

Educators' experiences in special education institutions during the COVID-19 outbreak

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The COVID-19 outbreak has had a profound impact on education worldwide. As a result of the educational institutions closures, it is likely that the impact on special education would be more detrimental since special education population becomes more vulnerable in the aftermath of an outbreak. In the scope of this study, a researcher created survey was used to examine educators' teaching experiences and their perceptions about the impact of COVID-19 outbreak on special education students. The sample included 215 educators working in the Special Education and Rehabilitation Centers (SERCs) in Turkey. Results indicated that a large majority of the SERCs were not able to continue their education during the COVID-19 outbreak. In addition, there was a difference in educators' experiences by their educational practices (normal weekly schedule, reduced schedule, most of the educational activities are suspended, and all of the educational activities are suspended). Perceived level of COVID-19 outbreak impact on special education students were found to be significantly higher for autism spectrum disorders, intellectual disabilities, attention deficit and hyperactivity disorders, visual impairments, hearing impairments, specific learning disabilities and gifted students, respectively. The conclusion highlights the need of global collaboration, disaster preparation and management for students with special needs.

The recent global pandemic has generated a new wave of concerns among special education settings in Turkey. In 2020, almost 387,000 students with special needs have received their education in the Special Education and Rehabilitation Centers (SERCs) which are state-funded or private-funded institutions providing special education supports out of school time (Special Education Institutions Regulations [SEIR], 2012). As students with special needs are vulnerable in the pre-disaster stage, they become more vulnerable in the post disaster stage (Satapathy, 2009) as a result of the educational institutions closures, which in turn, has caused these students not being able to receive appropriate special education services.

There is a growing concern about the preparedness of teachers, professionals and administration staff working in special education settings. Pandemic preparedness of educators is drawing attention of researchers, as such research is vital to identify needs and to be prepared for the potential future pandemic situations. The current study aimed to address the gap and provide data about experiences and perceptions of educators working in the SERCs, which can be used to allocate resources.

Many schools in several countries were closed to mitigate the spread of the coronavirus starting with February 2020 (United Nations Educational Scientific and Cultural Organization, 2020). The pandemic has reshaped the education system and resulted in 'distance learning'. Distance learning has been defined as an instruction in which students and teachers are physically separated, but the instruction may include different forms such as computer and internet, live instruction (audio and/or video), printed materials provided to students via emails (Frederick et al., 2020). However, students may not have equal access to new era of education (Burke and Dembsy, 2020). For example, parents may not have skills and time for distance learning; teachers may not have online teaching skills; or students and schools may not have technological devices that are necessary for distance learning (Burke and Dembsy, 2020).

Since the COVID-19 outbreak, there has been an increased attention to the preparedness of the education system. Governments have predominantly used television to deliver distance learning and ensure education (Dreesen et al., 2020). Likewise, Turkish government has taken measures to limit the impact of outbreak on education. At the time of writing this article, lessons have been planned to be aired on an online platform named as EBA (Education Informatics Network [Eğitim Bilişim Ağı] and national public broadcaster, which is Turkish Radio and Television Corporation (TRT) for 20 million elementary, secondary and high school level students by the Ministry of National Education in Turkey (Ministry of National Education, 2020a). Ozer (2020) addressed several measures imposed against COVID-19 outbreak for general education students in Turkey.

Recent global pandemic has influenced not only general education institutions, but also special education institutions in the world. As protective measures, distance learning models have been used to serve students with special needs by US schools (Frederick et al., 2020). In Turkey, three major steps were taken to support students with special needs, their teachers, and parents by the Director of Special Education and Guidance Services (Ministry of National Education, 2020b): First, applications aimed at supporting the certain topics in reading-writing, math, language and communication, and practical skills were offered for free. Second, informative videos for parents of students with special needs and instructional videos for students with special needs were aired on EBA. Third, activities were prepared for students who continue their education in inclusive classrooms were released on EBA. Lastly, online resources were made available to students with special needs at EBA Library.

Even though most education systems have taken measures after disasters or outbreaks, very little research has been executed to examine the experiences of educators in the aftermath of a disaster or outbreak. Ducey and Stough (2011) conducted a qualitative study to examine the special educators' roles and experiences after Hurricane Ike. Results of the study illustrated that teachers provided both tangible and intangible supports to students with significant disabilities. In another study, Ozmen (2006) examined the preparedness of principals and teachers towards an earthquake in Turkey and concluded that school staff were not well-prepared for future disasters. As educational settings are playing a crucial role in minimizing the effects of disasters even for the most vulnerable population (Ronan and Johnston, 2005), educators should be up to date about how to behave before, during and after the disasters to minimize these effects (Kokcu et al., 2012). Being prepared is even more important when educators serve to special education population who are more vulnerable due to their unique needs.

