





ORIGINAL ARTICLE

School absence legislation governing in Norway, Sweden and Denmark for children with chronic illness in compulsory education—A comparative study

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Abstract

Background: Health and education are interrelated and influence social, economic and lifestyle perspectives. Children with chronic illnesses experience barriers in the educational system regarding school attendance and social isolation. Gaining knowledge of compulsory education and how children with chronic illnesses are supported is crucial for the implications of future education policy and legislation in Scandinavia. This study compares Scandinavian legislation frameworks on compulsory education, chronic illness and school absence to form the basis of future research on education for children with chronic illness.

Methods: The study uses a comparative approach to explore the support of children with chronic illnesses in compulsory education across Norway, Sweden and Denmark. The documents included are 3 education acts and 15 secondary documents, which are notes and guidelines for the education acts. The data were analysed using a manifest content analysis.

Findings: We found four categories and six subcategories: (1) school obligation and rights; (2) chronic illness; (3) school absence: (a) categorisation of absence; (b) registration of absence; and (c) sanction; and (4) education support: (a) Hospital school support; (b) Home instruction support; and (c) technological support.

Conclusion: This study's findings demonstrate the similarities and differences in the Scandinavian compulsory education legislation and guidelines regarding chronic illness and school absence. We found similarities across the countries regarding chronic illness and school absence. Still, the findings showed differences in the systematic registration of school absence and requirements for attendance with compulsory education in Norway and Denmark compared with compulsory schooling in Sweden. This knowledge will inform and enlighten future discussions and decisions in education and public health. The results can contribute to awareness of the opportunities for educational support and perspectives about education for children

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with chronic illnesses. Future research focusing on the experience of children with chronic illness and educational support is needed.

KEYWORDS

children, chronic illness, comparative study, compulsory education, document analysis, education legislation, educational support, Scandinavian, school absence, technology solutions

BACKGROUND

Education is an essential social determinant of health and increases social status, employment and well-being [1]. However, children with chronic illness experience unmet needs and a lack of support in the educational system [2]. Chronic illness is defined as a health condition with long-term perspectives lasting at least 3 months [3]. Approximately 10% of children worldwide live with a chronic illness that may cause physical, emotional and social barriers in everyday life, including their school life [4]. Physical barriers include pain, fatigue and periods of treatment or hospitalisation, affecting participation in education [4]. Emotional barriers are linked to a reduced sense of belonging, anxiety and feelings of exclusion [2, 5]. Social barriers include a lack of friendships, bullying from classmates, or social isolation from school and classmates [6, 7].

School absence is a cross-national policy problem affecting thousands of children with chronic illnesses [4, 5]. School absence is defined as excused or unexcused absence [8]. An unexcused absence is an illegal school absence, such as not attending classes without permission. An excused absence is a legal school absence, for example if the child suffers from an infection or symptoms of chronic illnesses [8]. Excused absences are justified by parents' consent or a doctor's certificate to the school [9]. The literature focuses on problematic school attendance, such as absence due to school refusal or mental problems [10, 11]. In contrast, research regarding excused absence due to chronic illness and the consequence of absence is sparse [2, 4].

Norway, Sweden and Denmark (Scandinavia) have compulsory education systems based on universalism with equal access for children to participate in the public education system regardless of their social and economic background or health [12]. The similarities in the educational principles in Scandinavia make the countries optimal for comparative research [13]. The three countries' legislation on education should encompass and address all needs, including barriers to school attendance [2]. The Scandinavian governments determine how children with chronic illnesses can participate in education. Accordingly, the Scandinavian legislation on compulsory

education is a cornerstone for understanding the legal initiatives installed to enhance participation in compulsory education, including school participation for children with chronic illnesses [13]. Compulsory education is defined as the education children from Scandinavian countries are required to participate in [14–16].

