The need for School Nursing: an integrative literature review
La necesidad de la Enfermería Escolar: una revisión integradora de la literatura

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ABSTRACT:

Introduction: School health must ensure the comprehensive well-being of the school community, strengthening self-care behaviours and healthy habits through promotion and prevention and through health-related research. The holistic approach that defines Nursing makes the inclusion of the school nurse fundamental in the different educational centres.

Objective: To analyse the benefits of the role of school nursing based on their remit to identify the need for nurses in schools.

Methodology: Integrative review of the literature and qualitative review based on the indications of the PRISMA statement. The search for publications was carried out in the Web of Science and MedLine databases, selecting those articles published in the last 5 years in English and Spanish.

Results: A total of 10 articles were included. Their analysis shows the remit of the school nurse, the perspective that teachers and parents have of the school nurse role, as well as the need it represents to the school community.

Conclusions: The presence of the school nurse in educational centres ensures tranquillity and benefits for the community, not only through prevention or assistance activities, but also through health education strategies. Our research has revealed how, despite the fact that there is a firm and concise argument regarding the importance of this role, the fight for its establishment continues.

Key words: School Nursing; School Teachers; Parents; Health Education.
RESUMEN:
Introducción: La salud escolar debe velar por el bienestar integral de la comunidad escolar, fortaleciendo conductas de autocuidado y hábitos saludables a través de la promoción y prevención e investigación en salud. El abordaje holístico que define a la Enfermería hace que la inclusión de la enfermera escolar sea fundamental en los diferentes centros educativos
Objetivo: Analizar los beneficios del rol de la enfermería escolar en base a sus competencias para identificar la necesidad que supone la figura de la enfermería en los colegios.
Metodología: Revisión integrativa de la literatura, cualitativa siguiendo las indicaciones de la declaración PRISMA. La búsqueda de las publicaciones se llevó a cabo en las bases de datos Web of Science y MedLine, seleccionándose aquellos artículos publicados en los últimos 5 años en inglés y español.
Resultados: se incluyeron un total de 10 artículos. Su análisis muestra las competencias de la enfermera escolar, la perspectiva que tienen los docentes y los padres de la figura de la enfermera escolar, así como la necesidad que aporta a comunidad escolar.
Conclusiones: La presencia de la enfermera escolar en los centros educativos garantiza tranquilidad y beneficios para la comunidad, no solo mediante actividades de prevención o asistenciales, sino también mediante estrategias de educación para la salud. Nuestra investigación ha recogido cómo pese a que existe un argumento firme y conciso sobre la importancia de esta figura continúa la lucha por su implantación.
Palabras clave: Enfermería escolar; Docentes; Padres; Educación para la Salud.

INTRODUCTION
In recent decades, Spain has seen an important change in the social and family structure and, consequently, in education as well. The current educational models bring new concepts. Children enter school from a very early age and do not reveal special educational needs. Today's society presents an increasing percentage of children who attend schools with developmental disorders, pathologies or specific, acute, or chronic health situations. And in view of this, it is essential to achieve normal schooling (1).

Maintaining a healthy lifestyle in young people depends to a large extent on the health education they have received. In 2019, 23.3% of children between 6 and 9 years old were overweight, while 4.2% suffered from severe obesity (2). 60% of students in Spain between the ages of 3 and 12 suffer from some type of severe allergy, among which 25% of anaphylactic events occur for the first time in schools (3).

That is why the need for a health professional integrated into the educational field is of vital importance. The school nurse is defined as the nursing professional who performs their work in the school environment, providing attention and health care to the education community. She detects, plans, and executes health interventions in schools through daily interaction. In a broad sense, the school nurse emerges as a figure capable of identifying needs and providing care, as well as constituting a first-order element in the health education of children, healthy or with pathologies, their parents, and the entire education community (4). The figure of the school nurse provides security in the educational environment, even preventing the teaching staff from having to take responsibility for some care or action in emergency situations (5).

The beginning of the school nurse dates back to 1981 (London). Countries such as the United States, France, Scotland, Sweden or even Saudi Arabia show a fully consolidated role of the school nurse (6). However, in Spain, this figure of the school nurse is not institutionalized. Spain raises an important debate in which the school...
nurse is confronted to the community nurse, who covers the needs in school health programs (7).