Special education in Turkey

Education of students with disabilities is coordinated by the General Directorate of Special Education Guidance and Counseling Services of the Ministry of National Education in Turkey. Students with disabilities are educated in general education classrooms, special education classrooms in general education schools and special education schools for certain types of disabilities (e.g. visual disabilities, intellectual disabilities). While majority of students with disabilities (74.2%) are educated in inclusive settings, 25.8 Percent of them are educated in special education schools (Tekin-Iftar, Jimenez, and Degirmenci, 2021).

Students with disabilities can receive additional supports during after-school time in the SERCs. The SERCs are state-funded or private-funded institutions that provide supports to students with special needs in line with their

interests, wishes, abilities and competencies by using special methods, personnel, tools and equipment out of school time (SEIR, 2012). As mentioned in the regulation, the purpose of the SERCs is to improve social, self-care, and independent living skills of students with special needs by minimizing the effects of language and speech difficulties as well as mental, physical, sensory, physical, social, emotional and behavioural problems.

Students who are found eligible to receive special education supports can receive one-on-one education, group or one-on-one plus group education in the SERCs. Individuals with different disabilities, such as specific learning disabilities, intellectual disabilities, autism spectrum disorders, hearing impairment, visual disabilities, orthopaedic impairments and multiple disabilities can receive special education supports provided by special education teachers, preschool teachers, guidance and psychological counsellors, physiotherapist, audiologists, speech and language therapists and social workers working in the SERCs (SEIR, 2012).

Research has explored the disaster experience of individual with disabilities (Park et al., 2019; Rooney and White, 2007; Smith and Notaro, 2009); and their caregivers (Henderson and Hildreth, 2011). What is missing in the literature is the kind of research that evaluates the experiences of educators working in special education settings. As the SERCs ensure the education of students with special needs in Turkey, examination of the experiences of educators working in these settings is critical to understand the needs of an affected community.

Purpose and research questions

The purpose of this study is to examine educators' teaching experiences and their perceptions about the impact of COVID-19 outbreak on special education students. Two research questions constructed for this purpose are: (1) Is there any difference in educators' experiences by their educational practices during the COVID-19 outbreak?, (2) do perceived level of COVID-19 outbreak impact on special education students (i.e. visual impairments, hearing impairments, autism spectrum disorders, specific learning disabilities, intellectual disabilities, gifted education, attention deficits and hyperactivity disorders) differ than the hypothesized mean?

Materials and methods

Sampling

The research is exploratory in nature and quantitative data were collected through online surveys by using snowball sampling. Surveys are used to collect data from a population to explore characteristics, attitudes or opinions (Gall, Gall, and Borg, 2003; Wallen and Fraenkel, 2001). The use of online survey provided access to a difficult population due to the restriction and social distancing rules as a result of COVID-19 pandemic during the time when the

study was conducted. In addition, the use of online survey allowed to collect data in a short amount of time from a large population at respondents' convenience. To combat social desirability bias, the survey was kept anonymous and identifying markers (i.e. names of institutions) were not asked for further confidentiality. Data were drawn from a sample of 227 educators working in the SERCs in one province in the Marmara Region of Turkey.

Participants

The initial sample included 227 special educators who were working in the SERCs. Among those educators, 12 respondents were removed from the study for reporting the fact that they were working in educational settings (i.e. resource rooms) other than the SERCs. Thus, final sample included 215 educators who held different positions in the SERCs. Gender breakdown was 80.9 Percent for female educators and 19.1 Percent for male educators. The age of the sample ranged from 22 to 65 years old, with a mean of 30.31 years ($SD = 7.88$). Years of teaching experience ranged from 1 to 44 years, with a mean of 6.42 years ($SD = 6.88$). With respect to highest education degree earned, 79.1 Percent of them had an undergraduate degree while 20.9 Percent of them had masters' degree. The distribution of the sample is shown in Table 1.

