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Review Article

Nursing-led training of school staff to care for children and adolescents with special health care needs: a scoping review

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Abstract

Introduction

Children and adolescents with special health care needs (SHCN) live with chronic physical and developmental conditions that affect functioning and require ongoing support from health systems. Nurses work throughout the lifespan and across various care settings; they are well positioned to provide health education and deliver specialized care to individuals, groups, and communities, leading to improvements in health outcomes.

Objective

To map the scientific evidence on training school staff to care for children and adolescents with SHCN in school settings.

Methods

We carried out a scoping review in line with Joanna Briggs Institute (JBI) guidance and the PCC framework (Participants, Concept, Context). Studies were identified from six international databases between May and June 2024. Study selection followed the PRISMA-ScR checklist (EQUATOR Network); three independent reviewers performed the data charting and analysis.

Results

This scoping review included three articles published between 2015 and 2020. Data were charted according to the main domains of the A-FROM tool. The nursing interventions reported aimed to train school staff through health education sessions and practice-based activities to build knowledge and competencies.

Conclusion

Nursing-led training for school staff caring for children and adolescents with SHCN showed positive effects on knowledge regarding the targeted needs, confidence in care, and children's quality of life. Continued research and reporting of nursing interventions that train school staff to care for children and adolescents with SHCN in school settings are essential.

Keywords

Students; School Health Promotion; Nursing; Staff Training.

Introduction

The Alma-Ata Conference in the 1970s was the pioneering conference on primary health care; it addressed strategies for health promotion and highlighted the relevance of the social determinants of health. Subsequently, in 1986, the first International Conference on Health Promotion was held in Ottawa. In addition to contributing

to the goal of Health for All by the year 2000, it responded to growing expectations for a renewal of public health. It also established a commitment to health promotion, defined as the process of enabling individuals, groups, and communities to participate and increase control over their health, thereby improving their health and quality of life.[1,2]

Portugal has been part of the Schools for Health in Europe (SHE) network since 1994, a World Health Organization–guided European online platform that brings together schools and organizations to create a supportive environment for promoting health and well-being among children and adolescents, thereby improving both health and educational outcomes.[3]

The National Health Plan 2030 holds that health is a responsibility of society as a whole and that health promotion applies across all the settings where communities live, work, and learn. A core strategic choice is to invest in the social determinants of health and well-being by strengthening protective factors, reducing—or even eliminating—risk factors, and at the same time ensuring the engagement and commitment of all stakeholders to health outcomes. Accordingly, one specific setting for intervention is schools, as the health of children and adolescents is influenced by the environments in which they grow, learn, and develop throughout their school years.[4,5]

In 2022, Portugal had 1,591,865 students enrolled in preschool; the first, second, and third cycles of basic education; secondary education; and career and technical education (CTE) programs.[6] In the 2021/2022 school year, the number of non-tertiary educational institutions in Portugal was 8,199.7

All children and adolescents have the right to health and to education. The school community plays a central role in promoting and maintaining the health and well-being of children and adolescents, given its proximity to these age groups; it is essential to build local, regional, and national networks, alliances, and partnerships committed to the school community to address identified needs.[4]

School health interventions encompass the entire school community—students, school staff, and parents/guardians—and contribute to improving the quality of the school environment and minimizing health risks; promoting healthy lifestyles and raising health literacy; and promoting health, preventing disease, and reducing the impact of health problems on students' academic performance.[4]

One of the strategic pillars of the 2015 National School Health Program is capacity-building within the school community and raising health literacy regarding health conditions, specifically in areas related to special health care needs (SHCN). School health teams, in coordination with schools and families, are responsible for identifying, screening, referring, and supporting children or adolescents with SHCN.[4]

SHCN are defined as "those resulting from health problems that affect functioning and require intervention in the school setting, such as irregular attendance or the need for special conditions to attend school, and a negative impact on learning or individual development."[4(p.43)] They include chronic diseases, disability, developmental disorders, and emotional and behavioral disorders, among others.

