RESEARCH | PESQUISA

The content of occupational health and teaching methods in nursing education*

O conteúdo da saúde do trabalhador e as metodologias de ensino na formação do enfermeiro

El contenido de salud del trabajador y las metodologías de enseñanza en la formación del enfermero

Abstract

Objectives: To identify the content developed in the undergraduate degree course in nursing at a public university in the field of occupational health, and describe the teaching methods used by the nursing faculty for describing the content in this field.

Methods: A qualitative, descriptive, exploratory study involving 12 professors. The data collection instruments were semi-structured interviews and a documentary form for collecting data. The data, which were collected between May and July 2012, were examined through thematic analysis.

Results: The curriculum of the nursing course provides content that is essential for the training of nurses in the field of occupational health. Conclusions: The faculty should integrate the contents of occupational health with different areas of nursing knowledge and emphasize the link between theory and practice.

Keywords: Occupational Health; Baccalaureate in Nursing; Curriculum.

Resumo

Objetivos: Identificar os conteúdos desenvolvidos no curso de graduação em enfermagem, de uma universidade pública, referentes ao campo da Saúde do Trabalhador; e descrescer as metodologias de ensino utilizadas pelos docentes de enfermagem para o desenvolvimento dos conteúdos referentes a esse campo.

Métodos: Estudo qualitativo, descritivo e exploratório, realizado com 12 docentes. Os instrumentos de coleta foram a entrevista semiestruturada e o formulário para coleta de dados documentais. Os dados, cuja coleta ocorreu entre maio e julho de 2012, foram examinados por meio da análise temática.

Resultados: Evidenciou-se que o currículo do curso de enfermagem prevê, para a formação do enfermeiro, os conteúdos essenciais ao campo da Saúde do Trabalhador. Conclusões: Sugere-se que o corpo docente integre os conteúdos da Saúde do Trabalhador com as distintas áreas do conhecimento da enfermagem e enfatize a articulação entre teoria e prática.

Palavras-chave: Saúde do Trabalhador; Bacharelado em Enfermagem; Currículo.

Resumen

Objetivos: Identificar los contenidos desarrollados en el curso de graduación en Enfermería, de una universidad pública, referentes al campo de la Salud del Trabajador; y describir las metodologías de enseñanza utilizadas por los docentes para el desarrollo de los contenidos relativos a este campo.

Métodos: Estudio cualitativo, descriptivo y exploratorio, realizado con 12 docentes. Las herramientas de colecta fueron entrevistas semiestructuradas y el formulario para coleción de datos documentales. Los datos recorridos entre Mayo y Julio de 2012, fueron examinados por medio del Análisis Temático.

Resultados: El currículo del curso de Enfermería prevé, para la formación del enfermero, los contenidos essenciales al campo de la Salud del Trabajador.

Conclusiones: Se sugiere al cuerpo docente la integración de los contenidos de Salud del Trabajador con las distintas áreas de conocimiento de enfermería y el enfoque de la articulación entre teoría y práctica.

Palabras clave: Salud del Trabajador; Formación en Enfermería; Currículo.
INTRODUCTION

The object of this study is the teaching content related to the field of occupational health and its approach in the undergraduate nursing program of a public university.

Many were the reasons that led to this research, among which stands out the experience of attending an undergraduate nursing course in a public institution in which the curriculum was composed of sub-areas of knowledge, understood as a set of coordinated and integrated disciplines, in which 11 of these sub-areas had in their titles and synopsis the terms "Work" and/or "Workplace". The mention of these two terms characterized the need and importance to develop educational content to substantiate the actions of future nurses in relation to their knowledge about care for themselves and for the professionals part of the nursing staff, and about the comprehensive care of individuals/patients considering their insertion in the workplace.

Furthermore, there is also participation in a nursing internship that corresponds to the last two periods of the course that is characterized by a practical and daily experience of the students in health and nursing services. It is a moment that intensifies these concerns and motivations due to an immersion into everyday health work, and this experience brings about the realization that working in nursing has a multitude of occupational hazards that need to be further developed in the undergraduate courses in order to preserve and protect the health of workers.

