

Remote teaching and school refusal behavior – lessons learned from the COVID-19 pandemic

Ulla Irene Hansen^{1*}, Kenneth Larsen², Hanne Sundberg³, Ellen Kathrine Munkhaugen⁴

¹ Regional Resource Centre for Autism, ADHD, Tourette's syndrome and Narcolepsy, Division of Paediatric and Adolescent Medicine, Oslo University Hospital, Oslo, Norway

²Department of Educational Science University of Southeastern Norway

³Department of family and upbringing, Ringerike municipality, Ringerike, Norway

⁴Unit on Mental Health in Intellectual Disabilities Division of Mental Health and Addiction, Norwegian National Advisory, Oslo University Hospital

*Corresponding author: hanul@ous-hf.no

Abstract

When the Norwegian government closed down schools and kindergartens in response to the increased spread of COVID-19, the use of homeschooling raised concerns about students with school refusal behavior and the school system's ability to address their special needs in these circumstances. Six students referred to the school absenteeism team were interviewed about their circumstances, using an author-developed interview. The results indicate that the students rated homeschooling as very satisfactory. Students with school refusal behavior participated in homeschooling and their attendance continued during the initial reopening of schools.

Keywords: homeschooling, school refusal behavior, social, school and emotional factors, individualized measures

Background

In response to the increased spread of the COVID-19 virus in Norway, on March 12, 2020, the Norwegian government closed down most of society, including schools and kindergartens. This lockdown resulted in homeschooling organized as teacher-led remote teaching. There were variations in how schools organized remote teaching. However, some structure was preferred. This usually included morning assemblies in which teachers provided tasks and readings for the school day.

Remote teaching can be described as distance teaching, whereby students and teachers are physically separated (1). Remote teaching can contain various technologies, such as, videos and audio (2). This "online education" uses the internet and computers as the means of delivery.

School refusal behavior (SRB) is defined as child-motivated refusal to attend school or a child having difficulty remaining in class for an entire day. SRB affect children and young persons aged 5–17 years who, to a substantial extent, (a) are entirely absent

from school, and/or (b) initially attend then leave school during the school hours and/or (c) go to school following behavioral problems such as morning tantrums, and/or (d) display unusual distress during the school day that precipitates pleas for future non-attendance (3). Kearney and Silverman (1996) created four functional dimensions to describe the definition of SRB. The functional dimensions are: avoidance of negative emotions related to school stimuli, aversive social or evaluative situations, need for parental attention, and access to positive reinforcement when not at school. These dimensions may be directional to prescriptive interventions (3).

School attendance problems include a whole range of difficulties and multiple factors may influence school attendance. It is important to emphasize that it is not only factors related to the student, but also school factors and how SRB affects families that influence how these behaviors are maintained. In most cases, it is the interaction between multiple factors that contributes to SRB (4). In our study, the

students have various forms of SRB and all factors that contribute to non-attendance must be taken into account.

Several factors seem common in explaining SRB (5), including school factors such as the student and teacher relationship, the social environment in the school and classroom, social factors such as insufficient social skills and bullying, and emotional factors such as emotional and behavioral problems (6, 7). Developmental disorders such as Autism Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD) and language disorders, executive problems, family factors such as physical and mental illness, and trauma such as bullying may also be associated with SRB (5, 7-9). School absenteeism can have short and long term consequences in young people's academic, emotional and social development. School plays an essential role in a student's life, and problematic absenteeism is associated with a range of problems in adult life, including poor academic outcomes, adult unemployment and poor economic situation (10).

Students reactions to school lockdown has been the subject of studies in the general child and adolescent population (11-13). The main findings in these studies indicated that adolescents were mainly positive about school lockdown with remote teaching, despite their parent's and teacher's concerns about mental health issues and reduced physical activity due to increased screen time and physical passivity (11-13).

Even though students were mainly satisfied with remote teaching in this situation, they expressed concerns about their social life, friends, and their family's financial situation. The students also expressed concerns about their academic progress and stated that they were still under academic pressure (12). Research by Martarelli et al. (2021) on the individual prerequisites of remote teaching indicates that self-control is an important predictor for adherence to remote teaching. Students with higher levels of self-control perceived remote teaching as being less problematic. Students with high levels of boredom perceived remote teaching as being more difficult, indicating that boredom proneness is a critical construct to consider during remote teaching (14). Another study examined the views about homeschooling of 238 students aged 15-17 with and without ADHD during the COVID-19 pandemic. This study indicated that students with ADHD may need more support because they had fewer daily routines than students without ADHD (15). A study of students with Autism spectrum disorder (ASD) found that both students and parents felt that homeschooling was initially challenging because of a lack of support from school. However, both parents and students reported that

homeschooling was satisfactory both personally and educationally after the initial transition from ordinary education at school to school at home (16).