According to the report Health of Portuguese Adolescents in the Context of the Pandemic, in 2022, 18.6% of students in Portugal reported a long-term illness, corresponding to 5,809 students. The most frequently reported diagnosis was allergies, accounting for 49.8% of students with a long-term illness, followed by reduced visual acuity (35.2%), asthma (27.4%), and mental health conditions (about 10.7%). Additionally, among students with a long-term illness, 3.8% had heart disease, 2.8% had obesity, 2% had diabetes, and 1.6% had epilepsy.[8]

The presence of a long-term illness affects students' quality of life: 54.5% need to take medication; 29.1% report effects on participation in leisure activities; 27.2% mention problems with school attendance and participation; and 12.5% report needing special equipment such as a blood glucose meter, forearm crutches, a wheelchair, or an adapted computer.[8]

In addition to the impact on learning, these students require an appropriate response to their SHCN. This observation underscores the importance of nursing-led training for school staff to care for these students, providing the school community with initiatives that promote and protect health, build capacity for self-care and care for others, and prevent disease and disability.[4,9]

Nurses play an important role in achieving the goals of the National Health Plan and in implementing the National School Health Program; working in partnership with schools and families, their practice aligns with these initiatives' strategic priorities.[10]

Nurses are well positioned to promote and maintain health and to build the school community's capacity to identify and address its problems from a holistic perspective. They recognize the potential of health education within nursing interventions and apply the nursing process to strengthen community capacity.[10]

Accordingly, nurses implement strategies in, with, and for the community—working with partner organizations—to enable the community to promote health and improve health outcomes. Thus, nursing's agenda embraces the following Sustainable Development Goals (SDGs): SDG 3, good health and well-being; SDG 4, quality education; SDG 10, reduced inequalities; and SDG 17, partnerships for the goals.[11]

Despite growing recognition of the importance of training school staff in school health, the literature lacks comprehensive scoping reviews on this topic. A preliminary search in MEDLINE, CINAHL, and Scopus did not identify recent reviews specifically focused on training across multiple SHCN-related conditions. This finding underscores the relevance of the present review as a contribution to organizing the evidence and informing good practices in school settings.

The main objective of this scoping review is to map the available scientific evidence on training school staff to care for children and adolescents with SHCN in school settings.

Methods

A scoping review is a methodological approach for synthesizing available scientific evidence using a rigorous and efficient process. The main objectives are to map existing evidence in a research area, identify gaps, and provide a preliminary exercise that justifies and informs a subsequent systematic review.[12]

A distinctive feature of scoping review methodology is that it typically does not assess the methodological quality of included studies, since the aim is to map existing evidence rather than locate the best evidence.[12]

This review followed JBI methodology and was guided by the question: "Which nursing interventions provide training for school staff caring for children and adolescents with special health care needs in school settings?" It was framed using the PCC framework, which organizes the question into three elements: P—Participants (school staff); C—Concept (nursing-led training for school staff); and C—Context (school settings). This study adheres to the PRISMA-ScR checklist (EQUATOR Network).[12]

The protocol for this scoping review is registered on the Open Science Framework and is available at: https://osf.io/gbcs3.

Eligibility criteria

After formulating the question and defining the objective, inclusion and exclusion criteria were established and applied to guide the search and subsequent study selection.

Study inclusion criteria:

Participants: school staff, with no restrictions on sex, ethnicity, or personal characteristics

Concept: nursing-led training interventions for caring for children/adolescents with special health care needs (SHCN). The International Council of Nurses (2001) defines a nursing intervention as "an action carried out in response to a nursing diagnosis to achieve a nursing outcome," as cited by the Portuguese Order of Nurses.[13(p15)]

Context: the school community, regardless of the educational institution's geographic location, and whether the institution is public or private, general or specialized, urban or rural.

Source types: primary studies with quantitative, qualitative, or mixed-methods designs; theoretical articles; literature reviews; and gray literature—namely dissertations and theses—in English, Spanish, or Portuguese, regardless of year of publication, with only sources available in full text included.

Exclusion criteria:

Participants: children, adolescents, and families;

Concept: studies addressing special educational needs were excluded. The World Health Organization (2011), as cited by the Directorate-General for Education and Science Statistics,[14(p.?)] defines special educational needs as "a set of significant limitations in one or more domains of life activity and participation resulting from

permanent functional and structural impairments, leading to ongoing difficulties in communication, learning, mobility, autonomy, interpersonal relationships, and social participation.".

