

Scientific production in nursing teams in a public teaching hospital**Produção científica da equipe de enfermagem de um hospital público de ensino****Producción científica del equipo de enfermería de un hospital público de enseñanza****Received: 15/04/2017****Approved: 15/05/2017****Published: 31/10/2017****Renata Maria Dias de Abreu¹****Thaís Santos Guerra Stacciarini²****Getúlio Freitas de Paula³****Fernanda Carolina Camargo⁴****Luan Augusto Alves Garcia⁵****Gilberto de Araújo Pereira⁶**

The aim of this study is to analyze the intellectual production of the 2nd Scientific Nursing Conference at the Clinical Hospital of the Federal University of Triângulo Mineiro, Uberaba, MG, Brazil. This study is one of documentary analysis, of an exploratory nature, of the works that were approved for presentation during the event. Data were processed in the software IRAMUTEQ, organized into groups thematically according to a descending hierarchical classification method. 58 projects were presented, with hospital nurses being the principal authors (94.3%), and lato sensu graduate health students (29.3%). Concerning the nature of the projects presented, reports of experience were most frequent (56.9%), as well as the results of primary studies (25.9%). Thematic groups representative of the intellectual production resultant of the event were: Quality, attention and care; Multiprofessional Residency Program; Hospital as site of intellectual production; and Procedures, methods and implantation of nursing care. The scientific event was introduced as an initiative to integrate teaching, research and care. Further, the event was used as a space for the exchange of knowledge, with potential for inducing the improvement of practices in research settings.

Descriptors: Scientific and Technological activities; Teaching hospitals; Nursing.

Este estudo tem como objetivo analisar a produção do conhecimento do 2^o Encontro Científico de Enfermagem do Hospital de Clínicas da Universidade Federal do Triângulo Mineiro. Trata-se de um estudo de análise documental, de caráter exploratório, sobre os trabalhos aprovados para serem apresentados durante o evento. Os dados foram processados no software IRAMUTEQ, organizados em classes temáticas conforme método de classificação hierárquica descendente. Foram apresentados 58 trabalhos, sendo os principais autores enfermeiros hospitalares (94,3%), e pós-graduandos lato sensu modalidade residência em saúde (29,3%). Quanto a natureza dos trabalhos apresentados foi mais frequentes os relatos de experiência (56,9%) e os resultados de estudos primários (25,9%). Classes temáticas representativas da produção do conhecimento resultante do evento foram: Qualidade, assistência e cuidado; Programa de Residência Multiprofissional; Hospital enquanto cenário produtor de conhecimento; e Procedimentos, métodos e implantação do cuidado de Enfermagem. O evento científico apresentou-se como iniciativa para a integrar ensino, pesquisa e assistência. Além do mais, funcionou como espaço de troca de saberes, potencial a induzir a melhoria de práticas no cenário de estudo.

Descritores: Atividades científicas e tecnológicas; Hospitais de ensino; Enfermagem.

Este estudio tiene como objetivo analizar la producción del conocimiento del 2^o Encuentro Científico de Enfermería del Hospital de Clínicas de la Universidad Federal do Triângulo Mineiro, Uberaba, MG, Brasil. Se trata de un estudio de análisis documental, de carácter exploratorio, sobre los trabajos aprobados para ser presentados durante el evento. Los datos fueron procesados en el software IRAMUTEQ, organizados en clases temáticas según el método de la clasificación jerárquica descendente. Fueron presentados 58 trabajos, siendo los principales autores enfermeros hospitalarios (94,3%) y pos-graduandos *latu sensu* modalidad residencia en salud (29,3%). En cuanto a la naturaleza de los trabajos presentados fueron más frecuentes los relatos de experiencia (56,9%) y los resultados de estudios primarios (25,9%). Clases temáticas representativas de la producción del conocimiento resultante del evento fueron: Calidad, asistencia y cuidado; Programa de Residencia Multiprofesional; Hospital como escenario productor de conocimiento; y Procedimientos, métodos e implantación del cuidado de Enfermería. El evento científico se presentó como iniciativa para integrar enseñanza, investigación y asistencia. Además, funcionó como espacio de intercambio de saberes, potencial a inducir la mejora de prácticas en el escenario del estudio.

Descriptorios: Actividades científicas y tecnológicas; Hospitales de enseñanza; Enfermería.

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INTRODUCTION

An articulation between the various players involved in university hospitals-whether those players are professors, researchers, students or health workers-in order to find safe and constructive scientific and technological answers to the demands of healthcare and management has been a long time coming. However, the engagement of these various players needs to be stimulated in order for the best evidence arising from well-delineated research, together with data concerning the care, preferences and values of the patient population and the expertise of the professional, to help solve problems that are faced every day in the hospital environment¹⁻³.