This context gave rise to a research issue: how is the approach of teaching content in the field of occupational health characterized in undergraduate nursing courses in a public university from the perception of the nursing faculty?

The following objectives were proposed: to identify the content developed in the undergraduate courses in nursing at a public university in the field of occupational health, and describe the teaching methods used by the nursing faculty for developing content concerning this field.

The state-of-the-art of scientific studies involving this object took place through a literature search on the Virtual Library of Health website, specifically in LILACS (Latin American and Caribbean Center on Health Sciences Information), MedLine (Medical Literature Analysis and Retrieval System Online), IBECS (Spanish Bibliographic Index on Health Sciences), Cochrane Library, SciELO (Scientific Electronic Library Online), and the international organizations PAHO (Pan American Health Organization) and WHOLIS (World Health Organization Library Information System). The search was done in Portuguese, English, and Spanish and resulted in 34 scientific articles.

This shows that the quantity of papers written on the topic is still incipient. Therefore, the object proposed can bring contributions to nursing education and to the field of occupational health and foster research in the area of work and education.

LITERATURE REVIEW

Work can be viewed as a producer of values of use, an expression of a metabolic relationship between the social being and nature, while it can also be seen as a source of accomplishment because it favors socialization and the search for self-fulfillment, and ensures livelihood. However, work does not always represent personal satisfaction and valuing the human being, even though it stands out as a way to meet basic material needs1. Therefore, it is necessary to understand the aspects that permeate the workplace, the environment in which it happens, the configuration of the organization, and the labor process.

The relationship of men and work is the source of the psychic load from labor. An authoritative work organization leads to an increased psychic load because this type of organization, where there is no dialogue, hinders workers’ creative ability, generating a feeling of displeasure, tension, and suffering2.

Job satisfaction depends on what the organization offers to its employees plus what each person wants for themselves in the organization and in meeting their needs following a parameter considered feasible in economic, social, physical, and mental aspects3.

The model of a capitalist production seeks greater profit, productivity, and competitiveness, which makes the workers’ loads have a greater dimension. The impact of workloads and the wear caused by them generates changes in the health-disease process. Thus, the production process globally is what makes it possible to understand how workloads and wear act on the lives of workers3.

The organization of tasks and the nursing working conditions can be set up so that they adversely affect the health of those who work with it4. In nursing, the way work is processed does not favor the reflection of workers on their activities, their feelings, their relationships at work, thus generating wear on these workers and also immobilizing attempts toward changing this reality5.

Nursing workload is heavy. It increases work pace and exhausts the psychosomatic energy of workers to the point of causing them to carry out activities without reflecting on how they are developed and how they are perceived, nor how these activities affect their life and health. Moreover, it appears that the curricula in the health area encourage very little or nothing the practice of critical reflection on problems that involve living in society and the centrality of work in people’s lives. Furthermore, there has also been a difficulty to reflect and transform the hostile reality of the workplace4.

In the light of this, it is very important that future nurses discuss about the organization’s characteristics and work process and about its correlation to health and disease. Thus, psychological and cognitive conditions are created so that they can recognize their work activities as a possible causal agent in health problems, paying attention primarily to occupational
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hazards to which they may be susceptible and also to the comprehensive care of people.

For nursing work to become better structured and healthier, some changes are needed such as working conditions compatible with the work to be performed, adequate infrastructure of material and human resources, implementation of more democratic management models, and the inclusion of occupational health content in the training of health workers.

According to Article 3 of the National Curriculum Guidelines, the bachelor’s degree course in nursing, in general, should present a generalist, humanist, critical, and reflexive training profile. Because of this, an amplified look can be developed about the nurse's education on the worker, the work environment, and the relationship that these elements have with the health-disease process.

In this sense, the undergraduate nursing curricula should include content about the workplace and occupational health, which should support the development of care for the promotion and protection of health. Through this education, the intention is that nurses get to know the occupational hazards they are exposed to and with this adopt behaviors aimed at self-care and neutralizing or minimizing the effects of occupational hazards on the health-disease process, resulting in better health care for the population.

Undergraduate courses should develop, together with the students, the interrelationship between, on the one hand health and work, and on the other the positive and negative implications of this relationship for the health-disease process of workers. With this, future nurses will have better conditions to both direct their care practices to themselves and to their teams so as to promote care actions for users with knowledge and recognition of the influence of the working activities on the health-disease process.