Information sources and search strategy

The literature search was carried out between May 18 and June 2, 2024, following JBI's three-step process for developing a comprehensive search strategy.[12]

The first step consisted of identifying the keywords most frequently used in the titles and abstracts of retrieved papers, as well as the indexing terms used in the literature. To this end, a preliminary search was conducted using natural-language terms in MEDLINE (via EBSCO) and CINAHL Complete (via EBSCO). The titles and keywords were analyzed to identify relevant search terms for this scoping review.

Next, a complete and customized search strategy was implemented in MEDLINE (via EBSCO) and CINAHL Complete (via EBSCO). This strategy was adapted to each database, using natural-language search terms, DeCS and MeSH indexing terms, and truncations applied to the title, abstract, and MH Exact MeSH Subject Heading fields. Boolean operators OR and AND were used as detailed in Tables 1 and 2.

Table 1. Search strategy used in the MEDLINE Ultimate database (via EBSCO) on May 21, 2024

ID	Search strategy	Results
S1	TI child* OR AB child*	1,705,663
S2	TI teen* OR AB teen*	36,359
S3	TI school OR AB school	344,820
S4	TI "special needs" OR AB "special needs"	4,809
S5	TI nurs* OR AB nurs*	542,580
S6	S1 OR S2	1,731,003
S7	(S1 OR S2) AND S3 AND S4 AND S5	63
S8	S7 AND TEXTO INTEGRAL [Filter]	11

S – search line; * – truncation

Table 2. Search strategy used in the CINAHL Complete database (via EBSCO) on May 21, 2024

ID	Search strategy	Results
S1	TI child* OR AB child* OR MH child*	899,443
S2	TI teen* OR AB teen* OR MH teen*	21,241
S3	TI school OR AB school OR MH school	166,646
S4	TI "special needs" OR AB "special needs" OR MH "special needs"	4,140
S5	TI nurs* OR AB nurs* OR MH nurs*	795,513
S6	S1 OR S2	913,677
S7	(S1 OR S2) AND S3 AND S4 AND S5	78
S8	S7 AND TEXTO INTEGRAL [Filter]	34

S – search line; * – truncation

In the second search, all identified keywords and index terms were applied across all included databases, specifically SCOPUS, JBI EBP Database on Ovid, Cochrane Central Register of Controlled Trials, and SciELO (Tables 3 to 6).

Table 3. Search strategy used in the SCOPUS database on June 2, 2024

ID	Search strategy	Results
S1	child* (article title, abstract, keywords)	3,956,287
S2	teen* (article title, abstract, keywords)	21,340
S3	school (article title, abstract, keywords)	463,745
S4	"Health care needs" (article title, abstract, keywords)	17,038
S5	nurs* (article title, abstract, keywords)	219,947

S6	S1 OR S2	1,176,662
S7	(S1 OR S2) AND S3 AND S4 AND S5	54
S8	S7 AND TEXTO INTEGRAL [Filter]	53

S – search line; * – truncation

Table 4. Search strategy used in the JBI EBP Database on Ovid on June 2, 2024

ID	Search strategy	Results
S1	child* mp	2,580
S2	teen* mp	163
S3	school mp	1,378
S4	"Health care needs" mp	60
S5	nurs* mp	7,141
S6	S1 OR S2	2,595
S7	(S1 OR S2) AND S3 AND S4 AND S5	21
S8	S7 AND TEXTO INTEGRAL [Filter]	10

S – search line; * – truncation

Table 5 – Search strategy used in the Cochrane Central Register of Controlled Trials database on June 2, 2024

ID	Search strategy	Results
S1	TI child* OR AB child* OR MH child*	196,412
S2	TI teen* OR AB teen* OR MH teen*	3,750
S3	TI school OR AB school OR MH school	12,776
S4	TI "special needs" OR AB "special needs" OR MH "special needs"	314
S5	TI nurs* OR AB nurs* OR MH nurs*	54,232
S6	S1 OR S2	198,926
S7	(S1 OR S2) AND S3 AND S4 AND S5	6
S8	S7 AND TEXTO INTEGRAL [Filter]	2

