

Exploring the Consequences of COVID-19 Pandemic on Behavior and Learning of Children with Special Needs

By

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A thesis submitted to Brac Institute of Educational Development in partial fulfillment of
the requirements for the degree of
Master of Science in Early Childhood Development

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Brac University
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Declaration

It is hereby declared that

1. The thesis submitted is my own original work while completing degree at Brac University.
2. The thesis does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I have acknowledged all main sources of help.

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Ethics Statement

Title of Thesis Topic: Exploring the Consequences of COVID-19 Pandemic on Behavior and Learning of Children with Special Needs

Student name: Shamma Tasnim

1. Source of population: Mothers of children with special needs aged between 3 to 8 years
2. Does the study involve (yes, or no)
 - a) Physical risk to the subjects (No)
 - b) Social risk (No)
 - c) Psychological risk to subjects (No)
 - d) discomfort to subjects (No)
 - e) Invasion of privacy (No)
3. Will subjects be clearly informed about (yes or no)
 - a) Nature and purpose of the study (Yes)
 - b) Procedures to be followed (Yes)
 - c) Physical risk (N/A)
 - d) Sensitive questions (Yes)
 - e) Benefits to be derived (Yes)
 - f) Right to refuse to participate or to withdraw from the study (Yes)
 - g) Confidential handling of data (Yes)
 - h) Compensation and/or treatment where there are risks or privacy is involved (Yes)
4. Will Signed verbal consent for be required (yes or no)
 - a) from study participants (N/A)
 - b) from parents or guardian (Yes)
 - c) Will precautions be taken to protect anonymity of subjects? (Yes)
5. Check documents being submitted herewith to Committee:
 - a) Proposal (Yes)
 - b) Consent Form (Yes)
 - c) Questionnaire or interview schedule (Yes)

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Abstract

During global crisis, children with special needs are in real bind. COVID-19 pandemic has been detrimental for the children with special needs (CSNs) due to closure of education and therapies, social isolation, unstructured routine and economic deprivation of families which led them to multiple forms of exclusion linked to their basic rights. The purpose of this quantitative research was to explore the consequences of COVID-19 pandemic on CSNs in terms of behavior and learning. 40 mothers with special needs children aged 3 to 8 years participated in this study with a self-rated questionnaire, indicating that majority of the special need children had unawareness about COVID-19 and failed to practice the preventive measures. Findings also discovered that most of the CSNs had inaccessibility to education and therapies which hampered their learning excessively. In addition, incapability to daily living skills, behavioral implications like hyperactivity, aggressiveness, sleep disturbances and changed appetite magnified the risk for CSNs. Additionally, findings highlighted increased negative parental behavior, child abuse and unavailability of essential goods such as medicines prescribed by physicians due to pandemic on CSNs. Therefore, this findings emphasis on further studies, capacity development and policy reforms to ensure the service and mitigate the learning loss of CSNs.

Key words: Children with special needs; COVID-19, Consequences, Learning, Behavior

Dedication

This thesis is dedicated to my beloved parents and my wonderful children, who have been a constant source of support and encouragement for me during this Master's program.

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List of Acronyms

ABA	Applied behavior analysis
ADHD	Attention Deficit Hyperactivity Disorder
ASD	Autism Spectrum Disorder
BRAC	Bangladesh Rural Advancement Committee
CDC	Centers for Disease Control and Prevention
COVID-19	Corona Virus Disease of 2019
CSNs	Children with Special Needs
ECD	Early Childhood Development
SDG	Sustainable Development Goal
SPSS	Statistical Package for the Social Sciences
UNICEF	The United Nations International Children's Emergency Fund
UNSDG	The United Nations Sustainable Development Goals
WHO	World Health Organization

Chapter I

Introduction & Background

Introduction

The emergence of COVID-19, a virus that emerged unexpectedly, threw the entire world into a major and abrupt change that the World Health Organization declared it as a pandemic (WHO, 2020). More than two hundred thirty-one million affected and almost five million deaths occurred as this virus hit the world hard (Worldometer, 2021). As the virus diffuses through infected person's droplet from mouth and nose, so while sneezing, coughing, speaking or breathing it can easily infect other people (WHO, 2020). So, the transmission of the COVID-19 virus was prevented by restricted movements and social isolation around the globe. One correlational study was done to analyze the effect of lockdown or isolation strategy on transmission of the coronavirus in 49 countries. The study demonstrated that implementation of lockdown by governments was successful in reducing the spread of the disease (Atalan,2020).

The pandemic containment strategy has been successfully implemented in most of the countries to prevent coronavirus transmission. But this pandemic has caused multitudinous implications on children (UNICEF,2020). More instance, children with special needs are no exception in this regard. Generally, before the COVID-19 pandemic, special need children were already stigmatized in society and lagging behind their peer groups in all aspects of life. This pandemic situation has created a number of risk factors for children who have a history of preexisting vulnerabilities (UNICEF,2020). In research from UNICEF (2020), global school suspension and inaccessibility to community health care services weathering the storm for special-

needs children (CSNs) during pandemic. Confinement at home, closure of educational institutions and therapy services, loss of family members, employment deprivation of families, unstructured routine, loss of learning and development, these all can be inadvertently harmful for CSNs. Moreover, the impact of this social isolation was dreadful for CSN's behavioral and psychological distress. According to a study, comparing to adults', children have more long-term adverse consequences in this pandemic (Shen et al., 2020). Another study parallelly discovered that the pandemic has a number of long and short-term psychosocial and mental health consequences for all children, particularly for CSNs (Singh et al., 2020).

As per research, one out of every six children aged 2 to 8 years has some kind of neurodevelopmental, behavioral, or emotional needs (CDC,2019). Children with special needs, such as Autism Spectrum Disorder, Attention Deficit Hyperactivity Disorder, Cerebral Palsy, Learning Disability, and Developmental Delays, are among the most underserved communities during pandemic and lockdown (CDC,2019).

In 2016, a comprehensive assessment provided an insight of 195 countries. The assessment estimated that globally around 52.9 million children (54% male) below five years have developmental disabilities and among them around 95% lived in low-income and middle-income countries (Olusanya et al., 2018). Another study anticipated that there was a significant increase in prevalence of all sorts of developmental disabilities from 2009 to 2011 and 2015 to 2017 and 1 in 6 children has neurodevelopment impairs between 3 to 12 years at United States of America (Zablotsky et al., 2019).

These underprivileged children and their families are combatting with this struggle for years to provide equal contribution towards their life and society along with their peer groups. However, because this pandemic has a worldwide devastating impact on typical

children's development and learning, it may place a significant burden on children with disabilities, causing their development to be disrupted. Generally, the children with disabilities are facing the real quagmire specially in impoverished communities (UNICEF,2020). But during this pandemic, they are facing the challenges tremendously and to some extent the impact might be irrevocable. According to UNICEF (2020), in the pandemic context, special need children may face intensified risk of exposure, complications and health risk due to underlying causes and pre-existing vulnerabilities. Children who are having functional difficulties in aspects of vision, hearing and cognitive functioning, face significant barriers to access the services during pandemic (UNICEF,2020). However, the increased health and psychosocial risks for children with disabilities as well as reduced access to community-based services during this COVID-19 pandemic have escalated the challenges for them undeniably. CSNs need more assistance and care than typically developed children to perform their daily living, self-care and social skills (Schieve et al., 2012). So, utmost priority and attention should be given to ensure their rights. Therefore, this study focuses to explore consequences of COVID-19 pandemic on special need children in terms of behavior and learning.

Statement of the Problem

Globally, one billion people, or 15% of the population, and 93-150 million children under the age of 14, survive with some form of physical or mental impairments (World Health Organization & World Bank, 2011). The statistics reveal that at least 1 in 10 children worldwide has a sort of disability and unfortunately 80% of them live in developing countries (UNICEF,2020). Aside from that, the COVID-19 pandemic has had a massive global impact, particularly on CSNs, which may have resulted in an increase in exposure to risks. This pandemic has created significant stress and

disruption of lives for those children who are already belonging to the marginalized group of the world.

National border closures, social isolation, physical distancing, inaccessibility to health and education system, all these have pushed the world into a mess during the pandemic. Countless families are suffering with their children for not reaching their full potential (UNSDG,2020). As the physical classes are suspended around the globe, children are following remote learning methods to fulfill their right of education (UNICEF,2020). But very little is talked about the children with special needs who are not really able to receive any special education or therapies during this pandemic. The most common barriers to education and intervention for CSNs are scarcity of internet or opportunities for remote learning, constraints of special schools and services to provide remote learning facilities, and unmanageable children during virtual classes (UNICEF,2020). According to a study, most of the online classes do not have the compatibility with adequate technological support and infrastructure for teaching children with special needs who have visual or hearing impairments (Hills, 2020). Disruption in educational attainments and therapeutic services create additional burden for those children who usually remain occupied in these activities for several hours.

The advent of COVID-19 magnified the challenges of special need children in aspects of physical health and psychosocial well-being. Disorganized routine, interruption of therapies and educational services, parent's or caregiver's psychological distress and home quarantine all these might be very challenging for the children with special needs during pandemic (OECD, 2020). The reasons of unstructured routine of families due to pandemic are sudden job loss of parents, stress due to social distancing, mental trauma and demise of near and dear ones which led the families backward to maintain a

structured routine. Patel (2020) found that lack of routine and uncertainty made the children of Autism Spectrum Disorder (ASD) more stressed, anxious and unhappy and the underlying reasons behind them are; experiencing displeasure at home, sudden mood changes, change in sleeping and eating pattern as well as disturbance in their therapies and special education services. According to one recent study, children with Attention Deficit Hyperactivity Disorder (ADHD) were showing significantly fretful and turbulent behavior in lockdown. The study emphasized special focus on the ADHD children who were fraught with danger (Shah et al., 2020). Termination of structured routine, educational and therapy services negatively impacted the children with Autism Spectrum disorder (ASD) where behavioral problems increased a lot compared to before and during the pandemic (Colizzi et al., 2020). Similar study found consistently same results for children of ASD in the areas of irritability, social withdrawal, hyperactivity, self-injury and inappropriate speech, sleep disturbance regarding duration and quality (Mutluer et al., 2020).