Children with chronic illnesses need equity in education to graduate from compulsory education successfully [6]. Educational support is a tool to support children with chronic illnesses to participate in school. Educational support could be home instruction and/or an individualised education plan [2, 17]. Recently, technologies such as video conferences and telepresence robots have also been used to support flexibility and school attendance for children with chronic illnesses without being physically present [18, 19].

The responsibility and assignments for the stakeholders (government, municipalities and school principals) are described in the education acts [14–16]. The governments in Scandinavia define the legal framework for compulsory education and develop guidelines for municipalities [14–16]. The Scandinavian municipalities organise and structure compulsory education through government decisions and approaches. They also structure and form the economic framework for compulsory education (number of schools, school days and overall economy). The school principals administrate and manage the pedagogical aspect of the schools. They are responsible for complying with the governments' and municipalities' decisions (NO: Chapter 9; SW: Chapter 2; DK: Paragraph 45, section 1) [14–16].

In Scandinavia, children are obligated to receive education for 10 years. All three school systems have preschool classes and grades from one to nine [14–16]. Norway and Sweden each have a national education act for primary, lower secondary (compulsory) and upper secondary education. Denmark has separate education acts for compulsory education and upper secondary education. The legal framework conceptualises the importance of educational support for children with chronic illness and school absences. Accordingly, understanding how the Scandinavian countries address chronic illness and school absence in their education acts and recognise education as a critical factor for health.

AIM

To compare the similarities and differences in the Scandinavian legislation on compulsory education, *chronic illness* and *school absence* to promote mutual learning between the Scandinavian countries (Norway, Sweden and Denmark). Furthermore, to explore the use of *educational support* to reduce school absence for children with chronic illnesses provided by the education acts and guidelines to share knowledge across borders.

METHOD

Research design

This study compares the Scandinavian legislation on compulsory education [14–16] and secondary documents.

Data collection

Data collection was performed by the first author (SS) from February to April 2023. The primary documents were the education acts, and the secondary documents were guidelines and notes to supplement the education acts. The documents were available on the following web pages:

- Documents from Norway: lovdata.no (the Norwegian Education Act) and [UDIR.no](http://udir.no) (notes and guidelines). Retrieved 1 April 2023
- Documents from Sweden: riksdagen.se (the Swedish Education Act) and [Skolverket.se](http://skolverket.se) (notes and guidelines). Retrieved 1 April 2023.
- Documents from Denmark: [Karnov.dk](http://karnov.dk) (the Danish Education Act, notes and guidelines). Retrieved 1 April.

The web pages contain legislation text and guidelines of the education acts for municipalities and school principals. The data included the Scandinavian legislation on compulsory education from February 2023. The total number of documents included in the study was 18: six from Norway, seven from Sweden, and five from Denmark. In Norway and Sweden, documents were available from the public web pages free of charge. Access to the Danish law web page [Karnov.dk](http://karnov.dk) was granted via a paid subscription. We collected three primary documents: The Norwegian Education Act [16], the Swedish Education Act [15], the Danish Education Act [14] and 15 secondary documents. We collected the secondary documents using the snowball sampling method [20]. The secondary documents were referred to in the primary documents,

and some of the secondary documents, again, referred to other secondary documents. The criteria for inclusion of the secondary documents were that they must explain the legislation on chronic illness and school absence or guidelines for implementing the legislation in practice. We excluded guidelines, notes and legislation texts about upper secondary education in the analysis as the aim focuses on compulsory education. Table 1 shows an overview of the primary and secondary documents included in the comparative analysis.

Data analysis

The methodology manifest content analysis guided the analysis in a four-step process. The authors described and analysed the texts in the documents closely [21]. First, all the collected documents were adapted to the software program Nvivo 12 and organised into main and secondary documents [21]. The documents were adapted and analysed in the original languages (Norwegian, Swedish, and Danish) for a better understanding and respect for linguistic specificities. The authors can read and comprehend all three original languages in the documents.