When society opened up and schools reopened, some concerns were expressed about attending school in a Co-SPACE study (17) on parents' and children's concerns about attending school after lockdown. The report presents data divided into groups, for example, students with and without special educational needs and neurodevelopmental disorders. The parents and children in this group were concerned about certain aspects of attending school, including uncertainty, academic pressure, changes routines, managing social distance, concentration problems. There were also concerns about workload, and not receiving the necessary support (17).

As a part of the intervention for students with SRB, homeschooling is often requested by students and their families in order to prevent an increased gap in academic achievement (18). Remote teaching is one form of homeschooling, but some families perform homeschooling themselves because of the emotional distress of the school environment (19). In the literature on SRB, homeschooling is not recommended. Staying at home may maintain an attendance problem, particularly in cases in which the SRB is the result of anxiety (19, 20). To our knowledge, no qualitative studies have been conducted that examine remote teaching as part of intervention for students with SRB. The pandemic gives us a unique opportunity to study homeschooling as remote teaching. Asking students for their views could add valuable information to explore further opportunities for the assessment and treatment of SRB.

Aim

This study aimed to explore the views of students with school refusal behavior on remote teaching academically, emotionally and socially in order to uncover valuable information for the assessment and treatment of SRB.

Methods

Setting and Participants

This qualitative interview study was conducted in June 2020 when schools had been organized into small groups physically attending school, together with infection control, focusing on hand hygiene, as well as remaining at home when students had symptoms of illness.

Remote teaching as infection control was established from March 12 until April 27, 2020. After the fully remote teaching period, remote teaching combined with physically attending school were used. Half of the students attended school for half of

the school week and the other half of the students received remote teaching for the other half of the school week.

All students who received services from the school absenteeism team (SAT) during the lockdown period from March 2020 to June 2020 in a rural municipality received information and were invited to participate in the study. The students included in this study were closely followed by the SAT during this period and their attendance in remote lessons was registered.

The SAT forwarded information about the study and a request to participate to the students' parents. The parents were asked to discuss participation with their children and sign a written consent form before participating. One student did not reply and two students declined to participate without stating a reason. The six remaining students were between nine and sixteen years of age and attended primary and lower secondary school. All participants had special educational needs in the form of ADHD and Autism Spectrum Disorder or emotional problems such as anxiety and depression symptoms that requiring individualized education (Table 1). Four of the participants had formal diagnoses from specialists at child and adolescent psychiatric clinics. One student showed depressive symptoms and one student/ pupil had anxiety symptoms.

One of the students did not attend school at all, while another student displayed reluctance to attend school and partial absenteeism. The sample size was small and the basic socio-demographic characteristics of the study sample is described in Table 1.

qualitative research is the relationship between the participants and the researcher. Children may perceive an adult as an authority figure, and this unequal power relationship must be considered (21). When children are involved in research, confidentiality is fundamental to respecting and protecting the participants (22). In order to ensure the confidentiality of the participants, only a brief description of the students/pupils has been provided.

The study was approved by the municipalities' legal authorities in accordance with the Personal Data Act (2018) and was conducted in accordance with the Declaration of Helsinki.

Procedure

The authors developed a semi-structured interview guide comprising eight open-ended questions with keywords for more information. From research and clinical experience, it may be assumed that students with SRB may have problems answering open-ended questions due to social-, emotional or academic challenges. Thus, keywords were useful when it was necessary to ask for more information. The interview guide was developed based on the key findings on SRB and interventions, as well as other studies on how children and young persons in the general population perceived the pandemic (12-14, 23-25).

When the students were informed about the study, they were given information in a language that was adapted to their age and cognitive level so that they could make an informed decision whether they

TABLE 1. Characteristics of the six participants.

School	Diagnosis	Absenteeism*	Refusal behaviour
A Lower secondary school	Neuro-developmental disorder	3 days	Sleeping in, tiredness, stomach ache, aggression
B Primary school	Anxiety	2.5 days	Verbal refusal, somatic complaints
C Primary school	Anxiety symptoms	0 days	Verbal refusal
D Primary school	Anxiety	0.5 days	Anxiety symptoms, frustration, verbal refusal
E Primary school	Neuro-developmental disorder Anxiety	2.5 days	Postpones tasks related to school, delaying
F Lower secondary school	Depression symptoms	5 days	Total absenteeism, low motivation, boredom, depression symptoms

*Average weekly absenteeism in 2020 prior to lockdown.