In this context that questions the approach of content regarding the field of occupational health in the nursing degree, there is a need to sensitize higher education institutions and the nursing faculty for more investment in the approach of this theme with the student body due to its importance for the education of nurses.

The National Policy on Occupational Health & Safety establishes the restoration of education in occupational health and safety. The strategy to carry out such a project would be to establish curricular references for the education of these professionals. Furthermore, it calls for the inclusion of disciplines of occupational health and safety in the higher education curriculum, in this specific case of nursing.

METHODS

This is a qualitative, descriptive, and exploratory study, whose background was a nursing course at a public university located in the city of Rio de Janeiro, in the state of Rio de Janeiro, Brazil. This school, which has existed for 68 years, offers undergraduate and lato sensu graduate courses, including internship and specialization courses, but it also offers stricto sensu courses for master's and doctorate degrees in nursing.

In 1996, this school implemented a new pedagogical policy project that adopted the paradigm of Critical Theory of Education based on a Problem-based Pedagogical Methodology.

The nursing program at the institution of this study is developed in nine periods and makes up a class load of 5,850 hours. The course regime is flexible and its full curriculum is set up according to an integration code built collectively by the professors in an effective pedagogical exercise in the course.

The participants of this study were current professors who taught classes in the health care and fundamental area of the school's undergraduate course curriculum, specifically in 11 sub-areas, whose names allude to the development of content about occupational health, namely in the following sub-areas: Health Care I - Health, Work, & Environment, Adults, Elderly People, and Workplace 1, 2, 3, 4, Supervised Internship; Health Care III - Health of Adolescents, Adults, Elderly People, and Workplace 1, 2, 3, 4, Supervised Internship 5 and Supervised Internship 6, and in the fundamental area in the sub-areas III-C - Health Policy 1 and 2.

The inclusion criteria of the participants were to be a permanent professor, work in the sub-areas mentioned, have given classes in the sub-area for at least two years, and be available to provide information. The reason for this is that permanent professors with a minimum experience of two years are more likely to respond properly to questions made when compared to sub-contracted professors or permanent professors with less than two years of experience in the sub-area.

The exclusion criteria were as follows: sub-contracted professors, permanent professors with less than two years of experience in the sub-area, and the existence of any link to the study being done. From the application of these criteria, 12 professors were selected.

The study was approved by the institution's Research Ethics Committee under protocol nº 06/2012 and ethical precepts were guaranteed. The professors who agreed to participate were informed of the guarantee of their anonymity and signed a free and informed consent form. Data collection took place between May and July 2012.

Data were collected using two instruments: a semi-structured interview aiming to identify the teaching content related to the field of occupational health and through an analysis of the nursing school's curriculum documents, specifically those related to teaching plans, the course synopsis, and the undergraduate curriculum flow chart by using a form.

The interviews were interpreted in light of the technique of thematic content analysis. Furthermore, the authors examined synopses of 11 sub-areas that develop content on occupational health so as to complement the data and deepen the discussion.
RESULTS AND DISCUSSION

The sub-area developed in the first academic period, whose title includes the terms Health, Work, & Environment, has the general objective of understanding the process generating health-disease and relating it to the living conditions of the population and their social, political, economic, historical, and cultural development.

The program content described on the synopsis of this sub-area includes the links between the health-disease process and work. The synopsis also proposes the construction of epidemiological information in understanding the relationship between health and work. The professor that lectures in this sub-area confirms the data listed in the synopsis and expands more on the contents that are covered:

What is covered in the area of care is the health of human groups, the environment, and the workplace. Always relating health to work [...]. The first period helps the students understand the relationship among health, environment, and work, bringing the concept of health. And the occupational health content is given this way: to understand the working process and the insertion of the individual in the work process having a direct link with their health. Environmental, physical, chemical, and biological risks are discussed, along with the risks that the work environment can pose. (D12)

In the second academic year of the course, two sub-areas develop content related to the field of occupational health: sub-area I, Health, Work, & Environment 2, and sub-area III-C, Health Policy 1.