Furthermore, the documents were classified into countries for a better overview of the coding process. Initially, the two authors, SS and HBL, independently coded the documents to obtain meaning units related to the aim. In the coding process, we selected paragraphs from the primary documents related to the keyword's *chronic illness*, *school absence* and *educational support*. Afterwards, we coded the secondary documents using the same process. Second, the reading and coding process of the documents were repeated several times to increase the reliability of the coding. The authors discussed and compared the initial analyses. Third, the documents were read and coded again, and the meaning units were categorised into main and subcategories. The meaning units were moved back and forth between the categories to strengthen the outcome of the categories. The identified categories were discussed and reduced to answer the aim of the study [22]. Fourth, a cross-document comparison was conducted by analysing similarities and differences in the categories and subcategories in the three countries [13]. Disagreements between the authors were solved by discussion and obtaining consensus.

Ethical considerations

The Central Denmark Region Committees on Biomedical Research Ethics and The Norwegian Region Committee for Medicine and Health Research Ethics assessed that

TABLE 1 Documents included in the analysis.

#	Documents	Webpage	Country
1	Act on compulsory education and further education [Lov om grunnskolen og den vidaregåande opplæringa (Opplæringslova)]	Lovdata.no	Norway
2	Regulations for the Education Acts: Chapter 3. Individual assessment in compulsory education and further education [Forskrift til opplæringslova: Kapittel 3. Individuell vurdering i grunnskolen og i vidaregåande opplæringa]	Udir.no	
3	Right to education in child welfare and health institutions and at home in case of long-term illness Udir-6-2014 [Rett til opplæring i barnevern—og helseinstitusjon, og i hjemmet ved langvarig sykdom udir-6-2014]		
4	School welfare Udir-3-2017 [Skolemiljø Udir-3-2017]		
5	The schools' responsibility for students who need health and care services during school hours [Skolens ansvar for elever som har behov for helse—og omsorgstjenester i skoletiden]		
6	Children who do not attend school—for schools and school principals [Barn som ikke møter på skolen—for skoler og skoleeiere]		
7	Education Act [Skollag (2010:800)]	Riksdagen.se	Sweden
8	Special teaching in the home or in another suitable place [Särskild undervisning I hemmet eller på annan lämplig plats]	Skoleverket.se	
9	Remote learning [Fjärrundervisning]		
10	Absence from school [Frånvaro i skolan]		
11	Extra adaptations, special support and programmes [Extra anpassningar, särskilt stöd och åtgärdsprogram]		
12	Distance learning [Distanceundervisning]		
13	School obligation and right to education [Skoleplikt och rätt till utbildning]		
14	Education Act on compulsory education [Lovbekendtgørelse 2022-10-05 nr. 1396 om folkeskolen]	Karnov.dk	Denmark
15	Home instructions for students in compulsory education [Vejledning 2023-01-10 nr. 9009 til bekendtgørelse om sygeundervisning af elever i folkeskolen og frie grundskoler]		
16	Student absence from education in compulsory education [Bekendtgørelse 2019-10-24 nr. 1063 om elevs fravær fra undervisningen i folkeskolen]		
17	Rules on school absences in compulsory education—guidance for parents of children in compulsory education [Sådan er de nye regler om fravær i grundskolen—Vejledning til forældre til børn i folkeskolen]		
18	Guidance to home instruction for students in compulsory education [Guidelines for bekendtgørelse af sygeundervisning for elever i folkeskolen og den frie grundskole]		

the project was not liable for notification (DK: jr. no. 1-10-72-274-21, NOK: request no. 560380). The data included in the study are publicly available documents. No personal or sensitive data were used in the study, and the study complies with data privacy standards.

