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Inclusion of children with special healthcare needs at school: teachers' perspective

Inclusão de crianças com necessidades de saúde especiais na escola: perspectiva de professores

Inclusión de niños con necesidades especiales de salud en la escuela: la perspectiva de los profesores

Francisco Junio do Nascimento[a]
Eliane Tatsch Neves[b]
Cíntia Beatriz Goi[c]
Camila Lovato de Figueiredo[c]
Ana Carolina Cunha Almeida[c]
Giovana Calcagno Gomes[a]
Aline Cammarano Ribeiro[b]
Andrea Moreira Arrué[d]

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ABSTRACT

Objective: to understand the perception of teachers from the municipal education network regarding the inclusion of children with special healthcare needs in the school context.

Method: qualitative research carried out through semi-structured interviews with 22 teachers from nine public schools in southern Brazil between November and December 2023. The selection strategy was conducted by educational clusters, schools were selected by probabilistic sampling and participants by convenience. The data were submitted to inductive thematic analysis.

Results: teachers reported a feeling of frustration and overload due to the lack of continued training to assist in the process of including children with special healthcare needs in the school environment. Strategies included playful activities and planning in partnership with special educators. They cited the nursing professional as a facilitator for the inclusion process.

Conclusion: in the teachers' perception, there are difficulties related to the child, the training process, institutional aspects and infrastructure to enable inclusion. They suggest bringing the education and health sectors closer together so that teachers feel safe to carry out their activities.

Descriptors: Child; Chronic Disease; Mainstreaming education; Nurse.

RESUMO

Objetivo: conhecer a percepção de professores da rede municipal de educação quanto à inclusão de crianças com necessidades de saúde especiais no contexto escolar.

Método: pesquisa qualitativa realizada por meio de entrevistas semiestruturadas com 22 professores de nove escolas públicas no sul do Brasil no período de novembro e dezembro de 2023. A estratégia de seleção ocorreu por conglomerados educacionais, as escolas foram selecionadas por amostragem probabilística, e os participantes, por conveniência. Os dados foram submetidos à análise temática indutiva.

Resultados: os professores apontaram sentimento de frustração e sobrecarga frente à falta de formação continuada para auxiliar no processo de inclusão de crianças com necessidades de saúde especiais no ambiente escolar. Como estratégias apontaram atividades lúdicas e planejamento em parceria com educadores especiais. Citaram o profissional de enfermagem como facilitador para o processo de inclusão.

Conclusão: na percepção dos professores, há dificuldades relacionadas à criança, ao processo de formação, aos aspectos institucionais e à infraestrutura para possibilitar a inclusão. Sugerem a aproximação dos setores de educação e saúde a fim de que os professores se sintam seguros para desempenhar suas atividades.

Descritores: Criança; Doença crônica; Inclusão escolar; Enfermagem.

[a] Universidade Federal do Rio Grande (FURG). Programa de Pós-Graduação em Enfermagem. Rio Grande, Rio Grande do Sul, Brasil.

[b] Universidade Federal de Santa Maria (UFSM). Programa de Pós-Graduação em Enfermagem, Departamento de Enfermagem. Santa Maria, Rio Grande do Sul, Brasil.

[c] Universidade Federal de Santa Maria (UFSM). Curso de Graduação em Enfermagem. Santa Maria, Rio Grande do Sul, Brasil.

[d] Instituto Federal do Paraná (IFPR). Curitiba, Paraná, Brasil.

RESUMEN

Objetivo: comprender la percepción de los profesores de la red educativa municipal sobre la inclusión de niños con necesidades de salud especiales en el contexto escolar.

Método: investigación cualitativa realizada a través de entrevistas semiestructuradas con 22 profesores de nueve escuelas públicas del sur de Brasil, entre noviembre y diciembre de 2023. La estrategia de selección se realizó por conglomerados educativos, los colegios fueron seleccionados por muestreo probabilístico y los participantes por conveniencia. Los datos fueron sometidos a análisis temático inductivo.

Resultados: Los docentes manifestaron sentimientos de frustración y sobrecarga debido a la falta de capacitación continua para ayudar en el proceso de inclusión de niños con necesidades de salud especiales en el entorno escolar. Las estrategias utilizadas fueron actividades recreativas y planificación en conjunto con educadores especiales. Citaron al profesional de enfermería como facilitador del proceso de inclusión.

