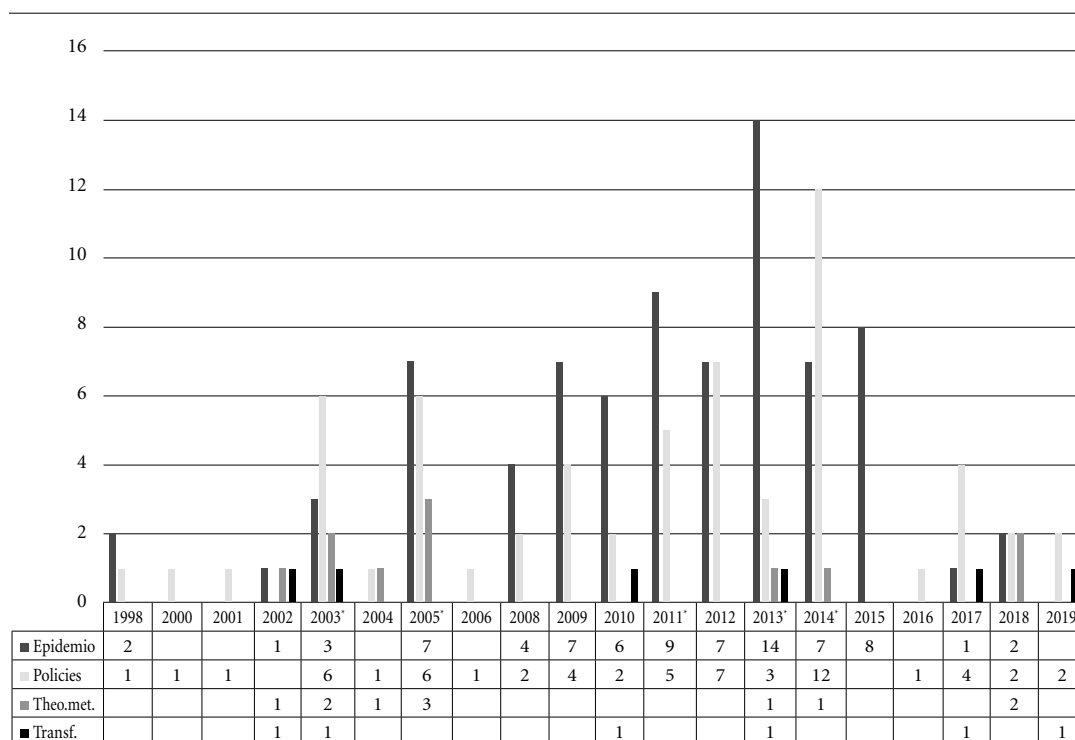
The representativeness of WH publications in the *C&SC* does not follow the variation in the total number of papers published by the Journal

over the 25 years. If in 2003, the WH production corresponded to 15.1% of the 79 published papers, with the increased number of publications. In contrast, the percentage of WH papers has been declining, reaching 0.7% in 2019.

The 156 works included in this analysis are sorted by main themes in the WH publications in the *C&SC*, organized in the Thematic Groups (TGs) previously presented. In the "Epidemiological Studies" thematic group, 78 papers were grouped under different theoretical-methodological and interpretation aspects. Of these, 37 studies present investigations on workers submitted to some illness process considering variables related to anthropometry, laboratory tests or imaging results, absence or presence of symptoms of the disease in question. This group included studies focused on workers' profiles in various occupations in the industry and services and works on exposure and contamination by physical, chemical, and biological agents, including rural work and pesticide exposure.

Next, 29 studies showed the multi-causality of the illness process in which the diseases studied were approached from the perspective of risk factors and in the interlocution of biological aspects with psychological, social, and individual behavior<sup>2,25</sup>. Part of the works presented socio-demographic data and the relationship between work and health in some sectors of the economy, with emphasis on mining, agribusiness (sugar and alcohol, timber), transportation, electricity, fishermen and crab scavengers, services (bank, police, and military, health professionals, and garbage collectors), and industry (especially metallurgists).

