

Delayed educational services during Covid-19 and their relationships with the mental health of individuals with disabilities

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Abstract

During the coronavirus disease 2019 (Covid-19) pandemic, individuals with disabilities (IWD), like many others, have not been able to benefit effectively from educational and school-based mental health services, which are vital to achieving mental good health. This study aimed to collect views of IWD about how their mental health was affected by the school closure during Covid-19. Thirty-one IWD were interviewed and data were analyzed thematically. Findings indicated that the educational delay, combined with the pressure of the preventive measures against Covid-19 was associated with (i) difficulties in emotional well-being, structured routines, learning, and socialization, (ii) enhanced feelings of isolation and pain, and (iii) negative perceptions of academic-self-efficacy and therapy-related outcomes. The findings of the study highlight the importance of urgent short-term and long-term measures to provide safe and individually oriented educational services to compensate for the consequences of the pandemic.

KEYWORDS

Covid-19, educational delay, individuals with disabilities, mental health, school closure

1 | INTRODUCTION

Over recent years, there has been an increasing recognition that individuals with disabilities (IWD) are at risk of experiencing mental health difficulties (Bates et al., 2004; Cree et al., 2020). Although the physical, cognitive and emotional difficulties that IWD experience may decrease their access to the facilities, opportunities, and services

targeting mental health, issues related to planning and delivery may also increase the risk of under-servicing IWD (Whittle et al., 2018). Relatedly, the estimates reported in the literature indicate a potential barrier against IWD for accessing the resources that could improve their mental health (Buckley et al., 2020). To overcome these barriers, institutions of various sorts have adopted an inclusive perspective to offer services to IWD and support them in developing mental good health. For example, the variety of educational opportunities, as well as the number of IWD benefitting from the services, has increased steadily in recent years (Bourke et al., 2017). However, the recent pandemic caused by the coronavirus disease has not only restricted the mobility of IWD but also led to a cancellation in the provision of services due to the closure of educational institutions, which assume a critical role in offering IWD opportunities for mental health.

Teaching and learning have a central part to play in anchoring the whole process of promoting mental, emotional, and social health in schools (Macklem, 2014). Increased awareness of the role of schools in offering an integrated curriculum supporting mental health for youth, particularly IWD, is reflected in the integration of mental health content within the mainstream and special curricula. There is a consensus in schools assuming that achieving mental health through a professional curricular perspective can equip IWD with the ability to engage fully and meaningfully in one's communities and pursuits and to overcome barriers and obstacles without undue distress (Saxena & Setoya, 2014). However, the closure of mainstream and special schools which provide the majority of the mental health services that IWD can access is likely to lead to serious mental health consequences for them (Wang et al., 2020).

School plays a significant role in the lives of IWD. Children and adolescents with disabilities leave school each day with several gains in learning, behavior, and development, and specifically good peer and family relationships, socialization, resilience, academic achievement, and cultural and social awareness. For IWD, education is primarily important to gain skills and knowledge to achieve an enhanced level of mental health. However, IWD have been deprived of these advantages due to the school closure during the coronavirus disease 2019 (Covid-19) pandemic. Due to the pandemic, almost all mainstream and special education schools that offer mental health services either totally remained closed or offered very limited services. Indeed, there is evidence in the literature (e.g., Asbury et al., 2021) that IWD who could not receive educational services during Covid-19 and their families are likely to be at greater risk of experiencing poor mental health, and to be under substantially greater pressure, than less vulnerable families.

The psychological consequences of Covid-19 for many people are notably severe. However, vulnerable individuals such as those with disabilities are likely to get affected more. With this in mind, the current study attempted to explore the perceptions of IWD about the impact of the delayed educational services on their mental health. The study approached individuals with physical disabilities who could provide detailed information about the effects of the pandemic on their mental health, due to the nature of Covid-19 which prevents mobility and social interaction.

1.1 | Covid-19 and educational delay

The Covid-19 disease required to take preventive measures such as curfew, closure of entertainment areas and venues, cancellation of public services including education, and several self-protection behaviors such as self-quarantine, isolation, hygiene, and mask-wearing (World Health Organization, 2021). Although these measures have played an important role in preventing transmission of the virus they have also had some negative effects on mental health. For example, studies have reported Covid-19 related increases in the levels of anxiety, depression, and mental well-being (Satici et al., 2020). Also, millions of students have not made satisfactory progress in acquiring and improving skills to maintain balanced mental health because of the delay in school-based educational and mental health services. To compensate for the disadvantages, countries have designed various means to deliver educational and mental health support (e.g., via distance activities). However, reports show that distance means or

intermittent attendance in schools has fallen short of compensating for the lack of proper face-to-face delivery of educational and mental health services, which can hardly be effective unless given under a regularly operating school system (Lazarevic & Bentz, 2021).

The school closure during the Covid-19 pandemic forced teachers to create and use alternative teaching and learning strategies. Distance education was introduced as a solution to the school closure and it partly achieved the mission of maintaining mass education. However, the way the challenges for vulnerable populations are overcome is debatable. For example, distance education had consequences for students and families because the online activities required adequate technical skills and new visions of teaching and learning strategies. Many families had limited digital devices and a lack of adequately fast connectivity. Also, reports show that IWD and their parents encountered difficulties in participating in online learning (Azoulay, 2020). This debate expresses the concerns related to the educational challenges, mainly entailing an increase in all forms of inequality due to the digital divide (Parmigiani et al., 2020).