RESULTS

The analysis resulted in four categories and six subcategories in the 18 documents regarding chronic illness and school absence in compulsory education in Scandinavia

(Norway, Sweden and Denmark) (Table 2). The first category, 'School obligations and rights', presents the rights and obligations to compulsory education of children with chronic illness in Norway, Sweden and Denmark. The second category, 'Chronic Illness in the Education Acts and Guidelines', explores the definitions of chronic illness in the Education Acts. The third category, 'School absence', explores the definition and registration of school absence in the Education Acts. The last category, 'Education support', explores the education support tools for children with chronic illness and school absence. The categories and subcategories are illustrated in Table 2.

TABLE 2 Categories and subcategories from the analysis of the education acts and guidelines in Scandinavia.

Categories	Subcategories
School obligations and rights	None
Chronic illness in the education acts and guidelines	None
School absence	Categories of school absence Registration of school absence Sanction
Education support	Hospital school support Home instruction support Technological support

School obligations and rights

In Scandinavia, children above the age of six have the right to compulsory education for 10 years, free of charge (SW: Paragraph 3; NO: Paragraph 3-2; DK: Paragraph 2) [14–16]. In Norway and Denmark, all children above the age of six are obligated to compulsory education (NO: Paragraph 2-1; DK: Paragraph 32) [14, 16]. Compulsory education can be fulfilled in three settings: homeschooling by the children's parents in their own homes, in public schools offered by the municipalities, or in private schools funded by a combination of parental and governmental funding (NO: Paragraph 2-1; DK: Paragraph 33) [14, 16, 23]. In Sweden, all children over 6 years old are obligated to compulsory schooling, but children must attend school physically here. In all three countries, the municipalities are responsible for offering compulsory education, and the parents ensure their children receive it [14–16].

Chronic illness in the education acts and guidelines

The three education acts and guidelines addressed the definition of chronic illnesses differently. The Swedish Education Act and guidelines do not mention chronic illness. The Education Act uses 'illness' to describe excused school absence [24]. The Danish and Norwegian Acts provide specific examples of chronic illnesses. In the Norwegian Education Act, chronic illnesses are exemplified by chronic fatigue syndrome and cancer [25]. The Danish Education Act divides chronic illnesses into illnesses requiring short- or long-term school absences. Short-term illnesses are exemplified by a broken leg, and long-term illnesses are exemplified by cancer [26, 27]. Defined diagnoses such as autism, ADHD, brain damage and mobility impairment are included in the 'illness, disability and similar category' [28]. Overall, the guidelines in Denmark mention more examples of chronic illness in the short- and long-term categories compared with the other countries.

School absence

In Norway and Denmark, unexcused school absence is described as absence where parents have not applied for and gained permission for the absence from the school principal [23, 29]. In Sweden, unexcused absence is based on school and teacher interpretations. The Swedish Education Act does not explicitly regulate school absence [15, 24].

Categories of school absence

In Norway, school absence is categorised into: (1) excused absence and (2) unexcused absence [23]. Excused absence can be chronic illnesses and absence permitted by the school. The school principal must contact the child's parents if a child has unexcused absence. In Sweden, school absence is categorised into: (1) excused absence and (2) unexcused absence [24]. Excused absence can be illness or agreed absence permitted by the school. After 1 day of unexcused absence, the school principal must contact the parents to inform them about the absence [15]. Danish legislation categorises school absence into: (1) unexcused absence; (2) illness, disability or similar absence; and (3) extraordinary exemption absence [29]. Permission for extraordinary exemption absence must be applied to and granted by the school principal [29]. The school principal must immediately contact the parents if a child has unexcused absence [29]. Norway and Sweden are similar in categorising school absence; Denmark has an extra category for illness, disability or similar excusable absence.

Registration of school absence

In Norway, the school principal must have a system for absence registration. The registration of absence is documented at the beginning of a school day and in every lesson afterwards [30]. The school must update the absence registration system every 6 months [30]. In Sweden, the school

principal must have an absence report system to document absence [24]. There is no further mention of how the report system must be organised or when the absence is pointed out during the school day. In Denmark, the school principal must secure absence registration of the children's absences. The school absence is registered in an electronic system. In first to sixth grade, absence is registered once daily, while it is registered twice daily in seventh to ninth grade. The absence is documented in the first and last lessons. The absence system is updated weekly [29].