Another 13 studies associated the workers' illness process with the social organization and the social reproduction processes. These come close to the critical epidemiology benchmark coined by Breilh<sup>26</sup> which is based on an understanding of health and disease that places work – the capitalist production – and, subordinate to it, life – consumption under the command of the capitalist accumulation process – at the center of the explanation of health determination. Thus, the different forms of class incorporation of workers in production mode determine their social reproduction and illness profiles. The studies in question investigated the workers' health-disease processes, associating the different forms of wear and illness with the different forms of incorporation into the social reproduction process of miners, industry workers, oil workers, fishermen, and shellfish collectors, and health workers.



**Figure 1.** Distribution of publications on Worker's Health in the *Journal C&SC* in the 1996-2019 period.

Source: Image constructed from the authors' formulation of the selected *Journal C&SC* publications from 1996 to 2019. The years marked with an asterisk indicate the publication of WH thematic numbers.

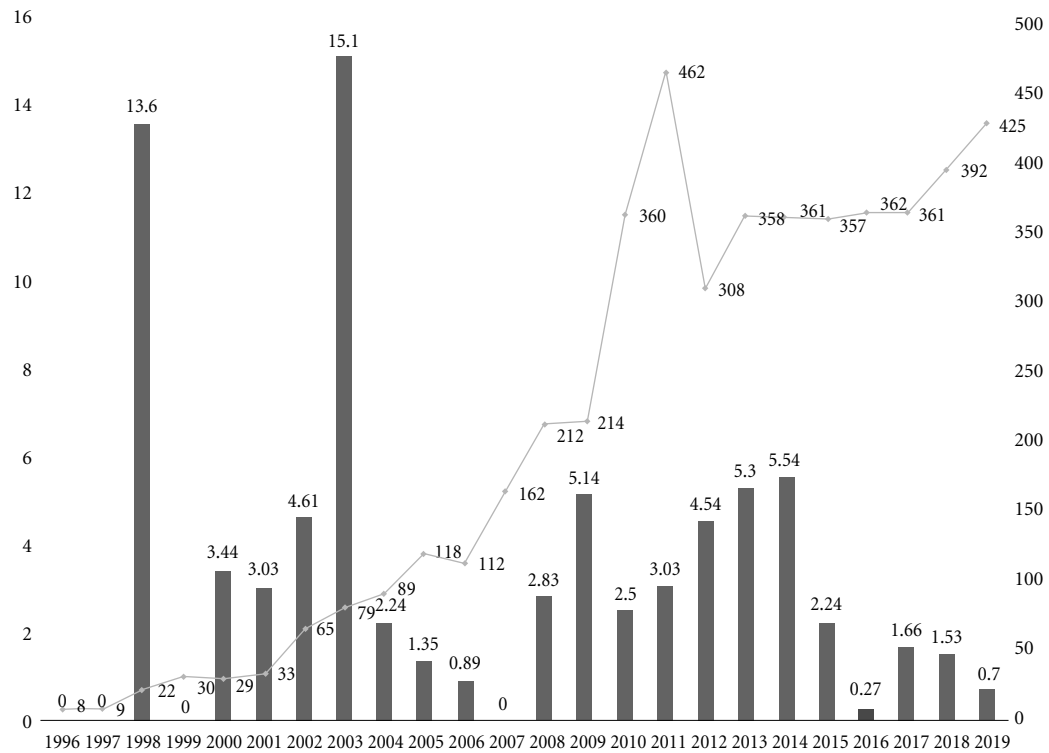
The thematic group of Public Policies and WH encompasses 61 papers on actions developed within SUS health services, and of these, 22 are related to VISAT's actions.

Among the issues addressed, RENAST and CEREST's regional network's implementation and their actions stand out. The following concerns are identified: the process of structuring WH actions articulated with SUS principles and guidelines; multidisciplinary matrix support actions; articulation of WH actions in the SUS and other sectors (Social Security, Labor, and Environment); the recognition of the need for an information system to support adequate planning and intervention; and the relationship between production, health, and the environment.