1.2 | The importance of continued education for mental health

Considering the time limitation, students' decreasing attention span and the increasing pressure on schools to be of benefit to all students, the importance of formal education and its permanent and organized delivery become more meaningful in contemporary social systems (Lazear, 2002). Therefore, delivering programmed, steady, and scheduled educational services is crucial to ensure that developmental, mental, and pedagogical objectives within the educational curricula are achieved. However, some ordinary situations such as drop-out, underachievement, or illness, which are preventable, may force individuals to quit schooling and leave the educational system without obtaining anticipated educational and mental health outcomes (Sakız, 2021). On the other hand, extraordinary situations such as the current Covid-19 pandemic have stopped the delivery of basic educational services and disrupted the access of individuals to these services. Therefore, the cancellation of educational activities, including school-based mental health programs, poses real risks for students.

For Michalos (2008), education can influence mental health when it is defined in (i) formal terms as the highest level of formal education attained including primary, secondary and tertiary education leading to diplomas, (ii) nonformal terms as the sort that might involve learning through course-work not connected to any diplomas or degrees, and (iii) informal terms as the sort that might involve learning outside of any course-work, from news media, works of art and culture, work-related training and experiences, social interaction and routine as well as extraordinary life experiences. Effective education defined in comprehensive terms can influence mental health by using naturalistic resources within schools to implement and sustain effective supports for students' learning and emotional/behavioral health; including integrated models to enhance learning and promote health; attention to improving outcomes for all students, including those with serious emotional/behavioral needs; and strengthening the active involvement of parents (Niemeyer et al., 2019).

There are studies about the relationships between isolation from the school during Covid-19 and negative social and emotional outcomes. For example, Prime et al. (2020) hypothesized that the isolation of children from their environments including schools could negatively affect the relationships in families. Outcomes of the study indicated that the impact of isolation from schools, playgrounds, and other social areas enhanced the parenting demands, responsibilities, and care burden, leading to weakened relationships between parents and their children. Similarly, Toseeb et al. (2020) have reported the views of parents of IWD about the needs of their children during Covid-19. The views highlighted mental health needs and included predominantly mobilization of the special and mainstream education services such as specialist professionals, full-time support in the mainstream, appropriate educational activities set by the school, and advice or support focused on children's mental health and wellbeing.

1.3 | IWD, education, and mental health

There is a great deal of evidence showing that IWD are at high risk of experiencing social and emotional difficulties. IWD tend to have lower self-esteem and be likely to be rejected by their peers, show lower motivation and a higher level of frustration which they find harder to manage, and be more likely to be alienated from school (Gurney, 1988; Weare, 2013). So there is a good deal of overlap between disability, learning difficulties, and emotional and social problems. Fortunately, schools can carry out the kind of actions that promote the mental, emotional and social health of all pupils including IWD. To achieve this, children and young people with disabilities need to be educated under an inclusive curriculum whereby objectives related to academic development and mental health are integral and associated.

To IWD, education can make a big contribution to skill and knowledge acquisition to maintain an optimum level of mental health, which is conceptualized as involving three clusters of development; cognitive, social, and emotional (Macklem, 2014). Among the various elements of mental health, contemporary and comprehensive discussions include life satisfaction, purpose, personal growth, educational attainment, environmental mastery, self-acceptance, autonomy, positive relationships, problem-solving and decision-making skills, and better biological functioning (Manderscheid et al., 2010). On average, IWD who can receive appropriate mental health services in schools are better equipped with psychosocial resources, but lack of such resources may put IWD at risk for mental ill-health (Niemeyer et al., 2019).

Education and its constant delivery are of great significance in the mental health of IWD. To ensure the development of mental good health among IWD, every nation must secure an appropriate education for its young citizens with disabilities (Hegarty, 1994). The number of IWD in schools and other educational contexts has been increasing in recent decades (Moriña & Orozco, 2021). Around the world, IWD are primarily enrolled in mainstream schools, with additional individual support targeting their special needs and demands. Receiving education appropriate to their needs and preferences, IWD have improved mental health and wellbeing by (i) acquiring social and emotional skills, personal growth, purpose in life, and satisfaction, (ii) developing the capacity to maintain their lives autonomously, (iii) joining the workforce, and (iv) participating actively in the mainstream social life (Sakiz, 2020).

The recent literature on Covid-19, which hypothesized that the school closure due to Covid-19 would affect IWD negatively, found that IWD fared badly from the educational restrictions and its outcomes in many aspects. Research results show that the measures taken to prevent the spread of the virus have interrupted the educational and support services IWD and their families have been receiving and that these restrictions have negatively affected IWD psychologically, emotionally, socially, and academically (Jeste et al., 2020; Warner-Richter & Lloyd, 2020). In addition, researchers have noted that the inability to receive educational and support services much needed for these children and families can increase the stress level of parents and cause behavioral problems and challenges in children (Narzisi, 2020). In addition, several studies investigated how the change in the social environment of IWD, including their deprivation of educational contexts and services affected their mental health. Research findings (e.g., Asbury et al., 2021) have shown that restrictions to prevent the spread of Covid-19, including the school closure, impacted the psychological well-being and behaviors of both children and their families negatively while families of IWD experienced increased anxiety.