To understand the consequences of CSNs during pandemic, in the perspective of Bangladesh, research and studies are needed. Alike the above global studies, in Bangladesh children with disabilities are also facing similar hurdles in this pandemic to survive. According to an assessment of BRAC (2020), the children with special needs faced multidimensional inequalities than typical children in the lockdown. The disruption of their learning and intervention strategies created havoc for them. They suffered most from physical and sexual abuse which increased their anxiety and fear. Therefore, this study aimed to determine the consequences of COVID-19 pandemic on CSNs in Bangladesh.

Purpose of the study

The purpose of the study is to explore the consequences of COVID-19 pandemic on behavior and learning of children with special needs. Another purpose of the study is to explore the current status of understanding and practicing preventive measures of COVID-19, accessibility to education and therapies, practice of daily living skills of CSNs during COVID -19 pandemic.

Significance of the study

Although children with special needs need utmost priority to enjoy rights and freedom like typical children yet discrimination is vivid in this regard. Lack of information and evidence restrict the policies and programs to intervene properly (UNICEF, 2015). The global crisis of COVID-19 has had a substantial influence on all children but there are compelling reasons why the impact may be felt more acutely by children with special needs and their families. According to UNICEF (2020), low income countries might not be able to explain the actual effect of COVID-19 pandemic on children with special needs due to scarce resources and data. It is important to capture the issues relating to COVID-19 and apprehend the actual need of CSNs', their living conditions and barriers to enjoy rights and accessibility, behavioral changes during pandemic to understand the actual scenario (UNICEF, 2020). Furthermore, disability inclusive evidence will be helpful for post pandemic smooth transition (UNICEF,2020).

The UN Convention on the Rights of Persons with Disabilities (2006) is an international agreement with Bangladesh that has been ensuring the rights, survival, employment, freedom, accessibility as well as identifying the areas of discrimination and providing effective interventions for children with disabilities. Moreover, The Rights and

Protection of Persons with Disabilities Act (2013) of Bangladesh specifies judicial provision to confirm inclusive education, justice, safety, equal recognition, rehabilitation program and alleviate discrimination for special need children along with the detail definition of their disabilities.

Additionally, the 2030 agenda of Sustainable Development Goal (SDG) clearly included seven targets for the children with disabilities and six other targets that ensure equal participation and inclusion of CSNs in several aspects (United Nations, n.d).

Hence all these documents are the legal manifestations of safeguarding children with disabilities in mainstream. Bangladesh Government has been working with prudence and advancement regarding this issue but still there is quite a way to reach the target. During COVID-19 pandemic, the state of children with special needs are already troublesome. Children who have pre-existing mental implications combatting relentlessly to meet their need for receiving disproportionately low level of service or no service at all. In Bangladesh, dearth of reliable and inclusive data is also notable alike global perspective (UNICEF, n. d). Social stigma, discrimination in families and communities push the children with special needs to exploitation, violence and neglect. According to one survey by BRAC (2020), It was revealed, that CSNs were deprived and victimized more than typical children during the pandemic. Non-participation in distant learning rose up to 61% for children with special needs due to lack of support and infrastructure (BRAC,2020). Another study was conducted to explore the perception of children about pandemic and educational loss, where 17% children were CSNs. That study found out that insecurity about food, loss of income in households, discontinuation of education, child assault and abuse at home, infection as well as death affected by COVID-19 etcetera evoked children's education emergency and psychosocial deterioration tremendously (Save The Children, 2020).

This study will be timely-appropriate and beneficial to understand the consequences of this pandemic in terms of behavior and learning for children with special needs. Hence It will also contribute in designing inclusive programmes for parents, teachers and children in terms of Early Childhood Development (ECD). Because ECD programmes can ensure improved survival and development for CSNs through well-organized and effective interventions (WHO & UNICEF, 2012). In this circumstance, this evidence can be favorable for CSNs. Thus, this study will be helpful in recommending and advocating coping strategies as well as providing interventions through appropriate programs and services for children with special needs

Research Topic & Research Questions

- What are the consequences of COVID-19 pandemic on behavior and learning of children with special needs (CSNs)?
- What is the current status of the children with special needs during COVID -19 pandemic?

Operational Definition

Children with special needs (CSNs) - It refers to a wide range of physical as well as intellectual disabilities, medical conditions, learning disabilities or emotional difficulties including hearing and vision impairments which negatively impact functioning typically like other people, are considered as children with special needs (Kagan, 2020).

Types of Children with Special Needs- Four major types of special needs were identified (Lambert,2019).

- Physical- Cerebral palsy, Multiple Sclerosis, Chronic Asthma, Epilepsy

- Developmental- Down syndrome, Autism Spectrum Disorder (ASD), Learning disabilities like Dyslexia
- Behavioral/ emotional- ADHD, Bipolar Disorder, or Oppositional Defiance disorder
- Sensory impaired- Blindness, Visual or Hearing Impairment, Deaf

In this study, Down Syndrome, ASD, ADHD, Learning Disabilities, Speech Delay were addressed and studied by the researcher.

Chapter II

Literature Review

This section is focusing on impact of COVID-19 on children with special needs in different aspects. The literature is divided into global and Bangladeshi context which are subdivided into several effects on CNSs.

Global Context

Globally several studies have been conducted around the world to determine how children with special needs are getting impacted during COVID-19 pandemic. The hidden impact of COVID-19 on children with disabilities are shown in different aspects in following.

Effects on Physical Health of CSN

Comparing with the typical children, CSNs require advanced healthcare needs for their physical health impairment. They need additional consideration for increased pediatric and specialist services, not only for their medical conditions but also for functional deficits (Schieve et al., 2012). But in this pandemic, CSNs are thriving most due to escalated chances of infection and inaccessibility to health and medication which is

dreadful and unacceptable. CSNs are mostly dependent on structured routine and intervention provided by school and therapy centers.

But preservation of medical health care capacities for the virus affected patients and risk of exposure disrupt the therapies of children with disabilities. Even telehealth care was not supposed to be enough for the children because the therapists and doctors often need close interaction and observation of them for their intervention (Aishworiya & Kang,2021). Scarcity and remoteness of health-care, therapy services create devastating physical effect on CSNs. Lack of medication and rehabilitation services, remoteness to community health services, closure of therapy services create several implications. For example, families rationing quantity of medicines which resulted in bowel and bladder problems which made children forgetful or deaf in some cases (Mbazzi et al., 2021). UNICEF (2020) also indicated that limited capacity of health systems and disruption in health services created several implications on physical health of CSNs during pandemic. From one study done at Scotland, it was revealed that many families appoint personal assistants to achieve the goals of special need children. Due to COVID-19 pandemic, those services got closed and families suffered tremendously to manage the children without any training or education (Couper-Kenny & Riddell,2021). Another study by Family Strengths Survey in the Western Pennsylvania, identified that most of the families who have children with special needs are predominantly impacted by the lockdown of pandemic in lack of therapies, reduced access, medical supplies and health care facilities (Houtrow et al., 2020). Obsession with routine is a common feature of children on the autism spectrum, and disruptions in routine linked to COVID-19 may cause major emotional and behavioral destabilization (Eshraghi et al., 2021).

Moreover, the children who are trying to cope up with the video conferencing, telemedicine and therapy services, may face attention deficit issues and communication difficulties incredibly. Not only children, the parents and caregivers struggled enormously who tried to provide therapies like professionals within their home environment (Aishworiya & Kang,2021). Another challenge for the remote mechanism of telemedicine or therapies were technological limitations like unavailability of internet services and devices (laptop/mobile) specially for the low-income people (Provenzi et al., 2020).

Effects of COVID-19 on Learning of CSN

According to one policy brief of the United Nations, children with disabilities were deprived most during this lockdown measures as they were not receiving one to one education and therapy services (UNSDG, 2020). Among 93 million CSNs in developing countries, 50% are out of school and developing countries contain utmost of them (UNICEF, n.d). According to World Bank (2020), 40 percent of low and low-middle income countries did not have adequate support and tools for learners with disabilities during the school closure of lockdown.

The greatest loss of COVID-19 on children with special needs is the education deprivation and the supports provided by the schools including the meal program for those who belongs to the impoverished community (Van Lancker & Parolin, 2020). Virtual learning process cannot be utilized enough in short of technology and device management of families specially in low-income profile. Beside this, disruption of organized routine, unavailability of health care and facilities as well as parental involvement in therapies and education without prior training and knowledge can be really challenging for the families (Asbury et al., 2020). Additionally, children with

special needs who have vision or hearing impairment could not be able to attend and communicate through online learning or therapy (Brandenburg et al., 2020). Therefore, for children with Attention Deficit and Hyperactivity Disorder (ADHD) and learning disorder may not be able to effectively use the online learning platform due to poor attentiveness and non-verbal communication (Juneja & Gupta, 2020). Also, children with ASD cannot cope up with the distance learning method. As a result, obesity increased vastly which is more vulnerable for them (Yarımkaya & Esentürk,2020). These all resulted into inaccessibility to education service which created a huge learning gap for CSNs (Brandenburg et al., 2020).

According to one study which was implemented in 46 countries and based on that, 1 in 3 children with disabilities did not have accessibility to school while 60% children did not have any assistance at home (Save The Children, 2020). Almost 19% difference showed that, children with disabilities (93%) are lagging behind a lot to meet their milestones compared to their peer groups (54%) during COVID-19 (Save the Children, 2020). UNICEF (2020) stated, children with special needs require adequate technology and learning resources to accomplish remote home schooling which is very limited according to the need. Another study done at Uganda found that, most of the parents mentioned CSNs were unable to concentrate on remote learning through television or broadcasted lesson (Mbazzi et al., 2021). A study revealed that most of the families complain about the special schools who are not always communicative towards the students in online classes (Couper-Kenny & Riddell,2021). Children with special needs who already have low-level achievement scores in their learning may have difficulties to cope up with after this pandemic compared to their peer group (Nusser,2021). Also, face to face instructions provided by special educators cannot be replaced by the home schooling done by parents without any training at home. As a result, there will be a gap

in children's learning and achievement score for their future as well (Nusser,2021). Furthermore, there is a possibility of a large number of CSNs for never returning to school again due to several reasons like parent's concern, financial limitations as well as health and safety issues (World Bank,2020).

Effects of Covid-19 on behavior of CSN

COVID-19 pandemic has not only effected children with special need's learning but also put negative implication on their psychological health as well. This adverse influence created several behavioral consequences of children with disabilities.