Regarding social participation, we identified papers that addressed the WH training of union directors and referred to the critical examination of the stance of union entities concerning health plans and the SUS and a text that addressed the National Worker's Health Conferences.

VISAT's actions are a theme dear to WH, which can be apprehended by the number of works on this subject, which address creating instruments and models for monitoring working environments and conditions; dialoguing with health, epidemiological, and environmental surveillance; intersectoral actions, highlighting one that involved the university and CEREST of Piracicaba (SP) in the development of a method for intervention actions in the sugarcane cutting work.

In the "Theoretical-Methodological Studies" thematic group, the papers show the diversity of disciplines underlying or dialoguing with WH and the epistemological approaches on this field's issues. We highlight texts that examine multi/inter/transdisciplinarity to reflect on the relationships between disciplines in the WH field; studies on research-intervention methods based on some theoretical-methodological approaches; and another, about the path of WH in the SUS, taking stock of its challenges.



**Figure 2.** Comparison between the total number of papers published by *Journal C&SC* and WH papers' percentage compared to the total in the 1996-2019 period.

Source: Image constructed from the authors' formulation of the selected *Journal C&SC* publications from 1996 to 2019.

The “World of Work Transformations and WH” TG consists of six papers. Some emphasize issues related to macro-social configurations in neoliberalism – external debt, globalization, criticism of the development model that leads to poverty, unemployment – seeking to relate them to work conditions and the environment. Another group of papers addresses changes in the ways of management and work processes in the industrial sector, which are studies that enter the workplace. The new organization of teaching work at public universities was also studied in this TG, regarding overload, with intensification and insecure teaching work conditions in mind.

## Discussion

The analyzed *C&SC* papers addressed WH comprehensively and differently. The production has been practically constant since 1998 – two years

after the publication of its first issue –, although there are, in its 25 years of existence, the absence of papers in this field in the four years already specified (1996, 1997, 1999, and 2007).

The texts analyzed in the “Epidemiological Studies” thematic group show a greater production, emphasizing the establishment of causal links between diseases and possible etiological agents. This result reflects the scientific health production, deeply influenced by the biomedical perspective<sup>27-30</sup>, to the detriment of the theoretical principles of Social Medicine<sup>26,31</sup>.

We can infer that the preponderance of studies centered on the biomedical perspective, often associated with the publication of the Flexner Report, whose guidelines guided the study of diseases and breaking with science based on metaphysics to support the rationalist model<sup>32</sup>, also reflected in the smaller number of studies on the world of work and theoretical and methodological aspects.

Noteworthy is the small number of studies aimed at transforming the world of work and WH compared to epidemiological studies. The studies address changes in macro-social policies under globalized neoliberalism and the implications of these changes in workers' daily lives with impacts on their health. Considering the current context marked by productive restructuring<sup>21</sup> and its consequences for the health of workers<sup>33</sup>, this reality deserves to be studied in a more attentive, regular, and prolonged way over time. Today, informal work affects about 42% of the employed population<sup>34</sup>. Both the informality resulting from the productive restructuring and that which historically underpin the Brazilian labor market. Such a gap is expected since the construction of the field occurred as a movement that articulated public health services and formal workers' unions<sup>35</sup>. In its path, WH has focused primarily on wage labor, although Brazil has never been a wage-related society, as pointed out by Castel<sup>36</sup>. From this perspective, as a health-related topic, unemployment also deserves to receive greater attention from WH studies, besides those dealing with mental health and work<sup>22</sup>.

The set of papers identified as "Theoretical-Methodological Studies" show an epistemological pluralism that historically gives substance to WH, evidencing the coexistence of several theoretical matrices, which have guided research and practices in this scope. However, conceptual studies and basic research and the proposition of methodologies that contributed to the strengthening and development of WH<sup>1</sup> are still scarce.

