

SELF-TRAINING IN THE DEVELOPMENT OF PROFESSIONAL SKILLS IN NURSING STUDENTS INTRODUCTION

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Self-training is a key skill for learning in the context of nursing (Visiers-Jiménez et al., 2022). It is presented as a tool available to nursing students, with the aim of developing professional skills. In turn, these skills are extremely necessary for nurses, in order to keep up with the growing evolution of scientific evidence, as they are faced with contexts that are constantly changing and of enormous complexity (World Health Organization, 2020).

Self-training encompasses the motivational, behavioral and metacognitive dimensions (Cho et al., 2017), and is a widely investigated learning method in the field of health (Cadorin et al., 2017; Murad et al., 2010). Thus, it is defined as a process in which the individual recognizes their learning needs, establishes objectives and, through material and human resources and selected learning strategies, evaluates the results achieved (Alharbi, 2018; Aktas & Sancar, 2021; Soliman & Al-Shaikh, 2015; Slater & Cusick, 2017; Senyuva & Kaya, 2014; Wong et al., 2021; Visiers-Jiménez et al., 2022). It also encompasses the ability to search for new information, critically evaluating it and implementing it in decision-making processes, particularly in clinical practice (Avdal, 2013).

With regard to professional competence, this is characterized by the adequate actions and judgment of the nurse in the face of complex, uncertain, unique situations with conflicting values, requiring the use of reflective knowledge to respond to the different needs of the person (Leddy et al., 1993, cited by Ordem dos Enfermeiros [OE], 2015). In this sense, it is important to emphasize that the competence in the provision of care is directly related to the circumstances and contexts where the nursing intervention is developed (OE, 2015).

Professional development and the acquisition of professional skills by nursing

students are closely related to self-training (Murad et al., 2010; Järvinen et al., 2021). Adequate professional development requires nursing students to possess the skills necessary for continuous learning, even after completing their academic training (Moteri, 2019; Visiers-Jiménez et al., 2022). In its guidelines, the European Higher Education Area (EHEA, 2020) states that students must be responsible for their development and specific acquired skills, thus highlighting self-training.

The main objective of this integrative review is to analyze current scientific evidence about the influence of self-training on the development of professional competences in nursing students.

METHODOLOGY

This integrative literature review aims to answer the following research question: “How does self-training influence the development of professional skills by nursing students?”

The inclusion criteria used are articles published in academic and scientific journals, peer-reviewed, free access, published between 2017 and 2022 and with full text available in Portuguese and English. The exclusion criteria used are duplicate articles and those that did not match the inclusion criteria.

The process of research and selection of articles is based on the flowchart *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA) (Page et al., 2021). The research was carried out in October 2022 in the B-On search engine, using the descriptors “self-training”, “nursing students”, “professional competences” and “learning method”. The Boolean operators “AND” and “OR” were used as follows: (“self-directed learning” OR “self-training” OR “self-coaching” [Title]) AND (“nursing students” OR “nurse student ” OR “student nurses” [Title]) AND (“competence” OR “competencies” OR “skills” OR “skill” OR

“professional skills” OR “nursing skills” OR “professional competencies” [Full Text]) AND (“method” OR “methods” OR “methodology” [Abstract]). Without inclusion and exclusion criteria, 6334 articles were obtained, and after their application, 32 results were obtained, of which 8 were excluded by duplication, 7 after reading the title, 9 after careful reading of the abstracts, leaving 8 articles that met strictly

to the established criteria. The selection and reading of the articles was carried out in pairs, with a consensus among the five authors regarding the inclusion of the 8 articles analyzed in this review.

Ethical issues were respected, in the sense that all consulted authors are identified throughout the text.

