

The use of active methodology in nursing care and teaching in national productions: an integrative review*

THE USE OF ACTIVE METHODOLOGY IN NURSING CARE AND TEACHING IN NATIONAL PRODUCTIONS: AN INTEGRATIVE REVIEW

UTILIZACIÓN DE METODOLOGÍA ACTIVA EN LA ENSEÑANZA Y ATENCIÓN DE ENFERMERÍA EN LA PRODUCCIÓN NACIONAL: REVISIÓN INTEGRADORA

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ABSTRACT

The objective of this integrative review was to identify and analyze the scientific publications regarding the use of active methodologies in nursing care and teaching in Brazil. The survey included national publications, from 1999 to 2009, using the following databases: LILACS, BDNF, MEDLINE and SciELO. A total of 28 articles were selected. The results and analysis pointed to problematization as the primary active methodology used, the lack of theoretical frameworks to plan the pedagogical action, and the excessive use of teaching techniques that do not always characterize innovation. In conclusion, the implementation of innovative methodologies requires further studies and more investment in research and dissemination on the subject.

DESCRIPTORS

Education, nursing
Learning
Problem-based learning
Nursing care

RESUMO

Esta é uma revisão integrativa de literatura cujo objetivo foi identificar e analisar publicações científicas sobre o uso das metodologias ativas no ensino e assistência de enfermagem no Brasil. O levantamento bibliográfico incluiu publicações nacionais, no período de 1999 a 2009. Foram verificadas as bases de dados LILACS, BDNF, MEDLINE e a biblioteca eletrônica SciELO. Foram selecionados 28 artigos. Os resultados e a análise mostraram a problematização como a principal metodologia ativa utilizada, a falta de referenciais teóricos para planejar a ação pedagógica e o uso excessivo de técnicas de ensino que nem sempre caracterizam a inovação do método. Conclui-se que a implementação das metodologias inovadoras ainda carece de mais estudos e necessita de maior investimento em pesquisa e divulgação sobre o assunto.

DESCRITORES

Educação em enfermagem
Aprendizagem
Aprendizagem baseada em problemas
Cuidados de enfermagem

RESUMEN

Esta es una revisión integradora de literatura, cuyo objetivo fue identificar y analizar publicaciones científicas sobre el uso de las metodologías activas en la enseñanza y atención de enfermería en Brasil. El relevamiento bibliográfico incluyó publicaciones nacionales, en el período de 1999 a 2009. Fueron verificadas las bases de datos LILACS, BDNF, MEDLINE y la biblioteca electrónica SciELO. Fueron seleccionados 28 artículos. Los resultados y análisis mostraron a la problematización como la principal metodología activa utilizada, la falta de referenciales teóricos para planear la acción pedagógica y el uso excesivo de técnicas de enseñanza que no siempre caracterizan la innovación del método. Se concluyó en que la implementación de las metodologías innovadoras aún carece de más estudio y son necesarias mayores inversiones en investigación y divulgación sobre el asunto.

DESCRIPTORES

Educación en enfermería
Aprendizaje
Aprendizaje basado en problemas
Atención de enfermería

* Extracted from the End-of-Course Monograph "Utilização de metodologia ativa no ensino e assistência de enfermagem na produção nacional: revisão integrativa", Nursing Department, Faculty of Medical Sciences, University of Campinas, 2009. ¹ Nurse, graduated from the Nursing Department, Faculty of Medical Sciences, University of Campinas. Campinas, SP, Brazil. sobral_fer@yahoo.com.br ² Ph.D. Professor, Nursing Department, Medical Sciences Faculty, University of Campinas. Campinas, SP, Brazil. cjcampos@fcm.unicamp.br

INTRODUCTION

Historically, the education of health professionals is based on the Flexner model of medical courses, that emphasizes on biological aspects, fragments knowledge, enhances the theory-practice dichotomy, and disregards the needs of the Brazilian national health system (Sistema Único de Saúde – SUS)⁽¹⁻²⁾.

Similarly, there is still a broad use of traditional teaching-learning methodologies in the education of health professionals. The highlights of these education models, which Paulo Freire referred to as *banking*, are the teacher-student knowledge transfer, an excessive valorization of technical education, and the dissociation between the theoretical knowledge that is received passively by the students and their social context⁽³⁻⁵⁾.

In the 1980s, it was already noticed that professionals lacked preparation to work in the health area because of the discrepancy between their education and the reality of their profession⁽⁶⁾. There was a growing mobilization of educators seeking a critical-thinking education with a view to social transformations. Among those analytical theories, the *liberation pedagogy* or *problem-posing* was developed, with emphasis on the educational model proposed by Paulo Freire, which made important contributions in the health area^(3,7). The method emphasized on the dialogic relationship between students as well as between students and teachers, in the academic environment, as well as between the population and the professionals, in educational health practices⁽⁵⁾.