Conclusión: en la percepción de los profesores, existen dificultades relacionadas con el niño, el proceso de formación, aspectos institucionales e infraestructura para posibilitar la inclusión. Sugieren acercar los sectores de educación y salud para que los docentes se sientan seguros para realizar sus actividades.

Descriptores: Niño; Enfermedad crónica; Integración escolar; Enfermería.

INTRODUCTION

The issue of including children with special healthcare needs in schools has been highlighted in recent decades due to the change in the morbidity profile of the Brazilian population, which has faced an epidemiological transition, moving from a scenario characterized by communicable diseases to a scenario of chronicity[1-2]. This context requires that health and education systems provide qualified services and professionals, as being supported and welcomed is a right of every child[3].

The social context is fundamental to ensure adequate growth and development for children, with emphasis on the school context and its relevant influence on their perspectives[4]. The family, education, school, child well-being and health services are social institutions that can be very meaningful for children and young people[1]. Access to education and educational environments, as well as having the necessary support to achieve better health outcomes are the needs emphasized by the World Health Organization (WHO)[5].

In the United States (USA), one in five children between 0 and 18 years of age has some special healthcare need[6]. In Brazil, this estimate was 25.3%, or one in four children between 0 and 12 years of age[7]. These children interact with several social environments, including their families, healthcare professionals and educational institutions. Their experiences at school are transformative and permeated by historical and cultural circumstances[8].

The interaction between school, family and healthcare professionals is fundamental for the success of school inclusion, however, when a child has a special healthcare need, there are many problems. There is a shortage of qualified teachers, resources and adequate infrastructure. Furthermore, there is a fragility of the support network that connects the health and education sectors, which influences the schooling process of these children and can hinder their rights of access to school and inclusion[8]. Promoting a safe environment in schools directly affects the health and well-being of students, highlighting the importance of the relationship between health and education[9].

When conducting a bibliographic search in the database of theses and dissertations on the website of the Coordination for the Improvement of Higher Education Personnel (*Coordenação de Aperfeiçoamento de Pessoal de Nível Superior* - CAPES) in 2022, a gap was identified in nursing production regarding health care and education in schools. The studies found focused mainly on special educational needs, not on healthcare needs.

In view of this, it is necessary to understand the inclusion of children with special healthcare needs in the school environment, based on teachers' perceptions of their pedagogical practice, to develop strategies that effectively contribute to this process.

Upon this issue, the following question arose: what are teachers' perceptions regarding the inclusion of children with special healthcare needs in the school

context? The objective was to understand the perceptions of teachers in the municipal education system regarding the inclusion of children with special healthcare needs in the school context.

METHOD

This is a qualitative study that followed the precepts of the Consolidated Criteria for Reporting Qualitative Research (COREQ)[10]. The study was conducted in nine municipal elementary schools in a city in southern Brazil, which were collected from the database of the matrix project "Children with chronic conditions in the school context: prevalence and quality of life".

The selection strategy for the elementary schools initially involved organizing the schools by education region (cluster sampling), based on a list of early childhood and elementary education institutions provided by the Municipal Secretary of Education for the matrix study.

After, schools were selected using probabilistic sampling, totaling nine schools, and the participants were selected by convenience sampling. During the researcher's immersion in the field, the reasons and interests for the research were presented and a printed folder with information, including a QR code, was made available.

The teachers were selected by convenience and contacted the researchers to schedule interviews according to their availability. The inclusion criteria were to be an active teacher, working with students in these schools. Upon being informed on the objective of the study, through the Informed Consent Form, the teacher could refuse, by stating not working with children with chronic conditions, however, no participant refused for this reason. Thus, all participating teachers worked with this group of children in the classroom, as reported during the interviews. And as exclusion criteria, being on vacation or on leave of any kind during the data collection period. One teacher refused to participate in the research. Each teacher was interviewed individually at their workplace.

The semi-structured interviews included seven guiding questions: 1) How do you see the family participation in the school?; 2) Given the possibility of receiving and working with CSHCN in the classroom, what was your reaction?; 3) What are the feelings experienced when first meeting the CSHCN at school?; 4) What was the reaction of classmates to the arrival of CSHCN ?; 5) How does the school work on access and continued attendance of CSHCN?; 6) Do you have any specialization in special education? If so, did this new training come from your own interest or was it offered by superiors? 7) How has your training helped you?