Ethical Considerations

Children's opinions and views in research are considered valuable in today's society and their participation in research as social actors is considered significant (21). Their perspectives and knowledge about their own lives are best gained from the children themselves. Article 12 of the 1989 United Nations Convention on the Rights of the Child states that children are entitled to be involved in any matters concerning decisions that affect them. Ethical considerations are fundamental in all research, but particularly in research concerning children. One of the most essential characteristics of

wanted to participate. The interview started with a few warm-up questions such as "name, age and school" in order to ensure a safe and comfortable interview setting. The remaining questions were developed in order to obtain information about the students' thoughts and feelings about remote teaching, social restrictions such as staying in touch with friends and COVID-19 restrictions. We asked the students how they felt about the possibility of returning to school when it re-opened. Two questions were about the students rating their feelings on a scale of 1–10 where 1 equals unsatisfactory and 10 equals satisfactory. This scale was provided to help the students describe their

feelings in a semi-structured interview. Finally, we asked them about their thoughts and wishes regarding school attendance in general and their feedback to the interviewer about good education.

The participants were free to choose the interview location; at home, in school or in a municipal office depending on their preferences and the fact that localization of the interview might influence confidentiality and raise ethical concerns regarding informed consent (26). At the start of the interview, all participants were informed about the aim of the study, and the interviewer repeated that they could withdraw from the study at any time. They were offered snacks and drinks in order to create a comfortable setting (26).

The interviewer used everyday language to make the questions easy to understand and explain what informed consent means. Parents were invited to the interviews to assure their child if necessary and ensure that the interview did not negatively impact them (26). Half of the interviews were conducted in the students' homes while their parents were present. The remaining interviews were conducted in the SAT's office. The interviews lasted an average of 30 minutes and were conducted in a single session. All interviews were audio-recorded, transcribed verbatim and anonymized. During the interviews, the infection-control measures current at the time were followed.

Data Analysis

The interviews were analyzed using a phenomenological approach for identifying, analyzing and reporting themes within data. The six phases of thematic analysis (27) were followed. The analysis focused on the detailed thematic description of the whole dataset. Based on the participants' descriptions, we were interested in exploring patterns of meaning relevant to the aim of the study. Data analysis started with reading the whole interview to get "the whole story" and identify "keywords" relevant to the research question. In the first phase of the analysis, the researchers went through each interview, transcribed and marked ideas. In the second phase, they formulated a list of interesting ideas and codes that could identify the features of the data and then coded the data in different colors, structured by the interview guide. The data were then organized into meaningful groups of themes. In the third phase, the researchers looked for a relationship between the codes, themes and sub-themes. The fourth phase had two sub-levels. In sub-level one, the researchers considered whether the themes appeared to form a coherent pattern from all the data. In the second sub-level, the researchers considered the validity of individual themes and whether the themes reflected the opinions. In the fifth phase, the

researchers defined what the themes were and started to think about what to call the themes in the final analysis. The analysis was performed manually. Two main themes emerged from the analysis: social-emotional and school factors. Social and emotional factors were linked and comprised social interaction with peers and family, emotional distress, and being in the same situation as classmates. School factors consisted of the following themes: academic achievement, organization of homeschooling as remote teaching, support for school tasks, and the students "dream school".

Results

The data were organized into two main themes: Social-emotional and school factors. To illustrate the themes, we used quotations from the students. The quotations were translated from Norwegian into English.

Social and emotional factors

Social and emotional factors comprised social contact with peers and emotional distress.

All students perceived good social interaction with their peers. Statements such as: "*I play with my friends and talk on the phone*", "*I have a good social life*", and

"I was in touch with one of my friends, and we tried to be with the same friends, just in case"

illustrate this finding. The fact that students have access to several social platforms makes it possible for them to maintain social interaction even when the community was in lockdown. However, most of the students appreciated meeting their friends again in person when the restrictions were lifted. Several of the students missed interacting with their friends. One student stated: "*... I missed the noise in the classroom after a while...*" another said: "*Not being with friends was boring.*" They stated they were bored at home, particularly at the beginning of lockdown when they couldn't see other people. This gradually improved when restrictions were lifted and physical meetings became possible. In this sample, one of the students who was constantly absent from school stated that he had some social interaction with his friends occasionally. The other students in this sample stated in the interviews that they had interaction with their peers outside school despite their school absenteeism. We may assume that when society opened up there were several activities that started.