As such, putting into practice strategies that can support the integration of these elements (professors, researchers, students and health workers) is an urgent matter and one that contributes to collective intelligence and contextualized necessities specific to those who employ such knowledge⁴⁻⁵. One of the biggest challenges lies in performing inventive scientific research in this space. The expansion of the integration of teaching and service is presented as a strategy for contributing to the strengthening of the formation of health professionals, supporting the resolution of demands, and, above all, elevating the quality of locally performed actions and structuring scientific practices^{1,6}.

In this environment, special attention should be paid to the fact that nursing care, as much in research as in practice, transcends the positivist determination of biomedical rationality in performance, oriented by the sustainability of the human condition, permeated by aspects such as culture, subjectivities, communication between other human necessities in health⁷⁻⁸. It must be recognized that nursing as a profession is characterized, above all, by the treatment of fragilities and vulnerabilities in the human condition, in illness and in the maintenance of health. Thus the comprehensive framework of research and practice in nursing transcends hard

technology, expanding the spectrum of sources of evidence for making decisions, requiring the strengthening of the critical judgment of nurses^{7,8}.

With the theme of "Updating hospital practices: management and attention", the second edition of the Scientific Conference of Nursing CH-FUTM⁹ was presented as a local initiative of the Clinical Hospital of the Federal University of Triângulo Mineiro (CH-FUTM), with the aim of promoting the integration between these players, with the goal of sharing knowledge produced in nursing teams that integrate formation, attention and research.

In this perspective, the following question emerges: What is the profile of knowledge produced in the initiative of the "Scientific Nursing Conference CH-FUTM"? The analysis of knowledge produced in this initiative presents itself as an important orientation concerning the gaps and potentialities that the integration of the community of professors, researchers, students and health workers in nursing have constructed in facing daily demands. Thus, this study aims to analyze the relative intellectual production at the 2nd Scientific Nursing Conference CH-FUTM.

METHOD

This is a documentary study of exploratory and descriptive nature, which contributes to the identification of the profile of scientific production formed in the HC-FUTM environment.

This health establishment is characterized as a large, general, public pedagogical hospital (332 beds) – macro-regional reference for the highly complex healthcare pole of the Southern Triangle of Minas Gerais, Brazil. It is the care reference for the micro-region of Uberaba, and for the macro-region of the Southern Triângulo Mineiro, which has a population of 744,497.

The sample was composed of all projects approved and presented in the 2nd Scientific Conference and contains thematic axes: Health Management; Education in Health and Care Practices in Health. The event took place November 9-10, 2016.

The following information from the summaries were used: title of the work, thematic axis, number of authors, highest degree of main author, number of authors on the nursing team (auxiliaries, technicians and nurses), number of authors with connection to hospital and with connection to the teaching corps of the university and the summary text presented.

The data were made available by the Scientific Commission of the event, collected during the month of December of 2016. For the treatment of the summaries, the analysis of Descending Hierarchical Classification (DHC) was used, via the software IRAMUTEQ (*Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires*), version 0.7 alpha 2, developed by Pierre Ratinaud in 2009 in French.

The IRAMUTEQ was used in Brazil beginning in 2013 and has the advantage of being free. It is anchored in software R and written in the programming language python. This program makes possible five types of analysis: classic textual classification; research of group specificity; descending hierarchical classification; analysis of similarities and word clouds¹⁰.

The DHC method performs a classification based on the vocabulary of the text being analyzed, and the entire set is separated according to the frequency of reduced forms. In this analysis, different classes of segments of texts are obtained that, at the same time, present similar vocabulary among them, and vocabulary different from the segments of text from other classes. From this analysis, the software organizes the data analysis in a dendrogram of the DHC, which illustrates the relationships between classes¹⁰.

From this corpus, which is a set of text that the researcher wishes to analyze, the dimensioning of the text segments or elementary context units (ECU) was performed, which possess on average three lines, classified based on the highest

frequency words and the highest Chi-square values in the class, aiming to understand which were most important for the qualitative analysis of data. The ECU's obtained "present similar vocabulary among each other and different from the ECU's of other classes"¹¹⁻¹².

The ethical aspects were respected, following the recommendations for research projects with human beings as stated by Resolution N. 466 of the National Health Council, from December 12th, 2012. The approval was obtained in decision n. 1.618.872 of the Ethics and Research Committee of the Federal University of Triângulo Mineiro - FUTM.

RESULTS

58 project summaries were submitted for the event, with a total of 296 authors, with an average of 5.10 authors per summary. The bibliometric information of the projects are presented in Table 1.