The interviews were audio-recorded and fully transcribed to constitute the *corpus* of analysis. They were conducted by a doctoral student and a master's student, both nurses, with previous training, developed in the research group. The interviews included a brief characterization of the interviewee regarding sex and age. The script was validated by members of the research group, including teachers, healthcare professionals and undergraduate and graduate students.

The fieldwork was conducted from November 20 to December 13, 2023. The interviews were conducted in a private environment within the school, with only the interviewer and participant present. They were recorded using an electronic/digital recorder, later transferred to the researcher's computer and fully transcribed into text management documents in an office suite. After, they were fully reviewed by the main researcher, and the interviews lasted between 15 and 20 minutes. There was no need to repeat interviews and return the transcripts.

A total of 22 teachers participated in the study, and the interviews were concluded when the theoretical consistency necessary to the study objective was reached. This is in compliance with the research team's analysis, based on the concept of theoretical saturation by Moreira and Caleffe[11].

Data analysis was performed using inductive thematic analysis[12] according to the following steps: Familiarization with the data, at which the interviews were transcribed and the data reviewed by reading and annotating initial ideas; Generation of initial codes, in which the main ideas, based on the interview script, were coded using colors (chromatic coding), to systematically highlight interesting aspects of the data in all interviews; Development of an analytical framework and organization by themes; and Report production, stage at which excerpts from the interviews were selected to relate to the research objective, literature and interview script.

The themes listed after the chromatic coding were needed for inclusion; barriers to inclusion; chronic illness or special healthcare need; management of the child in the school environment/classroom; need for support from other professionals; limitation for care; continuing education; personal limitation of the teacher; teacher/parent-family overload; facilitators; health and school management; and family expectations. These themes were then organized into two thematic categories: Challenges for the inclusion of children with special healthcare needs in the school environment and Strategies for the inclusion of children with special healthcare needs in the school environment. Based on this analysis and the researchers' analytical comments, the interpretation was made, based on the dialogue between the empirical material and the existing literature on the topic.

The research was approved by the institution's Research Ethics Committee under Opinion number: 6421755/2023. Alphanumeric coding was used with the letters T for teacher and the interview number in the order conducted, to ensure anonymity. The participants signed the Informed Consent Form.

RESULTS

All 22 participants were female, with an average age of 44 years, minimum 30 and maximum 62 years. Based on the teachers' statements, the authors identified key points from which a definition of children with chronic health conditions was developed, being as those children who have differentiated learning needs, requiring special planning and care from teachers. They have difficulties during the school year and require more attention than other children. Additionally, they may have health conditions that require more specific monitoring or care in the school environment, such as the use of controlled medications or support for physiological/pathological conditions. Despite these needs, they are seen as children who should be included in the school environment like any other.

It is notable that, in this definition, not only physical-biological and educational aspects were highlighted, but also relational, socio-emotional and recognition aspects, as citizens with rights that these children are, and should be included in the school environment.

Challenges for the inclusion of children with special healthcare needs in the school environment

This category encompasses the obstacles and limitations that hinder the inclusion of children with special healthcare needs in the school context, such as: special needs/comorbidities; limitations on care within the school environment; professional limitations of the teacher; overload of teachers/parents and family members and their expectations.

The health issues or special health needs that teachers most often face in the classroom include a variety of conditions, such as: asthma, autism, growth-related disabilities, diabetes, obesity, flu, stomach viruses, intellectual disability, seizures, epilepsy, cognitive delay, fetal alcohol syndrome, mental retardation, Oppositional Defiant Disorder (ODD), malnutrition, Attention Deficit Hyperactivity Disorder (ADHD), suspected dyslexia, deafness, vision problems, need for tube feeding, wheelchair user, psychosis, anemia, obsessive-compulsive disorder, Down syndrome, and other syndromes. Additionally, it is important to consider special learning needs to ensure an inclusive educational environment adapted to the particularities of each student.

Upon so many health-related issues, the teachers participating in the research identified the main needs that must be addressed in order to include children with special healthcare needs in the school environment. These needs were identified with an emphasis on the request for professionals specialized in the care for these children.