Therefore, to integrate theory and practice, healthcare service and teaching, a review should be done of the methodological proposals used in the education of health professionals. However, the change in the teaching-learning process is arduous, because it breaks with the traditional teaching models and the education of professionals concerned with humanized care⁽⁸⁾. Recognizing these needs, today many discussions point to the use of new pedagogical practices, and higher educational institutions have been encouraged to redefine their social role and value the quality of healthcare in health practice, adopting the referred innovations^(1-2,8).

The National Education Bases and Guidelines Law (Lei de Diretrizes e Bases da Educação Nacional – LDB) and the curricular guidelines of nursing undergraduate course contemplate these paradigmatic changes as they establish that universities must encourage the association between teaching, research, and care, requiring innovation and quality in the political-pedagogical project. These guidelines suggest investments in educational strategies that encourage students to reflect about society, and trans-

form their context. To do this, it is important to adopt pedagogical concepts that bring theory and practice closer and pose problems of daily nursing work situations^(1-2,6).

Therefore, it is noticed that political attempts have been made towards adopting innovative teaching strategies – also referred to as active methodologies (AM)⁽⁸⁻⁹⁾, thus confirming the idea that the search for knowledge in nursing should bring healthcare practice and education closer, considering that nurses use the teaching-learning process in every healthcare action they perform. This requires professionals to constantly review their actions and perform any planning always based on reality, which means it is necessary to encourage and adjust educational practices⁽¹⁰⁻¹²⁾. It should be stressed that, in this active process, the work of the educator is not the only determinant factor for those methodologies to be successful: students must also become autonomous and responsible for their own learning⁽¹³⁾.

The active methodology (AM) is an educational concept that encourages critical-reflexive teaching-learning processes, in which students participate and are committed to their learning. The method proposes the elaboration of teaching situations that promote the students' critical-thinking regarding the reality; a reflection about problems that generate curiosity and pose challenges; the provision of resources to research problems and solutions; the identification and organization of the most appropriate hypothetical solutions to the given situation, and the application of those solutions^(7,14).

Therefore, AM are based on problems and, currently, there are two major types: the Problem-Based Learning (PBL) and the Problem-Posing Methodology (PM).

In PBL, a tutorial group is formed, in which the teacher presents a problem that has been created by a commission of experts. The problems contain the essential themes for students to complete the curriculum and be prepared for professional practice. In this method, contents or disciplines are integrated. The students study the problem as a group and individually. Next, the group gets together again to re-discuss the problem. This is a proposal that directs the whole curriculum organization and demands complex structural changes, because it is the choice of the institution^(8,15). The inconvenient aspect of the PBL is the existence of a virtual study setting, where attempts are made to associated pre-defined contents, which usually do not represent a trustworthy reality⁽⁸⁾.

On the other hand, the problem-posing pedagogy has its theoretical-philosophical foundations supported on Paulo Freire's framework. It is a teaching model committed to the liberating education, which values dialogue, demystifies reality and encourages social transformation

through a critical and awareness-building practice. In this case, the studied problems require a real setting, so that knowledge development occurs based on meaningful experiences^(5,8-9).

The PM has five stages. The first is to observe the reality: based on the study theme appointed by the teacher, students identify the problems of the social reality. The second stage is to identify the key-points: students use previous information to reflect about the causes and determine the essential points of the problem. In the third stage, the students seek scientific knowledge and fundamental information to understand the empirical manifestations and the theoretical principles of the problems. The fourth stage is to formulate solution hypotheses: students analyze the feasibility of applying the studied solutions to the identified problems. The final stage is to apply the solution to the reality, which consists of students putting the most feasible solutions into practice. This is an essential characteristic of problem-posing and does not depend on the level of impact that the solutions have on society^(3,14-15).

Problem-posing can increase actual actions, because it uses a real setting, and it is an alternative that does not require many physical changes in the institution. The changes are related to the class program, the attitude of the teacher and student, and to the diversity of the study locations. However, in this case, learning outcomes are not completely controlled and predictable^(8,15).

With the purpose to promote reflections and discussions about the reality of nursing education in Brazil, we intend, through this review, to identify the use of AM in nursing education and care based on the Brazilian scientific production.

The relevance of this theme for the field of nursing education is due to the new national health policy and the development of human resources, which required reviewing the direction given to nursing education and practice^(1-2,6). Furthermore, because education is one of nurses' major roles, particularly in care and education, it is also worth knowing the teaching-learning methods used in health education activities with the purpose to identify the transformations of the teaching strategies used in the healthcare area⁽¹¹⁻¹²⁾.

This study does not have the purpose to specify what is being used and how it used, because the experiences and reports presented in the literature about innovative methodologies does not provide sufficient elements to identify details, or, at least, some characteristics of the methods being used. We do, however, intend to obtain an idea of that use or the attempts made to apply AM and the possible variations of this approach. Furthermore, the study does not have the objective to show if those methodologies improve learning nor focus on the use of methodologies only in the integrated curriculum, because, in fact, compared to other countries, this use is incipient in Brazil.