1.4 | Research context

In Turkey, IWD are offered public education in mainstream and in special education schools, which are controlled by the Ministry of National Education. Mainstream schools provide inclusive education to IWD along with their peers who are not identified with any disability. Apart from mainstream schools, IWD are offered special education and rehabilitation services in separate schools. The separate schools for IWD take two forms. First, separate public schools for IWD are run by the state and provide free education. Second, separate private schools for IWD, also called Special Education and Rehabilitation Centers (SERCs), are run by private initiatives; however, they receive

government funding to provide educational services to IWD. Students can receive special education in SERCs in addition to the education provided by public schools; therefore all IWD can receive services from SERCs and public schools at the same time.

In mainstream and special education schools, IWD can access general and special education curricula according to their needs. Both types of curricula include objectives ranging from academic skills to mental, social, emotional, and cognitive development. All schools include school counselors who implement a 'guidance and counseling program' specifically to improve the mental health of the students. Permanent access and meaningful participation within the curricula in these schools are vital for the mental health of IWD.

In Turkey, the closure of mainstream schools and the stoppage of special education and rehabilitation services have likely deprived IWD of opportunities for mental good health. Some measures were taken to compensate for the disadvantages of this closure. For example, the Milli Eğitim Bakanlığı-Ministry of National Education (2020) produced additional online publications for students with special needs, designed software to convert digital text into the Braille alphabet, and distributed a newly designed special education application called 'I am special, I am in education (Turkish: Özelim Eğitimdeyim).' The application includes training videos, special education books and materials, activity pages and calendars, family training videos, and interactive videos targeting cognitive development, literacy, communication, social and coping skills. Nevertheless, not all IWD could access these services, use them and maintain a satisfactory online education process. Also, the question of how distance education can replace regular education in terms of its contribution to mental health is still debated. Indeed, UNESCO, United Nations Children's Fund, World Bank and World Food Programme (2020) stated that the long-lasting effects of the Covid-19 pandemic are particularly threatening the development of vulnerable and disadvantaged students and may lead to mental ill-health. Currently, the future of educational services is not easy to predict. IWD are disadvantaged by the conditions created by the pandemic.

1.5 | Research question

The Covid-19 pandemic is a recent phenomenon. Despite its recentness, however, it has brought about significant consequences for the education and mental health of IWD due to the closure of schools. Nevertheless, how this closure has affected the mental health of IWD is rather unknown and un-researched within the related literature. Therefore, this study was aimed at investigating how IWD were affected mentally by the delay in the provision of educational services during the Covid-19 pandemic. The overall research question could be expressed as follows:

-How did the delay in the educational services due to Covid-19 affect the mental health of individuals with disabilities?

1.6 | Instruments, participants, and procedure

To answer the research question, an interview schedule involving eight open-ended questions was developed. A qualitative design was selected by the researcher to allow the participants to reflect on their educational experiences during the Covid-19 pandemic. The interview schedule included the following questions: (1) 'What do you think about the closure of schools and the delay in the education during the Covid-19 pandemic?'; (2) 'How do you think the closure of schools affected individuals with disabilities?'; (3) 'How do you think the closure of schools and the delay in education affected you?'; (4) 'How do you think the closure of schools and the delay in education affected your mental health?'; (5) 'How did the delay in education affect your emotional health?'; (6) 'How did the delay in education affect your socialization?'; (7) 'How was your learning affected by the closure of schools?'; and (8) 'How do you evaluate the overall quality of the alternative education offered to you during the pandemic? Although

the interview schedule contained structured questions, their open-ended nature allowed for asking for more details to collect further data from the participants.

The interviews were conducted with 31 students with physical disabilities from two different but nearby cities located in the Southeast region of Turkey. The selection criteria for the participants included (a) attendance in both special education and mainstream schools, (b) having a physical disability, and (c) a voluntary decision to participate in the study. The sampling strategy was a hybrid of purposive and convenience sampling because, respectively, (a) participants who fit the aims of the study and met the inclusion criteria and (b) those who were available at the time of the research were invited to participate in the research. The researcher had previous contact with thirteen of the participants whereas the other eighteen were contacted via referral by people with whom the researcher had contact. The physical disabilities included cerebral palsy ($n = 7$), arm paralysis ($n = 6$), muscular dystrophy ($n = 6$), back injury ($n = 3$), spinal cord injury ($n = 3$), hip dislocation ($n = 3$), and spina bifida ($n = 3$). All participants were high school students between 14 and 18 ages (mean age = 16.6). Eighteen participants were males and 13 were females. All participants were intellectually able to participate in the interviews independently.

Official ethical approval from the ethics board of the related university (No: 34233153-050.04.04) and participant consent was obtained before data collection. All participants were informed about the aims of the study and they were guaranteed that no information that could reveal their identities would be asked during the interview and reported afterward. Procedures for the interviews were laid out in writing and were clearly explained to interviewees before the interviews proceeded.