A considerable number of studies were identified in the "Public Policies" thematic group, whose analysis allows identifying at least two movements, whose general principles are part of the same process of implantation and implementation of WH actions in the SUS. One of them comprises texts that analyze, discuss, and present elements of implementing the WH policy in the SUS, the mechanisms and conflicts for its structuring, the challenge of intersectorality, and social control. The other consists of works that deal specifically with VISAT actions, which also involve structuring actions, intersectorality, and social participation.

Regarding the implementation of the WH policy in the SUS<sup>16</sup>, the publications are representative of the countless challenges addressed for its implementation, whose central issues can be summarized in the creation of WH<sup>37</sup> information systems, the inclusion of work-related mental health (WRMH) within CEREST<sup>38</sup>, and the

relationship between production, health, and environment<sup>39</sup> and, among others, social control<sup>40</sup>.

The analyzed studies dedicated to VISAT, in turn, can be divided into two approaches: 1) addressing the structuring of VISAT's actions, considering norms and methodologies created by CEREST, the incorporation of actions in Primary Care and health-related problems mental and work, as the object of VISAT's action<sup>41</sup> and 2) addressing VISAT's experiences in the particularities of some economic sectors or agents that trigger morbid-illnesses in some economic sectors.

Noteworthy is that, from this perspective, one cannot unlink the structure of VISAT from public health policies as a whole and the attacks that social policies, especially the SUS, have been enduring, which also affect policies aimed at WH<sup>42</sup>.

Thus, from the perspective of security, as provided for in the 1988 Federal Constitution, studies on social protection are necessary, since the recent counter-reforms of the State, extinguishing the Ministry of Labor and Social Security, are guided by the market's logic, denying social rights gains, since the Ministry of Economy<sup>43</sup> assumed the responsibilities of those ministries.

## Conclusions

This path portrays an overview of the characteristics of WH scientific production, among the many possible data analysis and composition designs in the corpus built from C&SC's papers. Besides the advances found, such as the significant production of epidemiological and public policy research, the analyzed studies indicate elements that translate into challenges for WH's full development, generating more questions than answers.

It is clear that the Health Reform movement was contemporary to what we can call the Worker's Health movement, and it is worth stating that they established little dialogue towards nurturing each other to build the SUS. In this sense, it would be interesting to inquire about the possible political articulations between the two movements from the perspective of strengthening the SUS, which could constitute an object of studies.

A topic dear to the field, social control should be investigated from a perspective that would illuminate the hardships of exercising it, in the light of the current reality of the Brazilian union movement, which is weaker now than the role it played in the 1980s. Prado<sup>44</sup> weaves criticisms of social control in the SUS, identifying several dif-

faculties to this intervention, as it is reduced to participation in health councils. What alternatives are there to this problem?

Concerning public policies and intersectoriality, studies on social protection, from the perspective of security, as provided for in the 1988 Federal Constitution, are necessary, as the recent state counter-reforms are guided by the market's logic, denying social rights gains. What paths are there for the implementation of the Social Security Policy, given the extinction of the Ministry of Labor and Social Security, considering that the Ministry of Economy assumed the responsibilities of those ministries?<sup>43</sup>

In this perspective of attacking public policies concerning their financing in the context of neoliberal policies that advocate the Minimal State,

we note some severe limitations for the SUS as a universal, comprehensive, and egalitarian policy with social participation, affecting worker's health policies<sup>42,45</sup>.

As health-related themes, the intense transformations in the world of work and unemployment and studies that address specifically mental health and work receive little attention from WH studies, leading us to question such stance.

Given the above, we understand that there is a long way to resume the transformative potential that WH-related research and actions within the SUS opened after the country's re-democratization as essential elements for the consolidation of Public Policies aimed at the well-being of the population and the quality of health services underpinning the SUS.

## Collaborations

FAC Lacaz prepared the theoretical conception, participated in the discussion, drafting, and revision of the text. PM Goulart, EA Souza, C Trapé, D Moita, G Mota-Sousa and B Chapadeiro participated in the elaboration, discussion, drafting, and revision of the text.