The overall objective of the first is to make students understand the process generating health-disease with an emphasis on actions that break the epidemiological chain of communicable diseases, correlating the syllabus to occupational health. The words captured below support the approach and correlation with the theme.

As for the second period, we even discuss content about vaccination, the adult vaccination passbook, and we expand the students’ view that the adult is also a worker. So this view is passed on of the adult as a worker and diseases that can be prevented by vaccination. (D5)

In the context of knowledge related to worker vaccination, it is recommended that undergraduate nursing students and nurses be trained and encouraged to know their immunity level related to infections that are part of their daily lives. Furthermore, it reinforces that nursing workers need to protect themselves against the many diseases to which they are more exposed than the general population, thus presenting increased risk of acquiring immunologically preventable infections such as mumps, flu, rubella, measles, tuberculosis, and hepatitis6.

Sub-area III-C, Health Policy - 1, helps students develop critical analysis of health care and about the organization of the services based on the assumptions of the Brazilian Unified Health System. On the synopsis of this sub-area there is no specific description about the field of occupational health; however, according to its overall objectives, they suggest an approach to occupational health policies.

Although the content from the synopsis of the sub-area seem incipient, the explanation of the professor who gives lessons in this sub-area confirms the development of content about occupational health policies. The professor's explanation can demonstrate this situation:

We cover the Occupational Health National Policy, the National Network of Occupational Health, and RENAST with the students of the discipline of Health Policy in the third period. We cover how they are organized and what the main focuses of the Occupational Health Policy are. This is not explicit in the synopsis, however, it is a goal of the curriculum committee to review and update the synopsis based on the new health configurations (D9).

The organization of the population's health care reflects the technical and scientific accumulation and correlation of the social forces that are expressed in a given health policy. In the field of occupational health, the knowledge of nurses about the “model” of health care given to workers in the Unified Health System becomes relevant as adopted in the construction of the Comprehensive Care Network for Occupational Health (RENAST) in health services and in the Occupational Health National Policy (PNST)14.

In the third period, in sub-area I, Health, Work, & Environment 3, based on what the professor said that is taught in the classes, the aspects addressed are biosafety, especially occupational hazards, and the measures of prevention and control so that students, when they become professionals, can opt for conducts/behaviors that distance the possibility of becoming ill because of work.

We work with what they need to do as a professional to protect themselves from any disease at the first instance such as occupational hazards and personal protective equipment, as well as safe approaches when providing patient care [... ] Knowledge is built about what is necessary for these professionals to protect themselves and avoid illness (D4).
In the nurses’ working process for carrying out various customer service activities, it is often required that they walk among sectors for gathering materials and medicines, or even to change the patient from one bed to another, or from a chair to a bed, and vice versa. These activities pose risks to workers’ health and can be considered as ergonomic risks, particularly in terms of developing musculoskeletal disorders. Although the professor develops this content inherent to occupational risks about personal protective equipment and workers’ illness based on the characteristics of their work process, this content is not identified in the synopsis, although they seem to be consistent with the scenario in which students develop practical classes.

The contents of sub-area III-C, Health Policy 2, even in the third period, suggest a comprehensive approach in the context of health policies, which include the Occupational Health Policy, but likewise does not present a systematic description of this content in the synopsis. The quote below confirms the approach of the Occupational Health Policy in that sub-area:

*I teach the course in the third period on policies and I cover the Occupational Health Policy* (D2).

In a further analysis, the sub-area III, Health of Adolescents, Adults, Elderly People, and Workplace 1, inserted in the fourth academic period, has in its curriculum the determinants of the working environment that interfere in workers’ health. The quote below confirms the description of this content in the synopsis:

*In the fourth period, there is a specific content of Occupational Health with a focus on the most prevalent diseases in the human groups (the adolescent, adult, and the elderly) in addition to their correlation with occupational health* (D12).

Occupational health is an area of increasing development and that needs a broadening in the contextualized view that essentially provides tools for modifying the relationship between work and the health-disease process. These tools therefore support this type of approach in the undergraduate course for nurses, which did not identify the further development of specific content to the area, but the construction of transversal and interdisciplinary content that gives support to nursing actions with safety in any field of activity of these professionals.