The objective is for them to be able to provide service in the school environment or to train teachers to work in the classroom. This creates an interprofessional and intersectoral support network:

> [...] *all schools should have a psychologist, a nurse and, if we dream of it, even a physician* [...]. (T3)

> [...] *even the idea of having a nurse at the school to give the children medication when they need it.* (T20)

[...] *so I think there is a lack of information. There is a need to sit down and talk to these families, to work together.* [...] *this is a whole process that must move forward together, like a gear system, in order to succeed in this area.* (T7)

[...] *I have something to complain about this. I think there should be people prepared at the school to provide care, whether it be a full-time special educator. Someone who has knowledge in the area and who can work with these children and who earns a fair salary.* (T15)

[...] *and what I notice is that this external support network, which would be macro, should have speech therapy services, for example, and there are children who should be receiving speech therapy and other psychopedagogical services. I think this is still very weak. It needs much more organization so that these children can actually participate in these interdisciplinary situations to develop better.* (T22)

Among these needs, the following stood out: improvement of physical structure and increase in qualified human resources; greater knowledge and training of teaching professionals; closer collaboration with the health sector and inter-institutional support to foster interaction with the education sector; careful planning of classroom activities for the inclusion of these children; individualized attention and the presence of qualified monitors; careful inclusion of children, considering their specific context; sharing of successful experiences in the inclusion of these children and exchange of information between educators and healthcare professionals; continuing education and dialogue with families.

The barriers that children with special healthcare needs face, from the teachers' perspective, in their inclusion in the school environment are:

[...] *sometimes there is a lack of guidance.* [...] *from the perspective of a school in the outskirts of the city where I work, I realize that parents are completely uninformed. They have no information, for example, on how to act with the child, or how to talk to the teacher either.* (T1)

[...] *because the teacher and class always have at least 20 students. So, there is no way to focus attention on just one child.* [...] *but there are cases, depending on the health problem, that are very delicate, right? For example, a classroom with 20 students is noisy. And in this case, I have a student who is blind and autistic, and I see that it is not good for him. I am not able to make him more productive, because that noise also bothers him. He needs attention like this that we cannot give in a larger group. So, in more serious cases like this, I often see suffering.* (T3)

[...] *so this child sometimes ends up being left aside. They could develop so much more and they don't* [...]. (T3)

[...] *but that is blocked by public policy issues.* [...] *the quality of these monitors, their quality. Because they also often arrive here unprepared, to care for a child who they have never come across with such a condition.* (T7)

I see that it is a slow process that we are on the way, but that laws are still needed to include these children more. We lack the conditions to better serve these children, [...] *but I believe that this is what is missing now for children to be more included.* (T19)

Teachers cited as challenges in the work environment, the lack of guidance and preparation to deal with these children, difficulty in interacting with their classmates due to their lack of understanding. Other issues highlighted were insufficient medical support, large class size hindering individualized attention, lack of qualified monitors, difficulties in inclusion due to the degree of cognitive impairment and the child suffering, lack of support and collaboration from the family, reluctance of families to reveal comorbidities, ineffective public policies and the lack of institutional and legal support.

Despite so many difficulties, it was possible to perceive optimism in the statements of the research participants regarding inclusion. What is noticeable is that much of the effort to overcome barriers comes from

the attitudes and actions of the teachers themselves, without institutional support or assistance from the families. Teachers also feel frustrated, as they perceive many limitations for the care and inclusion of children with special healthcare needs to take place.

The main limitations identified were the need for self-teaching to deal with the situation, inadequate training in undergraduate studies, time and resource limitations and the need for practical and specific training, such as training in first aid for children.