## References

1. Lacaz FAC. *Saúde do Trabalhador: um estudo sobre as formações discursivas da academia, dos serviços e do movimento sindical* [tese]. Campinas: Faculdade de Ciências Médicas; 1996.
2. Strausz MC, Guilam MCR, Oliveira SS. A intervenção em saúde do trabalhador na perspectiva dos atores históricos do campo. *Rev Bras Saúde Ocup*. 2019; 44(25):1-12.
3. Minayo-Gomez C. Campo da Saúde do Trabalhador: trajetória, configuração e transformações. In: Minayo-Gomez C, Machado JMH, Pena PGL, organizadores. *Saúde Do Trabalhador Na Sociedade Brasileira Contemporânea*. Rio de Janeiro: Editora Fiocruz; 2011. p. 23-34.
4. Gomez CM, Lacaz FAC. Saúde do Trabalhador: novas velhas questões. *Cien Saude Colet* 2005; 10(4):797-807.
5. Lacaz FAC. O campo Saúde do Trabalhador: resgatando conhecimentos e práticas sobre as relações. *Occup Health (Auckl)* 2007; 23(4):757-766.
6. Mendes R, Dias EC. Da medicina do trabalho à saúde do trabalhador. *Rev Saude Publica* 1991; 25(5):341-349.
7. Marx K. *O Capital: Crítica Da Economia Política*. Rio de Janeiro: Civilização Brasileira; 2006.
8. Laurell AC, Noriega M. *Processo de Produção e Saúde - Trabalho e Desgaste Operário*. São Paulo: Hucitec; 1989.
9. Laurell AC. A saúde-doença como processo social. In: Nunes ED, organizador. *Medicina Social: Aspectos Históricos e Teóricos*. São Paulo: Global; 1983. p. 133-158.
10. Laurell AC. *Para La Investigación Sobre La Salud de Los Trabajadores*. Washington: OPAS; 1993.
11. Oddone I, Marri G, Gloria S. *Ambiente de Trabalho: A Luta Dos Trabalhadores Pela Saúde / Saúde Em Debate*. São Paulo: Hucitec; 1986.
12. Rebouças AJA. *Insalubridade: Morte Lenta No Trabalho*. São Paulo: Diesat/Oboré; 1989.
13. Lacaz FAC. Política Nacional de saúde do trabalhador: desafios e dificuldades. In: Lourenço E, Navarro V, Silva J, Santana RS, organizadores. *Aveso Do Trabalho II: Trabalho, Precarização e Saúde Do Trabalhador*. São Paulo: Expressão Popular; 2010. p. 199-230.
14. Brasil. Portaria nº 1.823, de 23 de agosto de 2012. Institui a Política Nacional Do Trabalhador e Da Trabalhadora. *Diário Oficial da União* 2012, 23 ago.
15. Vasconcellos LCF, Gomez CM, Machado JMH. The gap between what has been defined and what is still pending in occupational health surveillance. *Cien Saude Colet* 2014; 19(12):4617-4626.
16. Dias EC, Hoefel MG. O desafio de implementar ações de saúde do trabalhador no SUS: a estratégia da RENAST. *Cien Saude Colet* 2005; 10(4):817-828.
17. Vianna LCrR, Ferreira AP, Vasconcellos LCF, Bonfatti JR, Oliveira MHB. Vigilância em Saúde do Trabalhador: um estudo à luz da Portaria nº 3.120/98. *Saúde Debate* 2017; 41(114):786-800.
18. Lacaz FADC, Trapé A, Soares CB, Santos APL. Estratégia Saúde da Família e Saúde do Trabalhador: um diálogo possível? *Interface (Botucatu)* 2013; 17(44):75-87.
19. Gomez CM, Vasconcellos LCF, Machado JMH. Saúde do trabalhador: aspectos históricos, avanços e desafios no Sistema Único de Saúde. *Cien Saude Colet* 2018; 23(6):1963-1970.
20. Lacaz FAC. Continuam a adoecer e morrer os trabalhadores: as relações, entraves e desafios para o campo Saúde do Trabalhador. *Rev Bras Saude Ocup* 2016; 41(13):1-11.
21. Antunes R. *O Privilégio Da Servidão - o Novo Proletariado de Serviços Na Era Digital*. São Paulo: Boitempo; 2018.
22. Seligmann-Silva E. *Trabalho e Desgaste Mental: O Direito de Ser Dono de Si Mesmo*. São Paulo: Cortez; 2011.
23. Schwab K. *The Fourth Industrial Revolution*. Geneva: World Economic Forum; 2016.
24. Minayo-gomez C, Thedim-Costa SMF. Incorporação das ciências sociais na produção de conhecimentos sobre trabalho e saúde. *Cien Saude Colet* 2003; 8(1):125-136.
25. Lima EP, Lopes SMB, Amorim MIM, Araújo LHS, Maia ER. Exposição a pesticidas e repercussão na saúde de agentes sanitários no Estado do Ceará, Brasil. *Cien Saude Colet* 2009; 14(6):2221-2230.
26. Breilh J. Epidemiología del siglo XXI y ciberespacio: repensar la teoría del poder y la determinación social de la salud. *Rev Bras Epidemiol*. 2015; 18(4):972-982.
27. Bennet G. *The Wound and the Doctor: Healing, Technology and Power in Modern Medicine*. London: Martin Secker and Warburg; 1987.
28. Barros JAC. Pensando o Processo Saúde Doença: A que responde o modelo biomédico? *Saúde Soc* 2002; 11(1):67-84.
29. Backes MTS, Rosa LM, Fernandes GCM, Becker SG, Meirelles BHS, Santos SMA. Conceitos de Saúde e Doença ao longo da História sob o olhar epidemiológico e antropológico. *Rev enferm UERJ* 2009; 17(1):111-117.
30. Puttini RF, Junior AP, Oliveira LR. Abordagem biopsicossocial e auto-organização. *Physis* 2010; 20(2):753-767.
31. Breilh J, Granda E. *Investigação Da Saúde Na Sociedade: Guia Pedagógico Sobre Um Novo Enfoque Do Método Epidemiológico*. 2ª ed. São Paulo: Cortez, Instituto de Saúde/Abrasco; 1989.
32. Fertoni HP, Pires DEP, Biff D, Scherer MDA. The health care model: Concepts and challenges for primary health care in Brazil. *Cien Saude Colet* 2015; 20(6):1869-1878.
33. Lourenço EAS, Lacaz FAC, Goulart PM. Crise do capital e o desmonte da Previdência Social no Brasil. *Serv Soc Soc* 2017; (130):467-486.
34. Fundação Getúlio Vargas, Instituto Brasileiro de Economia. *Boletim Macro 2019*. [Boletim na Internet] 2019. [acessado 2020 Abr 28]. Disponível em: [https://portalivre.fgv.br/data/files/58/37/B3/E5/5B7AE-610B0BBB6E68904CBA8/BoletimMacroIbre\\_1911.pdf](https://portalivre.fgv.br/data/files/58/37/B3/E5/5B7AE-610B0BBB6E68904CBA8/BoletimMacroIbre_1911.pdf).
35. Sato L, Lacaz FAC, Bernardo MH. Psychology and the Workers' Health Movement in the State of São Paulo (Brazil). *J Health Psychol* 2004; 9(1):121-130.
36. Castel R. *As Metamorfozes Da Questão Social: Uma Crônica Do Salário*. Petrópolis: Vozes; 1995.
37. Facchini LA, Nobre LCC, Faria NMX, Fassa AG, Thumé E, Tomasi E, Santana V. Sistema de Informação em Saúde do Trabalhador: desafios e perspectivas para o SUS. *Cien Saude Colet* 2005; 10(4):857-867.