Study revealed higher proportion (69%) of children with disabilities showed signs associated with distress and 86% claimed increase of negative feelings during pandemic (Save the Children,2020). According to Colizzi et al. (2020), compared to the pre-pandemic situation to the post pandemic, children with ASD showed greater behavioral problems with 35.5% more intense and 41.5% more frequent. Another study reported 38.5% parents stated about increase in aggressive behavior and 24.8% parents specified about overactivity of their special need children during lockdown (Dursun et al., 2020). According to a study, families of ASD confessed that the children showed greater behavioral problems during the pandemic and lockdown. Impulsive behaviors, inflexibility, sensory concerns as well as parental distress increased tremendously in pandemic (Levante et al.,2021). Hence, sleep duration decreased a lot according to another study done at Turkey which exposed that CSNs were becoming progressively obstinate, non-cooperative and highly stereotype with an upriser of problem behavior (Mutluer et al., 2020). Similar study found that experiencing negative emotions, sudden mood changes, change in sleeping and eating pattern these all can be harmful for children's mental wellbeing and may lead to an escalation of existing mental health

issues (Holmes, et al., 2020). Other study conducted by Dhiman et al. (2020), explored that children with special needs have higher prevalence of depression and anxiety. Parents and caregivers also showed negative emotional vibe during the pandemic (Dhiman et al., 2020). Montirosso et al. (2021) revealed, parents reported children's extreme behavioral problems comparing to post emergency lockdown like anxious and depressed behavior, attention problems and aggressive behavior.

Effects on Mental health and well-being of CSN

According to UNICEF (2020), the social distancing and isolation strategies, closure of educational services and therapies, lack of extra-curricular activities thwarted the children's wellbeing and increased mental health issues. Not only that, the effect of lockdown on children with disabilities created increased anxiety, depression, stress and led the children towards significant mental health issues (UNICEF, 2020). From another rapid online survey in the Philippines, a negative emotional vibe has been found as the majority of them reported for being afraid (41.9%) and sad (33.6%) at home (UNICEF Philippines, 2021). According to one study done in Scotland, children's appetite loss was obvious which had occurred due to anxiety. Families also mentioned they cannot continue with physical exercises and could not go outside also due to fear of disease transmission. These things also affected children's mental health badly (Couper-Kenny & Riddell,2021). Another study revealed, confinement at home, not attending schools, disruption of routines and lack of supporting networks create several mental health implications for the families and children with special needs (Asbury et al., 2020). According to Asbury et al. (2020), among 106 people, 56 (around 50%) reported that they suffered from an increase in anxiety and stress which is harmful for their mental health and wellbeing. Moreover, the study also found that in the long run, lower educational attainments and lack of learning competence will not only affect

children's learning but also affect their mental health and condition (Asbury et al., 2020). Likewise, in a survey at Zambia, participants also expressed increase in anxiety and fear during the pandemic (Sharpe et al.,2021).

Effects on violence and abuse of CSN

Lockdown has also produced evidence about domestic violence and abuse on CSNs globally. Economic recession, loss of family members, rise of unemployment, working from home approaches might create tribulation for families which increases risks of children to face harm at their home. According to a study, 33% of parents accepted their increase in negative behaviors at home and last but not least 86% of children with disabilities reported an increase of their negative feelings like anxiety, fear and depression (Save the children,2020). Hence, evidence shows through a policy brief, the children with disabilities who are considered to be the most vulnerable group are experiencing increased violence or risks at home. Concrete evidence also represents that the calls in hotlines for domestic violence have increased between 20% to 150% in several countries specially in India (30%) and Bangladesh during lockdown (40%) (World Vision International, 2020). Furthermore, the following study also found out that the children with disabilities are living under the most marginalized group who live under exploitation, neglect and abuse (World Vision International, 2020).

Bangladesh context

In Bangladesh, the scenario of special needs children is indistinguishable from other countries. Here, the data on children with disabilities are very limited and underestimated due to variety of definitions of disabilities and data collection procedure (Bangladesh Bureau of Statistics,2015). According to the surveys conducted during last decades, the prevalence of children with disabilities are ranging from less than 1.4 per

cent to 17.5 per cent (Bangladesh Bureau of Statistics,2015). For the estimated child population of 57.5 million, the number of children with some form of disability could range from under 805,000 to 10 million (Bangladesh Bureau of Statistics, 2011). According to MICS Survey (2019), the percentage of children age 2-4 years with functional difficulty in at least one domain is 2.8% and percentage of children aged 5-17 years with functional difficulty in at least one domain is 8.3%. Very few studies have been conducted regarding the effects of COVID-19 on CSNs in Bangladesh. Some are discussed below in different aspects.

Effects on of COVID-19 on Learning

Since the closure of educational institutions in Bangladesh, roughly, thirty-eight million children have missed the opportunity to meet their basic right of education (Rahman & Ahmed,2021). Before pandemic, estimates show that primary school enrollment remains 97 percent whereas only 11% consists of children with disabilities who attain any form of education (UNICEF, 2014). According to Situation Analysis on children with disabilities (2014), in Bangladesh, these children are the most marginalized and stigmatized population in the aspect of education.

Hence, after the outbreak of COVID-19 pandemic, children with special needs are predominantly afflicted by the closure of educational institutions. BRAC (2020) revealed in a survey that 29% children with disabilities expressed their fear of exclusion from education from their peer groups. Poverty, inaccessibility, technological curbs and scarcity of devices are the major barriers for inclusive education of children with special needs (BRAC,2020). Moreover, the alternative distance learning program initiated by the governments are not suitable and accessible for children with disabilities as well as risk of drop out remain prevalent (Debnath, 2021). The COVID-19 pandemic has been

severely impacted the inclusivity and accessibility to education for children with special needs (UNESCO,2021).

One study found out, 61% non-participation of CSNs in distant learning due to logistical constraints like lack of technologies, internet connection and financial limitations and 23% of students found less interest about study (BRAC, 2020). Another study of Gana Unnayan Kendra revealed most of the children with special need do not have accessibility or competitive technological support for remote learning, even most of the organizations who are working with these children are non-capable of coping with the remote learning strategy (n.d). A larger portion of children with disabilities will be drop out due to non-participation (UNICEF,2020). According to an article, the children with special needs are suffering tremendously due to pandemic because the person they rely on for education and therapies become inaccessible to them. Special schools, special educators, therapist, family members, relatives they all play vital roles in providing a blissful life for the CSNs. One parent reported, her child's education is comprised with Applied behavior analysis (ABA) therapy, speech therapy, occupational therapy, and group therapy which used to be a part of his daily routine. But now everything has stopped and her child is lagging behind from his peer groups extremely (Zarrin,2020). The government of Bangladesh has initiated distance learning in order to mitigate the loss of school closure which is unfortunately not suitable for the children with special needs. Particularly for the children who have visual/hearing impairment or attention deficit disorder (Debnath,2020). Moreover, inadequate learning tools and equipment for online platform, insufficient training of special educators and non-accessible reading materials was the key constraints of lagging behind in remote learning of children with special needs (World Bank, 2020).

Effects of Covid-19 on Behavior of CSN

Like global data, in Bangladesh also, children felt helpless, lonely and socially excluded due to lack of outdoor play and activities, social isolation, lockdown measures, discontinuation of education and therapies which create long term adverse impacts of anxiety and stress on children with special needs (Rahman, 2020). In Bangladesh children also cry, throw tantrums and behave inappropriately when they are not allowed to go outside or mix with other people due to the isolation measures (Zarrin,2020). According to other article, children with special needs got severely hyperactive during pandemic as they were not allowed to go outside. One of the parents reported her child did self-harm like banging head in the wall and did several hyperactive behaviors (Chandan,2020). Not only that the study also found out that children with neurodevelopmental disorder who remain occupied in therapies, training and activities also got extremely affected due to the pandemic (Chandan,2020). Similar study reported that children's negative attitude, frequency and intensity of self-injurious behavior increased tremendously comparing between the pre and post lockdown period for children with ASD (Rabbani et al., 2021). Additionally, that study also explored the increase of aggressive behavior and lack of concentration on children with ASD during the lockdown of COVID-19 pandemic in Bangladesh (Rabbani et al., 2021).

Effects on Mental health of CSN

Mental health of children with developmental disabilities also cripple significantly due to lockdown strategy. According to BRAC (2020), in a survey of mixed students, children with disabilities expressed more anxiety and panic during lockdown than other students. Among them 29% expressed fear comprised of 17% females. The survey also reported among the students, 34% became cranky and 28% get scared to see outsiders

(BRAC,2020). An article stated that children with ASD are generally susceptible to high anxiety and as they are prone to perform in a structured daily routine, so this pandemic has created unprecedented challenges for them (Pervin, 2020). Families cannot maintain structured routine due to many reasons in pandemic which maybe ended up into higher level of stress, irritability and uncertainty (Pervin,2020). For children with ASD, it is regrettably tough to maintain their daily routine during pandemic which created challenges for the families (Zarrin,2020). Another article represents that, experts draw attention for special education of CSNs because discontinuation and interruption of study may create risks of drop out and negative psychosocial problems (The Daily Star, 2020). According to Rabbani et al. (2021), during emergency like lockdown, the possible gap of mental health services was also exposed for children with ASD.

Effects on violence and abuse of CSN

In one study it was revealed that younger children with special needs specifically the children with intellectual disabilities are more vulnerable than other disabilities in Bangladesh. Shockingly, 99% were sexually abused by their close family members (Hossain et al.,2015).

During emergencies like lockdown, the possibilities of physical and sexual abuse increase a lot among the children with disabilities. According to Thompson, (2020) Children with diverse types of disabilities are particularly vulnerable to abuse or to denial of access to services. A study done by BRAC discovered several implications of COVID-19 pandemic on children. That survey explored that majority of special needs children have been the worst victims of abuse, 29% of them expressed fear which is higher in female participants. The children with disabilities were the most abused group

among the other groups of children and 16% were badly abused during lockdown (BRAC, 2020). Among all 3% children experienced abuse at home, 82% faced psychological harassment, 30% experienced physical torture, 9% faced sexual harassment and 4% experienced forced child labor.

