NURSING WORKER HEALTH: IDENTIFICATION OF SCIENTIFIC PRODUCTION

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ABSTRACT: The present study aimed to identify and analyze the scientific publications on health and nursing worker health generated by members of the Study Group on Occupational Health of Nursing and Health Personnel (GESTES). Descriptive-exploratory, documentary study of quantitative approach of data related to scientific publications of 1997 and 2016. In 20 years, 343 publications were generated. Analysis showed a predominance of publications by doctors (146; 42.57%), followed by masters (105; 30.61%) and graduate students (62; 18.08%), most of them “abstracts and extended abstracts published in annals” (172; 50.15%), followed by articles published in scientific journals (74; 21.57%). The theme “Exposure to workloads and/or work wear Process” prevailed, demonstrating the risks to worker health. It is concluded that the research group identified a significant volume of scientific publications on the referred theme during the study period.

DESCRIPTORS: Nursing; Research groups; Worker health; Research; Health personnel; Personnel development.

SAÚDE DO TRABALHADOR DE ENFERMAGEM: RESGATE DA PRODUÇÃO CIENTÍFICA

RÉSUMÉ: Ce présent travail avait pour but d’identifier et d’analyser les publications scientifiques sur la santé du travailleur de santé et de santé du travailleur de soins de santé générées par les membres du Groupe d’études sur la santé du travailleur de soins de santé et de santé (GESTES). Étude documentaire descriptive-exploratoire, d’approche quantitative de données relatives à la production scientifique de 1997 et 2016. Au cours de 20 ans, 343 publications ont été générées. L’analyse a montré un prédominance de publications par docteurs (146; 42,57%), suivis des maîtres (105; 30,61%) et des étudiants (62; 18,08%), la plupart d’entre eux “résumés et résumés étendus publiés dans les annales” (172; 50,15%), suivis d’articles publiés dans des revues scientifiques (74; 21,57%). Le thème “Exposition à des charges de travail et/ou Processus de dégâts au travail” a été le plus prédominant, démontrant les risques à la santé du travailleur. Il est conclu que le groupe de recherche a identifié une quantité de publications scientifiques significative sur le thème abordé pendant la période de l’étude.

DESCRIPTEURS: Enfermerie; Groupes de recherche; Santé du travailleur; Recherche; Personnel de santé; Développement de personnel.

SAÚDELATRABAJADORDEENFERMERÍA: RESCATEDELAPRODUCCIÓNCIENTÍFICA

RESUMEN: El presente estudio tuvo como objetivo identificar y analizar la producción de conocimiento publicada acerca de la salud del trabajador de enfermería y de salud gerada por los integrantes del Grupo de Estudios Sobre Salud del Trabajador de Enfermería y Salud. Es un estudio documental, descriptivo y exploratorio, con análisis cuantitativo de los datos referentes a la producción entre 1997 y 2016. En 20 años, fueron producidas 343 publicaciones. El análisis ha apuntado predominio de publicaciones de investigadores doctores (146; 42,57%), maestros (105; 30,61%) y graduados (62; 18,08%), siendo la mayoría “resúmenes y resúmenes extendidos publicados en anales” (172; 50,15%), seguidos de artículos publicados en periódicos científicos (74; 21,57%). La temática “Exposiciones a cargas de trabajo y/o Proceso de desgaste en el Trabajo” fue la predominante, evidenciándose los riesgos a la salud del trabajador. Se concluye que el grupo de pesquisa presentó producción científica expresiva en el periodo estudiado, contribuyendo con el avance del conocimiento científico sobre el tema en cuestión.

DESCRIPTORES: Enfermería; Grupos de investigación; Salud del trabajador; Investigación; Equipo de salud; Desarrollo de personal.


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INTRODUCTION

The development of nursing research is an important strategy for the strengthening of the sector as a science and a profession, with a professional practice based on continuous search for new knowledge(1). During the 1970's there was a significant increase in scientific publications on nursing in Brazil, as well as in the number of scientific journals related to the area, following the establishment of the University Reform of 1968 (2).