The objective of this study is to identify and analyze the Brazilian scientific publications in nursing about the use of active methodologies in teaching and care.

METHOD

In this study, an integrative literature review was performed, which permits to summarize articles and draw general conclusions to analyze the scientific knowledge about the issue under investigation. This research was conducted following a few basic stages: 1) elaborate the study theme; 2) conduct the literature review; 3) organize the collected data; 4) interpret and evaluate the study outcomes; 5) present and disseminate the review⁽¹⁶⁻¹⁷⁾.

In the 1st stage — elaborate the study theme — the following guiding question was used: how are active methodologies used today in nursing education and care, according to what has been published on this theme in national scientific journals?

In the 2nd stage, the literature review was performed using BIREME (Virtual Health Library), and the electronic databases: LILACS (Latin American and Caribbean Health Sciences Literature), BDNF (Nursing Database), MEDLINE (International Health Sciences Literature), and the SciELO (*Scientific Electronic Library Online*) open access electronic library. The keywords used in the searches were chosen from the Health Sciences Descriptors (DeCS/Bireme): *aprendizagem, aprendizagem baseada em problemas, educação em enfermagem, enfermagem* (learning, problem-based learning, nursing education, nursing).

The advanced search used two or three descriptors simultaneously. Therefore, in the BDNF, LILACS and MEDLINE databases, besides the SciELO electronic library, the following terms were grouped at the same time *problem-based learning/ nursing education; problem-based learning / nursing and problem-based learning / nursing education / nursing*. On the other hand, on SciELO, the descriptor *problem-based learning* was used alone, and the descriptors *learning/ nursing/ nursing education* were used simultaneously.

Also on SciELO, the keywords *problematização* (problem-posing) and *enfermagem* (nursing), were crossed simultaneously in an attempt to contemplate important studies that had not yet been included. We highlight that although these are not official descriptors, the search provided significant outcomes.

The inclusion criteria used to select the sample were: articles published on national journals, from 1999 to 2009, addressing the theme *active methodologies*, considering all the areas of interest in nursing, and providing free online access to the full-text. This period was chosen considering that the number of publications on this issue are growing in the national setting, and because the use of new pedagogical practices is a new phenomenon in the country, and has been growing over the last years⁽¹⁻²⁾.

The literature review conducted in March 2009 provided an initial sample. During the following months, an exploratory reading was performed of the articles' titles and abstracts, followed by a first reading to determine if the articles were appropriate for the proposed theme. Next, a selective reading was performed, that is, a deeper reading of the whole articles. Based on this reading, all studies considered irrelevant for the study theme were excluded. Next, having established the final sample, an analytical reading of the articles was performed, with the purpose to organize and summarize the information from the selected articles to answer the study objectives⁽¹⁸⁻¹⁹⁾. In September 2009, following the same aforementioned steps, another search was conducted, and new articles, which had not yet been available on the databases, were added to the sample.

In the 3rd stage, organizing the collected data, a specific form was used for the data collection with the purpose to take note of information considered the most relevant to meet the study objectives. Therefore, the final sample was organized according to the date of publication from the latest to the oldest, and alphabetically according to the authors' last names. The form contained data such as year, author, title, journal, type of active methodology, country region that used the method, forms of application (education or care) and thematic content.

In the 4th stage — interpreting and evaluating the outcomes — the categorization was based on the incidence of the content and on the characteristics present in the selected studies. This way, we divided the content into three main recurrent themes: a) the teaching-learning process / teaching strategies; b) health education activity; c) professional development / permanent education.

In the 5th stage — presenting the outcomes — the information from each study, which were considered the most relevant in the review, were described. The data were summarized and presented individually to facilitate the critical analysis of the sample.

However, in this stage, it is necessary to point out some considerations about the review process that was conducted. This study has some limitations regarding the incompatibility between the descriptors and keywords used by the researchers of the surveyed articles. On the one hand, this can limit the final sample of the study, while, on the other hand, it can provide many articles, but with several themes, making it difficult to find manuscripts that would interest the research theme.

Furthermore, the fact that the articles should be available online, but only through free access, may also have contributed for other national studies not being included. However, the present study authors consider it important to select articles that have free access to any person, rather than those available only to a limited privileged part of the population, such as academic communities. It is

essential that the dissemination about the use of innovative methodologies is not limited to higher education, but made available to all other education levels.

RESULTS

On BDEF and LILACS databases, 29 (7%) and 64 (17%) articles were found, respectively. On MEDLINE, the search resulted in 176 (44%) articles. The search on the SciELO electronic library provided 129 (32%) articles. The search on the databases, considering that all the descriptors and keywords used, found 398 articles. After reading the title, abstract and full texts, 370 (93%) articles were excluded because they did not contemplate the study theme (Table 1). Therefore, the final sample consisted of 28 (7%) articles (Chart 1).

