

Nursing teaching strategies used to promote collaboration and teamwork: an integrative literature review



Estratégias de ensino em enfermagem para colaborar e trabalhar em equipe: revisão integrativa da literatura

Estrategias de enseñanza en enfermería para colaborar y trabajar en equipo: una revisión integrativa de la literatura

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ABSTRACT

Objective: To identify in nursing literature published between 2010–2014 the teaching strategies capable of promoting collaboration and teamwork.

Methods: This integrative literature review allowed the selection of empirical studies in nursing literature published between January 2010 and December 2014. The review was taken in April 2015, using the EBSCOhost platform to search in databases such as CINAHL® Plus with Full Text, Nursing & Allied Health Collection, Cochrane Collection, MediciLatina and MEDLINE with Full Text, Academic Search, and Education Research Complete.

Results: Findings revealed 18 empirical studies. Academic approaches based on high and low-fidelity simulations, “role play”, work group, reflective discussions and clinical stages were the strategies employed.

Conclusions: The present study emphasizes the need to develop instruments that can be used in the evaluation of the competence to collaborate and work as a team in students in the first years of nursing studies.

Keywords: Learning. Cooperative behavior. Nursing education. Patient care team.

RESUMO

Objetivo: Identificar na literatura de Enfermagem, publicada entre 2010–2014, as estratégias de ensino aplicadas pelos docentes na promoção da capacidade de colaboração e de trabalho em equipe no estudante de Enfermagem.

Métodos: A revisão integrativa da literatura permitiu a seleção dos estudos empíricos publicados em Enfermagem, entre janeiro de 2010 e dezembro de 2014. A pesquisa decorreu em abril de 2015, recorrendo à plataforma EBSCOhost para pesquisa nas bases de dados CINAHL® Plus with Full text, Nursing & Allied Health Collection, Cochrane Collection, MediciLatina e MEDLINE with Full text, Academic Search Complete, Education Research Complete.

Resultados: Obtiveram-se 18 estudos empíricos. Abordagens acadêmicas baseadas em simulações de alta e baixa fidelidade, “role play”, trabalhos de grupo, debates reflexivos e estágios clínicos foram estratégias empregadas.

Conclusões: Salienta-se a necessidade de instrumentos que possam ser usados na avaliação da competência de colaborar e trabalhar em equipe nos estudantes do primeiro ciclo de Enfermagem.

Palavras-chave: Aprendizagem. Comportamento cooperativo. Educação em enfermagem. Equipe de assistência ao paciente.

RESUMEN

Objetivo: Identificar en la literatura de Enfermería, publicada entre 2010–2014, las estrategias de enseñanza aplicadas por los docentes en la promoción de la capacidad de colaboración y de trabajo en equipo en el estudiante de Enfermería.

Métodos: La revisión integrativa de la literatura permitió la selección de estudios empíricos publicados en Enfermería entre enero de 2010 y diciembre de 2014. La investigación se llevó a cabo en abril de 2015, con el uso de la plataforma de EBSCOhost para la investigación en las bases de datos CINAHL Plus with Full Text, Nursing & Allied Health Collection, Cochrane Collection, MediciLatina y MEDLINE with Full text, Academic Search Complete, Educational Research Complete.

Resultados: Se obtuvieron 18 estudios empíricos. Simulaciones de alta y de baja fidelidad, “juego de roles”, trabajo en grupo, discusiones reflexivas y prácticas clínicas se emplearon.

Conclusiones: Se destaca la necesidad de desarrollar herramientas que puedan ser utilizadas para evaluar la competencia de colaborar y trabajar en equipo en los alumnos del primer ciclo de Enfermería.

Palabras clave: Aprendizaje. Conducta cooperativa. Educación en enfermería. Grupo de atención al paciente.

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■ INTRODUCTION

Currently, worldwide, there is growing concern about population health, the emergence of new infectious diseases, the increased prevalence of noncommunicable diseases and chronic diseases, the behavioral and environmental risk factors, the changes in lifestyles, the increase on the average life expectancy and its consequent population aging⁽¹⁾. This description, when coupled with the intrinsic bio-psycho-socio-cultural and spiritual aspects of the human being, makes us understand the inherent complexity of interventions required in response. A team-based approach has been a necessity considered as imperative in the integration of dynamic and collaborative responses of different specialties and health professionals⁽¹⁾.