During the 1980s, there was a significant increase in the number of studies related to Nursing Worker Health as a result of a series of changes that occurred in macro and social microsystems involving two major areas: health and education. This increase was also a result of the combination of practices and knowledge related to nursing worker health, and the structuring and expansion of master's and doctoral courses in the country has contributed to this phenomenon(3).

It should also be stressed that research on nursing publications has been drawing attention internationally, and there is a better understanding of the valuable work performed by these professionals in disease prevention, delivery of high quality care, and management of environments and return to work (4).

The research is also an instrument that provides nursing students with the possibility of becoming independent, critical and creative professionals. The development of scientific papers since the early years of graduation may bring students closer to the real problems of the community, providing them with an opportunity to apply their acquired knowledge and skills to solve these problems (5).

The need to involve nurses in research and extension activities is recognized, and students should also be encouraged to join research groups with a common goal: to meet the demands of society. Moreover, the dissemination of research findings is one of the stages of the knowledge production process. Other strategies should also be implemented for the development of human resources and the improvement of nursing care (6-7).

The Study Group on Occupational Health of Nursing and Health Personnel (GESTES), attached to the Professional Guidance Department at the School of Nursing of the University of São Paulo (EE-USP), certified by the Directory of Research Groups of the National Council for Scientific and Technological Development (CNPq), began its scientific activities in 1997 and has been producing knowledge on this subject, through activities guided by its leaders and students of different levels, that is, graduate and postgraduate (lato and stricto sensu). In addition, its leaders are part of the Nursing Management Research Network (REPEGENF).

During the Group's meetings leaders, researchers and students interact in monthly meetings where studies on relevant issues are conducted according to all the ethical standards of conduct, and methodology, participation in events and publications - i.e. a series of activities that promote the development of research and the training of human resources for research and graduate studies – are addressed. Group meetings take place at the Professional Guidance Department of EEUSP, work locus of the leaders.

In addition to the development of scientific production, the research projects developed by the GESTES increased the exchanges with other national and international research groups, with the development of local and multicenter projects. One example is the multicenter project “Nursing Worker Health Monitoring System” (SIMOSTE), developed by researchers of the group to conduct studies on the health status of nursing and health workers, for monitoring purposes (8).

The 20-year old GESTES has produced a significant volume of scientific publications, which is being consolidated. However, this production has not been sufficiently incorporated to the different settings of nursing work. Therefore, we are motivated to give greater visibility to this scientific production, as well as to detect knowledge gaps that may guide other studies.

Thus, the present study aimed to identify and analyze the scientific publications on health and nursing worker health generated by the members of the Study Group on Occupational Health of Nursing and Health Personnel.
METHOD

This is a descriptive-exploratory, documentary study of quantitative approach of data related to the scientific production of the Study Group on Occupational Health of Nursing and Health Personnel (GESTES), from 1997 to 2016. The study has a descriptive and exploratory design, as it describes and classifies an observed phenomenon (9).

In order to reach the proposed goal, this study was developed in three stages. In the first one, the entire scientific production was identified, under the guidance of the leading professors, between 1997 and 2016, based on the list of researchers involved in the group, search of résumés of current and former members of the Group, also available on the Lattes platform of CNPq; search in DEDALUS platforms of the University of Sao Paulo and Research Gate. In this stage, 343 scientific publications were identified, constituting the study population. The inclusion criteria were: all the publications of the group members during the collection period. Exclusion criteria were publications whose abstracts or full texts were not available on the internet, and publications of members of the group unrelated to the guiding question.

The second stage consisted in the construction of a database, using from Microsoft Excel® software. This database allowed checking the duplicity of productions. The following information was inserted in the database: researcher's name; education; title of the publication, type of scientific production, authors, theoretical and methodological aspects, year and reference.

The third stage consisted in an analysis of the types of publications and themes covered during the period, in the related scientific publications, with quantitative analysis of data and qualitative analysis of the themes.

RESULTS

In its 20 years of existence, the GESTES had 61 members, including students and researchers who produced 343 publications, as a result of studies in the area of nursing and health workers health status, at different levels of education/academic degree, as shown in Figure 1.
Most publications were produced by doctors (146; 42.57%), followed by masters (105; 30.61%) and (62; 18.08%).