> *So, from my perspective as a teacher, we are very alone. Quite alone. And what we know, which is not in our area, is just basic elementary knowledge.* (T1)

> [...] *but there are some things, needs that a child presents, that they already have a diagnosis or that they are already included, to be included, in the class, I don't have answers, many times there are no answers,* [...]. (T4)

> *E I believe that we, as teachers, need this training.* [...], *and I would really like to have it, because it is a reality.* (T7)

> *During my undergraduate studies, I took two courses, which were "Fundamentals of special education", and then I took "Special education: inclusion processes", both of which were 60 hours. After my graduation, I took a first aid course in the PET Nursing project, which was offered by the rectory at the Universidade Federal de Santa Maria* [...]. (T8)

> [...] *And it's very difficult when we don't have a support network or someone to help monitor* [...]. (T9)

> *No, I didn't receive [specific training], we can't even give them medicine, right? Sometimes they come with antibiotics, fever medication, inhalers, none of that is legally allowed, they must be referred to the coordination.* (T20)

> [...] *all the children who need this assistance, and the best professional would be a health professional to administer and provide this support to these children* [...]. (T16)

> [...] *that's how I feel, sometimes I feel frustrated for not being able to provide the care that child needs, the way I should* [...]. (T15)

In addition to the frustration of inefficient training to deal with these students with special health conditions, teachers feel overwhelmed and believe that, in the parents' perspective, school is the place where parents can count on to feel more relieved and relaxed, because in addition to trusting the institution to take care of their children, they can also take a break from daily childcare.

The lack of incentives and adequate payment for monitors makes it difficult to hire and keep them in schools. The administrative and bureaucratic burden consumes time that could be dedicated to planning and providing differentiated care for students with special needs. In addition, teachers often feel overwhelmed, and out of their area of expertise, when performing the tasks of other professionals.

> *From my perspective, it is very overwhelming for the teacher, not in the sense that the teacher does not want to do it, but because there is a lack of support.* [...] *it is difficult to have a child with this problem. It is not easy for the parents, but many parents would like to be able to leave their child at school until Saturday.* [...]*these parents send their children to schools with the intention of having their free time.* (T1)

> [...] *but no one takes care of us, teachers are very forgotten. We're pressured, but we're forgotten.* [...] *I am not a psychologist* [...]. (T5)

> [...] *here is no one to help, so you have to teach, plan for everyone and make a different plan for them, and all by myself. And you have to manage when there is no monitor* [...]. (T9)

[...] *so we know that most parents are working parents, who leave their children and sometimes there is no one to pick them up. But they do what they can, what is within their reach, I think.* (T13)

In addition to the usual overload, teachers feel pressured by the expectations coming from family members, who demand a lot from the school so that the students are included, which can generate excessive pressure for the teachers. From their point of view, families need to understand that inclusion is a process that takes time and that, often, schools do not have ideal conditions to serve these children, which can lead to conflicts with families.

[...] *because, often, there is pressure from the family demanding inclusion* [...]. *So, there is an excess demand* [...]. *And that is also where families have difficulty understanding* [...]. (T7)

Well, I believe they expect us to meet their children's needs, [...]. (T11)

[...] *but I think families really trust the school, even though we don't have the training to deal with it in a technical and qualified way, I think families still trust the school a lot. Even knowing that we're not nurses or doctors, we're not trained professionals to handle these situations, I think they always end up trusting us.* (T12)

There is a recognized feeling of trust in the school environment, with the school meeting children's needs and serving as support in these situations. However, some families do not understand the teachers' difficulties in attending to these children and end up placing all the responsibility on the school for the situations they experience.

However, during the study, the teachers also pointed out some elements and strategies that facilitate the inclusion of these children in the school environment.

Strategies for the inclusion of children with special healthcare needs in the school environment

The strategies for including children with special healthcare needs in school mentioned by teachers include managing the child in the school environment; support from other professionals; health and school management; continuing education. Participants reported that they handle situations related to the healthcare needs of these children to enable inclusion. The situations highlighted revealed the importance of adapting classroom activities to meet the needs of these students, as described below:

[...] *so, sometimes you assign students who want to help that child, and they try to assist, but that is not their role.* (T2)

Yes. We try to do as many activities as possible to integrate the class, right? But there are times when there will be activities that have to be specific to that case. So these are cases that always require different materials. Like now that I have a blind and autistic student, his learning is based on sound; he repeats what I say, he likes music, so the whole plan is different. (T3)

Yes. In first grade I have only one special needs student and I bring adapted materials for him every day. In preschool, which I work in the morning, since it's more playful, I try to always include him in the same activities as the others. (T6)

[...] *unfortunately, I will have to do it with him separately at another time,* [...] *I can do some activities with everyone and with this child, others I can't.* [...] *I won't forcefully include him in everything if, sometimes, the child can't adapt to a certain group activity* [...]. *Many times, an activity doesn't work and that's okay. I can also offer an activity to a child with special needs and if they don't adapt, that's okay.* (T7)