An important ethical consideration was to make the participants happy with the location of the interview and therefore, they were offered alternatives. Four options were offered: (1) a visit by the researcher to their place, (2) a visit by them to the researcher's office, (3) an independent place outside of the two options (e.g., park), and (4) an online interview. Twelve participants asked the researcher to visit them at their flats (2 participants were visited in the nearby city), 12 participants preferred online interviews (8 participants being in the nearby city), 5 participants opted to meet at a public park (2 participants being in the nearby city), and 2 participants wanted to visit the researcher's office. The participants who attended the interviews at parks and the researcher's office came to the places either by using wheelchairs or being transported by a family member, a friend, or the researcher. All Covid-19 preventive measures were taken before the face-to-face interviews. The researcher and participants wore face masks and maintained hygiene at all times. The researcher never approached the participants when they felt symptoms of Covid-19. All participants consented to an audio record. The researcher constantly thought about the possible harm of the interview questions and minimized the potential distress to be caused by them by maintaining maximum awareness throughout the interviews.

1.7 | The coding and data analysis procedure

The coding and data analysis procedure was divided into three stages (Corbin & Strauss, 2015): (1) open coding, where the participants' answers were classified into 'codes' starting from the students' words, and 'coding' meaning generating concepts from the data; (2) axial coding, where these concepts were grouped into categories and subcategories, depending on differences and similarities; and (3) selective coding, where the researchers interpreted the data, selected the main categories and identified the connections among categories and codes. The analysis yielded 10 overarching themes.

To enhance the reliability and validity of the research and ensure that the analysis is trustworthy, some procedures were implemented. First, the researcher designed the interview schedule by considering the need for consistency between the aims of the study, the characteristics of the participants, and the quality of the interview questions. Next, the researcher was cautious in maintaining the focus on the research aims during the interviews so that the nature of the data remains in line with the research question. Third, participants were asked to check the content of the interview transcripts, and the researcher made sure that all participants confirmed the accuracy of

their content. Finally, the researcher asked for support from two other researchers to check the coding and thematization of the transcripts. Necessary revisions were made until agreement of all the three researchers about the codes and themes was ensured.

1.8 | Findings

Ten themes emerged throughout the analysis of the perceptions of IWD about the delayed education during Covid-19 and their mental health (Table 1): Emotional well-being, isolation, engagement, self-efficacy, structured routines, therapy-related effects, feelings of mobility and pain, academic self-efficacy, learning and socialization through education. Findings are illustrated to present the thematic analysis.

1.9 | Emotional wellbeing

All participants acknowledged that the closure of schools due to Covid-19 resulted in negative experiences concerning their emotional wellbeing. First, participants reported feelings of fear because Covid-19 can be lethal when IWD possess chronic illnesses. The vanity created due to the closure of schools intensified this fear. The feeling of emptiness created due to the closure of schools intensified this fear (e.g., Participant 4: *'At least I could forget about the fear of death if I was occupied with the school'*). Second, IWD emphasized that the anxiety caused by Covid-19 was intensified when they lost the protective power of educational attainment and support against anxiety. Most of the participants stated that their physical difficulties had already caused anxiety before Covid-19. However,

TABLE 1 Themes, codes and examples of thematic analysis

Themes	Codes
Emotional well-being	Feelings of fear (n: 20); anxiety (n: 14), loss of purpose (n: 12); loss of hope (n: 9); insufficiency of alternative educational services to support psychological wellbeing (n:7)
Isolation	Physical distance (n: 22); social distance (n: 17)
Engagement	Interest in life (n: 18); motivation (n: 17), interest in school (n: 14)
Self-efficacy	Feelings of being a burden (n: 17), decreased (n: 15) and increased feelings of resilience (n: 8)
Structured routines	Loss of structured rehabilitation routines (n: 19); inadequacy of the alternative family routines (n: 16); adequacy of alternative family routines (n: 6)
Therapy-related effects	Negative effects of the lack of therapy (n: 25); difficulty of affording for private physical therapy (n: 18); home-based therapy alternatives (n: 18)
Feelings of mobility and pain	Decreased mobility (n: 22); Increased pain (n: 21); increased familial responsibilities and roles (n:20)
Academic self-efficacy	Individual education plans (No: 20); feelings of ceased academic progress (No: 18); lack of appropriate testing and evaluation (n: 10); lack of appropriate and quality distance educational services (n: 9)
Learning	Lack of active learning (n: 23); lack of cooperative learning (n: 17); insufficiency of distance educational teaching strategies (n: 14)
Socialization through education	Lack of mainstreaming (n: 24), lack of social, sports and arts activities (n: 19)

inclusive education provided them with mainstream social and academic support while special education provided them with the mechanisms (e.g., psychomotor self-treatment support) to reduce the anxiety caused by the physical difficulties. One student reported that they spent a lot of time in mainstream and special schools and thus they developed daily and weekly routines. However, when schools were closed, they felt ambiguous and anxious about what would happen in the future.

Most of the participants stressed that they could develop a sense of purpose and hope about the future and feel emotionally well in schools (e.g., Participant 22: *'Losing my school deprives me of forgetting my difficulty and achieving my goals in life. I do not know if things will be the same as before'*). In addition to helping IWD to set a purpose in life, one student stated that the closure of schools left them in the middle of a huge emptiness because schools used to keep them busy through exercises, practices, social activities, and homework. Emphasizing the need for education to set future goals and persevere to achieve them, a student underlined the importance of schools where they could learn about peoples, places, and nature.