The data collected by the School Nursing Observatory of the General Nursing Council (CGE), with the collaboration of different National and International associations (AMECE, ACEESE), show how Spain has one nurse for every 8,497 students, data that clearly exposes the insufficiency of this figure on the national scene. The Spanish ratios are very far from that established by the North American Association of School Nurses (NASN): one nurse for every 750 students and one for every 350 in special education nurses (8).

Currently, Spain does not have national legislation that makes the presence of school nurses mandatory in educational centres. However, specific regulations have been identified in several autonomous communities of the country, which address and regulate the figure of the school nurse. These regulations, reflected in official publications of the Official State Gazette (BOE), show that some autonomous communities have taken the initiative to recognize the importance of having school nurses in the educational environment and have established regulatory measures in this regard. An example is the Autonomous Community of Madrid, which has legislated and applied the role of the school nurse. However, there still exist Autonomous Communities in which the profile of the school nurse does not even exist (8,9).

Within the national panorama, one of the most relevant investigations in relation to the school nurse has been carried out in the Autonomous Community of Madrid in 2018. It showed how parents positively value the presence and availability of a school nursing service, but also the importance of having such a figure, not only to address the health problems of their children, but also to contribute to the health education and the training of teachers in health-related issues (10). The fact that most educational centres do not have school nurses forces teachers to assume functions for which they are not prepared and takes time away from their actual duties. The pandemic situation we are experiencing has added more burden and responsibility to those teachers, whose majority does not have the support of a school nurse (11).

The role that the school nurse has played during the Covid-19 pandemic has shown that school nurses have been, and continue to be, key inside and outside educational centres. The school nurse has become the reference in terms of advising and implementing preventive measures (12).

For this reason, based on the situation described, this research set out to analyse the benefits of the role of school nursing based on its remit in order to identify the need for nursing in schools.

**MATERIAL AND METHOD**

An integrative, qualitative, and descriptive review of the literature was carried out following the indications of the PRISMA statement (*Preferred Reporting Items for Systematic Reviews and Meta-Analyses*).
An exhaustive exploratory search of the international scientific literature related to school nursing was carried out in two databases (Web of Science and MedLine) between the months of December 2021 and March 2022. Those studies that addressed both the remit of school nursing as well as the importance of its implementation in educational environments were selected, providing specific data that supports the relevance and need for a nursing role in schools.

The terms used for the search were made up of (DeCS and MeSH) “School Nursing”, “School Teachers”, “Parents”, “Health Education”; which were considered based on different equations with the Boolean operators OR and AND, allowing the selection of published articles according to the established inclusion and exclusion criteria.

The inclusion criteria were: (i) language: articles in Spanish and English, (ii) year of publication: between 2017 and 2021, (iii) accessibility: open access articles for viewing and (iv) qualitative and quantitative articles, systematic review, and meta-analysis. As exclusion criteria: (i) articles published more than 5 years ago (ii) articles that were not available in full text, (iii) articles in a language other than those included in the inclusion criteria, (iv) articles from narrative review, and letter to the editor and (v) articles related to school nursing from a clinical perspective.

Study selection and data extraction

The search results were imported into a bibliographic reference manager (Mendeley), where duplicates were eliminated. Subsequently, the remaining studies were reviewed by title and abstract, discarding those whose content was irrelevant. Articles that met the eligibility criteria were reviewed in full text to verify whether they were to be included in the review. A complete and critical reading of each of the articles was carried out to confirm the quality and specific topic for our systematic review. Finally, the data extraction was carried out by making tables, where the following data was recorded: title, authors, year of publication, country, type of study, objective, sample, most significant results.

RESULTS

A total of 235 articles related to the topic of interest were identified; 121 of which came from the Web of Science database and 114 from MedLine. Subsequently, duplicate records were eliminated (n=22). After reading the titles and abstracts, 187 articles were excluded. Finally, of the 26 articles identified as potentially relevant, 20 full texts were obtained. To determine the evaluation of the methodological quality, the "Practical Guide for Critical Reading of Original Scientific Articles in Health Sciences" was used. Only those that met high and medium methodological quality were included, under compliance with >45 critical reading guideline indicators. The total number of articles included in the systematic review was 10. A data matrix was used to organize the information and synthesize the evidence presented for subsequent analysis (Figure 1).
Figure 1: Flowchart of the study selection process according to PRISMA recommendations.