Effects on Physical Health of CSN

The COVID-19 crisis has created a substantial interruption of healthcare and medical services for children with disabilities specifically for the rural areas (Thompson,2020). Research says, the current situation of COVID-19 created scarcity of health care resources including medication and treatment services for people with disabilities (Hasan et al., 2021). Another study revealed similar findings that due to lockdown and remoteness of the healthcare facilities, it was impossible to reach community healthcare and therapy services for the children with special needs during pandemic (Das et al., 2021). According to one article, children's therapy services got disrupted due to pandemic that created several implications on their physical health. For example, a child's free therapy session from a health care service, was interrupted during pandemic which put negative impact on the child's health (The Daily Star, 2020).

Chapter III

Methodology

Study Design

In this quantitative study, the survey design was used to explore the consequences of COVID-19 pandemic on behavior and learning of children with special needs. According to Creswell (2009), quantitative designs are truly focused on describing and explaining in a definitive manner. Survey design was applied to conduct this study

because it gathers information about a group's beliefs, attitudes and behaviors (Gay et al., 2012). Survey research determines ways to explore the current status of the subject of the study. This research is helpful to assess the attitudes, practices, concerns of a group of people (Gay et al., 2012). Though survey research data are collected through questionnaires and interviews but due to COVID -19 pandemic situation, remote mechanism was used. Remote data collection is defined as the collection of data through phone, online or other virtual platforms where the researchers and study participants are physically distanced (Hensen et al., 2021).

Research Site

The participants were selected from different special schools of Mohammadpur area, Dhaka City.

Research Participation & Participation Selection Procedure

The population of this research was the mothers of children with special needs aged between 3 to 8 years.

The sample size of this study was 54 mothers. The mothers were selected purposively based on the following inclusion criteria:

- Mothers having special need children whose age range is 3-8 years and clinically diagnosed for different kind of disabilities such as ASD, ADHD, Learning difficulties, Down syndrome and Speech delay
- Mothers who are sending their CSNs to special schools

Data Collection Tools

Self-administered Survey questionnaire was used to collect data. The questionnaire consisted two parts like, Socio-demographic status and Consequences of COVID-19 on CSNs.

- Sociodemographic form- age, gender, education and occupation of parents, types of special need of children, special education status of children (receiving or not/ online or offline), number of siblings, were collected.
- Consequences of COVID-19 on CSN: Survey questions were developed by the researcher to identify the consequences of COVID-19 lockdown on children with special needs.

Data Collection Procedure

Description of questionnaire development:

Based on research questions, the researcher developed the questionnaire. Then it was reviewed by the experts (ECD faculty and supervisor). After that, the questionnaire was piloted with five mothers who have school going CSNs. Then it was finalized and transformed into Google form. The researcher then communicated with the special schools and took permission to communicate with mothers. The researcher then selected mothers based on the inclusion criteria and took oral consent from them. After that, the researcher explained the purpose and objective of the study. Then researcher collected mother's emails and necessary information and sent the google form/ link to the mothers through email. After receiving the data, the researcher sent thank you email to all the mothers.

Data management and Analysis

All the data were stored or entered in google spreadsheet. The accuracy of the data was checked manually. The researcher did the analysis of the data by employing descriptive analysis. Frequency distribution and percentage of data was calculated to understand the insight of the circumstance. Tables and Graphs were used to represent the results for better understanding.

Validity & Reliability

Generally, the purpose of reliability and validity in a research points to the credibility of the findings that it derives without any fault. Researcher took utmost care in conducting the study. The Survey questionnaire was developed considering the research questions. It was reviewed by the ECD expert from BRAC IED to check the face validity. In addition, the tools were piloted with some participants for checking accuracy and understating of the participants.

Ethical Issues

The researcher took the ethical approval for the study from Brac University. All participants took part voluntarily, free from any pressure and their rights, dignity and autonomy was respected and protected. Before data collection, informed consent was taken from all participants. No physical, psychological, legal and social harm was occurred during the study. The participants got the proper information about the research procedure, purposes and storage of data without threat or inappropriate inducement. The participants had the authority of withdrawing their responses any time from the research. Confidentiality was strictly maintained regarding the personal information provided by the participants.

Limitations of the Study

As the research took place during the pandemic situation so some limitations occurred. Due to limitations in data collection procedure, there were some conditions or influences that researcher could not control.

- The main limitation of the study was time constraint.
- Due to the COVID-19 pandemic, it was not be possible to take the interview face to face.
- Only urban area was targeted.
- The sample size was relatively small which might affect the reliability and the subsequent generalizability of the statistical result.

Chapter IV

Results & Discussion

Results

The main purpose of this study is to explore the consequences of COVID-19 pandemic in terms of behavior and learning of CSNs. Another purpose of the study is to explore the current status of the children with special needs during COVID -19 pandemic.

The findings of the study are presented under three broader areas and data were analyzed using descriptive statistics; demographic information of the participants; the understanding and special service status of CSNs; and the consequences of COVID-19 on them in terms of behavior and learning. The survey was conducted on 40 mothers of children with special needs between age 3 to 8 years. In total, 40 individuals

participated the email survey between 24th October to 10th November,2021. There were no missing data in the data set. All the mothers answered all questions.

Demographic Information of Participants:

The demographic information of the participants is presented under Table 1 and Table 2. Table 1 shows the demographic information of the participants in the study. In this survey, the total number of mothers were 40, who have CSNs between 3 to 8 years. Of mothers aged 18 to 45 years, 10% were in 18- 25 years, 60% were in 26-35 years, and 30% were in 36- 45 years and above. In this survey, of fathers aged 26 to 45 years and older, 30% were in 26-35 years, 55% were in 36-45 years and 15% were in 45 years and above. Findings show, 27.5% of mothers were H.S.C, 50% were graduates and 22.5% were postgraduates. Among the fathers, 10.0% were H.S.C, 47.5% were graduates, 40% postgraduates and 2.5% were PhD. In this survey, 67.5% of mothers were homemaker, 5.0% employed in government service, 22.5% in private service, 2.5% run business, and 2.5% occupied in other occupations. Among fathers, 20% employed in government service, 40% was in private service, 17.5% run business and 22.5% employed in other occupation. Table 1 also shows that 50% of parents had one child, 40% had two children and 10% had three children.

Table 1: Demographic Information of Parents

Participants	Variables	Frequency	Percentage
Mother	Age (in years)		
	18-25	4	10.0%
	26-35	24	60.0%
	36-45	12	30.0%
	Educational Qualification		
	H.S.C	11	27.5%
	Graduate	20	50.0%
	Postgraduate	9	22.5%
	Employment		
	Home maker	27	67.5%
	Government Service	2	5.0%
	Private Service	9	22.5%
	Business	1	2.5%
	Others	1	2.5%
Father	Age (in years)		
	26-35	12	30.0%
	36-45	22	55.0%
	45 and above	6	15.0%
	Educational Qualification		
	H.S.C.	4	10.0%
	Graduate	19	47.5%
	Postgraduate	16	40.0%
	PhD	1	2.5%
	Employment		
	Government service	8	20.0%
	Private service	16	40.0%
	Business	7	17.5%
	Others	9	22.5%
Number of Children			
One child		20	50.0%
Two children		16	40.0%
Three children		4	10.0%

Table 2 shows, among children, 25% belongs to 3-4 years age cohort, 25% in 4-5 years age cohort, 17.5% in 5-6 years age cohort, 20% in 6-7 years age cohort, and 12.5% in 7-8 years age cohort. Of all children boys accounting for 72.5 percent of the total. Findings show, 40% of the children identified with multiple disabilities including ASD, ADHD and Speech delay all three together. 22.5% of the children had Autism ,12.5%

had ADHD, 10% had speech delays, 5% had Down syndrome, 2.5% had learning disabilities and 7.5% had other disabilities.

Table 2: Demographic Information of CSNs

Participant	Variables	Frequency	Percentage
Children	Age		
	3-4	10	25.0%
	4-5	10	25.0%
	5-6	7	17.5%
	6-7	8	20.0%
	7-8	5	12.5%
	Gender		
	Boy	29	72.5%
	Girl	11	27.5%
	Types of children with Special need		
	Multiple Disabilities (ASD, ADHD and Speech Delay)	16	40.0%
	Autism Spectrum Disorder (ASD)	9	22.5%
	Attention Deficit Hyperactivity Disorder (ADHD)	5	12.5%
	Speech delay	4	10.0%
	Down syndrome	2	5.0%
Learning disorder	1	2.5%	
Others	3	7.5%	

Understanding of COVID-19 and Special Service Status of CSNs During Pandemic

This section focused on the findings of current status of CSNs during COVID-19 pandemic. The mothers were asked about their children's general perception or understanding about COVID-19 and preventive practice of COVID-19 like wearing masks, washing hands frequently and keeping isolation. Furthermore, mothers were asked about the accessibility of special education and therapy during pandemic of their special need children. Additionally, practice of daily living skills and self-care like

eating by own, washing hands, bathing, playing with peers, these issues were also dig out to shed the light on children’s current status.

Understanding and Preventive Practice of COVID-19 Among CSNs

Table 3 represents the understanding and preventive practice of COVID-19 among CSNs during pandemic. According to mother’s information, 82.5%(f=33) children with special needs understand nothing about this virus, 12.5% (f=5) understand very little and 5.0% (f=2) have adequate knowledge about this virus. In addition, mothers also mentioned, 57.5% (f=29) of CSNs do not follow anything regarding preventive practices of COVID-19 like washing hands, keeping isolation and wearing masks, 32.5% (f=13) moderately follow the guidelines and 10% (f=4) follow the guidelines properly without any hesitation.

Table 3: Distribution of Understanding and Preventive Practice of COVID-19 among CSNs

Variables	Scoring criteria	Frequen cy	Percentage
Understanding about COVID-19 of CSNs	Nothing	33	82.5%
	Very Little	5	12.5%
	Adequate	2	5.0%
Practice Preventive measures of COVID-19 (e.g. wash hands, keep isolation, wearing masks)	Do not want to follow anything	29	57.5%
	Follow Moderately	13	32.5%
	Follow properly	4	10.0%

Special Education and Therapy Services of CSNs during pandemic

Table 4 represents that 72.5% (f=29) of CSNs did not have access to special education during pandemic. The findings also suggest that 45.0% (f=18) of CSNs did not have access to therapy amid the pandemic. From Table 4, it is also observed the daily living skills of CSNs indicate that 55.0% (f=22) children can practice daily living skills and self-care (e.g. eat by own, wash hands, bath, give signals for toilet, play with toys individually/with peers, wear clothes and shoes) and 45.0% (f=18) cannot do anything without their parent's/ caregiver's assistance.