Table 1 - Distribution of the articles that were found, excluded and selected according to the electronic databases - Brazil - 1999 to 2009

Databases	Found	Excluded	Final sample*
BDEF	29	26	3 (1%)
LILACS	64	56	8 (2%)
Medline	176	173	3 (1%)
SciELO	129	115	14 (3%)
Total	398	370	28 (7%)

*Numerical data in rounded percentages

The results revealed that the innovative methodologies predominated in southeast Brazil with 17 (61%) studies, followed by the South with six (21%) articles, the northeast with three (11%), and two (7%) in the mid-west. The search did not find any articles from the north of Brazil that contemplated this methodology.

Regarding the methodologies used in nursing education and care, 13 (46%) articles adopted problem-posing (PM), 11 (39%) applied AM. Three (11%) manuscripts addressed participative methodologies, and only one (4%) used PBL.

It is highlighted that 24 (86%) articles reported that the innovative methodologies were applied to class disciplines, and 13 (46%) evaluated the implementation of the adopted methodologies.

The most reported theoretical frameworks were Paulo Freire's, with six (21%) articles, Maguerez and Bordenave with five (18%). The other studies used different frameworks or did not state which one.

Twenty (71%) articles focused on education, 16 (57%) of which addressed undergraduate education, graduate and technical education levels were addressed on two (7%) texts each. Two (7%) articles were dedicated to the permanent education of nursing professionals, and one (4%) for community health agents (CHA). Regarding the manuscripts focusing on care, there were five (18%) articles that addressed the use of active methodologies in health education projects for the population.

Chart 1 – Selected studies per area, year of publication, title, and journals - 1999 to 2009

Area	#	Year	Title	Journals
EDUCATION	1	2009	Uso de metodologia ativa na disciplina gerenciamento de enfermagem em saúde coletiva da FEO/UFPEL.	Rev. Eletr. Enferm.
	2	2008	Curso técnico de enfermagem do PROFAE-Ceará: a voz dos supervisores.	Texto & contexto Enferm.
	3	2008	Processo de ensinar e aprender em UTI: um estudo fenomenológico.	Rev Brás. Enferm.
	4	2008	Aprendizagem baseada em problemas em ressuscitação cardiopulmonar: suporte básico de vida.	Ver. Esc. Enferm. USP
	5	2008	A experiência de realizar um Estágio Docência aplicando metodologias ativas.	Acta. Paul. Enferm.
	6	2007	Construindo um programa de educação com agentes comunitários de saúde.	Interf. com Saúde Educ.
	7	2007	Metodologia da problematização no ensino em enfermagem: uma reflexão do vivido no Profae-RS.	Esc. Anna Nery
	8	2007	Reflexão e interação: uma nova perspectiva para o ensino da enfermagem por meio da aprendizagem vivencial.	Online braz j Nurs.
	9	2006	Implementando as unidades educacionais do curso de Enfermagem da Famema: relato de experiência.	Interf. com saúde Educ.
	10	2006	Educação permanente: uma ferramenta para pensar e agir no trabalho de enfermagem.	Rev. latino am Enferm.
	11	2006	Utilização da pedagogia problematizadora na graduação de Enfermagem para o atendimento do paciente agressivo.	Rev gaúcha de Enferm.
	12	2005	O ensino de enfermagem em saúde mental e psiquiátrica: visão do professor e do aluno na perspectiva da fenomenologia social.	Rev latino am Enferm
	13	2005	O planejamento estratégico situacional no ensino do gerenciamento em enfermagem.	Acta. Paul. Enferm.
	14	2005	Utilizando técnicas de ensino participativas como instrumento de aprendizagem e sensibilização do manejo da lactação para profissionais de enfermagem de uma maternidade.	Acta. Paul. Enferm.
	15	2004	Concepções pedagógicas no processo ensino-aprendizagem: uma visão reflexiva dos alunos de graduação em Enfermagem.	Ciência, Cuidado e Saúde
	16	2003	Professor e aluno compartilhando da experiência de ensino-aprendizagem: a disciplina de Enfermagem pediátrica da Universidade Federal de Mato Grosso do Sul.	Rev. latino am Enferm.
	17	2002	Assistência de enfermagem ao portador de alterações na integridade cutânea: um relato de experiência de ensino-aprendizagem.	Rev. Esc. Enferm. USP
	18	2002	Ensino de administração em enfermagem: relato de experiência.	Acta. Paul. Enferm.
	19	2002	Posicionamento de enfermeiras sobre ensino problematizador.	Rev latino am Enferm.
	20	2001	Capacitação pedagógica: uma construção significativa para o aluno de graduação.	Rev. latino am Enferm.
	21	2000	O ensino do exame físico pulmonar através do método da problematização.	Rev. latino am Enferm.
	22	1999	A problematização da violência como experiência de ensinar em Saúde.	Interf. com saúde educ.
	23	1999	Reflexões sobre o ensino de dinâmica de grupo para alunos de graduação em Enfermagem.	Rev. Esc. Enferm. USP
CARE	24	2009	Percepções de mães de prematuros acerca da vivência em um programa educativo.	Acta. Paul. Enferm.
	25	2007	Competência dos enfermeiros em problematizar a realidade do serviço de saúde no contexto do Sistema Único de Saúde.	Texto & Contexto Enferm.
	26	2004	Cartilha educativa para orientação materna sobre cuidados com bebê prematuro.	Rev. latino am Enferm.
	27	2003	A experiência de jogos em grupos operativos na educação em saúde para diabéticos.	Cad. saúde pública
	28	2000	Atividade educativa no alojamento conjunto: relato de experiência.	Rev. latino am Enferm.