Procedures

Prior to any data being collected, the study was approved by the university institutional review board. School closures began on March 16th, 2020 and remained until June 15th, 2020 in Turkey. Invitations to participate in online survey were sent in two phases. The first and the second invitations were sent on June 5th and June 10th, respectively. The survey started with a consent letter including information about the survey and guaranteeing that participation was voluntary, that they had right to end the survey at any time, and that data were kept confidential. In addition, a consent statement was included at the end of the first page: 'By proceeding the next page I am giving my consent to participate in this study'. Identifying markers such as names of the participants and institutions were not asked to ensure confidentiality. Educators completed an online survey consisting of a demographic information questionnaire and the COVID-19 Experiences and Perceptions Survey (CEPS) assessing their experiences and perceptions during the COVID-19 outbreak. The median time for survey completion was around 15 minutes.

Development of the Survey. The survey was developed based on phone interview with two educators working in the SERCs and unstructured group interviews with four special educators conducted for three times in March, April and May to have a further understanding about educators' experiences. To address the validity and reliability, the followings steps were taken: The draft was sent to the expert review, a pilot study was conducted with five teachers to examine the clarity and practicality

Table 1: Research participants

Demographic Variables	n (%)
Gender	
Female	174 (80.9%)
Male	41 (19.1%)
Years of teaching experience	
1-5	124 (57.7%)
6-10	53 (24.7%)
11-15	23 (10.7%)
16-20	9 (4.2%)
21 or >	6 (2.8%)
Educational degree	
Undergraduate	170 (79.1%)
Master's degree	45 (20.9%)
Status	
Principal	19 (8.8%)
Special education teacher	95 (44.2%)
Child development	50 (23.3%)
Physical therapist	17 (7.9%)
Early childhood teacher	7 (3.3%)
Audiologist	5 (2.3%)
Psychologist	5 (2.3%)
Speech and language therapist	3 (1.4%)
Physical education teacher	3 (1.4%)
Social worker	1 (0.5%)
Not indicated	10 (4.7%)
Institution size	
Small	68 (31.6%)
Medium	98 (45.6%)
Large	49 (22.8%)

N = 215.

of the survey questions. After the pilot study, some of the items were revised. The survey includes two parts explained below.

Part 1. The correlation coefficients between each item and total score was calculated and the Cronbach's alpha as a measure of internal consistency was used to address the internal consistency. First, correlation between items and total score were obtained to be between 0.38 and 0.84. All items were significantly correlated; thus, all items were included in the survey. Second, the Cronbach's alpha coefficient of internal consistency was at 0.945 for 20 items, which can be considered as excellent. Corrected item-total correlations indicated that all items were important to be included. Exploratory factor analysis was used to analyse the factor structure. The Kaiser-Meyer-Olkin (KMO) was 0.933, which can be considered as an adequate sample for factor analysis. The Bartlett's Test of Sphericity was 0.000 indicating that the factor analysis was appropriate to use in this study. Four items

(Item 8, 9, 10 and 11) were deleted as it loaded on two factors. Using the ‘eigenvalues of 1.00 or greater’ criterion, the factor analysis accounted for four factors explaining 72.81 Percent of the total variance of the remaining 16 items. Table 2 shows the factor loadings, means and standard deviations of each item.

Part 2. Participants were asked to report the degree of perceived impact of COVID-19 on special education students. The Special Education Teaching Program, which is implemented at private and public universities across the country, included six disability categories. These categories are visual impairments, hearing impairments, autism spectrum disorders, intellectual disabilities, gifted education and specific learning disabilities including attention deficit hyperactivity disorders. Thus, only these seven categories were included in the survey. The second part includes 7 items constructed on a 5-point Likert items, with 1: very low impact to 5: very high impact. The Cronbach’s alpha coefficient of internal consistency was at 0.865, which can be considered as good.

The COVID-19 experiences and perceptions survey (CEPS)

The final version of the survey includes two parts. The first part of the CEPS includes 16 items distributed to four domains to measure educators’ experiences during the COVID-19 outbreak. Each item was constructed on a

5-point Likert items, with 1: Strongly disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree. Higher score indicates more positive experience of educators working in the SERCs. Cronbach’s alpha coefficient of internal consistency was found to be 0.92 for the 16-item. The second part of the CEPS includes 7 items distributed to one domain to determine the degree of perceived impact of COVID-19 on special education students. Each item was constructed on a 5-point Likert items, with 1: very low impact to 5: very high impact. Cronbach’s alpha coefficient of internal consistency was found to be 0.865.