Teamwork is a widely applied and recognized concept, finding its essence in the form of *"two or more individuals interacting adaptively, interdependently and dynamically towards a common goal and appreciated by all"*⁽²⁾.

According to the Institute of Medicine (IOM), aspects related to the complexity of the professional interventions associated with poor collaboration among the members of the health teams lead to adverse effects that may manifest in varying degrees of morbidity and in extreme cases of mortality⁽³⁾. The answer found is reinforced by the document "Health Professions Education: A Bridge to Quality"⁽⁴⁾, which recommends team-based education and training as a way of encouraging the competence of effective care, which determines a culture of safety.

It is, thus, prompted to take responsibility in academic formation through the adoption of new curricular and pedagogical strategies that are adapted to the community contexts.

There is a need for an advanced relationship among health professionals in the response to emerging problems, which can be achieved by establishing common goals, open lines of communication, clear definition of roles and responsibilities, and a network of relationships based on commitment, respect and trust⁽⁵⁾. These characteristics are strategies of collaboration responsible for opposing organizational, cultural and environmental aspects⁽⁴⁾. The creation of synergies, integration of values, application and development of competences and responsibilities⁽²⁾, allow to respond to the growing deficiencies in Health. The globalization, the scientific and technological advances impose the emergency to educate nurses to complex thinking, enabling them to adapt, respond and intervene before the unforeseen and in an integrated and multiprofessional practice⁽¹⁾.

In this way, the need to know and synthesize evidences that reveal teaching strategies and processes to learn how

to work in teams arise, namely in the preparation of nursing students. Thus, it was intended to identify, in the Nursing literature published between 2010- 2014, the teaching strategies applied by the teachers in order to promote the capacity of collaboration and teamwork of the nursing student.

■ METHODOLOGY

The integrative literature review was the adopted methodology, since it was the one that best fit the nature of the research carried out and the objectives outlined, allowing to recognize the inherent complexity of the nursing practice through the possibility of aggregating studies of different methodological approaches⁽⁶⁾.

The research has been carried out according to the steps defined for this type of methodology, starting with the identification of the phenomenon or the problem, the research of the relevant literature based on a research protocol, data quality evaluation, data analysis, coding and categorization, and, finally, the presentation and writing of the final results⁽⁶⁾.

Thus, in response to the research question outlined: "What are the teaching strategies present in the literature published between 2010-2014, which promote the ability of the nursing students to collaborate and work as a team?"

The research has been conducted during the month of April 2015, using the EBSCOhost platform to search the databases CINAHL® Plus with Full text, Nursing & Allied Health Collection, Cochrane Collection, MedicLatina and MEDLINE with Full text, Academic Search Complete, Education Research Complete. Terms were used that led and delimited the research, through the association of keywords as descriptors of the research (Figure 1).

It has also been established a set of inclusion and exclusion criteria that allowed filtering the studies found (Chart 1).

With the definition of the research protocol, the literature published between January 2010 and December 2014 has been reviewed by the two authors, who were capable of highlighting the recent strategies adopted in nursing teaching as a way of promoting collaboration and teamwork (Figura 1). There has not been any disagreement in the selection of the articles by the reviewers. The level of evidence analysis has been analyzed with the Oxford Center for Evidence-Based Medicine Scale⁽⁷⁾.

■ RESULTS

The research resulted in obtaining 379 relevant articles in the answer to the guiding question of the investigation (Figure 1).