The characterization and results of the articles included in this integrative review of the literature which met the inclusion criteria are presented below (Table 1).
<table>
<thead>
<tr>
<th>Publication</th>
<th>Type of study/ Sample</th>
<th>Objective</th>
<th>Main results</th>
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<tbody>
<tr>
<td>“A School Nurse Competency Framework for Continuing Education”. Shin EM, Roh YS (2020)</td>
<td>Qualitative study. • 12 school nurses. • Interview with focus groups</td>
<td>To develop a school nurse remit framework for a continuing education curriculum.</td>
<td>Designing and implementing effective continuing education for school nurses could ensure optimal student health and a proper school environment. All this, through 6 basic skills: 1. Ability to provide patient-centred care through the integration of knowledge and skills. 2. Ability to communicate and collaborate with students, school staff, and community resources. 3. Ability to think critically. 4. Ability to implement school health services and programs. 5. Ability to integrate legal and ethical nursing practice. 6. Ability to carry out health education.</td>
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<td>&quot;Nurse duties in educational institutions: a view from educational managers&quot;. Luna Victoria Mori FM, et al. (2018)</td>
<td>Descriptive-exploratory qualitative study. • Seven education managers. • Unstructured interview</td>
<td>To describe and analyse the attributes of the nurse's duties in the health care of schoolchildren.</td>
<td>The study contributes to the conceptual support of the school nurse remit for intersectoral health-education actions and the establishment of health promotion policies for schoolchildren within educational institutions.</td>
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<tr>
<td>“School nursing: contents and perceptions about its relevance in inclusive schools”. Martínez-Santos AE, et al. (2019)</td>
<td>Prospective study with a qualitative approach (Delphi technique). • 17 experts in public and youth healthcare. • Online baseline questionnaire asking for opinions and proposals on School Nursing</td>
<td>To determine the degree of consensus of experts in public and youth healthcare on aspects related to school Nursing to establish the contents that must be developed in the care function and in Health Education.</td>
<td>88% of the participants affirmed that there is low or very low knowledge about school nursing in the health field. 94% of the experts stated that they disagreed or strongly disagreed with the training of teachers to meet the health demands of their students. 75% of the participants disagreed or strongly disagreed with the transversal treatment given to EpS (Health Education) in schools. The presence of nurses would improve educational inclusion and attention to diversity in childhood and adolescence.</td>
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<td>&quot;Perceived need of Pre-school, Primary and Secondary Education teachers regarding health training and the...</td>
<td>Cross-sectional descriptive study. • 75 teachers from the public educational centre. • Self-administered</td>
<td>To analyse the perceived need for health training, as well as the implementation of the school nurse figure, by teachers.</td>
<td>The main health problems that the teachers faced were glycaemic alterations in diabetic students, falls, wounds, epileptic seizures, and fractures. Most of the teachers expressed the need for more training in health care. The figure of the school nurse is valued...</td>
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<td><strong>Implementation of the school nurse figure</strong></td>
<td>Questionnaire</td>
<td>As a health reference in educational centres, and as the person in charge of promoting healthy lifestyle habits.</td>
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<tr>
<th><strong>Health education in school context: revision study integrative</strong></th>
<th>Integrative review of the literature.</th>
<th>To characterize the scientific productions and describe the work of nurses in health education practices at school.</th>
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<tbody>
<tr>
<td>Gueterres EC, Rosa E de O, Da Silveira A, Dos Santos WM. (17) (2017)</td>
<td></td>
<td>A total of 20 articles were included. 45% of the articles dealt with health education and public health problems at school, 40% about nursing and health education at school, and 15% about actions developed in the school environment. The nurse must carry out health education and awareness activities in collaboration with teachers.</td>
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<th><strong>School nursing: a necessary resource for the educational community</strong></th>
<th>Descriptive qualitative study. Sample: management teams, families (parent associations) and school nurses from five preschool and special education schools.</th>
<th>To expose the situation of La Rioja in relation to the presence of school nurses.</th>
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<tr>
<td>Álvarez-Teran R, Eguilaz M, Moreno S. (18) (2018)</td>
<td></td>
<td>The collaboration between teachers, families and nurses allows the acquisition of health skills in students and encourages the confidence and security of families in the school as a health promoting environment, in addition to contributing to the improvement of the work-family balance in chronic processes and/or in emergencies.</td>
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<th><strong>Potentials of school nursing for strengthening the health literacy of children, parents and teachers</strong></th>
<th>Cross-sectional descriptive mixed study. • Two self-administered surveys • Sample: 28 primary and secondary schools.</th>
<th>To examine the changes observed in the levels of health literacy of children, parents, and teachers in schools.</th>
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<tr>
<td>De Buhr E, Ewers M, Tannen A. (19) (2020).</td>
<td></td>
<td>The results of the research provide the first indications of the potential benefits of school health nursing on the health literacy levels of primary and secondary schoolchildren, their parents, and teachers.</td>
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| **The need for school nursing in Spain: A mixed methods study** | Mixed method • Quantitative phase: observational, descriptive, cross-sectional | To identify life-threatening health problems and complications in students, as well as the teachers’ training and 56.6% of teachers show a high concern for having to face this type of situation, only 0.6% feel properly trained. For 81.8% the existence of school nursing would be quite relevant. The analysis of the interviews allowed us |
Rodríguez-Almagro J; et al (2018) study. Questionnaire (n=3246 teachers) • Qualitative phase: Giorgi's descriptive, phenomenological design. Semi-structured interviews (n=16) capacity to identify them. to establish four categories: Need in the face of reality, Fears, Responsibility and Limitations as a teacher. The presence of nursing professionals in schools could result in an improvement in the quality of life of both students and teachers.