Table 4: Distribution of Special Education and Therapy Services for CSNs during pandemic

Variables	Scoring criteria	Frequency	Percentage
Access to special education during pandemic	Yes	11	27.5%
	No	29	72.5%
Access to therapy during pandemic	Yes	22	55.0%
	No	18	45.0%
Daily living skills / Selfcare	Yes	22	55.0%
	No	18	45.0%

Consequences of COVID-19 on CSNs in terms of Behavior and Learning

The first research question focused on finding out consequences of COVID-19 on behavior and learning of CSNs during pandemic. The mothers were asked about how their CSNs' learning and behavior got affected during pandemic to assess the consequences.

Consequences of CSNs on Learning

Table 5 reflects that, 92.5% (f=37) of parents mentioned that their children's learning was affected during pandemic. Mothers also stated about several factors that were responsible to hamper their children's learning. According to mother's information, 22.5% (f=9) of CSNs had less self-regulation during virtual classes like they were inattentive and unstable and they cannot be managed during classes, 35% (f=14) had financial limitations like job loss or economic deprivation of individuals and families due to COVID-19 pandemic, 10% (f=4) had technological limitations like lack of device/internet at home, 17.5% (f=7) reported about hiring untrained teachers/therapists and 15% (f=6) faced other problems like lack of support from families etc.

Table 5: Distribution of Consequences of CSNs on Learning

Variables	Scoring criteria	Frequency	Percentage
CSNs' learning during pandemic	Affected	37	92.5%
	Not Affected	3	7.5%
Factors affecting learning during pandemic	CSNs' instability and inattentiveness	9	22.5%
	Financial limitations	14	35.0%
	Technological limitations	10	25.0%
	Untrained teachers /therapists	7	17.5%

Consequences on Play Activities

To understand the consequences of children's behavior, mothers were asked whether their children's play activities if there are any changes during pandemic or not. Table 6 represents, 62.5% (f=25) of mothers confirmed that their children's play activities changed during pandemic. Mothers also shared that, 35% (f=14) of CSNs play alone because they do not want to play with other children, 12.5% (f=5) of children play only with siblings but not with other children, 7.5% (f=3) of them play only with others but

not siblings and 7.5% (f=3) of children always show aggressive behavior (hitting, fighting) while playing with children (Table 6).

Table 6: Distribution of Consequences in Play Activities

Variables		Frequency	Percentage
Changes in play activities	Yes	25	62.5%
	No	15	37.5%
Different changes in play activities	Play Alone	14	35%
	Play only with siblings but not other children	5	12.5%
	Play only with others but not siblings	3	7.5%
	Always show aggressive behavior (hitting, fighting) and do not play with other children	3	7.5%
	No change observed in play activities	15	37.5%

Consequences on behavior during pandemic of CSNs

In reference to mother's reported information, there were considerable differences in the behavior pattern of CSNs during pandemic. From Table 7, the findings indicate that, 12.5% (f=5) CSNs were happy to spend time with family, 15% (f=6) were sad and depressed, 40% (f=16) remain always hyperactive and 15% (f=6) remain always extremely annoyed and aggressive. Mothers also mentioned about several factors that influence the consequences on behavior of children. Among them, 40% (f=16) mothers stated about closure of special education and therapy that created profound challenges to maintain routine regulated life of CSNs, 32.5% (f=13) mothers disclosed about children's addiction for electronic gadgets as mothers were compelled to spend more time in household chores during pandemic and children spent more time with gadgets which made them hyperactive, 10% (f=4) mothers responded about social isolation &

irregular schedule pattern during pandemic that evoked the behavior consequences of special need children (Table 7).

Table 7: Distribution of Consequences on Behavior of CSNs

Variables	Scoring Criteria	Frequency	Percentage
Changes in Behavior	Happy to Spend time with Family	5	12.5%
	Sad and Depressed	6	15.0%
	Always Hyperactive	16	40.0%
	Always Extremely Annoyed and Aggressive	6	15.0%
	No change in behavior	7	17.5%
Factors Affecting Behavior	Closure of Special education and Therapy	16	40.0%
	Addiction for Electronic Gadgets	13	32.5%
	Social Isolation & Unstructured Routine	4	10.0%
	No change in Behavior	7	17.5%

The findings also suggest, CSNs had significant changes while meeting new people during pandemic. From Table 8 findings reveal, 32.5% (f=13) special need children were very shy and uncomfortable that they behaved unusually in front of new people, 17.5% (f=7) were extremely aggressive (shouting, crying, being hyperactive) and 7.5% (f=3) of CSNs love to meet new people during pandemic.

Table 8: Distribution of Consequences of COVID-19 on Social Behavior

Variable s	Scoring Criteria	Frequency	Percentage
Change in social behavior (meeting new person)	Very shy and uncomfortable	13	32.5%
	Extremely aggressive (shouting, crying, being hyperactive)	7	17.5%
	Love to meet people	3	7.5%
	No change observed	17	42.5%

Consequences of COVID-19 on Parental Behavior

According to mothers, there were changes in the parent's attitude in terms of negative behavior during pandemic. Table 9 summarizes, 75% (f=30) of mothers confirmed about increase in negative parental behavior during lockdown. Mothers also mentioned about several factors which influence the rise in negative parental behavior. Of them, 35% (f=14) mentioned about sudden job loss and uncertainty due to pandemic, 30% (f=12) stated about isolation and work from home and 15% (f=6) stated about unstructured routine and loss of families. (Table 9)

Table 9: Distribution of Consequences of COVID-19 on Parental Behavior

Variables	Scoring criteria	Frequency	Percentage
Parental Negative Behavior	Increased	30	75.0%
	Not Increased	10	25%
Factors Affecting Negative Parental Behavior	Sudden Job Loss and Uncertainty	14	35.0%
	Isolation and Work from Home	12	30.0%
	Unstructured Routine and Loss of Family	6	15.0%
	No Specific Reasons Reported	8	20.0%

Consequences of COVID-19 on Sleep Duration and Appetite

In reference to mother's information, findings reveal there were considerable differences in the sleep duration and appetite of CSNs compared to pre and during pandemic. Figure 1 illustrates, daily 7.5% (f=3) of children slept less than 5 hours, 22.5% (f=9) slept within 10-12 hours and 70% (f=28) children slept within 6-10 hours.

Figure 2 illustrates, 47.50% (f=19) of CSNs had no change in appetite, 17.5% (f=7) of children's appetite increased and 35% (f=14) of children's appetite decreased in pandemic compared to before pandemic.

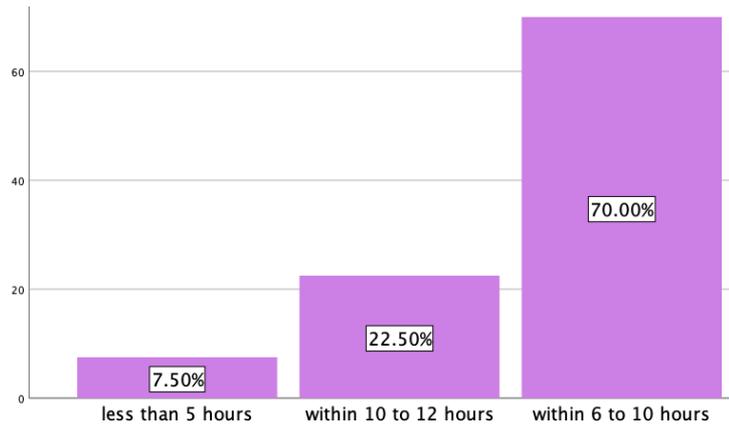


Figure 1: Distribution of Sleep Duration of CSNs

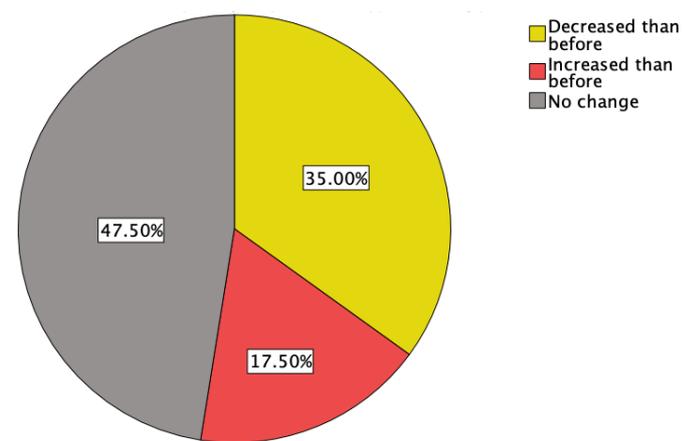


Figure 2: Distribution of Changes in Appetite of CSNs

Consequences of COVID-19 on Child Abuse at home

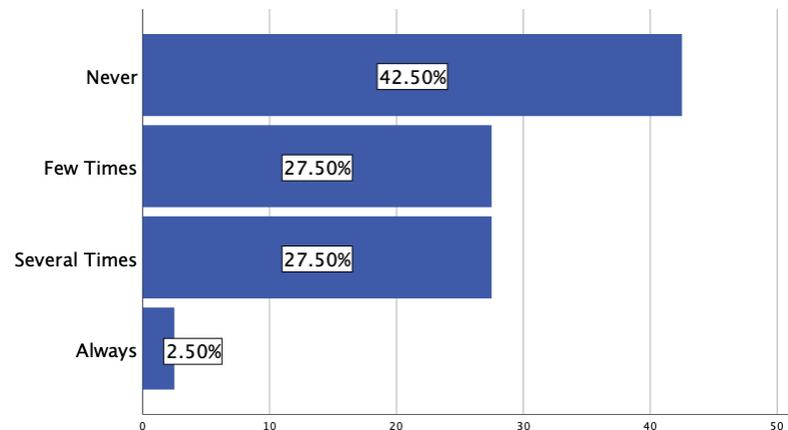


Figure 3: Distribution of Domestic violence and abuse during pandemic

Findings capture the insight from mother's information that domestic violence and abuse like hitting, scolding or verbally abusing CSNs increased considerably during pandemic. Figure 3 shows that, though 42.5% children's mothers mentioned that they never did such abuse at home but 27.50% of mothers agreed they did child abuse for 'few times', 27.50% for 'several times' and 2.5% of mothers did violence 'always' at home during COVID-19 pandemic.