S – search line; * – truncation

Table 6 – Search strategy used in the SciELO database on June 2, 2024

ID	Search strategy	Results
S1	(ab:(necessidades de saúde especiais)) OR (ti:(necessidades de saúde especiais))	153
S2	(ti:(escola)) OR (ab:(escola))	9,202
S3	(ti:(crianças)) OR (ab:(crianças))	16,737
S4	(ab:(enfermagem)) OR (ab:(enfermagem))	9,390
S5	S1 AND S2 AND S3 AND S4	0
S6	S5 AND TEXTO INTEGRAL [Filter]	0

S – search line; * – truncation

Finally, in the third step, the reference lists of all articles and studies selected for inclusion were reviewed to identify additional studies potentially relevant for answering the review question.

Selection of sources of evidence

Search results from the different databases were exported, compiled, and managed—first in Zotero 6 for Mac, then in Rayyan Intelligent Systematic Review to organize and remove duplicate records. Study selection followed the inclusion and exclusion criteria established for this review. Titles and abstracts were initially screened, followed by a full-text reading of potentially eligible studies to verify their relevance and suitability according to the review question. Studies that did not meet the inclusion criteria were excluded. Two reviewers

independently selected the sources of evidence, and any discrepancies regarding inclusion or exclusion were resolved by consensus.

Data charting and synthesis of results

To extract relevant information from the studies included in the review, a data charting instrument (table) was developed in Microsoft Word, based on JBI guidance, to ensure detailed organization and synthesis of relevant information for each study. These tables contained information on the title, author(s), year of publication, country of origin, methodology, objectives, population/sample, nursing intervention, and context.[12]

Results

This section is organized into three subsections: selection of sources of evidence, characteristics of the included studies, and synthesis of results, each accompanied by summary tables of the analyzed studies.[12]

Selection of sources of evidence

A total of 110 potentially relevant articles were identified through database searches. Thirteen duplicates were removed, leaving 97 records. Titles and abstracts of these 97 records were screened; 85 did not meet the inclusion criteria, and 12 proceeded to full-text review. Of the 12 full-text articles assessed, 10 were excluded: two did not address the context, four did not involve the target population, and four did not include nursing interventions. Additional records were identified through citation searching. Of the 123 articles listed in the reference lists consulted, 20 were selected for full-text review; 17 did not address the review question, and one was not available in full text. At the end of this process, three articles were included in this scoping review, as shown in Figure 1.[12]

Characteristics of the included studies

Three articles published between 2015 and 2020 were included. One study was conducted in New Jersey, United States, using a literature review design, although the methodology was not explicitly described. The second study, carried out in California, followed a systematic literature review approach. The third study was conducted in Egypt and used a quantitative quasi-experimental design.[15,16,17]

Across all included studies, nursing interventions targeting school staff (teaching and non-teaching) consisted of training programs aiming at caring for children with SHCN.[15,16,17]

It was difficult to identify studies in which nursing-led training was directed exclusively to school staff (teachers and non-teaching personnel). This fact may reflect school settings where a school nurse—employed by the institution—assumes primary responsibility for caring for students with SHCN as part of routine duties. Among the reviewed studies, only one specified the children's age group (preschool), and only one reported the intervention period, without specifying duration or frequency.[15,16,17]

The preschool-focused study described nursing-led training for school staff addressing several SHCN-related conditions in children, specifically asthma, type 1 diabetes, food allergies, and seizures. The remaining studies involved adolescents with type 1 diabetes (T1D).[15,16,17]

Synthesis of results

Findings demonstrate nursing-led training designed to develop teachers' and school staff's knowledge and skills for caring for students with SHCN. Tables 7, 8, and 9 present the extracted results and align them with the review question and objectives.