That year when I had that student, yes, we did more tactile activities with him, because he didn't have developed communication skills, so they were more hands-on activities to work in touch. So we had specific activities for him. (T12)

Yes, my entire planning is different. First, I see what the needs are, I talk to the special educator, but this is for children who are not attended to by the special educator as well, children who have some difficulty, dyslexia, dyslalia, something like that [...]. (T15)

These strategies include carrying out some activities separately, performance reports for referral to healthcare professionals, interrupting the class to care for specific students, creating bonds through music, dance, physical activities and play, family and school support for the development of these children and collaborative planning with the special educator.

When asked about the integration between education and health sectors, participants revealed that integration between school and health service occurs mainly through referrals of students for health assessments, but there is not always a feedback.

It was also mentioned that the Health at School Program (*Programa Saúde na Escola* - PSE) plays an important role in bringing the health services closer to the school, as statements below:

Yes. And so, in this system that is organized now, which is referrals... we refer to the school administration, who then refers to I don't know who [...].*The process is very slow, and we know that the earlier we act on a child's needs, the better.* (T3)

Yes, our local health center team is very open, they respond quickly to us. We call them here, and they come during campaigns, sometimes even request to come. Many people here receive Bolsa Família benefits (food stamps), so one thing is linked to the other. (T4)

[...] *there is a unit here, where if they could, from time to time, do some work in the classroom... because I can identify (*the students' speech problems*), but I don't have the speech therapy technique to help them with verbalization. I can do my part, I can't do anything beyond that* [...]. (T5)

*PSF (*Programa Saúde da Família - *Family Health Program) gives us support here, but it's general, very basic, not specific support for a child with special needs.* [...] *it's just the basics, nothing specific. In fact, each person can always handle their basics.* (T11)

[...] *it's very hard to get an appointment with a psychologist or a speech therapist. For example, right now the municipality doesn't have a pediatric neurologist.* [...] *So, he urgently needs a new assessment, to update his report, and we can't get it.* (T14)

The health sector mainly interacts with the school administration/management, without direct interaction with the teachers. There is a delay in the referral processes to the health sector, which is overcome with the help of colleagues who have a background in healthcare. They believe that the school plays an important role in identifying students' health and learning problems, and when there is a need for the team from the nearest health unit, the process is simple and quick.

The teachers value the exchange with healthcare professionals, who tend to be creative when proposing activities for the children. However, there is a shortage of healthcare professionals who are specialists. This integration, even if modest, was noticeable in the interviews and is seen as a facilitator of the inclusion process:

[...] *the more knowledge we have from all the areas that support the child and their development, the better for us* [...]. (T10)

[...] *so we look for a lot. I started doing a master's degree precisely because of this, to understand and to breathe some oxygen into my practices so that we could always offer the best.* (T14)

[...] *when I receive special needs children in my classes, I go after it. I study, I plan, together with the special education teacher,* [...]. (T19)

Despite being autonomous and not very institutionally stimulated, teachers actively seek to improve their educational practices – some even pursue advanced degrees, such as a master's, to better understand and enhance their work. Additionally, teachers receive training or exchange knowledge with special education teachers from the school network and participate in meetings to discuss learning difficulties and curriculum adaptation.

At school, teachers work in collaboration with a special education teacher to welcome special needs children into their classes and actively seek out study and planning methods to best support these students. Continuing education is seen as a facilitator for the inclusion of these children in school.

DISCUSSION

In line with what was said by the teachers interviewed, children with special healthcare needs require more attentive care, have continuous care needs, which may be temporary or permanent, and require specialized, individualized and personalized assistance[13-14].

Moreover, teachers perceive specific issues related to teaching, such as: differentiated lesson planning, increased attention in the classroom to children with special healthcare needs, to the detriment of other students, and management of situations related to health care in the school environment[15-16]. However, when concluding the concept of children with special healthcare needs, the issue of inclusion is revisited, comparing them with any child who should be included in the school context[17-19].