The education acts and guidelines show a difference in the registration of school absence in the three countries. In all three countries, the schools are obligated to register school absence. Danish schools have more obligations to register school absence regularly compared with Norway and Sweden.

Sanction

In Norway and Denmark, sanctions are operationalised to parents if their children are unexcusably absent from compulsory education. Parents of children with documented chronic illness cannot be sanctioned in Norway and Denmark (NO: Paragraph 3-38; DK: Paragraph 2) [29, 30]. In Norway, the school must contact the parents within a week when a child has unexcused absence. Furthermore, the school can contact the child protection service if a child has too much unexcused absence. Furthermore, the municipalities can decide to report the parents to the police for not following the obligation for compulsory education [23]. In Denmark, the school principals must summon the parents to a meeting if the unexcused absence rate exceeds 10% of school days and contact the municipalities if it exceeds 15%. The municipality can then decide to impose economic sanctions on the parents [29]. In Sweden, the municipalities can impose sanctions on parents who do not ensure that their child meets school attendance requirements (SW: Chapter 7, Paragraph 23) [15]. The Swedish Education Act does not describe what the sanctions include. The aim of the sanctions is to secure school attendance in all three countries.

Education support

Hospital school

Children have the right to education during hospitalisation or treatment. In Norway, the county council must secure education at the hospital during treatment. The right to education applies to children hospitalised or visiting the hospital for daily treatment and children who cannot participate in compulsory education (NO: Paragraph

12-3a) [16, 25, 31]. The education at the hospital school must correspond to the education offered at the child's home school. The Norwegian Education Act does not describe the number of hours of teaching. In Sweden, the responsibility for educating children during hospitalisation or treatment lies with the municipalities in which hospital schools are located (SW: Chapter 24, Paragraphs 17 and 19) [15, 32]. The education at the hospital school must be comparable to the education plan at the child's home school. In Sweden, hospital schools are described in the 'special needs education' category in the Education Act. 'Special needs education' is not part of compulsory schooling but is a compensation for the child with illness's lack of education [32]. The number of teaching hours depends on the child's ability to receive education (SW: Chapter 24, Paragraphs 16-17) [15, 33]. In Denmark, the principal of the child's school is responsible for ensuring that the child receives compulsory education during hospitalisation or treatment [14, 26, 27]. The municipality in which the hospital is located organises the hospital school (DK: Paragraph 23-2) [14]. The Danish Education Act does not describe the number of teaching hours allocated for hospital education. Education at the hospital school must follow the learning plans of the school the child normally attends.

Home instruction

Home instruction is when a teacher from the local school teaches a child in its own home. In Norway, children with long-term illnesses have the right to home instruction, and the municipalities and municipal councils are responsible for organising it. The hours of home instruction depend on the child's capacity to receive education. In Norway, home instruction is categorised as special needs education (NO: Chapter 5) [16, 31]. In Sweden, the school principals are responsible for organising home instruction [15]. Children with illnesses who cannot participate in compulsory schooling have the right to be taught at home (SW: Chapter 24, Paragraphs 19-20) [15, 33]. Home instruction should meet the same educational objectives as compulsory schooling. The hours of home instruction are not specified. In Sweden, home instruction is categorised as special needs education and covered by the Education Act.

In Denmark, school principals are responsible for organising home instruction for children with chronic illness who cannot participate in compulsory education [26, 27]. In Denmark, children can be taught at home, if they are absent due to illness for 15 school days [26, 27]. Home instruction should meet the educational objectives of the school curriculum. The school principal and the

teachers decide how many hours of home instruction the child needs or can receive [26, 27].