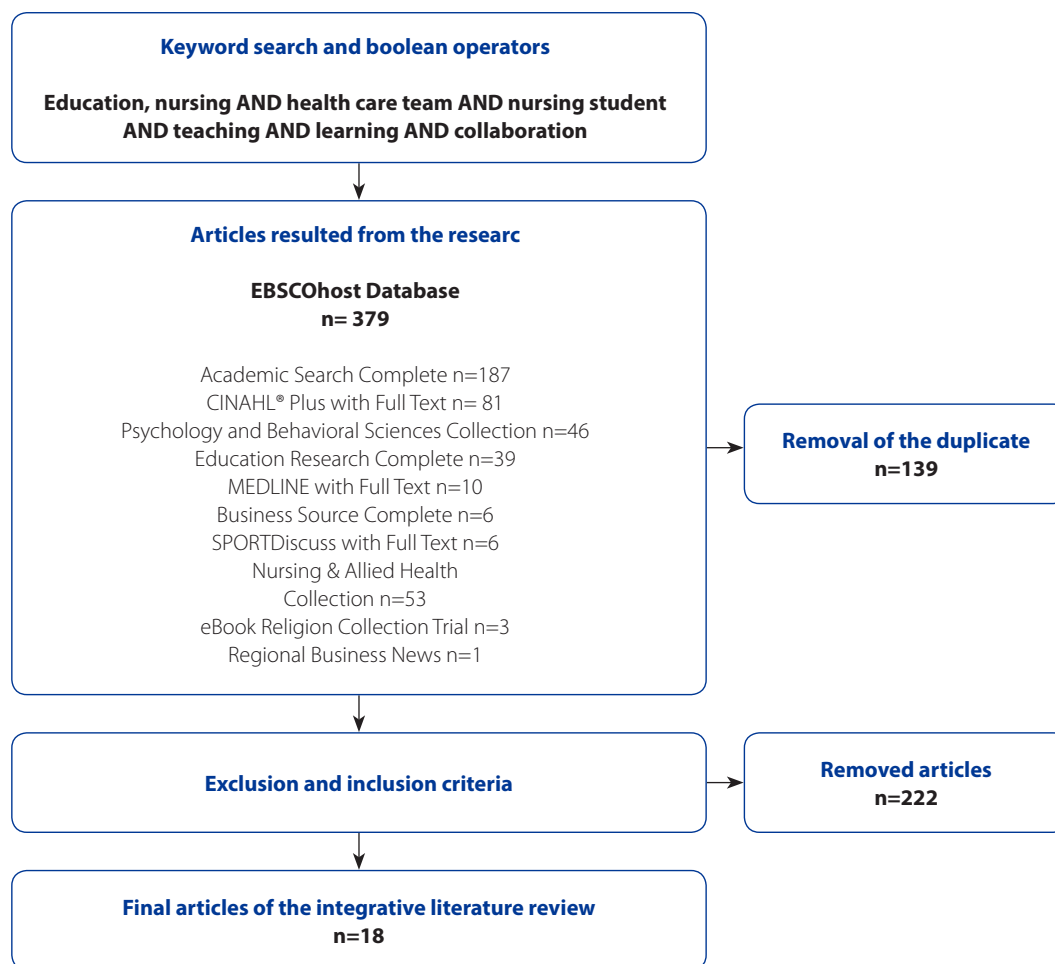


Figure 1 – Diagram of the selection of articles for the integrative literature review

Source: Research data, 2015.

After selection and elimination of the duplicate studies, 240 articles have been obtained, of which 91 have been excluded taking into account the title. The remaining have been later submitted to the abstract reading with 103 studies. In the last phase, each article has been subjected to a complete reading of the text, requiring the elimination of 85 articles that did not fulfill the criteria of selection (exclusion and inclusion). It has been obtained 18 articles resulting from the published evidence. The extracted and synthesized data has been presented according to the name of the author(s), year of publication, population, exposure, synthesis of results and study design (Chart2).

The selected studies have presented different methodological approaches, emphasizing the qualitative approach as the most frequent (n=8), followed by the mixed with qualitative and quantitative (n=6) equantitative (n=4). As to the level of scientific evidence, it has been verified that

from the selected articles, 9 corresponded to the level of evidence 2B (ecological studies) and 9 presented evidence level 2C (cut-off studies).

The year of 2010 was the one with the highest number of published evidence (n=8) followed by the year of 2012 (n=5).

It has been found that in the United States of America (n=12) there was greater production of evidence relevant to the present investigation, being preceded by England (n=3). Equally, we can mention Iran (n=1), Canada (n=1) and New Zealand (n=1).

The number of participants in the study was variable, being between four⁽²³⁾ and 173⁽²²⁾. This factor was referred to the use of small groups of participants, closely related to the short time delimitation of the investigations, which assumed a minimum temporality of one day⁽¹⁹⁾ and a longevity of nine years⁽²²⁾.