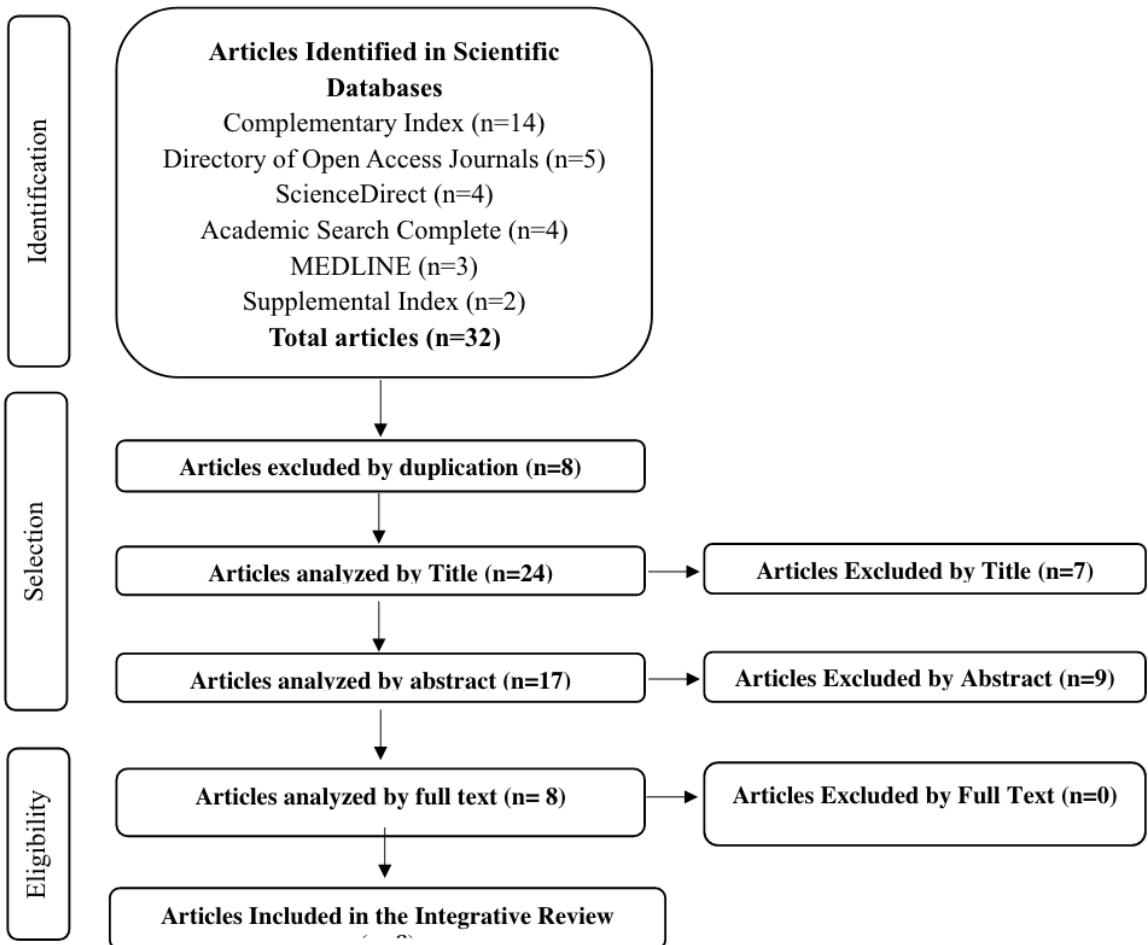


Figure 1. Flowchart of the Article Selection Methodology

Source: Adapted from Page et al. (2021).

RESULTS

TITLE	AUTHOR AND YEAR	TYPE OF STUDY	OBJECTIVE	RESULTS
Readiness for self-directed learning: How bridging and traditional nursing students differs?	Alharbi, H. A. (2018).	Comparative study	To compare the level of self-education in nursing students with different levels of education at the Saudi Arabian University of Nursing.	There are significant differences between the academic level of nursing students, with students with a lower academic level having higher self-training scores, compared to students with a higher academic level. There are no differences between the gender of students and the level of self-training.
Refining The Skills Of Self-Directed Learning Among Student Nurses In Pakistan: An Intervention Study	Khan, A., & Begum, H. (2019).	Quasi-experimental study	To evaluate the improvement in the ability to resort to self-training in nursing students from Swat, Pakistan.	A significantly higher mean self-training score was observed after application of the Self-Directed Learning Readiness Scale (SDLRS) scale, as well as a statistically significant improvement in overall self-management and self-control. No significant differences were found regarding motivation to learn.
Effectiveness of a self-directed learning program using blended coaching among nursing students in clinical practice: a quasi-experimental research design.	Noh, G., & Kim, D. H. (2019).	Quasi-experimental study	Evaluate the effectiveness of a self-training program, through <i>blended coaching</i> , among nursing students during clinical practice.	Students in the experimental group showed a significant improvement in skills to use self-training, as well as greater satisfaction in clinical practice, compared to the control group.
The Relationship Between Professional Motivation Levels and Self-directed Learning Skills in Nursing Students.	Aktas, D., & Sancar, B. (2021).	Cross-sectional study	To study the relationship between the level of professional motivation and self-training skills in nursing students, through the " <i>Motivation Sources and Problems Scale</i> " (MSPS) e da " <i>Self-learning Skills Scale</i> " (SDLSS)	Fourth-year nursing students have higher MSPS and SDLSS scores than the rest. There are statistically significant differences in students who say they like the profession, compared to those who entered the course based on entrance exams, as well as those who have health professionals in the family. There are no significant differences regarding age, gender, parents' education level, income, future goals or library usage habits.