Technological solutions

The Norwegian Education Act does not mention technological solutions. Digital teaching platforms are mentioned once in a supplementary guideline for hospital schools [25]. The Swedish Education Act mentions two technological solutions: Distance and remote learning [15, 34, 35]. Distance learning allows the child to access education at different places and times. Before implementing distance learning in the school, it must be approved by the school principal and the state [35]. Remote learning is when the child is absent in the classroom but can follow the lesson from a distance in real time [34]. The remote learning settings are in a room at the school facilities [34]. Remote learning requires acceptance by the school principal before being implemented in compulsory schooling. The two technological teaching solutions are not directly described as education support for children with chronic illness and school absence. The Swedish Education Act does not specify the technological solutions that can be utilised; instead, they specify the child's placement concerning their learning. Lessons can be organised with information and communication technology. The two forms are implemented in Sweden due to a shortage of teachers in some municipalities or the need for a subject to be available nationally [35]. Children with the right to extra adaptations and special support can receive distance learning to secure the school obligation in Sweden [15, 35]. Only the Danish legislation contains guidelines for home instruction suggesting that technological solutions can be used as educational support for children with chronic illnesses [26, 27]. Technological solutions can be combined with home instruction and arranged so the child can participate in group work, blackboard teaching, and social activities [27]. How the technology support should be organised or administered at the school is not mentioned. As Table 3 shows, there are similarities in the legislative frameworks but differences in the definitions and descriptions. The overall similarities and differences between the three countries in the four categories and six subcategories are illustrated in Table 3 below.

DISCUSSION

This comparative analysis highlighted the legislative framework for children with chronic illness and school absence. The legislative framework operationalises the options children with chronic illness and school absence

have in theory. The legislative framework reflects the society and educational system in the three countries. The findings showed that children with chronic illness and school absence have the same rights as their peers without chronic illness. To secure compulsory education for all children, the three countries have enabled educational support to compensate for the school absence.

This study demonstrates the differences in how the educational systems are structured in the Scandinavian countries. Norway and Denmark have compulsory education, whereas Sweden has compulsory schooling. In terms of chronic illness and school absence, compulsory education provides more options for education support, as parents, for example, can teach and organise compulsory education for their children at home. On the other hand, compulsory schooling places the responsibility of securing education for children with chronic illness and school absences with the municipalities and schools. Reports state that, despite the obligation of 10 years of compulsory education, some children in Scandinavia are not enrolled in school [36–38]. In Denmark, 279 children were not enrolled in compulsory education in 2018 [37]. In 2015, 200 children in Sweden were not in school for more than 1 year of compulsory schooling [36]. There are no available data on the number of children who do not participate in compulsory education in Norway [38].

Another study finding is the difference in how the three countries' education acts define chronic illness. In the Swedish Education Act, illness is mentioned; in comparison, the Danish and Norwegian legislation mention specific diagnoses like cancer and fatigue syndrome [25, 26]. Naming specific chronic illness groups in educational support guidelines may exclude other chronic illness groups from receiving educational support. The term 'illness' used in the guidelines for the Swedish Education Acts forces school principals to interpret the legislation before determining whether a student qualifies for support [24]. In line with our findings, Wikie et al. [39] found that the understanding of children with chronic illness and their needs is lacking. Teachers believed schoolwork was not crucial for children with chronic illnesses and school absences [39]. Contrary to that belief, children wanted to continue schoolwork and connect to their school during their period of absence [39]. The guidelines for absence due to chronic illness state that parents, school principals and teachers must determine the extent to which the child can participate in school during treatment and periods of side effects from their chronic illness [25, 26, 40]. Education is an important social determinant for health [1, 41]. Children spend most of their time in school during their childhood. School is an arena for developing academic, social and health-related competencies. Children with chronic illness are a vulnerable group that requires

TABLE 3 Overview of similarities and differences in compulsory education in Scandinavian.