Consequences of COVID-19 on Availability of Essential Goods

Some products and medicines like dietary products, gluten free carbohydrates, lactose free milk, medicines these things were compulsory for the wellbeing of the children which were prescribed by the physicians but due to lack of supply or high price in the market during pandemic, many families of CSNs were unable to buy them. Figure 4 illustrates the consequences of pandemic on availability of essential goods during lockdown. According to mother's statement, 52.5% (f=21) faced difficulties while buying essential products for special need children during pandemic which were

prescribed by their physicians. 47.5%(f=19) of mothers did not face any challenges to buy essential products for their CSNs.

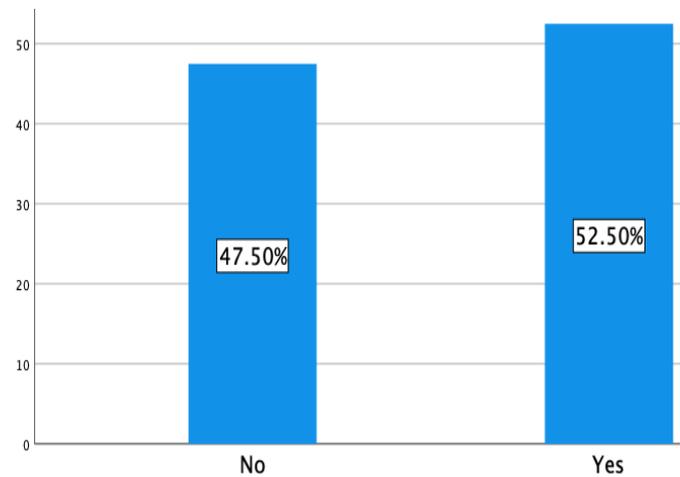


Figure 4: Distribution of Consequences of COVID-19 Pandemic on Availability of Essential Goods

Discussion

This survey was devised on 40 mothers of children with special needs between age 3 to 8 years. This study aimed to determine the consequences of COVID-19 pandemic in terms of behavior and learning on children with special needs. Another purpose of this study was to address the current status of CSNs during the COVID-19 pandemic.

The findings contribute to provide a preliminary insight on wide-ranging multiple negative impacts of COVID-19 on special need children. This study magnified the heightened risk factors of children through experiencing multiple disparities related to education, health, equity and social inclusion. By interrogating mothers in terms of learning and behavior, their current status and consequences were revealed. In addition, particular factors associated with COVID-19 pandemic exacerbated threats for CSNs.

Understanding of COVID-19 and Special Service Status of CSNs During Pandemic

This section was focused to devise the impact on the current status of CSNs in terms of understanding and preventive practice of COVID-19 as well as accessibility to special service status during pandemic.

Understanding and Preventive Practice of COVID-19 Among CSNs

This study also examined that larger portion (82.5%) of children with special needs are mostly not being able to understand about the COVID-19 virus and they struggle to adapt with the preventive measures like hand washing, wearing mask, social distancing, confinement at home as well as follow relevant hygiene instructions. Besides, children with special needs may have some sensory issues which could have an impact on wearing mask or washing hands frequently and this maybe preventing them to perform the actions. These findings are parallel to some similar findings on different countries that how CSNs are managing to cope with and respond to COVID-19 measures. Dursan et al. (2020) stated, children with intellectual disabilities like ASD or ADHD, may struggle more to understand the threatening situation in this regard. Asbury et al. (2020) discussed that children with developmental disabilities experienced trouble to understand about social distancing and effect of pandemic. This study also suggest that families passed difficulties to cope up with the restrictive measures of quarantine and lockdown. Similar study also established that families endure a lot to cope with the children's swelling misbehavior during the confinement of lockdown (Dursan et al., 2020). The majority of the children were unaware of what COVID-19 was and about the measures or consequences of this virus. Result of this present study, indeed showed likewise.

Special Education and Therapy Services for CSNs during pandemic

This study also exposed that majority (72.5%) of children with special needs did not attend any special education or therapy during the pandemic. Globally over 80% children's education hampered severely for the reason of school closure and social isolation (Lancker & Parolin, 2020). Children with disabilities and their families are not exceptional than this huge learning gap. UNICEF (2020) also confirmed about this exclusion of children with special needs from education programs during this pandemic. This interruption of CSNs' education during the pandemic was also investigated in one similar study. In the western Pennsylvania area, it was also surveyed that majority of families with CSNs had reduced access to necessary rehabilitations, early intervention and school-based support networks (Lancker & Parolin, 2020). During COVID-19, 14% of children lost access to school-related service and face-to-face access to developmental therapies, causing many to fall behind in critical areas (Easterseals, 2021).

On the contrary, this study exposed that a bigger portion (55%) of children attended therapies at home by the special educators or therapist during the lockdown. So, from this study it is visible that a number of parents tried to adjust with the remote learning process though they felt several difficulties during pandemic. Thus, in line with Cahapay (2020), many parents tried to provide interventions at home for their special need children.

To find out the current status of CSNs, practice of daily living skills and self-care were investigated from their mothers. Findings show that most (46.3%) children had difficulties in managing daily living skills and performing selfcare (e.g. eat by own, wash hands, bath, give signals for toilet, play with toys individually/with peers, wear

clothes and shoes) without assistance since the disease outbreak. It can be speculated that as these children remain occupied in one to one intervention at school or therapies and they can learn so many daily living skills from their support-based networks, so due to closure of these services, daily living skills deteriorate for many children. Similar findings were discovered where many children fall behind than their peers and lost progression in terms of daily living skills (Easterseals, 2021).

Consequences of COVID-19 on Behavior and Learning

This section was focused on consequences of COVID-19 on CSNs in terms of behavior and learning. Findings suggest that CSNs had to face unprecedented challenges in terms of learning & behavior as well as additional factors were identified in this study which might have an indirect effect on children's learning and behavior during pandemic.

Consequences on Learning

This study findings indicated that majority of mothers (92.5%) asserted that their children's learning hampered extensively during pandemic. Additionally, mothers clarified rather than COVID-19, several factors also effect their CSNs' learning. The majority (35%) of the mothers stated about their financial limitations due to sudden job loss or economic deprivation associated with COVID-19 pandemic. Many (22.5%) mothers blamed about children's inattention and uncontrollable condition during virtual classes which caused obstruction in learning. According to mothers, virtual learning was not suitable for their children. Many (25%) of the mothers expressed about lack of technological management (e.g. internet or device) that acted as foremost barrier for their children's learning. Some (17.5%) parents tried to arrange therapies at home by teachers/ therapists but due to lockdown professional teachers were not available and untrained teachers/therapists were not that much beneficial for the children's progress.

Similar statements justify that lack of materials, tools, modified keyboards for vision impaired children, audio books and other devices as well as tailored support from teachers to participate in learning were never structured sufficiently for the gifted children (UNICEF,2020). The parents reported that several barriers like lack of suitable learning materials, inadequate teacher's training and support as well as parent's inefficiency to help their children with disabilities kept them away from online learning during pandemic (UNICEF,2020). Study done in Nepal also investigated that 70% parents and caregivers blamed that lack of learning materials was the foremost barrier for online learning during lockdown (Humanity & Inclusion, 2020). According to Save The Children (2020), 71% children with disabilities didn't have enough homeschooling learning materials and 60% of children with special needs reported for nonexistent of adult's assistance at home for their home schooling. Around 6 in 10 children with disabilities did not have anyone to help. Nevertheless, 38% parents and caregivers experienced impaired capacity of supporting their children's learning in virtual classes. Beside this, 91% teachers even expressed this deficiency of supportive materials and tools for online learning in the classes of CSNs (Save the Children, 2020).

On the other hand, those who are attending online classes for special education or therapies, their parents act as trainers/educators during the classes. But untrained mothers or caregivers might find it more difficult to provide sessions in the same way that professionals do. Similar findings show that children with disabilities did not have professional support from therapists or caregivers at home during the lockdown, which worsened their condition compared to before the pandemic (Easterseals, 2021). According to studies, students enrolled in online education perform worse than their in-person peers. One study, conducted prior to COVID-19, found that online students were up to a year behind their peers in math. The rapid transition from traditional to virtual

learning has increased the likelihood of academic losses during COVID-19 (Easterseals, 2021).

In this regard, Cahapay (2020), introduced the ideas of how parents of Philippine tried to cope up with the online learning and homeschooling methods with their children with special needs during the pandemic.

Therefore, lack of learning opportunities, inadequate therapies and children's inability to contribute in education has become a greatest challenge for the special children to persist.

Consequences on Play Activities

This study also discovered that majority (62.5%) of mothers observed their children's change in play during pandemic. Mothers indicate that children became shy to interact with others and 35% of them play alone, they do not play with other children. Not only that some (12%) of them play with siblings only. Additionally, 7% children always show aggressive behavior (hitting, fighting) and do not play with others. Study shows that children with disabilities had negative impacts on their physical activities or play too. 44% children stopped physical activities which led them into health risk and mental complications (Cacioppo et al.,2021). A big percentage (55%) of children with disabilities found out playing less than other children during pandemic which is also similar to the result of this study (Save the Children,2020).

Consequences on Behavior

The most devastating change parents observe about their special need children is, escalation of hyperactivity and aggressiveness in their behavior during pandemic. According to the findings of this study, a large portion (40%) of children were always hyperactive, some (15%) were constantly annoyed and aggressive, and some (15%)

were always sad and depressed. Most of the parents (40%) mentioned about the closure of educational institutions and therapy services as well as some (32.5%) mothers emphasized on addiction for gadgets as the substantial reasons for this heightened hyperactivity.

Similarly, in Italy, comparing to the children's pre and post pandemic status, it has been investigated that COVID-19 resulted significant increase in anxiety, depression and attention deficit in special need children's behavior. The study also estimated 40-50% children with disabilities showed behavioral regulation problems which is possibly associated due to social isolation and cancellation of education (Montirosso et al., 2021). Parallely another study estimated 81.6% children watched television and gadgets more than before pandemic that is responsible for children's increased aggressiveness and their hyperactivity (Masi et al., 2020).