Factors associated with self-directed learning among undergraduate nursing students: A systematic review	Wong, F. M. F., Tang, A. C. Y., & Cheng, W. L. S. (2021).	Systematic review	To identify factors associated with the capacity for self-education among nursing students	Self-training is influenced by the curriculum, teaching strategies, age, gender, problem-solving ability, self-efficacy and motivation to learn. Small group learning and teacher support positively affects self-training.
Evaluation of Self-Directed Learning in Nursing Students: A Systematic Review and Meta-Analysis	Nazarianpirdosti, M., Janatolmakan, M., Andayeshgar, B., & Khatony, A. (2021).	Systematic review	To analyze existing studies on the level of self-training in nursing students in different countries: Australia, China, Iran, Saudi Arabia and Turkey.	The average self-training score is higher in females than in males. As the semester progressed, the levels of self-training decreased significantly. These levels of self-training are different between students of different years of study and countries studied.
Mediating effects of self-directed learning on the relationship between critical thinking and problem-solving in student nurses attending online classes: A cross-sectional descriptive study.	Song, Y., Lee, Y., & Lee, J. (2022).	Cross-sectional descriptive study	To analyze the relationship between self-training, critical thinking and problem solving in nursing students who attend online classes.	There is a significant positive correlation between self-training, critical thinking and problem solving. Self-training can mediate the effects of critical thinking on problem solving.
Nursing students' self-directed learning abilities and related factors at graduation: A multi-country cross-sectional study	Visiers, L., Palese, A., Brugnonli, A., Cadorin, L., Salminen, L., Leino-Kilpi, H., Loyttyniemi, E., Nemcová, J., Oliveira, C. S., Rua, M., Zeleníková, R., & Kajander-Unkuri, S. (2022).	Cross-sectional comparative study	To describe the level of self-education skills of nursing students and identify possible factors that influence it in European countries (Czech Republic, Finland, Italy, Portugal, Slovakia and Spain).	There are statistically significant differences between the level of self-training skills of nursing students and their countries, with the highest level in Spain and the lowest in the Czech Republic.

Table 1 - Title, Author and Year, Study Type, Purpose and Results of Selected Articles.

Of the 8 articles used for review, 87.5% (7 articles) reported that self-training is important in the training of nursing students. In the same sense, 62.5% (5 articles) report that self-training can be used as a tool to develop professional skills in nursing, with 50.0% (4 articles) stating that nurses must use self-training throughout their lives. career. In 66.7% of the articles studied (6 articles) advantages are identified for students who use self-training in their academic path and 12.5% (1 article) mention that there are no

statistically significant differences between students who use self-training and those who don't. In 37.5% of the articles (3 articles) the importance of the existence of a teacher in the teaching-learning process through self-training is evidenced.

DISCUSSION

Self-training allows nursing students to review and improve the learning process (Lee et al., 2020; Nazarianpirdosti et al., 2021). Evidence also argues that it is significantly

associated with academic success (Avdal, 2013), and with the development of professional skills (Yang & Park, 2004; Song et al., 2015), such as critical thinking, problem solving, communication, autonomy, time management, responsibility and assertiveness (Levett-Jones, 2005; Cadorin et al., 2017; Ertuğ & Faydali, 2018; Song et al., 2021; Hwang & Oh, 2021).

Although the results of this review demonstrate that it is possible to develop professional skills in nursing students through self-training, previous studies argue that certain professional skills, particularly problem solving, are not easily developed using self-training alone (Kim & Kang, 2011; Hwang & Oh, 2021). Thus, although it seems to be an intrinsic process for each student, there are skills necessary for self-training, such as motivation, commitment (Cadorin et al., 2013; Knowles et al., 2015), and self-efficacy (Dogu & Cevic, 2020; Hwang & Oh, 2021), data corroborated by Usher & Pajares, (2008), Artino, (2012), and Doménech-Betoret et al. (2017). Checking whether nursing students have the necessary skills for self-training during their academic training is key to promoting learning strategies that allow the development of professional skills (Bilgin et al., 2016).

Since 2005, Levett-Jones has shown that in order to develop professional skills in nursing students, self-training must be taken into account not only by students, but also by nursing professors, data corroborated by the study by Nazarianpirdosti et al. (2021), analyzed in this review. Thus, it is considered that teachers must act as facilitators of learning and join efforts to promote the effective use of self-training in students (Nazarianpirdosti et al., 2021).