Due to the heterogeneous composition of the group formed by students and researchers with different academic degrees, several types of publications were produced by the group members during the study period, according to Figure 2.

![Figure 2 - Distribution of the types of publications produced by the GESTES, between 1997 and 2016. São Paulo, SP, Brazil, 2017](image)

There was a prevalence of “abstracts and extended abstracts published in annals, with a total 172 published papers (50.15%) followed by articles published in scientific journals, with 74 manuscripts (21.57%).

The production of the group has been increasing over the study period, as shown in Figure 3.

![Figure 3 - Types of scientific publications from the GESTES between 1997 and 2016. São Paulo, SP, Brazil, 2017](image)
There was a significant increase in the number of most types of publications: abstracts and extended abstracts increased from 10 publications, between 1997-1999, to 34, between 2015-2016. In the same period, the number of published scientific articles increased from 3 to 19 and the number of book chapters published increased from to 1 to 23. As for the other types of publications, despite more constant oscillations, there was a slight increase in their bibliographic production.

The themes addressed in the group’s publications during the study period were described and are shown in Figure 4.

Figure 4 - Topics of the publications originating from scientific activities of the GESTES, between 1997 and 2016, in a three-year period. São Paulo, SP, Brazil, 2017

The theme “Exposures to workloads and/or work wear process” was the most prevalent, followed by other themes. However, over the last years of assessment, the themes “Implications for the worker and the work process”, “Management models and proposals of worker health interventions” and “Worker Health Surveillance” prevailed.

The internationalization of the group's scientific productions is shown in Figure 5, with the distribution of publications by country.
The country with the largest number of publications is Brazil (253), followed by Portugal (27), Italy (13), United States (11) and Spain (10). Internationalization is perceived in the presence of publications in several countries, in almost all continents (Africa, America, Asia and Europe).

**DISCUSSION**

The identification and analysis of publications on health and nursing worker health generated by GESTES members allowed identifying the academic profile of its participants, which includes graduate students, postgraduate students and researchers, and provided insight on the problems and themes investigated.

The research group is located at EEUSP, a public state university where the first nursing graduate course in the state of São Paulo was established, and it has 51 nursing research groups, with nationwide prominence due to their significant production of knowledge from graduate, postgraduate and extension courses. The leaders are part of the Nursing Management Research Network (REPEGENF). The GESTES promotes coordination and partnership with other groups and researchers of the subject, in the national scenery.

By welcoming graduate nursing students, the group provides these students with training on research, as and promote research as an important instrument for the nursing practice. Research promotes evidence-based practice, continuing education and consequently the visibility of nursing. This visibility has encouraged the participation of graduate students.

The number of doctoral programs in the Americas and the Caribbean has increased since the 1990s, thanks to the increased efforts of the international programs, the increase in the number of researchers and producers of nursing knowledge centers. The training of nursing doctors contributes significantly to the construction of a social knowledge in the health area. There was a considerable increase in the number of nursing doctors, as well as in scientific production. The need for nurses to develop
experimental research containing proposals for changes to health practices remains a challenge.\(^{(15)}\)

The fact that most publications are composed of abstracts and extended abstracts reflects the group’s intention to disseminate the results of their studies in sites of collective scientific dissemination, ensuring the visibility of publications in scientific journals.

The increasing scientific production has attracted a significant number of international publications, in addition to presentations of scientific works by professors and students during events outside the country. The nursing science must seek internationalization. However, when producing search results, the best means of dissemination should be selected in order to generate new research and provide knowledge to those involved in decision-making processes.\(^{(16-17)}\)

The number of scientific publications in the nursing field has increased considerably. Currently, the increase of knowledge production is concomitant with the increase in scientific production. Comparison of the scientific production in nursing in the three-year periods 2004-2006 and 2007-2009 showed an increase from 3,563 articles published in 373 journals to 5,194 articles published in 595 journals.\(^{(18)}\)

The contribution of the GESTES to nursing and worker health, through the development of studies on the field that resulted in several publications, is undeniable, as this scientific production may improve nursing work conditions, as well as promote better allocation of human and material resources in the development of work activities carried out by the nursing team.