One (4%) scientific production was performed by primary care nurses. Three (11%) articles counted with the participation of nurses from the service and faculty. The other 24 (85%) articles were published by nurse-professors.

In the present study, the contents of the articles were grouped into three central themes: learning process and teaching-learning strategies, covered in 19 (68%) articles; health education activities, with five (18%) manuscripts; and permanent education of nursing professionals with four (14%).

In both education and care, it was found that there are some common setbacks to apply the new methodologies:

the influence of conservative methods that generate, in some professionals, a resistance to accept other pedagogical concepts; the students' difficulty to become responsible for self-learning; the inflexibility of institutions and health services; some professionals' equivocated perception of losing power and their lack of knowledge regarding the pedagogical theories^(13,20).

To better understand the following discussion, Chart 2 presents the synthesis of the critical evaluation of the selected articles according to the numerical order presented on Chart 1.

Chart 2 – synthesis of the critical evaluation of the selected articles – 1999 to 2009

#	Synthesis
1	A brief report on how the activities are performed, it is understood that it refers to AM, similar to problem-posing. Partnerships are established between municipal health departments and the university to implement changing actions.
2	Uses PM with a pre-elaborated educational material (traditional resource). Strength: easier to work as a team; weaknesses: restricted internship fields, little support from the municipal administration.
3	Faculty tries to individually apply a differentiated education practice, it is an AM: students experience the real problems and have a more dialogical relationship with the professors. An effort is made to make changes that would improve education. Difficulty: faculty lack preparation about pedagogical concepts.
4	In the discipline, a massive amount of content is presented, with a previous distribution of theoretical material. Emphasis is on technical and theoretical training. There is no contact with the reality, only with a simulated situation in the final phase of the PBL. The students' evaluation is mostly traditional. Difficulty: students rooted to traditional processes.
5	Faculty internship in the graduate course applying AM in an undergraduate class discipline. There are traces of the problem-posing method. Different strategies were used in teaching and evaluations, blending traditional and innovative methods.
6	The PM was partially used to support the preparation of community health agents. The educational actions involved dynamics, participative strategies, which later were extended to the community.
7	Presents the PM, based on the arch method by Magueres. Attempts to employ the integrated curriculum model in the technical course, but does not provide details regarding that integration. Is concerned about developing the action-reflection-action process. Difficulties: limited to specific contents; interdisciplinarity; interconnected with places for practice.
8	Discipline applied with the objective to problematize; uses AM to solve daily problems. Strategies focus on group dynamics to encourage knowledge development. Few data are presented about the activities that were adopted.
9	Emphasis on the changes of the PM and the curricular model of an institution. Difficulties in the implementation: different understandings about the method, unclear pedagogical cycle, interdisciplinarity, insecurity and a redefinition of faculty roles. Strengths: the education-service partnership is strengthened and a connection is established between the courses.
10	An elusive and vague report about the application of PM in professional development. The teaching practices adopted approximate the theory of everyday life, but the educational activities are not associated to the working process; the practices were occasional and isolated. Difficulty: lack of investment by the institutions in training and a lack of commitment from the professionals.
11	Discipline based on problem-posing a hypothetical situation. An attempt is made to innovate the teaching strategy, promoting interventions and reflections. The contact with the simulated practice improved learning, but there is no information about the activities that were performed, it only describes the PM steps. Emphasis is on the educator's attitude change and their will to establish interdisciplinarity.
12	Reports experiences in the discipline, which emphasizes on the direct contact with the social reality, favoring learning. No reference is made to the methodology used, but it follows the AM characteristics, tending to problem-posing. Highlights: a more dialogical relationship between teacher and student, constant changes in attitude and reflections about the practice.
13	The discipline uses the Situational Strategic Planning as a pedagogical resource rather than as a methodology. It is an AM, focused on the problem-posing of reality. It attempts to include other active learning strategies. Difficulties: vulnerable human and material resources.
14	Uses participative methodology (actually, pedagogical techniques) that promotes participation and exchanging experiences. The activities problematize real situations, but aim merely at the participation of the people involved, prioritize on technical-biological aspects, restrict the students' and professionals' view. Traditional evaluation methods are used to verify the <i>assimilation</i> of the content.
15	The discipline prepares students to develop pedagogical practices that favor the construction of knowledge and critical-reflexive behaviors to the benefit of the individual/society. Its discourse is consistent with AM, but the activities are still based on the traditional education model.
16	The approach is characteristic of AM, and includes elements of traditional and liberating education; it permits students to express feelings and improve their autonomy. It appears to be a transition method: it seeks new paths for pedagogical practice, while maintaining conservative characteristics of the institution (formative evaluation of students measured by grades).
17	PM experience reports. Activities performed with guided studies. Difficulties: excessive content, interdisciplinarity, faculty educated by traditional models. To solve these problems, the following were performed: systematic discussions, advising with experts, faculty training.
18	Uses problem-posing, including the phase of the arch method in the theoretical-practical intern fields. Students evaluated the teaching method as positive, but there were difficulties regarding its implementation: students' adaption to the method, relationship with the health team members, the exact identification of the problem and its implementation, the faculty's lack of skills to work with the method.
19	Statistical demonstration of the advantages of using problem-posing. It does not emphasize on the application on the method, but shows the outcomes of the teaching process before and after it is used. The participation in the discipline makes a positive change in the participants' view about the importance to plan health education activities that value sharing practical and cognitive knowledge.
20	The discipline reviews faculty practice, seeking strategies that permit active knowledge development and the integration of theory and practice. The information about the teaching method is vague and general, therefore it is not possible to specify the methodology, but its structure resembles the awareness-building pedagogy. The study seeks alternatives to make learning more dynamic and introduces techniques that emphasize on student participation.