Data analysis

The software program used in this study to analyse data was SPSS. The level of statistical significance was set at 0.05 in all of the statistical analyses. Descriptive analysis (frequency, percentage, mean, standard deviation) was used in this study. The Cronbach Alpha Coefficient was used for reliability analysis. The dependent variable was normally distributed, as determined by kurtosis and skewness analysis. The institution size was categorized as small, defined as less than 201 students; medium defined as 201- 400 students; and large institutions defined as 401 students and greater, based on tertile cut points. As a result of an unequal sample size of each level, a Kruskal-Wallis test and a Mann-Whitney U test were used to examine whether there was a statistically significant difference between two or more groups. A one-sample t-test

Table 2: Factor loadings

Items		Factor loading	Mean	Standard deviation	% of Variance
Factor1: Communication	My institution cooperates with other private education institutions during the pandemic period.	0.679	3.20	1.33	49.41
	My institution supports the well-being of its employees during the pandemic period.	0.656	2.85	1.41	
	My institution is well-prepared for the educational break due to COVID-19.	0.640	2.63	1.38	
	There is a communication system used by my institution to inform students, parents and employees.	0.766	3.39	1.40	
	As an institution, we are in communication with students.	0.872	3.58	1.24	
	As an institution, we are in communication with parents.	0.867	3.65	1.28	
	My institution communicates regularly with its employees.	0.712	3.29	1.44	
Parents contact with the institution or educators to check the amount of assignments and the pace of progress.	0.685	3.07	1.30		
Factor 2: Support	My institution provides academic support to special education students.	0.810	3.26	1.28	8.75
	My institution provides social and emotional support to special education students.	0.859	3.53	1.27	
	My institution provides academic support to parents.	0.808	3.40	1.25	
	My institution provides social and emotional support to parents.	0.835	3.50	1.28	
Factor 3: Teaching	In the case of any educational break, we should have a readily available curriculum.	0.789	4.23	1.13	7.67
	Educational break helped use to understand shortcomings in special education.	0.845	3.83	1.21	
Factor 4: Student	Pandemic would affect student enrolment for the new academic year.	0.777	2.27	1.14	6.97
	We have a sufficient distance education plan for the education of special education students.	0.709	2.26	1.21	

N = 215.

was employed to determine whether the sample mean was statistically different from a known mean value.

Results

The first part of the CEPS is a 5-point Likert scale, and it consists of 16 items. The mean score was 3.28 ranging from 1 to 4 with a standard deviation 0.86 for Part 1 of the CEPS. A Kruskal-Wallis H-Test was employed to compare educators' experiences by their institution size. The institution size was organized by three levels: (1) small, (2) medium and (3) large. There was no significant difference in teachers' experiences by their institution size ($\chi^2(2) = 2.416, P = 0.299$).

A Kruskal-Wallis H-test was performed to compare educators' experiences by their educational practices during the COVID-19 outbreak. The educational experience was organized by four levels: (1) face-to-face education is replaced by distance education, the institution operates its normal weekly schedule, (2) face-to-face education is replaced by distance education, but the institution operates its reduced schedule, (3) most of the educational activities are suspended, the institution is trying to figure out a solution to offer education through digital methods, (4) all educational activities are suspended. More specifically, 5.6 Percent of educators opted to '1', 4.6 Percent of educators opted to '2', 45.6 Percent of educators opted to '3', and 44.2 Percent of educators opted to '4'. There was a significant difference in teachers' experiences by their educational practices during the COVID-19 outbreak ($\chi^2(3) = 19.044, P = 0.000$), with a mean score of 3.21 for Factor 1. There was a significant difference in teachers' experiences ($\chi^2(3) = 10.144, P = 0.017$), with a mean score of 4.03 for Factor 2. Neither was there any significant difference in teachers' experiences by their educational practices ($\chi^2(3) = 3.93, P = 0.26$), with a mean score of 4.03 for Factor 3. There was a significant difference in teachers' experiences ($\chi^2(3) = 12.62, P = 0.006$), with a mean score of 2.26 for Factor 4.