This study also remarked on the findings of children's lack of social behavior. Though majority (42.5%) showed typical behavior after seeing new persons during pandemic but many of them (32.5%) were shy and uncomfortable in new places or meeting new person during pandemic. Moreover, some children (17.5%) were extremely aggressive and they expressed their emotional breakout though shouting, crying or hitting others after seeing new persons due to lack of social communication. Nash (2021) also demonstrated about lack of social skills in ASD children during one study. More instances, another study found out during the pandemic, children with ASD experienced a variety of behavioral issues, including social communication deficits, attention deficit hyperactivity disorder, irritability, and aggression (Eshraghi et al., 2021).

Consequences on Parental Behavior

This study also to find out the effects of the pandemic on wellbeing of parents and their children. Findings exposed that majority (75%) of mothers of children with special needs reported an increase in their negative parental behavior during lockdown. In the face of social isolation, economic hardship and challenges, as well as dealing special need children by the families during pandemic rise the conflictual situation at home. Some mothers (35%) mentioned on unexpected job loss and financial deprivation due to COVID-19 pandemic, some (30%) on social isolation and the work-from-home method, and a few (15%) stated about unstructured routine and loss of families during pandemic. Similarly increase in negative parental behavior was also discovered in the study of Save the Children. Many (33%) parents/caregivers reported about heightened negative parenting techniques and majority (82%) parents/caregivers reported about reduced psychosocial wellbeing during the COVID-19 pandemic (Save the Children ,2020). Stankovic et al. (2020) also discovered that the parents of children with ASD had adverse feelings of helplessness during the Covid-19 which is very parallel to this study.

Simultaneously in this study it was also found that many parents felt happier than before as they could spend more time with their children and vice versa. Many (18.5%) children were happy according to their mother's opinion during lockdown to spend more time with all family members. Many studies explore the similar findings where parents felt overwhelmed to spend more quality time with their children during pandemic. Neece et al. (2020) examined, though many parents reported about negative feelings for confinement at home but at the same time some parents expressed their emotional positive aspects for being together in a family all the day during lockdown.

Consequences on Sleep Duration and Appetite

CSNs reported to be at increased risk for sleep disturbances and appetite problems during the COVID-19 pandemic. This may be related to several factors like closure of education and interventions which hamper their structured routine life. Parents maybe faced challenges to maintain daily routine and interventions at home during pandemic as they are not professional and had to take care of other issues as well during pandemic.

This study found out that CSNs lost their appetite than before which was explored in this study. Though half (47.5%) of the mothers stated they observed no change in their children's appetite but many (35.0%) parents assured about decreased appetite and some (17.5%) assured about increased appetite of CSNs during pandemic. This study also found out, special need children were sleeping less than before during pandemic. Most (70%) of the mothers reported children are sleeping within 6-10 hours, many (22.50%) mothers reported children slept within 10 to 12 hours and some (9.3%) of the mothers reported their children's total sleeping hours were less than 5 hours daily.

These results were consistent with findings from many other studies where most common effects of pandemic were sleep disturbances and changed appetite among CSNs. Another study result also shows similarity where 21% children with ASD lost appetite during pandemic than before ((Mutluer et al., 2020). Similar findings relate with this study in lined with Dursan et al, (2020) where sleep disturbances were also prevalent among children with special needs due to pandemic-related changes in daily life routines. Parallel with this result, one study explored the impact of COVID-19 on children with ASD, also confirmed that they slept less and had sleep disturbance during the lockdown (Mutluer et al., 2020). Another study found increased sleep disturbances among children with ASD during lockdown, which is similar to these findings. (Colizzi

et al., 2020). Masi et al. (2020) revealed during pandemic children experienced less sleep (43.6%) and lesser food than before (32.4%).

Consequences on Domestic violence and abuse

Generally, children with special needs are always being unsafe and jeopardized during any emergency situation than typical children. Additionally, loss of income, closure of special schools and fear of COVID lead the families to extra amount of fear, frustration and anger. As a result, CSNs constantly face greater risks of abuse and violence even at home which is not exceptional during COVID-19 pandemic. In this current study, a major portion (42.5%) of mothers accepted they never physically or mentally abuse their CSNs. But many (27.50%) of the mothers did ‘few times’ and many (27.5%) did ‘several times’ as well as some (12.5%) of the mothers did several times domestic violence (physically hit, scold or verbally abuse) during pandemic. So, it has been discovered that a major percentage of children with disabilities had augmented negative feelings during this pandemic for several reasons. Save The Children (2020) also identified, large quantity (86%) of children with disabilities were testified for heightened negative feelings throughout the pandemic due to domestic abuse which was quite similar with this study.

Consequences of COVID-19 on Availability of Essential Goods

The findings of this study represent a snapshot in time during the pandemic where more than half of the participants felt difficulties to buy necessary supplies and medicines for their special need children. The majority (52.5%) of participants faced barriers to buy essential household items, groceries, special dietary intake, hygiene products, medicines for their children with special needs during lockdown. These products and medicines were compulsory for the wellbeing of the children which were prescribed by

the physicians but due to lack of supply or high price in the market during pandemic, parents were unable to buy them. Similarly, one study done at Australia also identified the inaccessibility of necessities during the lockdown due to several reasons (Dickinson & Yates, 2020).

However, it can be observed from the discussion that children with special needs are disproportionately affected by COVID-19 pandemic during the lockdown and social isolation measures. Unstructured routine, inaccessibility to community-based services like education, health as well as social communication and poverty incur loss of their development and wellbeing dreadfully. Therefore, this study portrays that there was a huge learning gap and the impact of this gap can be devastating for the future of children with disabilities. Inflated aggressiveness and hyperactivity were consequential during the pandemic for lockdown and social isolation measures. Lack of play and physical activities, closure of school and therapies, unstructured routine and caregiver's negative feelings everything had a significant impact on the children. This marginalized group already face multiple barriers and difficulties to access inclusion in education and society but during the crisis period of COVID-19 pandemic these children were thrown into turmoil.

Therefore, it has been observed that children with special needs are an 'at risk' population in the COVID-19 pandemic. Heightened inequities cause by the pandemic put additional challenges for the families of CSNs to survive and thrive.

Conclusion

Existing research unveils that the children with special needs are forced to live in an unfortunate and abominable living during COVID-19 lockdown which is abhorrent and revolting for the children's wellbeing as well as the entire society. This survey devised

to capture the impact of COVID-19 on children with disabilities and their families sequentially. Additionally, this research focused the unmet needs of resources and information for children who have any sort of disability and scrutinize the reasons behind them. Proper intervention programs, inter-ministerial collaboration and political endeavor should be initiated to minimize the discontinuance of the education, health and rehabilitation services for the special need children.

Research flaunts that school closure, disruption in therapies and treatment, unstructured routine, confinement at home and anxiety put the children in to doldrums. The research proffers some necessary focus on the significant areas of impairment for learning and behavior in the context of lockdown and social isolation measures for CSNs.

The children with special needs were already striving to achieve the inclusion in several aspects of education, health, employment and social association. Due to the COVID-19 outbreak, these children fall behind deplorably than their peer groups in the context of progression and wellbeing. The children with developmental delays usually ought to receive one to one education and therapies but due to pandemic they were forced to depend on virtual learning. So, due to technological limitations, financial curbs and children's intractable attitude to receive education and therapies online, a biggest portion of children with special needs were out of education during the pandemic. This study also exhibits the facts and figures of some imponderable scenarios like how children's social behavior and communication changed a lot during pandemic due to incarceration of lockdown.

Furthermore, parents and caregivers also internalize all the anxieties of dreadful effect causing by the virus and the impact of lockdown on their children with special needs. The virtual learning process is actually not geared to the needs of children with

disabilities with accessible learning materials and tools particularly for vision and hearing-impaired children.

This is also considered that a slight change in the organized routine perhaps create a huge impact on the children with disabilities which was unpremeditated during pandemic. Beside this, these children are tended to habituated with regular medication and treatment which was completely out-of-the-way during the lockdown. Even many parents nitpicked about the unavailability of necessary supplies and inflation of dietary products as well as medicines during the lockdown when supply was closed within the entire country.

Therefore, heightened awareness and advocacy should be raised in the system level providers and collaborative efforts should be assured by the pediatric therapy providers and families as well. Though trying to change the attitudes to disability is an uphill struggle for all the societies particularly for the most disadvantaged one yet more and more productive partnership should be created among the stakeholders to mitigate this huge gap and bring the children back to their pace of life once again.

Recommendations

According to this study, the findings and discussion shed light on some issues that can be resolved through some possible key recommendations.

○ Developing inclusive accessible education after pandemic

After pandemic it should be ensured that the large portion of children who were out of school, should get back to education as soon as possible. Children with special needs have multiple intelligence and needs according to their individual choice. So, they should be supported intensively through adequate accessible learning tools, materials and methods suitable to their needs and learning styles. Targeted intervention should

be provided for the vision and hearing-impaired children who could not attend any virtual learning during the pandemic. Parents and educators or therapists need to make continuous collaboration to align with the children's individual need and learning method. Virtual learning process requires to be more technologically sound, adaptable and equitable for all the paces of children with disabilities.

- **Conducting more studies and researches**

There is always dearth of necessary information and data for the children with special needs particularly in the context of impoverished communities. More dedicated mixed-method studies should be conducted to find out the exact prevalence for CSNs and their needs. Conducting additional research and study will be beneficial for the children to intervene effective strategies and practices to achieve their highest potential. Data in all aspects like health, social care, education, disability services, should be anticipated. Data on enrollments, interventions, learning outcomes to identify the drop out reasons and rates, data on physical health, treatment and medicine, data on preparedness for any crisis or emergency everything should be brought under one umbrella for everyone's fair go. Ensuring safe and nutritious food, sanitation, medicines, hospital facilities and mitigating the losses through effective programme design and budgeting is necessary on this regard.

- **Enhancing Capacity development**

The findings of this study show that mothers of the CSNs are the important resource for their service delivery and planning process of intervention. So, parent education should be initiated for the mothers and caregivers so that they can support their children's learning and therapy.

Adequate and proficient education program training for special educators, health technicians, parents and caregivers must be ensured and instructed by professional to obtain, strengthen and also maintain the capacity over time to achieve the goals. As pandemic is not over still and distance learning program is still incorporating, so teacher skill development is compulsory to achieve knowledge with pedagogy and improved learning practices. Parental education and practices should be merged in real life also through increased interaction, support and play with children during the lockdown.