Some participants associated the alternative education during Covid-19 and its contribution to their emotional wellbeing. Most of them declared that alternative education such as distance learning did not contribute to their satisfaction significantly amid severe conditions including infection and death risk, quarantine, curfew, and physical difficulties. Some participants were content with the idea that there was at least some education they could receive. However, the quality and quantity of this sort of education were not sufficient to contribute to the overall wellbeing of IWD. For example, participants reported that distance education could not help them to improve their connection with other people, engage in physical activities, learn new skills and enjoy the present moment. A participant highlighted the inadequacy of distance education to support their social and physical development (e.g., Participant 21: *'Everything is on the computer. Everything is based on reading, writing and watching. Nothing is about physical health and socialization, which I need the most'*).

1.10 | Isolation

Covid-19 necessitates compulsory distance with the social entities and structures, resulting in behaviors of isolation among individuals. As some participants highlighted, the mainstream and special education schools were tools to reduce the isolation they already felt due to the decreased mobility resulting from their physical difficulties (e.g., Participant 8: *'The school is a place to come together and see each other with my friends. We sometimes meet outside these days but I do not always feel able to manage to wander around'*). However, the closure of schools has prevented IWD from the socialization of various sorts (e.g., shared activities, games, teamwork at school, homework groups, group therapy) and has led to feelings of loneliness and exclusion from the community (e.g., Participant 11: *'My friends used to treat me with care and cooperate because they knew I needed that. Losing that opportunity makes me feel bad'*).

The closure of schools was based on a necessity to maintain a physical distance among individuals. However, as reported by most participants, the physical distance has been everywhere in society, leading to isolation from schools and the community at large (e.g., Participant 24: *'Even when we were at school during a limited period within the pandemic, the physical distance kept us from doing many things together'*). The IWD in this study identified social distancing as associated with physical distancing (e.g., Participant 1: *'When you cannot see each other you start getting detached and forgetting each other'*). Most of the participants reported that they felt forgotten by their school friends.

1.11 | Engagement

The participants highlighted difficulties in engagement as an outcome of the closure of schools. Participants pointed to the difficulties they experienced in attention, focus, and loss of interest while engaging with daily routines and

educational tasks. First, the participants stated that schools were the primary means of clinging to life and securing their future within the disadvantageous conditions they already possess (e.g., disability and associated difficulties such as mobility, socialization). The closure of schools, however, led to difficulties in engaging with basic life routines and tasks (e.g., Participant 30: *'When there is no school, I feel like I am in emptiness'*). Along similar lines, most participants reported that the end of formal and active school activities led to difficulties in getting motivated to carry out basic life routines, engaging in distance educational tasks and socializing with others. As a result, students reported a decreased interest in the meaning and significance of education and consequent difficulties in the cognitive and behavioral aspects of educational engagement (e.g., Participant 15: *'I don't know if schools will ever open again. Even if they open, will things get any better? They say the pandemic will last long. What can education do when people die? So is it important to do homework within such a case?'*).

1.12 | Self-efficacy

The levels of self-efficacy can be influenced by the closure of schools due to Covid-19. When it comes to disability, the issue of self-care can become an element of uneasiness among IWD and their caregivers. Most participants stated that spending more time at home due to the closure of schools led to the feeling of being a burden for their family members (e.g., Participant 13: *'I act more independently at school. My family wants to do things for me all the time which I do not like. This makes me feel I am a burden for them'*). Participants reported that the time they spent in schools as well as the activities they performed there made them feel more autonomous than they were thought to be. Being perceived as a passive and care-needing person, according to some participants, made them feel less resilient against the difficulties created by their disabilities and the Covid-19 outcomes (e.g., precautionary behaviors). When schools were closed, they lost a significant tool where they could work, persevere, achieve and therefore, feel resilient against any difficulties they experience. On the other hand, there were IWD who reported that the extra difficulties caused by the Covid-19 and the closure of schools, required them to deal with these difficulties and therefore made them feel more resilient (e.g., Participant 10: *'It is the first time I have to face the fear of death and the feeling of emptiness. As I feel alone, I feel stronger'*).

1.13 | Structured routines

The closure of schools and delay in educational activities impacted the role played by the mental health services including special education and rehabilitation in the lives of IWD. An important contribution of these services is to help to develop routines in life. Most of the participants declared that the closure of the schools paved the way for the loss of structured routines. Before Covid-19, IWD visited the school several times a week and maintained the homework after school. However, the lack of special education and rehabilitation offered individually and in groups hindered their school-based (e.g., school visits, therapy sessions, school-based social, sports and art activities) and home-based routines (e.g., morning exercises, homework). To create new routines, IWD and their families attempted to carry out some of the activities at home. However, some participants stated that the new routines at home could not replace the ones they had before Covid-19 (e.g., Participant 19: *'My family does everything they can do. I attempt to keep what I did before but I do not feel as disciplined. When I lost my rehabilitation supervisors I felt like I am in emptiness'*). On the other hand, some participants reported that they were happy with the adequacy of the routines developed within their families during Covid-19. These participants resented the closure of schools; however, they argued that their family members supported them in restructuring their time by scheduling rehabilitative activities such as group exercise, hydrotherapy, walking out, and homework.