All the participants stated that they were satisfied with several factors related to remote teaching. Decreased emotional distress was demonstrated by the opportunity to "get some time off" and not have to physically attend school every day enabling them to start their school day more calmly. Other things that were highlighted was less disruption at home and more flexibility, resulting in less emotional distress.

Shorter lessons and the possibility to work alone and in your own way were mentioned. Statements like:

"I was able to relax a bit" and "I didn't have to get up early in the morning"

illustrate this.

The way that remote teaching was organized enabled the students to take breaks more frequently, and the teacher organized shorter lessons. The home environment was reported to be less stressful in several ways:

"Homeschooling is not so boring. You don't have to sit for six hours listening to the teacher", and "I feel more comfortable at home because the chairs at school are uncomfortable."

Other statements on this topic include:

"It's harder to concentrate at school because the teacher talks so much. In remote teaching it's easier to follow the teacher because the lessons don't last so long"

"In a way, remote teaching was easier because there are fewer disturbances when you work at home. Yes, it's easier to work at home."

The fact that all students at school, despite any existing challenges, received remote teaching, was rated as positive:

"When we have remote teaching, I'm part of the class. I've been there like the others. So when we're back at school, I feel I've already been there like the others."

When school re-opened, the same student reported that remote teaching represented a new start.:

"It's like a new start. No one asked me about my absence".

Some students reported that the different phases of remote teaching combined with physically school attendance was difficult. The transition from one situation to another can create multiple challenges for the students. Uncertainty about how to behave, what is required of them, how long the situation will last, planning for the day, social uncertainty are questions that can cause the student emotional distress. One student stated:

"We got used to remote teaching and then suddenly we had to return to school. It was difficult."

The students attended school every day during the homeschool period and when school re-opened with

restrictions, they continued to attend, including the student who had been completely absent for an extended period.

School factors

School factors comprised the following themes: academic level, organization of remote teaching, support for school tasks and their "dream school."

Most students experienced no significant change in their academic level. However, they reported mixed feelings about their academic expectations during remote teaching. One student worried about not being educated in certain subjects, during homeschooling and that it would make it harder to succeed academically when school re-opened:

"Not all subjects are available online (at homeschool)"

"We had homework in the subject we were missing, so I don't think I learned less"

"I learned the same, and it was easier to concentrate during homeschool,"

were statements that illustrate these mixed experiences. Another student said:

"The tasks were more difficult in remote teaching and it was harder to take breaks. My mother helped me."

Some students reported that it was easier to concentrate during remote teaching due to there being fewer disturbances and that remote teaching made it possible to catch up with some of the gaps in the curriculum. Statements like:

"There is less disruption at home and I can choose which tasks I want to do. I had greater freedom of choice when I didn't have to work with others"

"In school I was not able to participate in the classroom"

reflected this topic.

"I was able to catch up with the others when we had homeschool. I've learned more at home, so when we returned to school, it was like a new start for me,"

are other statements.

One of the youngest participants explained that some of the tasks were not academic. We assumed that practical tasks were given to the youngest students for the sake of variation and, as an alternative and supplement to traditional academic tasks, were perhaps less meaningful to them:

"We picked flowers and set the table. I think I learn more in ordinary school."

Several informants reported that the organization of remote teaching lessons led to reduced verbal information from the teacher and shorter lessons, and they felt this was positive; they felt more responsible for their education. One student stated:

"I don't think absence was registered. The teacher only noticed that we did the work we were supposed to do. I enjoyed the fact that it was less strict and that we were responsible."

However, the students had different views about the organization of remote teaching.

"If homeschool had lasted longer, I think it would have been a bit boring. It feels good to combined remote teaching and physical attending school" may support this theme. Other statements were:

"Some academic tasks are better to do at school. I think for those students who hate school it would be better for them to spend some days at school and some days at home"

"I can decide when I need to take a break and when to start working in the morning. It was good that we had independent academic work and delivered the work to the teacher at the end of the day."

These statements may illustrate the fact that remote teaching is not the only way to support students with SRB, but their ability to influence their own work and participation were empowering. One of the students stated:

"In remote teaching, you got to know the other students better because you could see their faces. In the classroom, you sit behind each other."