A study conducted in southern Brazil with teachers pointed out vulnerability and the lack of human and material resources, infrastructure and/or support resources in the school environment as factors capable of hindering the inclusion of this population in the school setting. These vulnerabilities were defined as being of programmatic origin, that is, related to policies and programs and the organization of the educational sector[8]. As a solution, it was suggested to encourage children to develop autonomy in self-care and show that teachers do not feel prepared to perform this type of care, so that their students are more autonomous, as they have not received training for this purpose[8].

A scoping review, which aimed to map school inclusion policies for children with autism in four European countries, pointed out the implementation of policies aimed at special schools, special classes and regular schools or regular classes[20]. It was found that teachers have high levels of responsibility and play a key role in the education of children with special healthcare needs, which goes beyond the role played in the education of other children[20].

When researching on children with tracheostomies who attend rural schools in South Africa, the researchers aimed to document the school experience of these children and develop educational tools for teachers and managers that facilitate greater acceptance and safety in the classrooms for this population. The main barriers identified by teachers for enrolling students were lack of knowledge about tracheostomies, uncertainty about the school's responsibility regarding the care of this student, and concerns about the reaction of other children to the medical device present in the student's body. Additionally, overcrowded classrooms and poor infrastructure were considered barriers[21].

In Brazil, the Statute of the Child and Adolescent (*Estatuto da Criança e do Adolescente* - ECA) established the right to education for children and adolescents with disabilities, preferably in the regular school system, ensuring acceptance without discrimination or separation regarding their general health and care or specific rehabilitation needs[22]. However, difficulties in including children with special healthcare needs are still perceived today, especially regarding qualified human resources.

Teachers from the South African study pointed out the need for the provision of supplies and suction equipment, and hand hygiene materials, to include these children with tracheostomies in the school environment. They also said that teachers need to be trained to deal with this health condition and potential complications related to the technological health device[21]. The needs identified in this study align with those mentioned by the teachers participating in the present research.

A study conducted to evaluate the knowledge of municipal school teachers about diabetes mellitus revealed that 78% of them had never received any training, lectures, or courses on this disease. This finding

corroborates the statements of the teachers in this study who claim a lack of information[23], since they did not receive training to deal with children's chronic health conditions.

To meet the needs for support and teacher training, the Law of Guidelines and Bases (LDB) No. 9,394 of 1996 enabled the creation of specialized support services, when necessary, in regular schools. Law No. 9,934 also refers to teacher training and the development of curriculum, methods, and ways to address the difficulties faced by children with disabilities, global developmental disorders, high abilities, or giftedness[24].

Despite the existence of several legal provisions for inclusion, barriers to this process are still evident. There is little clarification on measures to be adopted when a child with special healthcare needs experiences some worsening of their health condition at school.

In this regard, the presence of a health professional is necessary, highlighting the lack of a support network between the education and health sectors. Even though there are nearby health units, teachers point out that it would be necessary to have at least one nurse permanently in the school environment[8]. This is similar to the school health model in Portugal, where it is recommended to have one specialist nurse for every 1,500 healthy students and one pediatric and child health nurse for every 150 students with special healthcare needs[9].

Families are also concerned about the absence of a health professional in the school environment, which forces them to stay alert to the child's care needs. In some cases, they need to go to school to provide this care or plan with teachers to do so[25].

Often, the child experiences distress in the classroom environment among other classmates who sometimes do not understand their health condition. However, being away from the school environment can also negatively affect the child.

An example of this is the impact on the schooling of children undergoing hemophilia treatment. According to a study that assessed this impact, this treatment can last from five to four years, demanding prolonged absences or restrictions from the school environment. Therefore, in situations like this, inclusion becomes a continuous, unpredictable and indeterminate process, which may lead to greater academic deficits[26].

Given the numerous challenges and barriers to the inclusion of children with special healthcare conditions in the school environment, it is important to have a support network. Among these, stand out the family, the health unit and specialized services that integrate education and health at the municipal level[27].

However, despite the various barriers, there are facilitators mentioned by the teachers participating in this study. Teachers reported that the planning of activities to be developed with these children is different and that the understanding of the needs is partly achieved through interaction with them in the classroom[28].

Support of other professionals is a facilitator of the inclusion of these children in the school environment. The most sought-after and helpful professionals are those from nearby health units, colleagues in special education, and monitors, who are usually students in training.

The interviewees highlighted the importance of the support network, the partnership with the local health unit and the Interdisciplinary Center for Educational Support. However, it was noted the absence of specialized professionals to make the necessary referrals[27].