Selection criteria	Inclusion criteria	Exclusion criteria
Population	Nursing students attending the first cycle of studies, who learn to collaborate and work in teams; Nursing teachers who apply pedagogical strategies for teaching collaboration and teamwork.	Articles not available in full text in the databases searched in Portuguese, English and Spanish.
Exposure	Articles describing strategies that promote teaching and learning of collaboration and teamwork.	
Results	Be an empirical study; Articles published between January 2010-December 2014; To present information at the level of the parameters considered essential to be analyzed: Population, Exposure, Results and study design, year and author(s).	

Chart 1 – Criteria for inclusion and exclusion of the articles researched for the integrative review of the literature.

Source: Research data, 2015.

The students of the first cycle of Nursing studies, as the main participants, were assumed in all of them, with a greater predominance of those who attended the last year (n=7)^(10-15,18,23). This distinction is justified by the fact that in the last year of the course students already hold knowledge and skills acquired previously, which gives them the necessary maturity for the later acquisition of the capacity to collaborate and work in teams⁽¹¹⁾.

The participation of other actors has also been identified, and when they occurred they were nurses^(8,16,21,23,25), teachers⁽²¹⁾ and community reference people⁽²²⁾.

DISCUSSION

The critical analysis of the selected studies shows differences with different methodological approaches. Despite this difference of designs, three common categories have been highlighted: Pedagogical strategies that promote collaboration and teamwork; Contributions to nursing student learning; The potential of the academy in teaching collaboration and teamwork.

Pedagogical strategies that promote collaboration and teamwork

The studies generally reflect the need impressed by the society, in the curricular restructuring⁽²²⁾ and in the access to new ways of teaching.

The results point to preferential implementation scenarios namely, college^(10-11,13-16,18-20,22,25) and the clinical context^(8,9,12,17,21,23-25), according to the purpose of the studies

undertaken and the need to control or not the analyzed variables. The type of pedagogical strategy adopted is conditioned by the place where it is undertaken to the limitations and constraints imposed by these means.

To the college, are generally associated: the use of audiovisual media^(10,11,16,18), softwares⁽²⁰⁾, the use of external experts⁽¹¹⁾ and simulations^(10-11,14-16,18-20,22).

Peer work is a widespread technique and widely applied in college in all exercises. Its success is present in either written exams⁽¹³⁾, simulations, or reflective debates^(10-11,14-16,18-20,22). This is a characteristic aspect of learning in academia, where the search for interaction between students aims at stimulating collective work in place of the individual work printed by traditional teaching methodologies^(10-11,14-16,18-20,22). The simulations are preferably used for the possibility of approaching the student to the clinical reality, where the control of the variables allow to act safely and without any harm to the individual targeted for their care^(10-11,14-16,18-20,22). The collective work marks these exercises with an essential predominance for the training of leadership, coordination, delegation of tasks and determination of responsibilities, in situations of particular complexity and emergency^(10-11,15-16,18), to one or several clients simultaneously^(11,15). The attempt to establish loyalty has led the authors to resort to a combination of human actors and manikins, whether in the form of discharge^(10-11,18) or low fidelity^(14,16,19-20,22), depending on whether they were more or less realistic in the simulation of response of the human organism to pathophysiological changes. Computer softwares have been used when the previous feature did not fulfill the intended realism function⁽²⁰⁾.