This statement may be related to the fact that organization of the school's physical environment should be considered to further explored.

When schools re-opened, the students had to follow a strictly defined cohort. Some students/pupils highlighted some of the restrictions:

"I think it's better when we can spend more time outdoors like we do now and that we can go to school some days and have remote teaching on other days."

All students appreciated being in smaller groups when they physically attended school with restrictions:

"We're not allowed to be more than fifteen in one group. That's fine. It's better than the large group we had before. There wasn't enough funding to support two classes before COVID-19."

Nearly all students in this study reported that they found the combination of remote teaching and school attendance satisfactory, although this varied from one student to the next. One student felt it was tricky:

"I think it's difficult to go to school after holidays and weekends. This is the same as when we're going to school some days and have remote teaching other days."

The students in lower secondary school felt that their interaction with the teacher was good. The teacher was also available outside lesson time, and the students could call the teacher if they needed assistance. One informant reported that their interaction with the teacher was: "almost the same.". Most of the primary school students had limited interaction with their teacher, but they were free to contact their teacher whenever they need:

"It's not so easy to just talk with the teacher online as it is when we're at school," one said.

When asked to describe their "dream school", the students mentioned smaller groups, attendance every other day, variation in teaching, i.e., more frequent breaks, more time outdoors, physical activity and practical education. The frequent use of digital tools in learning activities was also emphasized. Some students stated that homework should be discontinued. Furthermore, all students called for more individualization. Statements such as:

"Homeschool would be ok one or two days a week, but it would be exhausting to have homeschool every day, because we have to work more with academically task"

"Less homework would be good. You get so tired of school when you have to do homework at home after school" underlines this.

Another student stated:

"The teachers should listen to the students and bear what they have to say about themselves. Maybe they have some ideas about how things could be improved."

All students rated remote teaching as highly satisfactory, ranking it from 7 to 9 on the scale (1–10). The student with prolonged absenteeism participated in remote teaching on a daily basis and continued to attend school when it re-opened. The other students in this study attended at the same level as before lockdown in March 2020.

Discussion and implications

This study aimed to explore the views of the students with school refusal behavior on remote teaching in order to explore factors relevant to SRB assessment and treatment. The pandemic has changed the circumstances and resulted in students receiving a different kind of education. Thus, in order to assess factors related to SRB, this study suggests that it could be valuable to ask students with SRB to elaborate on their perceptions of the homeschool period. The students' responses indicate that there are various issues to consider when assessing and making decisions on treating students with SRB.

The students with SRB in our study reported being comfortable with remote teaching. This is in line with previous studies of students in general, which showed that students rated remote teaching as satisfactory (11, 13). However, some academic, social and emotional concerns were raised by the students with SRB and the general youth population.

Students with SRB perceived less emotional stress during this period. Less pressure may be associated with the absence of daily expectations from parents and teachers to attend school physically (17). It could be assumed that remote teaching could also be a relief for parents in their daily attempts at getting their child to attend school, and perhaps the family climate becomes more positive. The COVID-19 pandemic and its effect has caused much concern in the everyday lives of families, although this study assumes that parental distress in the particular case of getting their child to school decreased. Many families feel a sense of helplessness in their everyday struggle to get the child to school. This issue was less significant when all students received remote teaching.

Our results add to other studies showing that students appreciated the opportunity to sleep longer and felt more rested (11). This could be related to studies of sleep patterns, showing that adolescents have a delayed sleep pattern compared to adults and small children (28). Furthermore, SRB and emotional problems are associated with sleep problems (29). Less emotional distress was described by many of the students as being one of the benefits of remote teaching. Emotional distress is perceived when demands and expectations surpass a person's skills (30). Regarding some of the factors that cause and/or maintain SRB, we may assume that remote teaching may help reduce emotional distress. Assessing these factors is essential regarding intervention.

Homeschool is generally not recommended as an intervention for students with SRB (5). This recommendation is based on the assumption that absenteeism is associated with anxiety for certain factors at school, and homeschooling may maintain avoidance behavior (18). However, SRB may require

a broader understanding in order to develop an effective intervention. It is essential to consider that missed education may lead to an increased gap between students with SRB and their peers and may be a factor that maintains SRB. Studies found that 10% of absence is a risk factor in missing academic skills and representing a barrier to interventions (31). The students in our study stated that they found it easier to concentrate at home. A student's home environment presents fewer distractions and may provide opportunities to increase academic achievement (16, 32). These findings are similar to a study of children with severe developmental disabilities and behavioral needs (32). A study of students with ASD found that the home represented a safe and quieter learning environment with minimal sensory distractions (16).