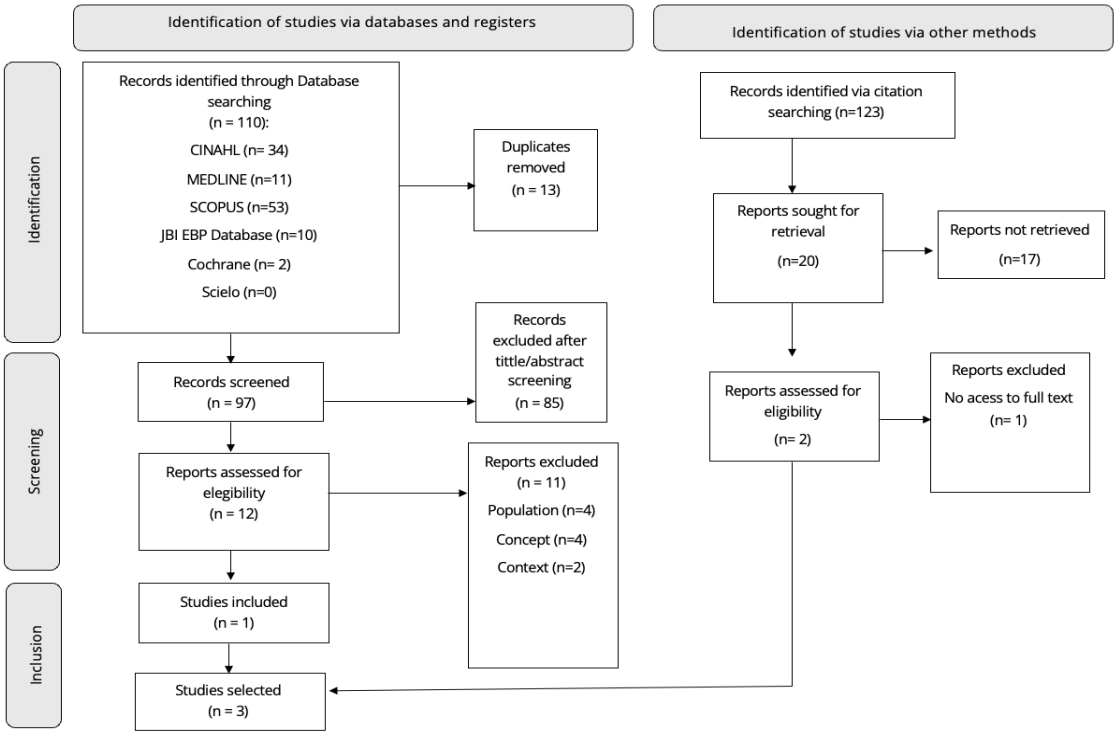

Figure 1 – Study selection flow diagram adapted from PRISMA 2020.

Table 7. Data charting from the article "Caring for the youngest students"[15]

Title	Author(s)	Michelle Lynn
Caring for the youngest students	Year of publication	2020
	Country of origin	New Jersey, United States
	Methodology	The literature review methodology was not explicitly described.
	Objective	To identify school nurses' interventions for preschool-aged children with SHCN.
	Population/sample	Staff of preschool institutions caring for children with SHCN
	Intervention	Nursing interventions are presented for the following chronic conditions: asthma, diabetes mellitus, epilepsy, and food allergies. For each condition, the nursing diagnoses and corresponding nursing interventions are specified. Interventions directed to teaching and non-teaching staff aim to build capacity to care for children with SHCN. Core elements of the training include preventing complications related to these conditions, recognizing signs and symptoms, and preparing staff to provide a rapid, effective response to school-based emergencies. Another intervention described is the development of an Emergency Action Plan (EAP) to be used by school staff in such situations.
	Results	With the implementation of nursing-led training for preschool staff tailored to each condition and the creation of Emergency Action Plans (EAPs), the school health team expects outcomes such as the prompt and effective recognition of signs and symptoms of asthma exacerbations, hypoglycemia, hyperglycemia, anaphylaxis, and seizures. Subsequently, each staff member should be able to identify their role and coordinate during emergencies to prevent more serious problems and achieve improvements in health outcomes for children with SHCN. Finally, health-promotion actions envisage an inclusive school in which children with SHCN can participate in the same activities—or in adaptations appropriate to their health condition—without adverse impact on their condition.