Another factor that can facilitate the inclusion of this population in schools is proper teacher training. Likewise, there is a need for continuing training processes with a view to reflecting on the reception of students with special health conditions. In addition to continuing training processes, there should also be the provision of specific information on the topic[28], due to its importance; sharing experiences of educators in interactions with their peers is also a strategy to be used[29].

A systematic review study that aimed at identifying and synthesizing strategies for coordinating care among health professionals, educators, and caregivers of children with healthcare needs highlighted the importance of building interpersonal relationships. In addition, this same study also highlighted clear procedures and roles for each professional and continuing education for members of the school community[30].

It is also necessary to establish more formal and/or institutional procedures for teachers to collect and record data on the identification of students' health conditions and their educational needs[28], such as reports to health professionals, as mentioned by some teachers in this study.

As a limitation, the study was conducted only with teachers from the municipal public school system, excluding the private school system. It is suggested that this study also be extended to schools from the private school system to identify possible differences and similarities.

CONCLUSIONS

Teachers' perceptions regarding the inclusion of children with special healthcare needs are mainly related to the lack of physical/structural and human resources, such as qualified monitors and full-time health professionals, including nurses, in the school environment. Other factors highlighted as barriers were the lack of preparation of teachers to deal with these children, the difficulty in accessing specialized health professionals and the inclusion of these children in very large classes. Additionally, institutional support for continuing education and public policies that do not protect teachers or students with special healthcare needs in this inclusion process were cited.

Beyond these difficulties related to the education and health sector, the overload and demand for care for children by families was also highlighted by teachers. When families are more engaged to the school, they help to overcome these difficulties, particularly by sharing information about the health status of their children.

Monitors, special education teachers and health units close to schools, especially through the School Health Program, were highlighted as support for teachers in managing these students in the school environment.

Despite the weaknesses in current public policies, teachers believe they are successfully integrating education and health and that, when they have experience, they can detect cases of children who need to be referred to the health sector.

It is suggested that teachers receive continuing education to develop the necessary knowledge and to effectively act with quality in the classroom, to meet the needs of this specific population in the classroom.

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Data and material availability

Access to the dataset can be obtained upon request to the corresponding author.

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Authorship contribution

Conceptualization: Eliane Tatsch Neves, Cíntia Beatriz Goi, Andrea Moreira Arrué
Data curation: Francisco Junio do Nascimento, Eliane Tatsch Neves
Formal analysis: Francisco Junio do Nascimento, Eliane Tatsch Neves
Investigation: Francisco Junio do Nascimento, Eliane Tatsch Neves
Methodology: Eliane Tatsch Neves, Cíntia Beatriz Goi, Andrea Moreira Arrué, Francisco Junio do Nascimento
Project administration: Eliane Tatsch Neves
Software: Francisco Junio do Nascimento
Validation: Francisco Junio do Nascimento, Eliane Tatsch Neves, Cíntia Beatriz Goi, Andrea Moreira Arrué, Camila Lovato de Figueiredo, Ana Carolina Cunha Almeida, Giovana Calcagno Gomes, Aline Cammarano Ribeiro
Visualization: Francisco Junio do Nascimento, Eliane Tatsch Neves, Cíntia Beatriz Goi, Andrea Moreira Arrué, Camila Lovato de Figueiredo, Ana Carolina Cunha Almeida, Giovana Calcagno Gomes, Aline Cammarano Ribeiro
Writing-original draft: Francisco Junio do Nascimento, Eliane Tatsch Neves, Cíntia Beatriz Goi, Andrea Moreira Arrué, Camila Lovato de Figueiredo, Ana Carolina Cunha Almeida, Aline Cammarano Ribeiro
Writing-review & editing: Francisco Junio do Nascimento, Eliane Tatsch Neves, Cíntia Beatriz Goi, Andrea Moreira Arrué, Camila de Figueiredo, Ana Carolina Almeida, Giovana Calcagno Gomes, Aline Cammarano Ribeiro

The authors declare that there is no conflict of interest.

Corresponding author:

Eliane Tatsch Neves.
E-mail: eliane.neves@ufsm.br

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Dagmar Elaine Kaiser

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João Lucas Campos de Oliveira