1.14 | Therapy-related effects

The participants reported that rehabilitative therapy played an important role in their lives because the therapy helped them to develop a treatment plan to improve their ability to move, reduce or manage pain, restore their function, and prevent severe disability. The closure of schools hindered the delivery of appropriate therapeutic services and affected the wellbeing of IWD (e.g., Participant 22: *'Physiotherapy made me feel effective and mobile. Staying inactive makes me feel like I am not functioning as a human'*). The deprivation from free therapy forced some families of IWD to seek private therapy offered by freelance experts. However, most participants stated that their families could not afford private therapy. Instead, parents and siblings attempted to implement therapy techniques and strategies on their own (e.g., Participant 30: *'I remember what my teachers applied to me and I tell my parents to help me with those movements when I cannot cope alone. We sometimes watch videos on physiotherapy and learn how to apply them at home. I sometimes feel that they help but sometimes not'*).

1.15 | Feelings of mobility and pain

For IWD, the closure of schools has negatively affected the role of education in improving their mobility and decreasing the pain caused by their difficulties. Most of the participants reported that they were not able to join individual-based (e.g., physical therapy, individual instruction) and group-based (e.g., exercise programs, clinical pilates, resistance training) special education and rehabilitation activities after the schools were closed and, therefore, they felt less motivated and able to go out, walk, socialize with others, and do their schoolwork and daily tasks (e.g., self-care). This was associated with the reports of IWD on the increased pain they felt (e.g., Participant 5: *'My legs need constant physiotherapy to reduce the disability and pain'*). Not surprisingly, families assumed responsibilities and roles to compensate for the lack of special education and rehabilitation received by their family members with physical disabilities. As reported by the participants, members of their families supported in the implementation of individual therapy accompanied their physical activities (e.g., walking outside, exercising inside) and tutored in individual study sessions.

1.16 | Academic self-efficacy

All participants acknowledged that inclusive education in mainstream schools contributed to their development and learning in many aspects (e.g., cognitive development, socialization, academic achievement). However, the closure of mainstream schools where IWD could receive inclusive education deprived them of this contribution. First, most of the participants reported that the individual education plans (IEP) which involved their learning needs and capacities were not implemented during Covid-19 (e.g., Participant 16: *'My teachers used to take my needs into account when I was at school. When outside, there is either no education or teachers straightforwardly provide limited online teaching'*). Second, most participants acknowledged that the closure of mainstream schools disrupted the academic progress they made. They reported staying behind their peers in terms of the pace of their academic progress and underachieving in the objectives of the general curriculum. The dissatisfaction with the level of progress was associated with the lack of adapted assessment strategies and processes. They could not have their progress assessed because there was no testing and evaluation which could provide feedback on how they were progressing with their studies conducted at home (e.g., Participant 24: *'Since the schools were closed I have not learned how I am doing with my studies. I sometimes test myself but it is not professional like my teachers did at school'*).

Distance education was implemented to compensate for the negative outcomes of the school closure. Some participants reported that following their courses through online technologies made them feel productive (e.g., Participant 27: *'At least I do something. Otherwise I would only sit at home and do nothing'*). The distance education

mostly focused on mainstream courses and, therefore, the Ministry designed an application for IWD to maintain special education. Participants praised this application for targeting cognitive development but resented that not all of them had access to the internet and to benefit from the related content. Also, the overall content included less on the needs on IWD (e.g., physical wellbeing). The participants stated that frequent problems (e.g., insufficient web infrastructure, inaccessible content, complicated software) were experienced during the delivery of distance education and these problems were either never resolved or solved after long trial and error processes. All in all, distance education could not replace regular education in terms of contributing to the academic self-efficacy of IWD.

1.17 | Learning

Inclusive education is a tool for IWD to join mainstream processes of learning with their peers from various ability levels. The students who participated in this study resented that they lost the chance of joining active and cooperative learning processes. First, most of the participants reported that their disabilities made it difficult to engage actively in their learning. However, the mainstream classrooms supported their active participation in their learning until schools were closed due to the pandemic (e.g., Participant 31: *'I felt productive because my teachers always encouraged me to speak and kept me motivated to follow the class. They gave me work to stay active'*). Second, the role of cooperative learning in the development of IWD was also highlighted by the participants because cooperation at mainstream schools enabled them to learn from and with their friends. However, the closure of mainstream schools deprived them of group-based learning activities and strategies in inclusive learning environments (e.g., Participant 4: *'One of my teachers always put us together in a group study. We learned from each other. I felt I could achieve because everyone had a role in the group'*).

Participants commented on their learning from distance education. Those who provided opinions stated that they did not feel progressing significantly through curriculum areas and rehabilitation skills (e.g., Participant 19: *'I can study myself in some courses like Turkish but I do not understand any math because it is not easy to learn math online...It does not work for my special education. What I need for rehabilitation is physical training and coming together with others. You cannot do these online'*). Part of the dissatisfaction of the IWD was related to the way teachers implemented distance education (e.g., Participant 10: *'Teachers seem exhausted too. They just teach something and leave. Maybe they do not know how to use the system because they struggle'*).