The synopsis of sub-area III, Health of Adolescents, Adults, Elderly People, and Workplace 2, taught in the fifth period of the course, does not specify which content inherent to the workplace should be covered either.

The lack of a content description of the workplace in the synopsis of sub-area III, Health of Adolescents, Adults, Elderly People, and Workplace 3, developed in the sixth period, is even more evident. There is no curriculum content provided in the synopsis that demarcates the context of the workplace with the health of adolescents, adults, and the elderly; however, there is the confirmation by the professor about the contradiction between what appears in the synopsis and what the professor says below:

As I work in the critical area, I give a lot of attention to the issue of risks inherent to the hospital environment, cutting or perforating objects, and standard precautions because often the student is faced with patients, especially in an emergency scenario, when you don’t know if they have tuberculosis or even meningitis. So the course has this kind of a focus. (D3)

A little different from the synopsis of the sub-areas alluding to the field of occupational health in its name, but without further expounding on the contents to be developed on the theme, sub-area I - Health, Work, & Environment 4, and Supervised Internship, inserted in the eighth period of the undergraduate course, signals a beginning towards promoting knowledge and prevention of occupational hazards and diseases typical of workers as well as content related to the theme. The quote below illustrates this content:

*I teach the course in the eighth period on content associated with the workplace, recycling knowledge already gained in undergraduate classes from the first to the seventh period, recovering the causal nexus of some pathologies associated with the workplace such as content on worker vaccination, the issue of programs, hypertension, and diabetes. Diseases that may be associated with the work while also bringing policies and regulatory standards, establishing what the risks related to the job are* (D5).

Sub-area III - Health of Adolescents, Adults, Elderly People, and Workplace, and Supervised Internship, also inserted into the curriculum of the course’s eighth period, has the objective of developing actions to promote, prevent, recover, and rehabilitate health, contextualizing this with the workplace. However, as in other sub-areas, the synopsis did not provide a specification of which content related to the field of occupational health should be addressed. The quote below shows this approach:

*During the internship in epidemiology, we also work a little bit with assessing occupational health and evaluating the nursing work environment in order to delineate the professional’s profile. Who is that professional they are assessing? What are the health problems they have? Is there a correlation with the work activity they develop?* (D12).
The relationship between occupational exposures and the onset of diseases has been known for a long time. Work accidents and occupational diseases can be more or less frequent depending on the use or not of protective and safety measures and the type of work performed by workers\cite{17}. Thus, it is relevant and necessary to invest in the educational process in this area of knowledge in nursing education with guidance and incentive to both use protective measures and respect prevention and control in the workplace. This practice can be developed through training, courses, and lectures in order to reduce exposure to risks and prevent the emergence of diseases resulting from work\cite{17,18}.

In the last period of the course, in sub-area III, Health of Adolescents, Adults, Elderly People, and Workplace 5, and Supervised Internship, the synopsis has as part of its content related to the theme the reinforcement of biosafety concepts regarding the specificity of the surgical field. In this sense, what the professors say indicate the importance of approaching content regarding workers’ protective equipment with due explanations about its proper use, always with a concern for the safety of the student/nurse and patient.

*Usually when I’m with the student, especially during their internship, I usually draw attention to the use of personal protective equipment (D6).*

*The surgical ward is an environment rich in chemical, physical, biological, and emotional risks. So I explain this well with them to avoid mental and physical illnesses (D8).*

It is clear that the designation of the 11 sub-areas allude to developing the theme and the reports of professors confirm their development; however, most of the synopses are not clear as for which content is provided in the field of occupational health in the curriculum. Thus, the content related to this field is described or presented in an incipient form, which makes it impossible to have the knowledge about what content related to the theme is expected to be developed in the sub-areas. This brings out a gap between what is prescribed and the reality of the object of this study, which creates difficulties both for the students and for professors in the teaching-learning process.

Given the importance and complexity of nursing work and due to the characteristics of the work environments in which these professionals are placed, it is essential that undergraduate curricula systematically cover content that encourages reflection and discussion about the workplace and its relation to workers’ health. Likewise, it is important to implement teaching methods that consolidate and expand this content in undergraduate courses, seeking above all to link theory to practice. In every scenario of internship there are work-related issues that need to be considered and developed in the teaching-learning process.