Categories	Subcategories	Norway	Sweden	Denmark
School obligation and rights		Free compulsory education	Free compulsory schooling	Free compulsory education
Chronic illness in the Education Act and guidelines		Chronic fatigue syndrome and cancer	Illness	Short-term sickness: Broken legs Long-term sickness: Cancer Disability: Autism, ADHD, brain damage, and mobility impairment
School absence	Categorisation of absence	(1) Excused absence (2) Unexcused	(1) Excused absence (2) Unexcused absence	(1) Unexcused absence (2) Sickness, disability or similar absence (3) Extraordinary exemption absences
	Registration of absence	Yes, there is a system for absence registration Absence registration in every lesson	Yes, an absence report system Absence registration is not described	Yes, an electronic system for absence registration Absence registration is once a day for children from one to sixth grade and twice daily for children from seventh to ninth grade
	Sanction	Yes, economic sanction with unexcused absence	No	Yes, economic sanction with 15% unexcused absences in a quarter
Education support	Hospital school support	Yes, for children hospitalised. The Country Council is responsible Categorised as special education	Yes, the municipalities where the hospital is placed are responsible for the hospital school Categorised as special education	The school principal is responsible for securing that the child receives hospital school. The municipalities where the hospital is located are responsible for organising the hospital school
	Home instruction	The responsibility is at the municipality and country council Special education	The school principals are responsible for home instruction Special education	The school principals are responsible for home instruction
	Technological support	Digital platform	Remote and distance learning described in the Education Act	Technological support in relation to home instruction

support in the educational context [2]. Consequently, the definition of chronic illness in the legislative framework and guidelines could be a barrier for the stakeholders to recognise the unmet needs of children with chronic illness. More increased knowledge for teachers on how to support for children with chronic illness could secure better practices and support for academic and social outcomes [4].

Another difference is the registration of school absences in Scandinavia. It is important to clarify how many children do not attend school and why [12, 36, 38, 42]. In Denmark, registrations are standardised with guidelines for when and how teachers should register absence in an electronic system. Reports, however, show that the municipalities and schools have varying systems for and definitions of registration [12, 37]. In some cases, the schools do

not categorise absence or do not register absence in the electronic system [12, 43]. Likewise, there is no requirement in the Danish legislation to register educational support. Consequently, there are no statistics indicating how many children receive home instruction and for how many hours per week. We also do not know how much technological solutions are used to secure participation. This points to a need for new and clearer guidelines on registering school absences in the electronic system. In Denmark, registration of absence has been prioritised as a political tool to reduce absence through specific rules and national guidelines. Norway and Sweden have less defined registration systems. From a future perspective, all three countries must learn how to use absence registration to reduce and enhance school absence for children with chronic illnesses. This calls for policies on chronic

illness and school absence with a stronger focus on registering and developing guidelines for municipalities and schools to support this target group. Likewise, more organisation and structure in the collaboration between parents, healthcare professionals, municipalities and schools could be beneficial to the support system for children with chronic illnesses [4, 44].

The study identified different educational supports to compensate for school absences due to chronic illness. One type of education support used in all three countries is home instruction. However, only 7% of the children eligible for home instruction are offered this type of support in Denmark [45]. This could be due to the fact that many parents of children with chronic illnesses do not know about their child's right to home instruction [37, 45]. In Denmark, home instruction is financed through the schools' own budgets without additional government funding [26, 37]. A report commissioned by the Danish Ministry of Children and Education found that principals often avoid offering home instruction to academically strong children. Some schools prioritise hiring extra teachers in the classroom over providing home instruction [37, 45]. Home instruction provides academic learning, but finances and resources determine the role of home instruction for the different schools [37]. Like in Scandinavia, hospital and home instruction are tools used in Australia and the United States [46, 47].

The educational support helps the child academically but does not address the lack of social interaction with their peers, which may lead to isolation [48]. Findings by Lum et al. [2] and Hopkins [49] also confirm that, like in Scandinavia, not all children with chronic illnesses in Australia receive home instruction when absent due to chronic illness. Children with chronic illness need equity in education to support the side effects of their chronic illness. The research on educational support interventions is sparse [17]. Sanction is part of the school absence tools [28]. Schools can sanction parents if their child is absent from school. In comparison, parents cannot sanction schools if their child does not receive educational support despite the legislative framework [37, 45].