With respect to the thematic axes proposed by the event itself for the selection of projects, it can be observed that: Healthcare Practices presented 30 summaries (51.7%), followed by Healthcare Education presenting 19 summaries (32.8%) and Healthcare Management with 9 summaries (15.5%). Considering the educational degree of the authors, graduate healthcare residents, FUTM undergraduate students and specialists represented the majority of the authors (60.34%).

With respect to the professional category of the authors, the majority of them had connections to nursing (auxiliaries, technicians and nurses) representing almost 95% of all the authors. More than half of these authors (63.5%) had a professional connection to the CH of FUTM. The majority of the projects were reports of experience (56.9%), results of primary studies (25.9%) and operational research of the clinical hospital itself (10.3%).

Table 1. Bibliometric information for projects presented in the 2nd Scientific Conference of the CH-FUTM, Uberaba – MG, Brazil, 2017.

Bibliometric Information		N (%)
Thematic axes ^a	Healthcare Management	9 (15,5)
	Healthcare Education	19 (32,8)
	Healthcare Practices	30 (51,7)
Educational degree of authors	Undergraduate	10 (17,2)
	Graduate	6 (10,3)
	Specialization	8 (13,8)
	Post-graduate (Residency)	17 (29,3)
	Post-graduate (Master's)	6 (10,3)
	Post-graduate (Doctorate)	3 (5,2)
	Master's	7 (12,1)
	Doctorate	1 (1,7)
Professional category of authors	Nursing (Aux., tech. and nursing.)	279 (94,3)
	Other professional categories	17 (5,7)
Work connection	Authors with work connection to CH	188 (63,5)
	Authors with work connection to FUTM	108 (36,5)
Nature of work	University Extension	3 (5,2)
	Primary study results	15 (25,9)
	Operational research of sector	6 (10,3)
	Experience report	33 (56,9)
	Final Project for Graduation (FP)	1 (1,7)

^aThematic axes proposed by the event itself for the selection of projects.

The summaries of projects presented were analyzed via DHC by the software IRAMUTEQ. It should be noted that the processing in the software took only one second, which is the main advantage in terms

of time with respect to other qualitative data analyses. 452 ECU's were obtained with a 88.05% utilization of the corpus and formation of 4 semantic classes in the DHC, illustrated in the dendrogram in Figure 1.

Figure 1. DHC of the *corpus* of knowledge produced in the initiative “Scientific Nursing Conference CH-FUTM”, Uberaba (MG), Brazil, 2017.



The interpretation of thematic contexts was performed using classes with the following meanings: 1-Quality, Attention and Care, 2-Multiprofessional Residency Program, 3-Hospital as site of knowledge production, 4-Procedures, methods and implantation of nursing care.

DISCUSSION

Certified as a Pedagogical Hospital by the Interministry Decree MEC/MS n. 1.704 of 8/17/2004, it has an internship program for technical courses, especially those related to healthcare, and a graduate program, in addition to meeting the demands of professional formation, medical, multiprofessional and graduate residencies (*lato sensu* and *stricto sensu*).

In January of 2013, FUTM and EBSERH signed the contract for the management of the CH-FUTM, published in June of 2013 in the Official Union Journal¹¹. It should be highlighted that the mission of the CH-FUTM is to “provide healthcare to every citizen with quality, interdisciplinary practices and humanity, integrated with teaching, research and extension” and as its vocation provide excellent medium and high-complexity healthcare in the Unified Health System. As an instituted guideline, one of the aspects of responsibility of the workers of this institution is:

[...] incentivize the production of scientific and technological knowledge in the hospital environment, by means of the promotion of research projects and the definition of guidelines. As presented in the Directive Strategic Plan (DSP) of the Clinical Hospital of the Federal University of Triângulo Mineiro (CH-FUTM) – setting of choice for the development of this research, there are difficulties in the integration of research and care. It is worth highlighting the “Difficulty of integration between teaching, research and care” composed as a macro-problem in this institution¹¹.

In this way, initiatives such as the one presented by the Scientific Event constitute strategies for overcoming the macro-problem. Especially considering the results of the analytic dimensions, in Brazil certain participation of nurses in the development of

research was observed after the creation of the university career in 1963, evolving largely with the start of the first Master’s program in nursing, in 1972, in the Anna Nery Nursing School, at the Federal University of Rio de Janeiro¹².

In the health field, particularly, the role of education is strategic. The barriers to changing the formation of human resources has as its background the process of implantation and consolidation the Unified Health System (UHS)^{13,14}.