The increase in the number of publications of the group is consistent with the historical trend of increase in studies on worker health, which began in the 1970s and 1980s, focusing on ergonomics, and later expanded with the incorporation of other methodologies in the late 1980s, with the use of qualitative methodology, which allows analyzes and reflections related to subjectivity and work.\(^{(3)}\)

In a study on the lines of research of the groups registered at CNPQ Directory of Research Groups in Brazil Lattes, we found 15 lines of research whose central theme is worker health. The phenomenon of the increase in the number of publications in the area is detected in the constitution of these groups, where 27% of the research groups in this field have been active from 0 to 5 years, 34% from 5 to 9 years, 18% from 9 to 14 years, 16% from 14 to 19 years and 5% from 19 to 24 years, with a peak of increase in the 2006-2011 period, which coincides with the online feeding of the database on the research groups in the country.

Regarding the theme “Exposure to workloads and/or work wear process”, some studies highlight workload in nursing, relating these issues, on the one hand, to lack of balance between resources and competencies and, on the other hand, between tasks and expectations, with the obvious need for resource allocation actions and educational activities promoted by managers.\(^{(19)}\) Work overload that has already been directly associated to patient safety, with the occurrence of pertinent adverse, is also well related to nursing worker health, and overload may result in absenteeism, professional turnover and occupational diseases.\(^{(20-21)}\)

Work, the element that makes up personal identity, generating meanings in the relationship with the organization, and producing pleasure and suffering experiences, is a key element with implications for the mental health of workers.\(^{(22)}\) These are some of the important elements that justify the relevance of the theme “Implications for the worker and work process”.

The relevance of the themes “Management models and proposals for worker health interventions” and “Work process” is demonstrated in publications that reinforce the need to examine the gaps between work assigned to the professional and work performed, reflections on the relationship between illness and levels of psychological demand and worker control over the work process, of participatory management with the creation of forums to discuss working conditions, and of the labor management model according to a non-machinic or bureaucratic logic.\(^{(23-26)}\)

Nursing researchers have been discussing the selection of research topics and the reasons for the choice. In this regard, the National Seminars on Nursing Research (SENPE) deserve mention.\(^{(27)}\) The referred event has been held since 1979 by the Brazilian Nursing Association (ABEN), whose challenge is to collaborate with the process of building knowledge through the social organization of class,
through fruitful debates about its transformation. The National Policy for Science, Technology, and Innovation in Health (PNCTIS) and the National Agenda of Priorities in Health Research (ANPPS) are also identified as mechanisms that increase selectivity, induction and promotion of research in the country, according to the regional characteristics. Both mechanisms resulted in the indication of 11 topics directly related to nursing, namely:

- Health, Environment, Work and Biosafety in Nursing; Assessment of Nursing Technologies and Health Economics; Clinical Research in Nursing; Work Management and Health Education; Health Systems and Policies; Nursing Care for Adult and Elderly Health; Nursing Care for Women's Health; Nursing Care for Child and Adolescent Health; Mental Health Nursing Care; Nursing Care for Communicable Diseases; Nursing care for non-communicable Diseases

These priorities guide the creation of research lines, considering the scope of nursing, the national scenario and paradigms of nursing as a science, in order to delimit its field of knowledge.

The profile of GESTES productions over the past 20 years has been similar to the one addressed during the 18th SENPE 2015, which recommended that nursing research focuses on the social determinants of the health-disease process as well as on epidemiological research and the health needs of the population.

**CONCLUSION**

After 20 years of existence and the work developed by its members, the GESTES has generated a significant scientific production, which resulted in many publications and in the participation of nursing students and researchers in national and international, with dissemination of the knowledge produced.

These results provide significant contributions that strengthen the field of nursing, with scientific research, productions and interventions that propose improvement in the working conditions and quality of life of nursing workers.

With the purpose of constructing a standard language and enabling exchange of information, without problems and/or disparities, it is understood that the process of organization of research groups in Brazil faces a challenge, especially regarding the construction of networks that promote a debate on the creation of a common “network” between the lines of research that increases information exchange and mutual complementarity.

**REFERENCES**