38. Sato L, Bernardo MH. Saúde Mental e Trabalho: os problemas que persistem. *Cien Saude Colet* 2005; 10(4):869-878.
39. Dias EC, Rigotto RM, Augusto LGS, Cancio J, Hoefel MGL. Saúde ambiental e saúde do trabalhador na atenção primária à saúde no SUS: oportunidades e desafios. *Cien Saude Colet* 2009; 14(6):2061-2070.
40. Lacaz FAC, Flório SMR. Controle social, mundo do trabalho e as Conferências Nacionais de Saúde da virada do século XX. *Cien Saude Colet* 2009; 14(6):2123-2134.
41. Araújo TM, Palma TDF, Araújo NC. Vigilância em Saúde Mental e Trabalho no Brasil: características, dificuldades e desafios. *Cien Saude Colet* 2017; 22(10):3235-3246.
42. Lourenço E, Goulart PM, Anunciação L, Lacaz FAC. Condições de trabalho de assistentes sociais da área da saúde e repercussões psicossociais. *Saúde Soc* 2019; 28(1):154-168.
43. Brasil. Medida Provisória nº 870, de 1 de janeiro de 2019. Estabelece a organização básica dos órgãos da Presidência da República e dos ministérios. *Diário Oficial da União* 2019; 1 jan.
44. Prado E. Controle social no SUS é sinônimo de conselho de saúde. *Ens e Dialog em Saude Colet* 2017; (5):20-22.
45. Associação Brasileira de Saúde Coletiva (Abrasco). *Manifesto em defesa do SUS - "Saúde e Democracia: desafios para o Brasil contemporâneo"*. [Notícia na Internet] 2018 [acessado 2020 Abr 27]. Disponível em: <https://www.abrasco.org.br/site/noticias/movimentos-sociais/manifesto-em-defesa-do-sus-saude-e-democracia-desafios-para-o-brasil-contemporaneo/33154/>.