Author(s) Year	Population	Exposure	Results	Study design
CHOJECKI et al.; ⁽⁸⁾ 2010	Students attending the second year of the Nursing Course (n=10) and nursing tutors (n=2).	Learning in pairs, in the context of clinical teaching.	Facilitated communication and learning, physical and emotional support. Technical and psychomotor skills: leadership, critical thinking, specific knowledge regarding context, understanding and promoting cooperation in learning.	Qualitative
CHRISTIANSEN e BELL; ⁽⁹⁾ 2010	Students of the first and third year of the Nursing Course (n=54).	Tutoring program among students.	Reduction of the feelings of social isolation and anxiety, promotion of emotional support, mechanisms of coping, acquisition of reference models of action, and effective communication.	Qualitative
GARRET et al.; ⁽¹⁰⁾ 2010	Nursing senior setudents (n=30).	High fidelity simulation. Viewing the recording, debate and oriented reflection.	Teamwork exercise, recognition of the impact of their interventions, a sense of confidence and security to intervene.	Qualitative
MORRISON e CANTAZARO; ⁽¹¹⁾ 2010	Students of the last year of the Nursing Course.	Simulation of a public health emergency. Theoretical lecture with powerpoint, videos and participation of experts. Written reflection and discussion session.	Reinforcement of previously acquired competences and development of new competences: coordination, leadership and teamwork.	Qualitative and quantitative
RUTH-SAHD et al.; ⁽¹²⁾ 2010	Students of the last year of the Nursing Course (n=78).	Summer clinical course (<i>Externship Nursing Program</i>).	Communication, the emphasis on individualized care, the importance of time to care, the meaning of being "a good nurse."	Qualitative
SANDAHL et al.; ⁽¹³⁾ 2010	Nursing senior setudents (n=110).	Peer learning in the context of theoretical examination.	Collaboration, knowledge development, critical thinking, decision making and intergroup relations. It promotes interaction, discussion, discussion of ideas, active listening, and respect for others in decision-making.	Quantitative
WATT et al.; ⁽¹⁴⁾ 2010	Students of the last year of the Nursing Course (n=118).	Group learning, peer counseling, reflective debates, and low fidelity simulations.	Reduction of anxiety and increased self-efficacy.	Quantitative
KAPLAN e URA; ⁽¹⁵⁾ 2010	Students (n=97) attending the last semester of the last year of the Nursing Course.	Simulation with multiple mannequins (three clients simultaneously). Meetings for debate and critical reflection.	Critical, indispensable thinking, decision making and teamwork. Ability to communicate, prioritize, lead, delegate and implement nursing actions to clients simultaneously.	Quantitative and qualitative

Chart 2 – Synthesis of articles selected for the integrative literature review (continue)

Author(s) Year	Population	Exposure	Results	Study design
HUSEBØ et al., ⁽¹⁶⁾ 2011	Students to attend the last semester of the third year (n = 81). Nurses (n = 5).	Simulation of cardiorespiratory emergency of a client. Before training, they had been trained on European resuscitation guidelines.	Verbal and non-verbal communication in team intervention.	Qualitative and quantitative
VOGT et al., ⁽¹⁷⁾ 2011	Students of the Nursing Course (n=26).	On-line training with discussion of case studies related to the context. Participation in a holiday camp for diabetic children, with subsequent written reflection (in the form of reflective journals).	Interpersonal communication and multiprofessional collaboration, leadership exercise, critical thinking, management of care and participation in daily decision making.	Qualitative and quantitative
BAXTER et al., ⁽¹⁸⁾ 2012	Volunteer students of the fourth year of the Nursing Course (n=27).	Pedagogical strategies (video, classroom and practical), in response to simulated emergency situations.	Learning and cooperation in emergency intervention.	Quantitative
FAY-HILLIER et al., ⁽¹⁹⁾ 2012	Students (n=9) who attended the Mental Health curricular unit of the Nursing Course.	Simulations with the use of Standardized Patients (SPs). Delivery of teaching material. Critical discussion.	Knowing how to do it, learning from mistakes, analyzing beliefs and prejudices, improving communication, encouraging collaborative practices; Reflexive criticism.	Qualitative
SHARPNACK e MADIGAN, ⁽²⁰⁾ 2012	Students attending the second year of the Nursing Course (n=32).	Low-fidelity and role-play simulations. Electronic systems: Electronic Health Records (EHR), Computer Assisted instruction (CAI) and Captivate® software.	Implementation of theory in practice. The debate after the simulation allows the consolidation of the knowledge and the critical reflection of the interventions.	Quantitative and qualitative
SPENCE et al., ⁽²¹⁾ 2012	Students of the second (n=8) and third year (n=1 or n=2). Nurses and teaching nurses (n=21).	Clinical teaching, with insertion in the hospital context.	Inclusion in the nursing team, with the possibility of developing their capacity to collaborate with it.	Qualitative and quantitative

Chart 2 – Synthesis of articles selected for the integrative literature review (continue)