Continues...

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#	Synthesis
21	The discipline uses dialogued exposition strategies, practical demonstrations, and activities in the classroom. It follows the arch method of Magueréz, which starts with the observation of a virtual reality, which is valid, but perhaps not very efficient, because in the final PM stage, in the real practice field, many students still had doubts, and "extra reinforcement" classes were necessary. A new method is used, but with traditional evaluation.
22	The discipline intends to prepare socially contextualized professionals. It recognizes and incorporates the students' daily experiences in the activities. The pedagogical activities involve more than simply applying techniques and/or knowledge provided in advance, it seeks to develop skills and attitudes that provide students with the necessary tools to understand and face the reality, integrating with the professional at the service, who have different interests.
23	Discipline with a reflexive theoretical-experiential proposal of the educational strategies that are used, aiming at their reconstruction. It uses several educational and evaluation strategies. Students face an initial difficulty to understand the dynamics used for teaching and overcome this through their personal interest to become responsible for their learning.
24	Implementation of a group of activities to promote knowledge development among users of a service, aiming at hospital discharge. Problematizing education was used. However, the method appears to consist merely of forming groups that share experiences and read the educational material. Practice is not associated with theory.
25	The use of AM in a specialization course. Nurses problematize the reality of the health service where they work. Despite being at a distance, the course associates theory to the participants' practice, who develop the ability to look to their reality, rise problems and find changing actions. Difficulty: problematizing a single theme of the reality.
26	Health education activity that uses PM. The instrument developed in the study (handbook) is an educational resource produced by professionals and users of the service, using problem-posing during the educational practices. It is not a permanent and pre-molded instrument. It is, actually, one of the objectives of the referred active process and emerged from the group members' attitude of sharing knowledge, and was adjusted to their needs.
27	Uses educational techniques in the form of games that follow general ideas of active methodology. The educational resources contributed with the training of the multiprofessional technical team, encouraging them to search new teaching alternatives to change health behaviors. Limitation of the process: poor technical-scientific improvement of the professionals; difficulties in the professionals-participants interaction.
28	Educational activity that uses the participative, but not the awareness-building method. Group dynamics and a practical demonstration of care are performed. The study proposes <i>new forms</i> of work, but the didactic techniques appear to be traditional, besides disregarding the experience of the target population. The evaluation of the process was performed using an educational game, which resembles the application of an exam, with aspects of punishment and reward.

DISCUSSION

Considering the yielded results, it is observed that the innovative methodology predominates in the most developed regions of Brazil. These data expose the power relationships existing in the construction of new educational actions, which are (re)produced based on the social, political, and economical interests of certain historical moments⁽²¹⁻²²⁾. The dominant sectors of society have no interest to invest in educational programs that develop students' critical thinking, because knowledge development promotes a greater ability of understanding and analysis. When knowledge reaches the majority of the population, it generates a potential for change and the new methodologies can help overcome conservative models and promote social revolutions⁽⁷⁾.