---

Article submitted 30/04/2020

Approved 22/06/2020

Final version submitted 24/06/2020

## ERRATUM

**p. 4843,**

### **which reads:**

Francisco Antonio de Castro Lacaz (<https://orcid.org/0000-0001-7621-3756>)<sup>1</sup>

Patrícia Martins Goulart (<https://orcid.org/0000-0002-5080-9241>)<sup>2</sup>

Edvânia Ângela de Souza (<https://orcid.org/0000-0002-8997-7592>)<sup>3</sup>

Carla Andrea Trapé (<https://orcid.org/0000-0002-3272-6565>)<sup>4</sup>

Dimitri Moita (<https://orcid.org/0000-0002-1814-7751>)<sup>5</sup>

Gabriela Mota-Sousa (<https://orcid.org/0000-0002-6710-773X>)<sup>6</sup>

Bruno Chapadeiro Ribeiro (<https://orcid.org/0000-0003-0167-0164>)<sup>1</sup>

### **reads up:**

Francisco Antonio de Castro Lacaz (<https://orcid.org/0000-0001-7621-3756>)<sup>1</sup>

Patrícia Martins Goulart (<https://orcid.org/0000-0002-5080-9241>)<sup>2</sup>

Edvânia Ângela de Souza (<https://orcid.org/0000-0002-8997-7592>)<sup>3</sup>

Carla Andrea Trapé (<https://orcid.org/0000-0002-3272-6565>)<sup>4</sup>

Dimitre Sampaio Moita (<https://orcid.org/0000-0002-1814-7751>)<sup>5</sup>

Gabriela Mota-Sousa (<https://orcid.org/0000-0002-6710-773X>)<sup>6</sup>

Bruno Chapadeiro Ribeiro (<https://orcid.org/0000-0003-0167-0164>)<sup>1</sup>

**p. 4850,**

### **which reads:**

FAC Lacaz prepared the theoretical conception, participated in the discussion, drafting, and revision of the text. PM Goulart, EA Souza, C Trapé, D Moita, G Mota-Sousa and B Chapadeiro participated in the elaboration, discussion, drafting, and revision of the text.

### **reads up:**

FAC Lacaz prepared the theoretical conception, participated in the discussion, drafting, and revision of the text. PM Goulart, EA Souza, C Trapé, DS Moita, G Mota-Sousa and B Chapadeiro participated in the elaboration, discussion, drafting, and revision of the text.