Other studies claim that homework can be an intervention to prevent educational gaps between peers and students with SRB and maintaining school routines (33). Further, the fact that students with SRB also don't feel different from other students when participating in remote teaching during this period may be worth considering. One of the benefits of remote teaching is that the students remain in contact with their peers and continue to socialize (32). Understanding SRB and prolonged absenteeism in light of the "theory of school alienation" can be useful, as Havik et al. (2021) suggested in their article. When a student has been absent for a prolonged period, this may lead to poor academic performance, learning difficulties, school disengagement and withdrawal from the educational system (34).

Remote teaching is not a measure that will be suitable for all students with SRB, particularly not for students who do not want any adjustments that would make them feel different from their peers. This study provided some information about how the student themselves considered this form of education. Based on these findings, it may be worth considering remote teaching as an adjustment or as a part of intervention.

Studies show that a relationship with the teacher is one of the essential factors to prevent SRB (34). A safe learning environment with the teacher present is an essential resource. It may be related to age, and younger students have a greater need for this kind of interaction. However, students with learning difficulties may perceive the same need for interaction with the teacher. Older students had to be more independent when working on academic tasks when they received remote teaching. This may be difficult for students who may have academic difficulties because of their absenteeism over a prolonged period, as well as learning difficulties (6).

These factors are relevant in addition to the important role of the teacher in the classroom.

One of the youngest student stated that it was difficult to get in touch with the teacher when needed. When students receive remote teaching, their parents must support them more than they usually would when they attend in ordinary school. Parental support may also provide parents with more information about their children's academic achievements and increase parent involvement (32). However, in line with Heyworth (2021), the parent's need support from school.

Studies show that social factors are relevant and play a role in SRB (35). One of the student with SRB reported that he was able to return to school when it re-opened because he did not stand out, but was "like the others." Despite his prolonged absenteeism, he stated that returning to school when it re-opened was more like returning to school after the summer holiday. Relationships between peers are often critical domains when absenteeism is prolonged. Because of the social withdrawal, students miss their peer support and may feel isolated (36). School alienation in relation to prolonged absenteeism may be something to consider when it comes to social interaction with peers (34). One of the benefits of remote teaching is that students social interact with their peers (32).

Most of the students in this study reported no difference in their social lives during the COVID-19 pandemic compared to the period preceding lockdown. Studies indicate that peer relationships and having friends may have a preventive effect on SRB. Social demands and social skills such as forming friendships would appear to be directly connected to SRB.

A lack of friendship may lead to isolation and loneliness that could be stressful and further increase negative emotions related to school attendance (37). We may speculate whether the students in this sample have fewer friends at school and therefore felt no difference in their social lives during this period. A study by Munkhaugen et al (2019) found that one of the characteristics of students with Autism Spectrum Disorder who showed SRB was a lack of social engagement. The youngest students did not mention that they missed the other students. This is an interesting finding regarding students' social engagement (9). Again, there were different responses to this topic, and the oldest students reported that when they returned to school, it was good to see their friends again in person. Studies show that social factors play a role in preventing school refusal behavior and a lack of friendship and limited social skills are risk factors that should be considered (5).

One of the student stated that he preferred remote teaching as he could see the faces on the screen, whereas they sat behind each other at school. This is an interesting statement considering that the classroom environment may impact the social climate (38). This may also be related to the influence of the physical environment in the classroom regarding SRB. The way that students sit in the classroom and whether something is perceived as uncomfortable are essential issues to consider in the assessment of SRB. One student said that the chair he sat on at home was more comfortable. The fact that students with SRB can have sensory dysregulation may impact their ability to concentrate because of their response to sensory stimuli (39).

Our study found multiple factors that may be considered when interventions are planned. These factors included individual factors, school environment, emotional distress, social factors, academic achievement, as well as the organization of lessons. Studies on interventions for SRB indicate that heterogeneity and complexity call for multifactorial assessments to design individually tailored interventions for students with SRB (40). There is consensus that assessing factors in the student, family and school associated with SRB is crucial for effective interventions (23).

This study adds essential knowledge from the students themselves about social- emotional and school factors regarding remote teaching, and these themes should be explored further. This study presents data from the students' thoughts, feelings and experiences in a particular setting. SRB negatively influences students' schooling and may prevent the fulfillment of their right to an education. The findings indicate that listening to students' voice may provide valuable information regarding school factors. Thus, this study makes a small contributes to the knowledge of SRB.