Table 8. Data charting from the article "School-based diabetes interventions and their outcomes"[16]

Title	Author(s)	Peter Schulz e Bénédicte Pansier
School-based diabetes interventions and their outcomes	Year of publication	2015
	Country of origin	Switzerland
	Methodology	Systematic literature review
	Objective	To determine effective school-based interventions to improve health, quality of life, and academic outcomes in children with diabetes mellitus.
	Population/sample	School staff
	Intervention	Fifteen primary studies in English (2000–2013) were included. Group 1 (7 studies) focused on educating school staff; Group 2 targeted children with diabetes to improve health, school performance, and well-being. Staff-focused interventions were delivered via educational programs, continuing education, online modules, CD-ROM materials, and the development of resources for school staff.
	Results	Staff-directed interventions were evaluated using quantitative and qualitative assessments of knowledge gains, satisfaction, and perceived competence and confidence in caring for children with type 1 diabetes; child outcomes included quality of life and HbA1c. Designs included pre-/post-assessments and longitudinal follow-ups. Programs for teachers and non-teaching staff showed significant improvements in diabetes knowledge following the training (e.g., $p < 0.033$; $p < 0.004$; $p < 0.001$).

Table 9. Data charting from the article "Evaluation of the impact of a diabetes education eLearning program for school personnel on diabetes knowledge, knowledge retention and confidence in caring for students with diabetes"[17]

Title	Author(s)	Taha et al.
Evaluation of the impact of a diabetes education eLearning program for school personnel on diabetes knowledge, knowledge retention and confidence in caring for students with diabetes	Year of publication	2018
	Country of origin	Egypt
	Methodology	Quantitative quasi-experimental study
	Objective	To evaluate the impact of a diabetes eLearning education program—focused on knowledge and practices for school staff—and to provide a supportive environment for caring for students with diabetes mellitus.
	Population/sample	School health nurses, teachers, and psychologists
	Intervention	The intervention comprised three components: knowledge modules, a skills workshop, and a toolkit with recommendations and resources. Knowledge content was delivered via an interactive eLearning program. Effectiveness was assessed using pre- and post-intervention diabetes-knowledge questionnaires; knowledge and confidence were also evaluated at 6 or 12 months, with half of the sample assessed at 6 months and the other half at 12 months.
	Results	A total of 124 public school staff members participated. After the eLearning intervention, diabetes knowledge increased significantly versus baseline ($p < 0.0001$) on immediate testing and at 6 months [96 participants (77%) retained knowledge] and 12 months [43 participants (55%) retained knowledge]. At the end of the intervention, the mean confidence score was 61.86% across all seven items assessed in the questionnaire on caring for children with diabetes mellitus. In addition, 51.1% reported confidence in their diabetes knowledge, and 57.4% reported confidence in adequately caring for a child with diabetes mellitus. Regarding the use of a blood glucose meter, 71.3% reported confidence, and 67% reported confidence in treating hypoglycemia.

Discussion

Summary of the evidence

Nurses' interventions were valued across all included studies, making relevant contributions to teachers and other school staff and, consequently, to children with SHCN. The findings of this scoping review identify the main areas of practice and the nursing interventions delivered in school settings, essentially aligned with training for school staff who care for children with SHCN.[15,16,17]

All T1D-focused studies were conducted in schools, and the study encompassing other conditions was carried out in a preschool institution.[16,17,15] According to Lynn, care provided by teaching and non-teaching staff to preschool children is more demanding than for older children. This article addressed, in addition to training for T1D management, interventions related to asthma, food allergies, and seizures.[15]

Regarding asthma, Lynn notes that preschool children have difficulty expressing symptoms during an exacerbation. Nurses play an active role in training school staff; therefore, nurses need to indicate each student's asthma severity and sensitize staff to early manifestations of an attack. The team must recognize signs and symptoms that require immediate rescue medication.[15]

Barros identified the greatest health literacy gaps among school staff caring for children with asthma, specifically in the clinical aspects of the disease, etiopathophysiology, and therapy. After online sessions on triggers, therapeutic regimen management, and crisis management, delivered within a training project for preschool and early-elementary caregivers, there was a significant increase in knowledge among teachers and non-teaching staff ($p < 0.001$), demonstrating the program's effectiveness.[18] The Directorate-General of Health states that training for asthma should focus on acquiring knowledge about the disease process, signs and symptoms, early recognition of exacerbations, adherence to pharmacologic treatment, and skills for correct use and adherence to controller therapy, such as inhaled therapy.[19]