In order to determine the significant differences in educators' experiences by their educational practices, multiple comparisons using a Mann-Whitney U-Test was performed for each factor. Educators who opted to 'normal weekly schedule' had statistically higher scores than educators who opted to 'reduced schedule' ($U = 30, P = 0.044$) for Factor 2. Educators who opted to 'normal weekly schedule' had statistically higher scores than educators who opted to 'all educational activities are suspended' for Factor 1 ($U = 321, P = 0.014$) and for Factor 2 ($U = 367, P = 0.044$). Educators who opted to 'most of the educational activities are suspended' had statistically higher scores than educators who opted to 'reduced schedule' for Factor 2 ($U = 292, P = 0.034$). Educators who opted to 'most of the educational activities are suspended' had statistically higher scores than educators who opted to 'all educational activities are suspended' for Factor 1 ($U = 3087, P = 0.000$), for Factor 2 ($U = 3791.5, P$

$= 0.025$), and for Factor 4 ($U = 3397, P = 0.001$). Table 3 presents the results of the Kruskal-Wallis test and the Mann-Whitney test.

The second part of the CEPS is a 5-point Likert scale and it consists of 7 items. A one-sample t-test was used to determine whether the perceived level of COVID-19 outbreak impact on special education students (i.e. visual impairments, hearing impairments, autism spectrum disorders, intellectual disabilities, gifted education, specific learning disabilities, attention deficits and hyperactivity disorders) differ than the hypothesized mean defined as a score of 3.0. The mean of impact for students with visual impairment ($M = 3.61, SD = 1.26$) was significantly higher than the score of 3.0, $t(214) = -7.12, P = 0.000$. The mean of impact for students hearing impairment ($M = 3.60, SD = 1.17$) was significantly higher than the score of 3.0, $t(214) = -7.45, P = 0.000$. The mean of impact for students with autism spectrum disorders ($M = 4.08, SD = 1.44$) was significantly higher than the score of 3.0, $t(214) = -11.08, P = 0.000$. The mean of impact for students with specific learning disabilities ($M = 3.50, SD = 1.26$) was significantly higher than the score of 3.0, $t(214) = -5.86, P = 0.000$. The mean of impact for students with intellectual disabilities ($M = 3.87, SD = 1.31$) was significantly higher than the score of 3.0, $t(214) = -9.69, P = 0.000$. The mean of impact for gifted students ($M = 3.23, SD = 1.31$) was significantly higher than the score of 3.0, $t(214) = -2.61, P = 0.010$. The mean of impact for students with attention deficit hyperactivity disorders ($M = 3.84, SD = 1.24$) was significantly higher than the score of 3.0, $t(214) = -9.90, P = 0.000$.

Discussion

Results of this study reflect educators' experiences and perceptions about the impact of COVID-19 outbreak on special education students in Turkey. While it is acknowledged that the results of this study represent only one province of the country, the results nevertheless provide an understanding of how the special education institutions handled the COVID-19 outbreak and evaluate the degree of impact on students with special needs in the eyes of their educators.

It appears that students with special needs did not continue their education as 45.6 Percent of the educators reported that most of the educational activities are suspended and 44.2 Percent of them reported that all educational activities are suspended. Results of this study clearly showed the necessity of a back-up plan for students with special needs. Very little research exists in the literature that examines disaster preparedness plans for students with special needs. One study, which investigated the US schools' emergency preparedness, showed that one-quarter of schools did not have a plan for students with special needs (Graham et al., 2006). As students with special needs becomes more vulnerable after

Table 3: Educators' experiences by their educational practices

	Kruskal-Wallis Test			Mann-Whitney Test			
	Chi-square	df	P	Comparison	U	P	z
Factor 1	19.044	3	0.000	1–2	43.5	0.275	–1.093
Communication				1–3	523.5	0.536	–0.619
				1–4	321	0.014*	–2.461
				2–3	404	0.361	–0.913
				2–4	374	0.270	–1.104
				3–4	3087	0.000*	–4.045
Factor 2	10.144	3	0.017	1–2	30	0.044*	–2.017
Support				1–3	5318	0.242	–1.171
				1–4	367	0.044*	–2.011
				2–3	292.5	0.034*	–2.117
				2–4	407	0.455	–0.748
				3–4	3791	0.025*	–2.243
Factor 3	3.927	3	0.269				
Teaching							
Factor 4	12.620	3	0.006	1–2	42.5	0.242	–1.171
Student				1–3	5373.5	0.525	–0.636
				1–4	384	0.060	–1.877
				2–3	372.5	0.207	–1.263
				2–4	462	0.885	–0.145
				3–4	3397.5	0.001*	–3.295