Author(s) Year	Population	Exposure	Results	Study design
SVEJDA et al.; ⁽²²⁾ 2012	Students in the first year of the Nursing Course, target of the new clinical teaching model (n=61). Students in the traditional teaching context (n=61), in the first year of the same school.	Clinical training, high-fidelity simulations and portfolios.	Trust and development of the competence to intervene in care, integration in the health team, development of relationships and a sense of belonging to the profession.	Qualitative
YONGE et al.; ⁽²³⁾ 2013	Students in the last year of the Nursing Course (n=4). Nursing counselors (n=4).	Clinical training in rural areas. Narrated photos.	Feeling of belonging, and confidence in the autonomy to act. The interdependence, the recognition of their role and the rest of the professionals.	Qualitative
ZANDEE et al.; ⁽²⁴⁾ 2013	Students of the Nursing Course. Residents from three disadvantaged neighborhoods.	Community clinical training.	Competencies to intervene in a team to respond to public/community health needs.	Quantitative
ZARSHENAS et al.; ⁽²⁵⁾ 2014	Nursing students (n=35) attending semesters (from the second to the eighth). Nurses (n=8).	Clinical training	Integration in health team, division of labor, assumes responsibility, feeling of identification with the profession.	Qualitative

Chart 2 – Synthesis of articles selected for the integrative literature review (continuation)

Source: Research data, 2015.

The active role of students was usually in addition to performance as a health professional (nurse), representation of the client's family, or other elements of the multidisciplinary team^(11,19).

The possibility of repeating of the simulations^(15,19) is a characteristic that is emphasized by the studies as facilitator of the acquisition of competences by the successive training, usually associated with video recording and later reflective debate of the experiences.

Reflective debates led by teachers are also moments of group interaction, emerging as an opportunity for sharing and clarifying ideas, identifying mistakes, feelings, behaviors, attitudes and values, in a reflexive and conscious improvement of practices^(10-11,14-16,18-20,22).

The clinical context is seen as a valued strategy^(8-9,12,17,21-25), by the allocation in real contexts where care is direct and centered on the client's overallity. In the dichotomy between the urban environment and the rural environment⁽²³⁾,

and between community services^(17,24) and medical hospitals⁽²¹⁾, acute care⁽⁸⁻⁹⁾, pediatric care^(8,17) and traumatology⁽¹²⁾, aspects of union and similarity have been found, due to the recurrence of common forms of learning, by the participation of external actors in the academy, as guiding nurses and the multidisciplinary health team.

The teaching, guidance and follow-up of the students is shared by nurses who carry out their professional activity in the contexts, with the teachers^(12,23).

From what has been said, it is possible to state that only the diversification of the applied methods and the interactive strategies allow the response to the multiple conditioning factors resulting from teamwork.

Contributions to nursing student learning

Each of the implemented strategies sought the evolution of the student as a future health professional, incorpo-

rating aspects that not only enhance their technical skills, but also their relational skills, and ethical responsibility, in a valid contribution to the identification with a client-centered profession that finds in collaboration a way of being with others.

The participants' earnings are revealed in their appreciation of the experiences, orally in reflexive debate actions or through a variety of validated or non-validated instruments. The questionnaires^(11,13,15,24), the interviews^(8-9,12,21,25), the efficacy assessment scales^(14,18,20), the cognitive evaluation scales^(14,20) and the tests^(17,24), were the privileged instruments in the evaluation of the effectiveness of the pedagogical strategies implemented.

In the same sequence other forms of individual expression and evaluation emerged, such as reflexive journals⁽¹⁷⁾, the written narratives⁽¹¹⁾, the photographic reporting⁽²³⁾ and the portfolios⁽²²⁾.

The studies have evidenced experiences where the disadvantages of the various types of approach are largely overcome by the advantages it provides to its participants⁽¹⁸⁾.

The positive manifestation of the actors involved was a demonstration of gains not only at the technical level, but also at the cognitive level by the: reduction of the social isolation⁽⁹⁾; promotion of effective forms of expression and communication^(12,16,18-19); emotional support⁽⁸⁾, namely the reduction of anxiety^(11,14) through encouragement, security⁽¹⁰⁾, the feeling of belonging^(23,25), the self-esteem and self-confidence^(14,22-23,25); development of knowledge and critical thinking^(8-10,13,17); And acquisition of coping mechanisms⁽⁹⁾ in the adaptation to different environments. The critical transition points, such as those referring to the student's academic initiation in the first year, the progression of the course marked by the frequency of clinical internships, and the completion of the teaching process with the transition to the labor market, are moments that by their complexity have been considered optimal moments for the implementation of pedagogical and educational support strategies. The facilitation of the growth process has been considered crucial by the authors, who sought to provide students with communication, organizational, leadership, decision-making, task and autonomy skills that are indispensable for interprofessional collaborative work^(8,10-11,15,18). The discomfort experienced by the difficulty of sharing and criticism of the experiences has been facilitated by minimizing the hierarchical and traditional barriers of teaching, by acquiring trust and confidence, by expressing oneself and others⁽⁸⁾.