1.18 | Socialization through education

Inclusive education was perceived as an important tool for socialization. The closure of mainstream schools was blamed for preventing social engagement with friends and teachers. Mainstreaming was especially important for IWD because they are socially prone to exclusion from educational contexts. After the schools were closed, the IWD in this study could not come together with their peers and felt the risk of getting excluded (e.g., Participant 11: *'When I am already not strong to join other people, now I feel I am outside healthy people more than I felt when schools were open'*). The socialization of IWD with their peers and teachers in mainstream schools often occurred through social, sports, and art activities. Most participants acknowledged that they felt lonely because of the lack of such activities after schools were closed.

2 | DISCUSSION

Schools are an essential entry point of mental health for all children including IWD. Quality education enhances the achievement and wellbeing of individuals whereas educational loss can cost low-performing countries and vulnerable individuals even higher levels of potential educational and mental health gains (Burgess & Sievertsen, 2020). However,

the outbreak of the Covid-19 pandemic and the closure of schools to slow the transmission of the coronavirus has affected millions of children negatively. This study intended to explore the views of IWD about the ways the closure of schools affected their mental health. Mental health was conceptualized as a broad concept involving cognitive, emotional, and social elements. The views of the participants centered on ten themes.

In this study, IWD associated the closure of schools with various mental health difficulties involving deterioration in engagement, emotional wellbeing, self-efficacy, and isolation. Also, school closure was associated with disruptions in their routines and a decrease in biological regulation. Moreover, the delay in the educational services was perceived as negatively influencing academic self-efficacy and learning. Indeed, schools offer a unique opportunity to integrate learning and mental health at an age when managing emotions, social relationships, and behaviors is perhaps the single most important challenge that faces the human race (Weare, 2013). For IWD, formal education and its steady delivery are important in equipping them with various social, emotional, and cognitive skills (Christner & Mennuti, 2008). In line with the current findings, studies have shown that IWD who already have difficulties in accessing educational opportunities and contexts, may feel isolated from society and lack the resources to develop social and emotional skills (Brigola et al., 2019). On the other hand, under carefully organized curricula, IWD can develop social and emotional skills, self-esteem, peer acceptance, and sustainable relationships (Firat, 2020; Sakiz, 2017). IWD who are deprived of the chance to develop various skills and use them, which they can do in schools, may develop low self-esteem and abstain from engaging with different contexts and individuals (Bates et al., 2004).

The findings of this study are supported by more research which documents that IWD benefit from education in terms of mental health, physical wellbeing, and academic development. When schools involve programs and activities tailored to the needs of IWD, their social-emotional development and academic achievement can be promoted (Ruijs & Peetsma, 2009). For example, in an evaluation of eight schools implementing effective educational programs for IWD, Idol (2006) reported significant improvements in students' peer relationships and socialization, their state-wide test scores, and educators' skills in offering educational and mental health services for IWD in schools. Also, Myklebust (2007) found a positive effect of education on competence attainment of IWD in reading, writing, and math. Finally, the benefits of extracurricular activities implemented in an organized matter are well documented. These benefits include enhanced social and emotional competence (Siperstein et al., 2009), greater expectations from IWD (Kersh et al., 2012), and improved physical well-being (Válková et al., 2010). When deprived of the opportunities presented in schools, IWD might have felt the negative consequences in terms of mental health difficulties (Asbury et al., 2021).

The negative influence of the school closure on the mental health of IWD cannot be separated from the negative effects of the Covid-19 on mental health. It is common for confirmed or suspected cases of Covid-19 to suffer from major psychological problems (Li et al., 2020). Indeed, sudden outbreaks of public health events always pose challenges to mental health (Zhang et al., 2020). The mental health of IWD is particularly sensitive and more prone to deterioration, given the high risk of disadvantaged conditions, chronic diseases, and contamination due to frequent visits to rehabilitation services (United Nations, 2020). Research reports that the proportion of people experiencing anxiety or depression increases with a physical disability (Jones et al., 2014). Despite these circumstances, when schools communicate clearly, provide adequate educational resources, and help parents to feel prepared to support their children's learning, the mental health of IWD can improve. Research reports that the engagement levels and social-emotional competency of IWD have significantly improved in schools where all students could access a school involving a positive culture and strategies to include everyone within the entire educational process (Sakiz, 2017).

IWD have hardly reached special education and rehabilitation services due to the closure of schools during the Covid-19 pandemic. For example, the participants in this study reported the severe effects of the lack of therapy on their feelings of mobility and physical wellbeing. However, special education and rehabilitation services are vital for IWD to reduce the negative impact of their disabilities and improve their sense of functioning. When designed properly, special education can offer unique provisions to different needs of IWD and contribute to their development (Kauffman, 2015). Several studies have documented the positive impact of clinical, psychological, and social interventions on the physical, and psychosocial wellbeing of IWD. For example, Garcia (2014) reports the positive effects of clinical based psycho-education on the mental

health of IWD while Tarakci et al. (2020) found that the Leap Motion Controller-based physiotherapy training was significantly effective in improving grip and pinch strength in the arms of IWD including juvenile idiopathic arthritis, cerebral palsy and brachial plexus birth injury. However, when special education and rehabilitation services are canceled and no alternatives are offered, IWD are deprived of specially designed, coordinated, and monitored set of comprehensive, research-based instructional, clinical, psychosocial, and assessment practices, which can facilitate their behavioral, physical, cognitive, emotional, and sensory development. In the case of physical disabilities, whose difficulties create severe physical and social disadvantages, the availability of these services can be more meaningful and vital. However, the availability of special education and rehabilitation services enables IWD to access various opportunities and services. When these opportunities and services are transformed into practices tailored to identify and address their strengths and challenges; IWD can develop educationally, socially, behaviorally, and physically. In addition, these practices can foster equity and access to all aspects of schooling, community, and society (Salend, 2011).