Faced with the worldwide crisis of the workforce in healthcare, the World Health Organization considered the preparation of inter-professional teams capable of developing collaborative practices as a crucial initiative in the solution of the problem. In Brazil, experiences in this perspective are still rare, as well as publications on the subject. The few existing publications are related to post-graduate *lato sensu* multi-professional actions, especially in Ministry of Health programs, such as Multi-professional Residencies^{13,14}.

As a result of the present research, the Residency Program was presented as a relevant category among the sample analyzed. Above all, the most common Residencies in the academic environment: Multi-professional and Neonatal and Trauma Residencies-were the ones that provided expressive elements in the construction of knowledge at the event analyzed.

Despite the existence of initiatives for the integration of research in nursing practice on the international scene since the 1970’s, these initiatives are still incipient in the Brazilian context¹⁶. Many times scientific research does not touch on problems related to everyday demands of healthcare and nursing care⁷. As shown by the results of a review of the literature about nursing research in the Americas, there is an urgent necessity for research about practical problems and geared toward patient care. And, especially, using the results of research in healthcare to modify practices and prepare nurses to make decisions based on the best evidence that can be incorporated¹⁶.

It is increasingly necessary to invest in strategies that guarantee the transfer of research results as a way of making the incorporation of evidence in practice viable¹⁷. Above all, the purpose of the production and dissemination of research is to lead us to reflections about the incorporation of new modes of expertise in nursing. The amplification of the social value of nursing research grows at the rate at which it is disseminated and applied, and decreases at the same rate when the opposite happens¹⁸.

Concerning the dimension *Hospital as scene of the production of knowledge*, it should be noted that in public, pedagogical hospitals, where nurses and managing nurses actively participate in diverse academic activities, it is crucial to promote the approximation of research and the utilization of its results. This action is beneficial for the qualification of this setting, principally, so that research is developed with the aim of responding to local demands – with the aim of strengthening the space as one of good practices as much in research and formation as in care^{7,18,19}.

Concerning the dimensions “*Quality, attention and care*” and “*Procedures, methods and implantation of nursing care*” – especially, bringing research results closer to nursing professionals favors the break with unsystematized practices, grounded in reproduction or tradition. Considering that this contingent of workers is the one of greatest expression in the hospital environment, transformations in its practices impact the organization of the hospital as a whole^{7,18,19}. Further, it is believed that these considerations are essential for nursing to obtain autonomy in the consolidation of its professional identity.

It is necessary to invest in a new administrative work structure, based on making resources available and the realignment of professional activities for permanent investigation, a supportive organizational culture that encourages changes in practice based on the use of scientific evidence, seen as a process of the incorporation of innovation¹⁶⁻¹⁹.

Bearing in mind that research, supported by the organization and desired by nursing, is consubstantiated as a scientific-pedagogical strategy in the permanent formation of nurses and has the potential to make positive contributions to the care provided; the engagement of the nursing community in the utilization and development of research is insufficient^{7,18,19}.

With respect to the limitations of the study, it should be noted that it is not intended to generalize the identified results and, instead, to characterize a local phenomenon concerning the production of knowledge originating from a scientific event, which corresponds to a specific population of nurses.

CONCLUSION

The necessity for integration between the diverse players involved in the context of a public, pedagogical hospital is notorious, bearing in mind that the approximation of the academic community and the corps of workers can allow for a recognition of the real necessities of these services and an orientation of research based on the current political and economic reality of the public health system in Brazil.

Nursing as a professional category strongly represented as a workforce in the hospital context was the most expressive among the authors of the event. The results of this study support the necessity of implementing actions that aim to stimulate scientific investigation that focuses on the everyday necessities in the field.

To this end, it is necessary to break with the perpetuation of professional action based on tradition or repetition of what has already been instituted.

The residency programs of the institution that nurses compose are relevant for the approximation of care to research and teaching.

Still, the actions of residents are denoted as means of recognizing the everyday necessities of nursing services and, the themes presented in the scientific event were alternatives for the better orientation

and resolution of real problems, identified in practice and formation.

In general terms, the results point to the interest of the nursing community in disseminating its initiatives, highlighting the importance of maintaining events such as the one analyzed, in similar contexts. However, there is the necessity of integrating other professional categories, of expressing their everyday constructions of knowledge and the way in which they produce interfaces with nursing care. Above all, these results support an existing recognition in hospital settings of integration between teaching and care, acting as a stimulus for the national debate on the subject.

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CONTRIBUTIONS

Renata Maria Dias de Abreu and **Gilberto de Araújo Pereira** participated in the review of the critical manuscript. **Thaís Santos Guerra Stacciarini** and **Getúlio Freitas de Paula** took part in data collection and in the critical review of the manuscript. **Fernanda Carolina Camargo** and **Luan Augusto Alves Garcia** participated in the conception of the study, data analysis, writing and final review.

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