Technological improvements have made it possible to use technology to include children in the school environment without physical presence [19, 50, 51]. Norwegian Education Acts and guidelines do not describe the use of technological solutions. Few municipalities use technology as a tool to support children with chronic illnesses and school absences [52, 53]. The Swedish Education Act includes distance and remote learning despite its compulsory schooling obligations. Denmark is the only country in which technological solutions are suggested as a supplement to home instruction for social and academic purposes. Research from Scandinavia has highlighted the

benefits of using technology to support a child's connection to the school environment when absent [18, 53].

Despite the benefits, it has been demonstrated that some teachers are sceptical about using technology in the classroom. A reason may be that technology requires extra resources from teachers to establish a successful connection between the classroom and the child at the hospital or home [54, 55]. In Sweden, physical presence in compulsory education is obligatory. This could be a potential barrier to including technologies in the school for children with chronic illness and school absence who cannot physically participate. By comparison, compulsory education in Denmark and Norway offers different options for education obligations. Despite the compulsory education options, technology is still a new and explorative solution that may help children connect to their school environment when absent [18, 53].

The data collection was based on document analysis, using the snowball sampling method to obtain documents about chronic illness and school absence in the Scandinavian legislation framework [20]. A limitation of the document analysis is the collection bias of using a single method. In this study, only the legislative frameworks and guidelines are used [56]. Some guidelines or documents might not be publicly available. Other documents, such as meeting minutes, background papers and proposals from the ministries of education in the three countries. These documents would have strengthened the implications and implementation of the legislative framework regarding children with chronic illness and school absence. The study would have benefited from interviews with educators and experts in the educational system in the three countries [57]. Another limitation is the interpretation of the legislative framework and different meanings in the language: Documents were written in Norwegian, Swedish and Danish, and some language barriers might have influenced the interpretation of the documents. This study compares three similar countries' legislative frameworks regarding chronic illness and school absence. The results indicate that the countries use the same educational support and have the same rights and obligations in compulsory education. However, more research is needed that compares with other countries' legislative frameworks for children with chronic illnesses and school absence. The study is limited as we did not explore the experience of children with chronic illness, parents and educators in compulsory education. Furthermore, the study does not examine the implementation of the legislative framework for children with chronic illness and school absence in the Scandinavian countries. We recommend that these perspectives be addressed in future research. Furthermore, research on education for children with chronic illness is important since it has been proven that

education promotes economic, social and health perspectives [41, 58].

CONCLUSION

In conclusion, our study compares the education acts and guidelines regarding chronic illness and school absence in Scandinavia. Children with chronic illness have the right to education support and registration of excused absence during compulsory education in Scandinavia. This study highlights the need to spread awareness of the opportunities for educational support for children with chronic illness and school absence. More shared definitions for school absence and registration would benefit the inter-Scandinavian collaboration on solutions for ensuring education for children with chronic illnesses. The study is limited to comparing the Scandinavian legislation on compulsory education for children with chronic illness and school absence. Additionally, more research is needed on how the education support provided by the compulsory education legislation is implemented and the effect of the education support on children with chronic illness and school absence.

AUTHOR CONTRIBUTIONS

First author carried out the data collection, and data analysis in collaboration with the last author Bækgaard Larsen. All author contributed to the design and manuscript drafting. The author Contributions section should be placed after the conclusion.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT


The data that support the findings of this study are openly available.

ETHICS STATEMENT


The study was approved by The Central Denmark Region Committees on Biomedical Research Ethics and The Norwegian Region Committee for Medicine. Furthermore, the project did not require notification (DK: jr. no. 1-10-72-274-21, NOK: request no. 560380).

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