“The school nurse. Opinion of the parents of girls and boys who start schooling”. Montoro A, Fernández P. (2017) Transversal study • Target population: parents of 3-year-old students (n=175) • 5 Pre-school Education centres in the Community of Madrid • Ad hoc questionnaire (22 questions) To know the opinion of the parents of the children who start school at the age of 3 about the need for the presence of the school nurse in the centre. 17% of children had chronic health problems. 37% of 3-year-old schoolchildren required health care while they were in the educational centre. 18% of the parents considered that their children’s health problem prevented them from fully integrating into the centre’s activities with 68% stating that the figure of the school nurse could solve this problem. 65% of parents acknowledged that they took into account the presence of the school nurse when choosing the educational centre. The opinion of the parents about the presence of the nurse is highly positive regarding health problems, Health Education, and teacher training.

“The impact of comprehensive school nursing services on students’ academic performance”. Kocoglu D, Emiroglu ON. (2017) Quasi-experimental study • 31 students To assess the impact of comprehensive school nursing services provided to 4th grade students on the academic performance of the students. With the presence of the school nurse, the grades and academic performance of the students increased while there was a decrease in the behaviours of absenteeism and postponement of academic tasks. The comprehensive school nursing services contributed positively to the academic performance of the students.

**DISCUSSION**

The objective of our research was to analyse the benefits of the role of school nursing based on their remit to identify the need for nursing in schools.

After carrying out the analysis of each one of the investigations found in the literature, it is evident that the theme of our investigation is divided into 2 categories: the remit of school nursing and its need for implementation.
School nurse remit

The analysed research shows how school nurses play an important role in the school environment. School nurses have an advantageous position to detect, prevent and assist diseases, improving students’ quality of life.

The study by Shin et al. \((13)\) encompasses the main duties of the school nurse, including activities to improve the health of students, families, and the community, through health education and care planning. Along the same lines, Luna Victoria Mori et al. \((14)\) supports these functions and identifies access to health from education as a fundamental element for full family and community development. The presence of nurses in educational centres is essential to encourage health promotion and prevention, as well as the early identification of diseases and mental health care for schoolchildren \((15)\). These results have been endorsed by several authors up to the present. The recent study published by Pluta and Marzec \((22)\) defends each and every one of these aspects, adding the importance that health care has for the student in the school environment. The student visualizes and internalizes the prevention and maintenance of health, as well as the detection and treatment.