Despite the contributions of self-training, it also presents barriers. Moteri (2019), defends their existence in the development

of the skills necessary for the self-training of nursing students, identifying three categories: process, individual and situation. With regard to barriers related to the process, the teaching-learning experience stands out. With regard to the individual, there is little self-confidence and dependence on others and, with regard to the situation, the passive teaching methodologies that can lead the student to a passive learner stand out. In addition to these, age (Zhu et al., 2016) and contextual factors such as social, cultural and educational context, the impact of previous experiences and self-concept (Behar-Horenstein et al., 2018) are also highlighted.

The study by Wong et al. (2021), approaches self-training as a process influenced by several factors, which can be classified as modifiable and non-modifiable. As modifiable, study plans for the degree in nursing, year of schooling, teaching-learning strategies, problem-solving and self-efficacy skills and interest and/or motivation were identified. With regard to non-modifiable factors, the age and gender of the students were identified.

According to the articles analyzed in this integrative review, the levels of self-training are different depending on the gender and age of the students (Nazarianpirdosti et al., 2021; Wong et al., 2021). In the study by Nazarianpirdosti et al. (2021), it was concluded that the levels of self-training are higher in females compared to males. Conversely, a previous study showed higher levels of self-training in male nursing students (Lee et al., 2020). However, in a more recent study, Kunjunkunju et al. (2022) showed that there are no statistically significant differences between student demographics (age and gender) and self-training levels.

Regarding age, it is expected that the levels of self-training will increase with the advancement of academic training, since students will have greater clinical and decision-

making experience, as well as being able to discuss more complex clinical situations (Ors, 2018). On the other hand, it was evidenced in one of the analyzed studies that, over the course of the semester, the level of self-training of nursing students reduced, which may be due to the fact that at the beginning of training, students were more motivated to learn. (Nazarianpirdosti et al., 2021).

Cadorin et al. (2017), and Shirazi et al. (2017), suggest the existence of differences regarding the self-education of nursing students in different countries, data that are in line with the articles analyzed in this integrative review, by Visiers-Jiménez et al. (2022) and Nazarianpirdosti et al. (2021). The first authors suggest that these differences may be due to the teaching strategies adopted in each country, while Nazarianpirdosti et al. (2021) suggests the cultural difference between the countries studied.

With regard to self-training data on nursing students in Portugal, Visiers-Jiménez et al. (2022), demonstrate that the self-training skills of Portuguese students are superior when compared to students from the Czech Republic. In the study by Kajander-Unkuri et al. (2020), Portuguese students rated their self-training skills as high, unlike students from Lithuania and Slovakia. Visiers-Jiménez et al. (2022), refer that such differences can be explained, for example, by the variation in the duration of the course between countries, however, Kajander-Unkuri et al. (2020), claim that the different nursing teaching methods do not explain, by themselves, such differences. In Portugal, the Ordem dos Enfermeiros promotes the continuous training of nurses, including a professional training regulation (Regulation n° 656/2021, 2021).

The development of professional skills in nursing students is crucial for increasing the quality of nursing care provided by them in the future, which leads to improved health

outcomes (Aiken et al., 2017). In this sense, for more than a decade, evidence has shown that self-training enhances the identification and satisfaction of each person's needs, health care and living standards. Thus, nursing students have to acquire different skills and knowledge based on scientific evidence, which are more easily developed through self-training (O'Shea, 2003; Safavi et al., 2010; Smedley, 2007).

Self-training is therefore essential for students, not only to achieve academic goals, but also to constantly update knowledge and provide safe care (Visiers-Jiménez et al., 2022). Nursing students who do not have the capacity to resort to self-training face several problems in their future professional careers, with scientific evidence stating that professionals need to be self-directed to increase independence, self-confidence in practical skills, motivation, discipline and guidance in the face of difficulties that may be experienced (Premkumar et al., 2018).

CONCLUSION

After analyzing the selected articles, it is concluded that self-training is an essential tool in the development of professional skills in nursing students. The skills identified in this review and which can be developed through self-training are critical thinking, problem solving, communication, autonomy, time management, responsibility and assertiveness. Self-training is influenced by several factors, namely age and gender, country, study plans for the degree in nursing, years of schooling, teaching-learning strategies, self-efficacy and interest and/or motivation.

Given the scarcity of data on self-training in nursing students in Portugal, investment in the elaboration of studies in this sense is suggested. In addition, taking into account the identified advantages, it is also suggested the implementation of self-training in the

training of nursing students, as well as its promotion among nurses, not only in order to ensure that they are aware of the constant updating of the evidence. scientific research, but also to respond to the growing demand for nursing care for the person, family and community in different contexts, throughout the life cycle.

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