Notes: 1: face-to-face education is replaced by distance education, the institution operates its normal weekly schedule, 2: face-to-face education is replaced by distance education, but the institution operates its reduced schedule, 3: most of the educational activities are suspended, the institution is trying to figure out a solution to offer education through digital methods, 4: all educational activities are suspended.

the disaster as a result of the loss of schools in terms of physical access and educational access, each special education institution should have a site-specific disaster plan and prepare their educators for potential future disasters. As the present study suggests, there is a need for the investigation of the institutions' practices during COVID-19 outbreak period and evaluate their practices to contribute the knowledge of practitioners and researchers to explore potential promising practices.

Perceived level of COVID-19 outbreak impact on special education students were found to be significantly higher than the hypothesized mean regardless of the type of the disability. First, the perceived impact was found to be the highest for students with autism spectrum disorders ($M = 4.08$), followed by students with intellectual disabilities ($M = 3.87$). These findings were not surprising as intense supports required for students with autism spectrum disorders were not delivered due to containment measures (Narzisi, 2020). Second, students with attention deficit hyperactivity disorders were perceived as the third most impacted category in this study ($M = 3.84$). This result was consistent with the claim that individuals with attention deficit hyperactivity disorders might exhibit higher behavioural problems as a result of the distress caused by Covid-19 outbreak

(Cortese et al., 2020). Empirical evidence exists in the literature indicating that ADHD symptoms of children were significantly worse during the COVID-19 outbreak (Zhang et al., 2020). In the study of, Zhang et al., (2020) the average of children's ADHD behaviours was found to be significantly higher ($M = 2.25$, $P < 0.001$) than the normal state of '2'. In addition, parents reported the most three problematic behaviours as a decreased level of focus (53.94%), an increased level of anger (67.22%), and a decreased level of daily routine (56.02%) for their children with ADHD (Zhang et al., 2020). Another finding of current study was the equal impact for students with visual impairments ($M = 3.61$) and hearing impairments ($M = 3.60$). This may open new avenues about the experiences of individuals with visual impairments and individuals with hearing impairments for further understanding. Lastly, the perceived impact was found to be significantly higher for students with learning disabilities and gifted students than the hypothesized mean. It is important to consider that the perceived impact was the lowest for gifted students ($M = 3.23$), followed by students with learning disabilities ($M = 3.50$) among all categories. The most compelling explanation for these findings may be students' abilities to cognitively process the influence of COVID-19 on one's daily life.

In summary, education institutions closures were challenging for students with special needs and their educators. As it is the first piece of research in the field examining educators' experiences and perceptions about the impact of COVID-19 outbreak on special education students in Turkey, this study provided an initial understanding to certain points. It will therefore be important to identify appropriate supports for students with special needs to ameliorate the impact of school closures.

Conclusion

A limited number of researchers have investigated the impact of COVID-19 outbreak on students with special needs. Although present study was conducted in Turkey, the results are relevant to international context. For instance, in a study conducted in Australia, many parents/carers experienced challenges to access supports for the education of their children with disabilities (Yates et al., 2020). Another study conducted in China explored that students with ADHD were reported as having significantly worse symptoms during the outbreak (Zhang et al., 2020). In another study conducted in Australia, a substantial proportion of students with disabilities were not able to receive sufficient educational support during the pandemic, more than half of the students did not have regular communication with education providers to ensure their learning, and more than half of the students did not reach out accessible curriculum and learning materials (Dickinson et al., 2020). While disaster research with diverse disciplines (i.e. sociology, psychology) is needed to expand our knowledge, neither disaster research is sufficiently synthesized across disciplines nor disaster management plan is developed to inform practitioners (Montano, 2020). In this context, results of this study inform researchers and policy-makers to work collaboratively and develop disaster management plans which would prepare educators for potential future disasters. As evidenced by present research, a large majority of students with special needs were not able to continue their education in the SERCs and perceived level of COVID-19 outbreak impact was detected on special education students regardless of the type of the disability. While international perspectives that examine the impact of COVID-19 on students with special needs is still necessary to gain further understanding, without any doubt, there is a global need to develop alternative methods and back-up plans to serve students with special needs in the aftermath of a disaster. As suggested by, Tekin-Iftar et al., (2021) one way to develop these methods and plans is to establish global education innovation initiatives where countries share their experience and use global data to identify effective and ineffective methods for countries. Further need is to develop disability type-based disaster management plans since each type is diverse in needs. Researchers and practitioners who have expertise in a particular disability type would produce more productive outcomes in developing disaster management plans for a certain

type population. A further recommendation by Boon et al., (2012) is to development of individualized emergency plan for students with disabilities which is implemented at each school level since the school will be the best to determine the necessary supports and address each student's needs as well as their families.