Considering the pandemic situation as a recent reference, the research by Bullard et al. \((23)\) collects how teachers and parents are fundamental figures in the prevention and fight against COVID-19. However, this study also reveals the relevance that school nurses have during the back-to-school process in times of COVID-19, taking charge of adapting the protocols to the school centre and carrying out daily monitoring that serves as a link with the basic areas of health. The role of the school nurse in vaccinating the entire community is also important, as well as the prevention and in-person and online control \((24,25)\).

Need for implementation

In this line of discussion, one of the most relevant and compelling investigations is the one carried out by Gueterres et al. \((17)\). This study emphasizes the benefits of approaching health education from the educational field and confirms how nursing plays a fundamental role. The school nurse enhances the autonomy of the individual with respect to their health. These same results have been endorsed in later years by Onnela et al. \((26)\), who also incorporates the promotion of students' mental health as well as the teachers' needs for professional support.

In today's society, it is important to also take into account the possibilities that progress creates in terms of health. Nursing responds to the development or adaptation processes that students, teachers, and the school community go through \((20)\). More current research also empathizes with these benefits, highlighting the role of school nursing from the biopsychosocial perspective in the face of technological development in the modes of behaviour and the well-being of students \((27)\).

We cannot ignore, as an important benefit, the results provided by Álvarez-Terán et al. \((18)\). This study shows the benefit for the educational community of the collaboration between teachers, families, and nurses. This enables the acquisition of health skills by students, and the confidence and security of teachers and families in the school as a health-promoting environment is also encouraged. This opinion has been shared by
several authors (28), who add and highlight the benefits of School Nursing within the educational community from a holistic point of view.

From another perspective, there are also several investigations (19,20) that collect the opinions of teachers and parents about the school nurse, showing a feeling of support with the implementation of this role. It should be noted that the schools that have a nursing service have a greater number of children with chronic health problems requiring superior health care, unlike those centres that do not have said nursing professional. Consequently, the percentage of teachers who express difficulty in addressing the health problems of schoolchildren is also increased in these educational centres. This relationship may be due to the choice made by parents of schoolchildren with health problems based on the presence of the school nurse in said centres (8).

In this line, the teaching team considers the presence of the nurse in educational centres necessary, as it can contribute to improving the health training of teachers in basic situations such as first aid and acute complications derived from chronic health problems (16). On the other hand, they highlight the role that said nursing professional develops regarding the education and promotion of healthy habits, in addition to guaranteeing an immediate response in the school to any problem caused during school hours. These findings coincide with the study by Melendez et al. (29), which shows the importance of school nursing in providing assistance to all students, especially those with special needs, and the support offered to teachers and parents.

Finally, Kocoglu et al. (21), in their research, collected a relevant parameter and perhaps one of the least addressed regarding the benefit of the establishment of School Nursing. Kocoglu analysed, through a comparative study, how the academic performance qualifications of the students whose centres presented the figure of the school nurse behaved. It was observed how there was a decrease in the behaviours of absenteeism and academic procrastination in those centres where there was a school nurse. The study by Bjornsen et al. (30) also countered these data and revealed the importance of the school nurse in the mental health and well-being of students to achieve their academic goals.

CONCLUSIONS

In Spain, there is no regularization of the figure of the school nurse. It is linked to family and community health, dependent on primary health care; therefore, it arises as a necessity. Through our review, we tried to gather how School Nursing provides great support for the education system, but also for the health system.

The collected duties show that the interventions of the nursing professional are aimed at disease prevention, pathology treatment, health promotion and education, but also at improving aspects such as academic performance, and decreased absenteeism and school procrastination.

The figure of school nursing allows us to face health problems through health promotion and prevention. This vision is shared by teachers and parents, who consider school nursing as an utterly necessary resource within educational centres. A biopsychosocial enrichment for students, but also for parents and teachers.
Lastly, within the framework of the covid-19 pandemic, nursing has developed a relevant role in promotion and prevention. The quick adaptation of School Nursing has generated numerous benefits in the transmission of knowledge and habits to be acquired by the educational community.

The implications of this research, from a theoretical point of view, lay the foundations for future research focused on enhancing the role of school nursing and its actual need for implementation.

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