It should be noted that the term “teaching methods” refers to the means used by professors in the coordination of the teaching process according to each activity and the results expected\cite{19}.

The data collected made it possible to identify the teaching methodologies implemented by professors for the development of occupational health content. According to the participants, the issues are addressed in a participatory manner with joint contribution between professors and students to construct knowledge.

The educational process, through problem-based learning, attempts to build knowledge from meaningful experience undergone for the subject based on the process of learning by discovery and in opposition to the teaching process by reception. In this perspective, problems are initially presented by observation of reality and are manifested with contradictions for educators and students, and from then on knowledge is constructed and reconstructed. Thus, it is important to establish a strong policy of pedagogical work centered in this philosophy so as to promote critical and reflective teaching\cite{11}.

*We select some texts for students to read and discuss in the classroom and to make theoretical presentations. The professor expounds the main aspects and debates with students, while always questioning (D9).*

*So these are the strategies: classroom dynamics, a class with as much dialog as possible, and practice (D13).*

The results presented indicate that professors use different methodologies to develop the content on occupational health. It is important to note that most were closely related to the profile of the content to be taught in the classroom and to the pedagogical characteristics of the professor, to the academic period, and also to encouraging the participation of the student group.

*So the professor has to be a master of what is being taught. By master I mean like a “magician”, trying to “take the rabbit out of the hat”. To explain to the students how they can do that without hurting the scientific principle. […] Because to say “you can’t do that” and walk away is easy (D5).*

Within this perspective of analysis, some important aspects such as the type of class (practical or theoretical), the theme itself, and especially the discipline goals, are decisive when choosing the strategies to be used by the professors. The way in which professors plan their classroom activities is crucial both for students to react with greater or lesser interest (reflecting directly on the construction of knowledge), and also in the teaching-learning process so that knowledge is coordinated and the methods used reach the objectives proposed\cite{16}. The quote below shows this analysis:
I always try to highlight facts. That's the strategy with regard to feeling what the worker feels. [...] Another strategy I use depends on the moment, the period, and on the objectives. I use a lot of music and films too (D8).

This study showed that the curriculum of the undergraduate nursing course investigated covers fundamental content related to the field of occupational health in nursing education when the perspectives of the professors and the curriculum synopsis are brought together. However, the synopses do not clearly define this content. Because of this, there seems to be a gap between what professors say is addressed with regard to content in the field of occupational health and what is described in the synopses.

It is true that the synopses were written in 1996 and since then many changes have occurred in the workplace and in the health area, and the professionals are updated and have changed their ways to develop work. This situation could be identified as a weakness, a gap between what is done and what is prescribed to be developed. Thus, we need to think about the possibility of updating the synopses and bringing professors closer to the pedagogical proposal of the nursing institution under study.

CONCLUSION

With the preparation of this study, some distancing is found between what the participants said and what is prescribed in the curriculum documents, therefore pointing to a need to review the form and content taught in the sub-areas so that they are in line with the institution's pedagogical policy project.

The results reveal that there is a multiplicity of content inherent to the field of occupational health that is developed in the nursing course with an emphasis on occupational risks, the relationship and the causal nexus among health-work-illness, and workers' measures of protection. It is also noted that the curriculum has a high class load for developing the content on occupational health and measures of protection. It is also noted that the curriculum has a high class load for developing the content on occupational health and that workers' measures of protection. To do this, however, it is essential that they are developed in a way that ensures the theoretical and practical development of the content so that the pedagogical proposal of the institution is met.

In this sense, the activities that are developed by the institution's curriculum monitoring committee should be highlighted since its main objective is to evaluate the development of the course so that it remains in line with the institution's pedagogical policy project.

The objectives were considered to be reached; however, there is still much to research regarding teaching occupational health in undergraduate nursing courses, especially with regard to the complexity of teaching and systematization for the development of this content.

REFERENCES


* Result of a master’s thesis entitled “A Saúde do Trabalhador na formação do enfermeiro em uma instituição pública,” for the Master’s Program in Nursing of 2012 at the State University of Rio de Janeiro, Rio de Janeiro, RJ, Brazil.