The findings in this study indicate that remote teaching should be further explored as a way of individualizing education for students with SRB. In line with Kearney (2016), it appears that this may be a way to catch up both academically and socially (18). In this particular setting when a high number of students being at home for several weeks, was giving the students space to return anonymously without having to answer unpleasant questions. For some students, the anxiety of being asked about their absenteeism may maintain the absenteeism (18). "We're all in the same boat now" may resonate with this topic.

The results of this study indicate that all students with SRB participated in remote teaching, and their attendance continued in the initial re-opening of schools with infection controls.

Limitations and future directions

The current study includes a small number of informants. The sample may not be representative and conclusions must be drawn carefully. This is a qualitative study and it is therefore challenging to draw generalized conclusions. The students with school refusal behavior who participated in this study give us a glimpse of what they felt about their situation during lockdown and remote teaching and may point to themes that need further exploration to understand SRB and the development of effective treatment. A general understanding of school absenteeism in practice should focus on future studies to help professionals gain knowledge about customizing interventions.

Also, remote teaching took place in situations characterized by full lockdown and may not be representative of other remote teaching situations.

Acknowledgments

We would like to thank all students and parents for participating in this study. The authors would also like to acknowledge the SAT team who helped to facilitate and implement this study.

Declarations

The authors have no conflicting interests.

References

- Kentnor HE. Distance education and the evolution of online learning in the United States. *Curriculum and teaching dialogue*. 2015;17(1):21-34.
- Roffe I. *Innovation and e-learning: E-business for an educational enterprise*: University of Wales Press Cardiff; 2004.
- Kearney CA, Silverman WK. The evolution and reconciliation of taxonomic strategies for school refusal behavior. *Clinical Psychology: Science and Practice*. 1996;3(4):339.
- Thambirajah M, Grandison KJ, De-Hayes L. *Understanding school refusal: A handbook for professionals in education, health and social care*: Jessica Kingsley Publishers; 2008.
- Kearney CA. School absenteeism and school refusal behavior in youth: A contemporary review. *Clinical psychology review*. 2008;28(3):451-71.
- Egger HL, Costello JE, Angold A. School refusal and psychiatric disorders: A community study. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2003;42(7):797-807.
- Havik T, Bru E, Ertesvåg SK. School factors associated with school refusal-and truancy-related reasons for school non-attendance. *Social Psychology of Education*. 2015;18(2):221-40.
- Ingul JM, Havik T, Heyne D. Emerging school refusal: a school-based framework for identifying early signs and risk factors. *Cognitive and Behavioral Practice*. 2019;26(1):46-62.
- Munkhaugen EK, Torske T, Gjevik E, Nærland T, Pripp AH, Diseth TH. Individual characteristics of students with autism spectrum disorders and school refusal behavior. *Autism*. 2019;23(2):413-23.
- Finning K, Waite P, Harvey K, Moore D, Davis B, Ford T. Secondary school practitioners' beliefs about risk factors for school attendance problems: a qualitative study. *Emotional and Behavioural Difficulties*. 2020;25(1):15-28.
- Bakken A, Osnes SM. *Ung i Oslo 2021. Ungdomsskolen og videregående skole*. 2021.
- Ulset VS, Bakken A, von Soest T. Ungdoms opplevelser av konsekvenser av pandemien etter ett år med covid-19-restriksjoner. *Tidsskrift for Den norske legeforening*. 2021.
- Zhao Y, Guo Y, Xiao Y, Zhu R, Sun W, Huang W, et al. The effects of online homeschooling on children, parents, and teachers of grades 1–9 during the COVID-19 pandemic. *Medical Science Monitor: International Medical Journal of Experimental and Clinical Research*. 2020;26:e925591-1.
- Martarelli CS, Pacozzi SG, Bieleke M, Wolff W. High trait self-control and low boredom proneness help COVID-19 homeschoolers. *Frontiers in psychology*. 2021;12:331.
- Becker SP, Breaux R, Cusick CN, Dvorsky MR, Marsh NP, Sciberras E, et al. Remote learning during COVID-19: examining school practices, service continuation, and difficulties for adolescents with and without attention-deficit/hyperactivity disorder. *Journal of Adolescent Health*. 2020;67(6):769-77.
- Heyworth M, Brett S, Houting Jd, Magiati I, Steward R, Urbanowicz A, et al. "It just fits my needs better": Autistic students and parents' experiences of learning from home during the early phase of the COVID-19 pandemic. *Autism & Developmental Language Impairments*. 2021;6:23969415211057681.
- Waite P, Pearcey S, Shum A, Raw JA, Patalay P, Creswell C. How did the mental health symptoms of children and adolescents change over early lockdown during the COVID-19 pandemic in the UK? *JCPP advances*. 2021;1(1):e12009.
- Kearney CA. *Managing school absenteeism at multiple tiers: An evidence-based and practical guide for professionals*: Oxford University Press; 2016.
- Kearney CA, Turner D, Gauger MJTCEoP. *School refusal behavior*. 2010:1-2.
- Havik T. *Skolefravær*: Gyldendal; 2018.
- Morgan M, Gibbs S, Maxwell K, Britten N. Hearing children's voices: methodological issues in conducting focus groups with children aged 7-11 years. *Qualitative research*. 2002;2(1):5-20.
- Einarsdóttir J. Research with children: Methodological and ethical challenges. *European early childhood education research journal*. 2007;15(2):197-211.
- González C, Kearney CA, Vicent M, Sanmartín R. Assessing school attendance problems: A critical systematic review of questionnaires. *International Journal of Educational Research*. 2021;105:101702.
- Kearney CA. Forms and functions of school refusal behavior in youth: An empirical analysis of absenteeism severity. *Journal of child psychology and psychiatry*. 2007;48(1):53-61.
- Kearney CA, Silverman WKJJoCCP. Measuring the function of school refusal behavior: The School Refusal Assessment Scale. 1993;22(1):85-96.
- Fargas-Malet M, McSherry D, Larkin E, Robinson C. Research with children: Methodological issues and innovative techniques. *Journal of early childhood research*. 2010;8(2):175-92.

27. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative research in psychology*. 2006;3(2):77-101.
28. Pallesen S, Bjorvatn B. Døgnrytmeforstyrrelser. *Tidsskrift for Den norske legeforening*. 2009.
29. Hochadel J, Frölich J, Wiater A, Lehmkuhl G, Fricke-Oerkermann L. Prevalence of sleep problems and relationship between sleep problems and school refusal behavior in school-aged children in children's and parents' ratings. *Psychopathology*. 2014;47(2):119-26.
30. Lazarus RS. *Stress and emotion: A new synthesis*: Springer publishing company; 2006.
31. Kearney CA. An interdisciplinary model of school absenteeism in youth to inform professional practice and public policy. *Educational Psychology Review*. 2008;20(3):257-82.
32. Tomaino MAE, Greenberg AL, Kagawa-Purohit SA, Doering SA, Miguel ES. An assessment of the feasibility and effectiveness of distance learning for students with severe developmental disabilities and high behavioral needs. *Behavior Analysis in Practice*. 2021:1-17.
33. Kearney C, Fornander M. School refusal behavior and absenteeism. *Encyclopedia of adolescence*. 2018:3298-303.
34. Havik T, Ingul JM, editors. *How to Understand School Refusal*. *Frontiers in Education*; 2021: Frontiers.
35. González C, Díaz-Herrero Á, Sanmartín R, Vicent M, Pérez-Sánchez AM, García-Fernández JM. Identifying Risk Profiles of School Refusal Behavior: Differences in Social Anxiety and Family Functioning Among Spanish Adolescents. *Int J Environ Res Public Health*. 2019;16(19).
36. Place M, Hulsmeier J, Davis S, Taylor E. The coping mechanisms of children with school refusal. *Journal of Research in Special Educational Needs*. 2002;2(2):no-no.
37. Stoeckli G. The role of individual and social factors in classroom loneliness. *The journal of educational research*. 2009;103(1):28-39.
38. Hendron M, Kearney CA. School climate and student absenteeism and internalizing and externalizing behavioral problems. *Children & Schools*. 2016;38(2):109-16.
39. Soler N, Hardwick C, Perkes IE, Mohammad SS, Dossetor D, Nunn K, et al. Sensory dysregulation in tic disorders is associated with executive dysfunction and comorbidities. *Movement Disorders*. 2019;34(12):1901-9.
40. Melvin GA, Heyne D, Gray KM, Hastings RP, Totsika V, Tonge BJ, et al., editors. *The Kids and Teens at School (KiTeS) framework: An inclusive bioecological systems approach to understanding school absenteeism and school attendance problems*. *Frontiers in Education*; 2019: Frontiers.