Limitations

The present study represents an initial attempt to explore educators' experiences working in special education settings in Turkey. Qualitative research conducted with educators working in the SERCs would provide further insight about educational practices implemented by special education institutions. Additional research with educators working in special education schools is necessary to elucidate educational practices of special education schools. In addition, findings of this study are limited to one province of Turkey. Future research should be extended to more provinces across the country for the generalization of the findings. Another potential limitation of this study was the recruitment of the participants by snowball sampling. As educators working in the SERCs do not have official email addresses, I contacted with the administration staff for the recruitment of the respondents, which may lead to potential bias. Lastly, results of the study appear to support the fact that special education students are affected by educational institution closures due to the COVID-19 outbreak. Although the results are more likely to be applied to Turkish population, this study may inform policy-makers for being prepared for a potential outbreak and educational institutions closures at global level.

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Appendix A

The COVID-19 experiences and perceptions survey Part I

Please answer the following questions by considering practices of the special education and rehabilitation centre (SERC) that you are working during the COVID-19 outbreak period. (1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5: strongly agree).	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Pandemic would affect student enrolment for the new academic year.	(1)	(2)	(3)	(4)	(5)
2. We have a sufficient distance education plan for the education of special education students.	(1)	(2)	(3)	(4)	(5)
3. My institution (SERC) provides academic support to special education students.	(1)	(2)	(3)	(4)	(5)
4. My institution (SERC) provides social and emotional support to special education students.	(1)	(2)	(3)	(4)	(5)
5. My institution (SERC) provides academic support to parents.	(1)	(2)	(3)	(4)	(5)
6. My institution (SERC) provides social and emotional support to parents.	(1)	(2)	(3)	(4)	(5)
7. My institution (SERC) cooperates with other private education institutions during the pandemic period.	(1)	(2)	(3)	(4)	(5)
8. My institution (SERC) supports the well-being of its employees during the pandemic period.	(1)	(2)	(3)	(4)	(5)
9. My institution (SERC) is well-prepared for the educational break due to COVID-19.	(1)	(2)	(3)	(4)	(5)
10. There is a communication system used by my institution to inform students, parents and employees.	(1)	(2)	(3)	(4)	(5)
11. As an institution (SERC), we are in communication with students.	(1)	(2)	(3)	(4)	(5)
12. As an institution (SERC), we are in communication with parents.	(1)	(2)	(3)	(4)	(5)
13. My institution (SERC) communicates regularly with its employees.	(1)	(2)	(3)	(4)	(5)
14. Parents contact with the institution or educators to check the amount of assignments and the pace of progress.	(1)	(2)	(3)	(4)	(5)
15. In the case of any educational break, we should have a readily available curriculum.	(1)	(2)	(3)	(4)	(5)
16. Educational break helped us to understand shortcomings in special education.	(1)	(2)	(3)	(4)	(5)

Part II

	Very low impact	Low impact	Medium	High impact	Very high impact
1. Please indicate the degree to which students with visual impairments are affected by educational institution closures.	(1)	(2)	(3)	(4)	(5)
2. Please indicate the degree to which students with hearing impairments are affected by educational institution closures.	(1)	(2)	(3)	(4)	(5)
3. Please indicate the degree to which students with autism spectrum disorders are affected by educational institution closures.	(1)	(2)	(3)	(4)	(5)
4. Please indicate the degree to which students with specific learning disabilities are affected by educational institution closures.	(1)	(2)	(3)	(4)	(5)
5. Please indicate the degree to which students with intellectual disabilities are affected by educational institution closures.	(1)	(2)	(3)	(4)	(5)

Table : (Continued)

Table : *(Continued)*

	Very low impact	Low impact	Medium	High impact	Very high impact
6. Please indicate the degree to which gifted and talented students are affected by educational institution closures.	(1)	(2)	(3)	(4)	(5)
7. Please indicate the degree to which students with attention deficit hyperactivity disorders are affected by educational institution closures.	(1)	(2)	(3)	(4)	(5)