For food allergies, in addition to the asthma-like challenge that preschool children may be unable to verbalize symptoms of an anaphylactic reaction, the same author notes that preschoolers often explore the classroom environment and may inadvertently ingest food residues there. Hence, the relevance of nursing-led training for school staff to identify signs and symptoms of anaphylaxis. In the event of an anaphylactic crisis, all staff should have the knowledge and skills acquired through health-education actions, an Emergency Action Plan, and the immediate administration of the indicated therapy (epinephrine), required for this situation.[15]

Regarding seizures, the emphasis again is on nursing-led training for staff in preschool settings, with a focus on primary prevention. To complement training, the nursing team should train staff in first aid and provide the skills needed to manage seizure emergencies.[15]

All studies included in this review mention nursing interventions that build the capacity of school staff to care for children with T1D, both in preschool settings and across other school ages.[15,16,17]

No differences were observed in the types of nursing interventions for preschoolers versus older students with T1D. The interventions aimed to improve health, quality of life, and academic outcomes by training school staff through multiple formats, including in-person and online educational programs. Statistically significant improvements were observed in knowledge and skills, in participants' perceived confidence to care for children with T1D, and in children's quality of life after the interventions.[16]

Similar findings—significant increases in diabetes knowledge and confidence in caring for children with T1D —were reported by Taha et al. following an eLearning program complemented by hands-on sessions. Gonçalves implemented three health-education sessions for teachers and two for non-teaching staff, achieving the impact indicators and demonstrating higher knowledge levels; the educational content across the three cited studies was comparable.[17,20]

However, Taha et al. was the only study to include longer-term follow-up (6 and 12 months), showing positive knowledge retention related to T1D. Lynn described the training content for preschool educators, but did not report outcomes or impact.[17,15]

By contrast, Belourico reported improvements in knowledge, confidence, and quality of life among preschool children with T1D after delivering one online health-education session and one in-person practical session to preschool teachers and classroom assistants. These sessions included opportunities to handle and simulate insulin and glucagon administration techniques, as well as capillary blood glucose monitoring.

SHCN have numerous physical, emotional, and socioeconomic impacts, placing a substantial burden on children and their communities. To ensure adequate management of SHCN, school staff should be engaged in promoting health and students' quality of life. Accordingly, across the studies, health promotion, health education, and training for school staff caring for children with SHCN were prioritized to support self-management and reduce costs, exacerbations, hospital admissions, and absenteeism from school and work.[18]

The data synthesized in this review underscore the strategic role of nurses in promoting health in school settings. For practice, there is a need for ongoing educational programs for school staff. At the policy level, capacity-building within school systems should structurally integrate nurses into school contexts. For research, gaps remain in longitudinal, multicenter, and experimental studies that evaluate the effectiveness and sustainability of these interventions over the long term.

Conclusion

This scoping review aimed to analyze and map nursing interventions in school settings that train school staff to care for children and adolescents with SHCN. Three studies were included, differing in implementation type and duration. All studies trained teaching and non-teaching staff who care for children and adolescents with SHCN, and one extended the interventions to psychologists and school nurses.

Addressing these gaps will require primary, experimental, and longer-duration studies with larger samples and broader geographic coverage. In addition, research should examine outcome selection and long-term evaluation methods to refine and improve school-based interventions. The studies included here, together with subsequent investigations, can inform health and school policies that improve health outcomes.

Study limitations

This review included only articles published in English, Portuguese, and Spanish. Including articles in other languages could strengthen the review. Conducting a methodological appraisal of the included studies would also be relevant, although it is not required in scoping review methodology.

Authorship and Contributions

MM: Contextualization, methodology, software, writing (original draft), writing (analysis and interpretation), first independent reviewer, final approval of manuscript, assumption of responsibility.
GD: Software, writing (analysis and interpretation of data), second independent reviewer, approval of final version of manuscript, assumption of responsibility.
BA: Validation, writing (analysis and editing), third independent reviewer, critical review, approval of the final version of the manuscript, assumption of responsibility.
XS: Validation, critical review, approval of the final version of the manuscript, assumption of responsibility.

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