Furthermore, changes in education cover the physical and material structures of institutions and the disposition – personal, institutional, and governmental – to face radical changes in the education processes⁽⁹⁾. In order to make these changes effective, there is a need for technical and financial investments from the power authorities, combining this cooperation to the group actions between municipalities, educational institutions and organizations representing the community⁽²³⁾.

The study also identified some educational tendencies adopted by the Brazilian nursing area, namely PM. It was observed that the articles that used active methodologies presented mainly problematizing characteristics or approaches with a main idea, conceived on the manuscript itself, very similar to the active method; therefore, in the present study, we classify those approaches as AM.

Moreover, in the context of the analyzed articles, it is understood that the participative methodologies contained problematizing elements in their applications. However, it cannot be stated that they refer to PM and, in some cases, there are doubts regarding the fact of considering them as active teaching methods, because they focus merely on student participation, and not on the reflections, actions, and transformations that they promote.

It should also be stressed that the studied articles that referred to participative and active methodologies, but did not have a clear theoretical-methodological framework, were those that presented the highest variety of pedagogical resources: group dynamics, dramatization, educational games, group discussions and other technological materials and tools.

New teaching methods are understood as challenging, because they demand the teachers to choose pedagogical

cal strategies that allow students to participate actively⁽²⁴⁾. Therefore, it is important for the faculty to be familiar with a variety of pedagogical activities, or always create new teaching situations, because there no method is better than the other to address all contents. The most important skill is knowing how to combine the many different methods to keep students interested, increase the possibilities of learning and achieve the goals of the education proposal⁽¹⁴⁾.

It is, therefore, essential for the faculty to make a critical and sensible plan of their actions, because choosing techniques and tools is not enough, it is necessary to know the pedagogical concept adopted in order to apply the procedures that are appropriate for learning⁽⁷⁾.

It was found that the teaching techniques used follow the main idea of the AM: problematize reality. However, some of the activities reported in the articles may not provide the desired critical thinking that is valued by the active method. It is noticed that maintaining a biomedical view of care is not only a hindrance to overcoming the dichotomy between theory and practice, and between teaching and care, it is also an influence on the faculty practice, which has a tendency to use techniques that reinforce the students' passivity⁽¹³⁾.

In some articles, it was observed that there was little information about the application of the chosen methodologies and the theoretical framework; it is possible that the use of these pedagogical practices occurred empirically, with a poor theoretical foundation⁽²⁵⁾.

The articles reported some activities that suggest using AM; however, the pedagogical instruments that were used do not, necessarily, characterize the activity as innovative. Using technological resources or forming groups does not mean the AM is being effectively put into practice. Innovation is more than simply using new technological elements; it consists of using resources that represent new forms of thinking the teaching-learning process⁽⁸⁾.

The techniques used by the educators are the means to accomplish the education proposal, and, inevitably, depend on a theoretical-philosophical perspective⁽⁷⁾. It is important to recall that every pedagogical concept has specific sociopolitical intentions and the techniques used can characterize the teaching action as manipulating or emancipating⁽²⁰⁾.

Hence the importance of having the educational practice grounded on knowledge theories, because not all the techniques reported in the articles are in fact innovative, though being referred to as such. Some experiences are centered on a conservative education, but adopt different teaching strategies only to be included in the "fad" of new pedagogical methods.

Therefore, an alert must be made that AM are not a mere set of tools aimed at professional education or educational actions at healthcare services. This methodology

requires a new pedagogical activity based on firm objectives, and with the following main features: subjects have an active participation in the teaching-learning process; they seek knowledge and take possession of knowledge, think critically about what they have learned to then act and transform the reality in which they live^(7,14-15).

Knowing the methodology being used offers the educator more flexibility to work. Therefore, using new methods is not sufficient if the teacher does not have a well-structured pedagogical concept to plan his/her work, and, particularly if the methods serve the single purpose to follow a *fad* when in fact the banking method is the one being used. To think about teaching methods and instruments implies a consistent and constant theoretical reflection about learning⁽²⁶⁾.

We do, however, admit that it is not always possible to use new methods in the best and most desirable way, even for those who master their foundations. The lack of infrastructure at healthcare services and educational institutions may risk the educational practice, making it discouraging. However, this does not justify the professional not seeking new teaching strategies, because other instruments or alternatives may be used, which could promote health education and professional development activities^(14,26).

Some articles from the sample criticize the use of traditional teaching methods in nursing education. However, keeping a conservative educational structure does not mean a disregard of the institutions with the education process. We highlight that the strengths of each methodology lies in how they are used. The chosen techniques can adopt different pedagogical concepts, which at times are centered on the teacher and at others on the student or on socialization⁽²⁰⁾.

Many of the studied innovative methodologies are strategies applied only to class disciplines. Most political-pedagogical projects do not follow these isolated changes. However, the use of new approaches may be useful for all the nursing contents, which justifies the need to adjust the methods⁽²¹⁾.