The insertion of the student in the clinical field under the guidance of a nurse and in a team context, participating in the division of labor, taking care of clients, are as-

pects that contribute to the student's recognition of the profession and develop a sense of belonging to the form of exercising the practices⁽¹²⁾. Experiences of integration and collaboration with the healthcare team in the provision of care, are promoters of the sense of usefulness and consequently the confidence, self-esteem and motivation to act according to what is expected as future professionals⁽²⁵⁾.

In short, it is possible to state that the experiences provided by the student's academic formation, both in a theoretical context of classes and in a clinical environment, are empowering for their personal involvement, internalization of values, norms and behavior⁽¹⁹⁾, and in the assumption of responsibilities and technical skills, resulting from the socialization. This process begins as a student during the academic life, where the basis of behavior and commitment as the future nurse is constituted.

The potential of the academy in teaching collaboration and teamwork

The evidences show that the transformation of the teaching process, and the demands that have been imposed, have generally emerged in order to respond to the health needs of the population. Other reasons mentioned refer to the aspects imposed by the educational environment, which highlight the high number of nursing students, the reduction of places of clinical teaching and the reduction of the number of hospitalizations due to the increase of the percentage of clients who enjoy home health care⁽⁸⁾.

Teachers are involved in a process of pedagogical restructuring, based on skills, where traditional methods are being replaced or supplemented by necessarily innovative methods and promoters of collective collaboration. The static presentation of content starts to be complemented by interactive and participative methods, through simulations in its high or low fidelity form and reflective debates⁽¹⁸⁾. Its action is more interventional not only in the physical environment of the university, but also in the beginning of the academic formation of the student⁽⁸⁻⁹⁾. Gradually, this more active role gives place to student autonomy. Inversely proportional to the increase of this autonomy, it is evidenced a decrease in the participation of the academy, which is minimal at the end of the course^(12,23). The clinical context becomes an environment where teachers take a back seat and where other participants, such as the services nurses and other students, take on the more direct role of tutors and supervisors of the on-the-spot learning process. Their responsibility is to coordinate and cooperate in the evaluation of the skills acquired by the trainees, in close collaboration with the other intervening actors. In this way, a vision in the

sense of horizontality is substituted, replacing the hierarchy that once characterized the pedagogical relations⁽¹⁹⁾.

An academic environment with open doors to the outside world that promotes the mobilization of interdisciplinary knowledge and where teachers are leaders in communicating with other realities is considered essential in the application of theory in the practice of teaching collaboration and teamwork.

■ FINAL CONSIDERATIONS

The present study offers an invaluable contribution in the deepening of the knowledge about the strategies applied by the teachers in the promotion of the capacity of collaboration and of team work of the Nursing student.

The presented literature identifies the existence of a solid base, on which the means to stimulate, from the first academic year, the collective and the collaborative work. It should be noted that the study was not without limitations, such as the fact that the term “teamwork” was not considered a valid descriptor, a situation that may have limited the screening of studies in the first phase of the research.

Emphasis should be placed on the need for the development and systematic application of valid instruments that can be widely applied, to be used in the evaluation of the competence to collaborate and to work as a team of the nursing students population that attends the first cycle of studies of the Nursing school.

Larger and more heterogeneous population samples are suggested, in which the learning strategies are not only evaluated by the students’ perception, but also by the teachers, in order to perceive the difficulties and limitations and which improvements can benefit the implemented programs at the academy.

On the other hand, the lack of studies that demonstrate the long-term effects of the collaboration strategies makes it imperative to invest in longitudinal analyzes that measure the effectiveness of the learning processes and the effects achieved in graduated nurses.

It should also be highlighted the relevance of students’ perceptions, not merely related to the effectiveness of pedagogical strategies, but with an analysis of the inherent aspects of the learning processes and the multiplicity of factors that can intervene in the acquisition of the collaborative work.

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