In this study, the participants were registered in both mainstream and special education schools, allowing them to comment on both types of educational services. The IWD in the study resented that they were deprived of inclusive education and its associated benefits including academic self-efficacy, learning, and socialization. As is known, inclusive education saved many IWD from either receiving no education or getting segregated from the mainstream educational contexts. In carefully implemented inclusive practices, the benefits of inclusive education include improvements in social skills, academic achievement, employment opportunities after graduation, transition to higher education, self-esteem, peer acceptance, and sustainable relationships (Başaran, 2020; Tapasak & Walther-Thomas, 1999). Also, mainstream schools are places for IWD where they can obtain a set of technical, vocational, social, and academic skills to achieve an independent identity within the community (Sakiz, 2017). Mainstream schools provide social environments where children interact and play with their peers. For many IWD, peer relations, social perception, and social competence are significant aspects of their IEPs. However, the closure of mainstream schools eliminated the opportunities for IWD to attend mainstream curricula, engage in active learning processes, socialize with their peers and teachers, and feel like a main member of the community. Looking from the perspective of individuals with physical disabilities, mainstream schools are especially important for them because they can overcome the limitation of their physical difficulties and get mobilized, come together with peers, collaborate in the school and gain self-confidence through learning and academic efficacy (Sakiz, 2021).

Although distance education has been preferred in recent decades due to its flexibility that can be adjusted to time and place (Liu, 2012), its widespread recognition was achieved after it was compulsorily used due to Covid-19. Some participants in this study praised distance education to keep them active and productive to some extent. However, it was not considered to have a significant impact on their mental health, particularly on feelings of efficacy, learning, and socialization. Although distance education strategies aim to ensure continued learning for all children, the most marginalized children including those with disabilities may not be able to access these opportunities. Vulnerabilities may also expand, shift, or multiply due to health emergencies, poverty, and technical insufficiencies (Unicef, n.d.). Also, distance education has not yet been able to compensate for the lack of social interaction and face-to-face communication in education (Carr, 2000). This disadvantage may be combined with the anxiety and fear caused by the Covid-19 pandemic. Therefore it may result in enhanced uneasiness among individuals. On the other hand, some arguments have underlined the role of distance education, which involves limited social interaction, in decreasing the level of stress and anxiety (Lazarevic & Bentz, 2021). For example in Turkey, specific content in distance education was designed for IWD. However, it only targets several developmental areas (e.g., literacy) and specific disability groups (e.g., visual, mental, and learning disabilities) and, by nature, cannot compensate for the lack of physical therapy and social-emotional engagement.

2.1 | Limitations, recommendations, and conclusions

There are some limitations to this study. The study was conducted only with students with physical disabilities, to maintain focus within the study. However, studies need to hear the voice of individuals with different disabilities about their experiences during Covid-19. Also, the data were collected while the pandemic was still in place and this might have

affected the responses of the participants. Although this was not a deviation from the study aims because of its Covid-19-related nature, the researcher was aware of the need to set a ground for the participants to be as objective as they can be. Further studies are needed after the influence of the pandemic is lessened to observe the long-term impact of school closure on IWD.

There are implications for several stakeholders. First, policymakers need to be aware of the short-term negative impact of the closure of schools on mental health and consider either opening schools by taking appropriate precautions (e.g., vaccination, hygiene) or designing alternative strategies (e.g., home-schooling, home-based therapy). Both mainstream and special education services and resources need to be mobilized urgently. Also, IWD and their families need mental health support in various universal and targeted ways such as school mental health programs, family support programs, psychotherapy, resilience-building activities, and psycho-education. Finally, the educational policymakers are recommended to improve the technical capacity of distance education technologies, make them accessible and free to all students, and make the applications designed for IWD more inclusive and versatile to cover more developmental areas and needs.

To conclude, the importance of the steady provision of educational services for the mental health of IWD is well-documented. This study shows that as IWD miss the opportunities to develop socially, emotionally, physically, and academically at school, they tend to experience symptoms of mental ill-health. The advancements to overcome the pandemic are promising for the opening of mainstream and special schools. Therefore, we propose that new priorities within the post-Covid-19 educational movement provide a timely opportunity for integrating mental health goals and educational services, which should involve collective and rigorous approaches to combat the negative impact of school closure.

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CONFLICT OF INTEREST

The author declares that there is no conflict of interest.

ETHICS APPROVAL

Research ethics approval was attained from the Mardin Artuklu University's Office of Research Ethics.

PATIENT CONSENT

All participants were informed of the study purpose and procedures and consented to participate.

PEER REVIEW

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DATA AVAILABILITY STATEMENT

Data available on request from the authors. The original interview transcripts can be made ready upon request.

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