In fact, in PM, students identify the problems observing the social reality and this methodology can be used to teach specific themes of a discipline, but is not always appropriate for every content, considering that some are better learned with one or more different method choices⁽¹⁵⁾. There is, however, the possibility to apply problem-posing in planning a discipline or some of its themes, as well as in planning the whole curricula⁽⁸⁾.

Some of the studied articles mentioned evaluation processes of the AM implementation. Only one study evaluated the methodology with former students of a technical course, and obtained positive results about the differentiated performance they have at work. This is a key point in the action of developing new teaching meth-

ods, because any innovative methodology implies process and formative evaluations to generate a critical reflection about the practice and identify improvements and difficulties in the teaching process^(1,24).

There were studies that evaluated both the student and the adopted methodology, whether in the educational institution or the healthcare service. In these cases, several evaluation means were used and adjusted. In other articles, however, the evaluation was not consistent with the innovative methodology, as it was applied in the traditional fashion.

Furthermore, two basic nursing areas for the application of innovative methodologies were investigated in the articles: teaching and care. Examples of the former are undergraduate, graduate and technical courses, in addition to permanent education programs for nursing technicians, aides, and professionals such as community health agents – all of which counted with the direct work of nurses. The latter included methods used to develop educational health practices with patients and their families, with a view to promoting critical thinking, skills and attitudes to improve community and individual health⁽³⁾.

Education is a continuous process of personal and professional development. It is not limited to the school environment, and also extends towards the workplace. Nurses, working in teaching or healthcare, influence the education and work of healthcare professionals. Nurses are in the position of changing the healthcare service of a place to make it suitable for learning, because, most of times, they are the ones responsible for the health education actions⁽²⁷⁻²⁸⁾.

Nevertheless, the study outcomes show that there are few studies by nurses working in the primary healthcare network. The published studies are mostly associated with undergraduate courses or the personal interests of nurse-faculty. This is not a negative fact; however, important examples may be lost because of the lack of dissemination of studies that do not have the partnership between teaching, research and care.

In fact, some of the studies found chose to use virtual realities or situations that simulate the reality because there was no available place to perform the practice, which means they had to make adaptations to the AM they used. Still, it is possible to become close to the social reality both through direct observation (in person, *in loco*) and by other means (audiovisual), but, in this case, there may be loss of information inherent to the representation of the reality. The important aspect is for the different strategies to create situations and address contents that contribute to the students' learning and allow for some personal and social transformation^(3,14).

In this sense, some of the analyzed articles highlight a factor that hinders the ideal implementation of AM: the lack of partnership. To promote changes in the pro-

fessional education of nurses and in care, it is important to establish and strengthen partnerships between educational institutions, municipal departments and the health system. They must share responsibilities and combine collaborative actions between the groups capable of making changes, with the purpose of finding new options of planning and managing the education and working process in the healthcare system, increasing and diversifying the learning settings⁽²³⁾.

CONCLUSION

The present study identifies the attempts made in nursing to adopt innovative pedagogical concepts in the teaching and care practices. Despite the difficulties to break with the traditional teaching methods, some education and nursing care institutions are aware of the need to change education and professional practice.

However, studies mostly present experiences of active methodology applied alone in class disciplines or teaching and care activities. These experiences are motivated by personal rather than institutional interests, which is rare. The nurse-faculty makes the strongest effort to apply innovative pedagogical methods. Difficulties such as the lack of support from the government or educational institutions impede making radical changes in education, demanding the teachers to adapt the active methodology to the resources available in their reality of work.

The surveyed studies provided little information about the use of the adopted methodology, but it was observed there was a predominance of the problem-posing method. Some emphasized on the idea of problematizing the reality, with variation of the active methodology, while others were unclear regarding the theoretical frameworks used. Some proposed new types of evaluation to the students consistent with active methods, while others insisted in using traditional evaluation methods. Most performed some type of evaluation about the method used, stressing on their positive outcomes and exposing the difficulties.

Several teaching instruments and strategies were used, but not always did they refer to an active method, because the resources used could sometimes maintain student dependence and the manipulation of knowledge, thus characterizing that the continuation of the traditional teaching method.

It should be highlighted that the pedagogical techniques used could serve as an active as well as a conservative methodology, and that all methods contribute to development of the professional. However, there should not be an overvaluation of practical over theoretical learning. One must always seek alternatives that favor both skills, thus promoting the individual abilities of students.

Nevertheless, the study also revealed that the implementation of innovative methodologies still requires fur-

ther studies regarding Brazilian nursing, which confirms that despite the current concerns with the education process of the professionals, more investment is needed in research and dissemination in this theme. It is also important to perform studies that evaluate the outcomes of active methodologies in educational institutions where the

method has already been implemented, to show its real influences in learning and the consequences on society. Furthermore, studies should include an evaluation of how new nurse professionals – graduates who have experienced the active pedagogical methods – have used this new pedagogical paradigm in their teaching and care practices.

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