- **Policy Reformation**

Initiation of inclusive policy reforms is essential to improve the quality of education and provision of accessible learning materials, methods and environment for reduce learning gap.

Moreover, inter-ministerial collaboration is compulsory for the sake of stakeholders to recognize the differently able children's ability and help them appropriately. Structural reforms will ensure the service delivery for children with special needs to mitigate their learning loss and other development issues. 'Bangladesh Rehabilitation Council Act 2018' is passed with a view to develop the rehabilitation services for the people who are suffering by various forms of disabilities and neurological disorders. This act is needed to include a structured emergency plan in the context of COVID-19 to recover the loss of CSNs and their families.

Beside all this, there is a need for acceptance and inclusion of the children with special needs in our society because already they are stigmatized and prejudiced.

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Appendixes

Questionnaire on COVID-19 consequences of children with special needs

I am going to conduct a research as part of the Masters in ECD under BRAC University.

You are requested to answer the following questions about how the COVID-19 epidemic is affecting your child. All information you provide will be kept confidential and will only be used for research purposes.

1. Mother's name-
2. Mother's age-
 - 18-25 years
 - 26-35 years
 - 36-45 years
 - 45 years above
3. Mother's education-
 - never went to school
 - 5th grade pass
 - 10th grade pass
 - S.S.C.
 - H.S.C.
 - Graduate (Diploma/Degree/ Honors)
 - Post Graduate
 - Masters
 - M.Phil.
 - P.H.D.
4. Mother's occupation-
 - Government Service holder
 - Private Service holder
 - Entrepreneur
 - Teacher
 - Banker
 - Doctor
 - House wife
 - Others
5. Father's name-
6. Father's age-
 - 18-25 years
 - 26-35 years
 - 36-45 years
 - 45 years above
7. Father's education-
 - never went to school
 - 5th grade pass

- 10th grade pass
 - S.S.C.
 - H.S.C.
 - Graduate (Diploma/Degree/ Honors)
 - Post Graduate
 - Masters
 - M.Phil.
 - P.H.D.
8. Father's occupation-
- Government Service holder
 - Private Service holder
 - Entrepreneur
 - Teacher
 - Banker
 - Doctor
 - House wife
 - Others
9. Number of Children –
10. Child's Name
11. Child's Age –
- 3-4 years
 - 4-5 years
 - 5-6 years
 - 6-7 years
 - 7-8 years
12. Child's gender- boy/ girl
13. In which spectrum your child falls into?
- Autism Spectrum Disorder
 - Down Syndrome
 - Attention Deficit Hyperactivity Disorder
 - Learning Disability
 - Speech Delay
 - Others

Understanding about COVID-

14. How much your child understands about COVID?
- nothing
 - very little
 - adequate
 - very well
15. How he/she behave about following guidelines of COVID like washing hands or maintaining isolation with people?
- maintain the guidelines without hesitation
 - did not maintain the guidelines
 - moderately maintain the guidelines
 - sensitive to maintain the guidelines (gets angry to wash hands or wear masks and maintain distance with people)
16. How your child reacts when he/she wants to go outside home during pandemic but you did not allow?
- nothing
 - manageable and not that much worried

- manageable but showed aggressive behavior
- extremely aggressive

Special Education and therapy services

17. Did he/she continue with special education services during pandemic?
 - yes
 - no.
18. If yes, then how many days in a month he/she special need school?
19. And, how many hours in a day he/she attended online schooling?
20. Which method did he/she used to continue special education services? (you can tic several options)
 - Remote learning services like online classes
 - Personal Physical schooling services conducted by special educators
 - In own home done by therapist
 - others
 - nothing
21. Did he/she continue with any therapy services during pandemic?
 - yes
 - no
22. Which method did he/she use to continue special education services? you can tic several options)
 - Remote learning services like online classes
 - Personal Physical schooling services conducted by special educators
 - In own home done by therapist
 - others
 - nothing
23. Did he/she had enough technological support while attending online classes? (if not attend online class tic 'not applicable')
 - yes
 - no
 - others
 - not applicable
24. Did online classes remain useful and supportive for your child? (if not attend online class tic 'not applicable')
 - not at all
 - very little helpful
 - very helpful
 - not applicable
25. If agree then why? (you can tic several options)
 - full guidance and cooperation of educators and therapists
 - Special schools and therapy intuition's adequate materials
 - availability of internet
 - others
 - not applicable
26. what types of problems did you face while attending online classes? (if not attend online class tic 'not applicable')
 - Problem in laptop or internet facilities
 - Child cannot give attention in the class
 - Child was not manageable and stable during online class

- Inadequate training of teachers and therapists
 - Others
27. Did the online classes of special schools have enough learning materials and tools for remote learning? if not attend online class tic ‘not applicable’. If not attend online class tic ‘not applicable’)
- yes
 - no
28. Do you think your child’s learning hampered during pandemic?
- yes
 - no
29. If yes, what could be the reasons? (you can answer multiple one)
- unavailability of technological infrastructures (device and internet facilities)
 - financial limitations
 - lack of attentiveness and behavior management of child
 - lack of interest in family
 - Inadequate training of teachers and therapists
 - others
 - not applicable

Play

30. Do your child plays with his/her sibling during pandemic?
- yes
 - no
31. Can you notice any change during pandemic while playing with siblings or other children?
- yes
 - no
32. if yes, then what are the changes? (you can answer multiple one)
- Happy to play with siblings or friends as they got more time to spend together.
 - do not play with other children, play silently beside them
 - Not happy, always behave negatively like fight with toys, hurt others
 - extremely negative behavior showed about siblings but positive about other children
 - positive about siblings but negative about other children
 - none
 - others

Aggressive behavior and Hyperactivity

33. How was your child during the pandemic?
- as usual no change
 - happy to stay more time with family
 - Unhappy and sad
 - hyperactive most of the time
 - extremely distressed and irritated
 - others
34. Did your child show aggressive behavior and hyperactivity during pandemic than before pandemic?
- yes
 - no
35. If so then, what could be the reason you think? (you can answer multiple one)
- disruption in therapies
 - disruption in education services
 - lack of treatment and lack of medicines

- Inaccessibility to health care services
 - Social Isolation
 - Unstructured routine
 - Loss of family members
 - Degradation of financial status
 - parental negative behavior
 - others
 - increased addiction to mobile, laptop or television
 - lack of sleep
 - not applicable
36. If yes, then how do you manage when he/she gets hyper? (you can answer multiple one)
- nothing
 - manage them by treatment and therapies learnt from special school
 - took him/her to hospital
 - scold or bit him/ her
 - overlooked or avoided
 - tried to distract him/her by other things
 - bring change in diet chart
 - not applicable

Interaction with family members

37. Did your child responds to his/ her name?
- yes
 - no
38. If no, then before pandemic did he/ she used to response by name?
- yes
 - no
39. Did your child faced violence in the family during pandemic? (for example, threaten, bit, scold or mentally abuse children)
- yes
 - no
40. Do you think parental negative behavior increased during pandemic?
- yes
 - no
41. If yes then what could be the reasons? (you can answer multiple one)
- Loss of job and economic decline
 - Loss of family members for COVID
 - Isolation and quarantine
 - Work from home
 - unstructured routine
 - uncertainty about future
 - others
 - not applicable
42. How did your child behaved after seeing new person during pandemic?
- nothing changed, normal behavior
 - shy but manageable
 - extremely shy and aggressive
 - not shy at all and enjoy spending time with new person

Sleep and eating pattern

43. What was your child's appetite during pandemic?
- increased than before pandemic
 - decreased than before pandemic
 - no change
44. What was your child's sleeping duration between pandemic?
- less than 5 hours
 - 5 to 10 hours
 - 10-12 hours
 - more than 12 hours

Selfcare and daily living skills

45. Which skills your child can do without or little assistance before pandemic? (you can answer multiple one)
- eating by own
 - washing hands by opening the tap
 - bathing
 - open and close his cloths
 - wear shoes
 - give signals for toileting when needed
 - doing toileting by his/her own when needed
 - playing with others with toys
 - arranging his/her books and cloths
 - others
 - nothing
46. Do you think your child's progress got lost during pandemic regarding these skills?
- yes
 - no
47. if Yes, then what could be the reasons? (if no then tic 'not applicable')
- lack of educational and therapy services
 - lack of support for family members
 - lack of professionals
 - closure of their help services like attendance, maid or house help
 - others
 - not applicable

Accessing health service and Information

48. Do you think the information about COVID you got was enough for fighting the disease?
- yes
 - no
49. Do you think health issues become inaccessible like COVID-19 testing, scarcity of telehealth services for your child during pandemic?
- yes
 - no
50. Did you able to buy essential supplies, like groceries, special dietary products, hygiene products or medicines during pandemic?
- yes
 - no
51. If no, then what are the challenges for inaccessibility to those services? (you can give multiple answers, if no then tic 'not applicable')

- lockdown of the entire country
- closure of product supplies
- inaccessibility to market or shops
- others
- not applicable

কোভিড -১৯ মহামারীর প্রভাব সম্পর্কিত জরিপ

আমি ব্র্যাক বিশ্ববিদ্যালয়ের অধীনে ইসিডিতে মাস্টার্সের অংশ হিসাবে একটি গবেষণা পরিচালনা করতে যাচ্ছি। কোভিড -১৯ মহামারী আপনার সন্তানের উপর প্রভাব ফেলছে কিনা সে সম্পর্কে আপনাকে নিম্নলিখিত প্রশ্নের উত্তর দেওয়ার অনুরোধ করা হচ্ছে। আপনার দেওয়া সমস্ত তথ্য গোপন রাখা হবে এবং শুধুমাত্র গবেষণার জন্য ব্যবহার করা হবে।

১. বাচ্চার মায়ের নামঃ

২. বাচ্চার মায়ের বয়সঃ

- ১৮-২৫ বছর
- ২৬-৩৫ বছর
- ৩৬ -৪৫ বছর
- ৪৫ বছর এর উর্ধ্বে

৩. বাচ্চার মায়ের শিক্ষাগত যোগ্যতাঃ

- কখনো স্কুলে যায়নি
- ১ম থেকে পঞ্চম শ্রেণি পাশ
- ষষ্ঠ থেকে দশম শ্রেণি পাশ
- এস.এস.সি
- এইচ. এস. সি.
- গ্রাজুয়েট(ডিপ্লোমা/ ডিগ্রী/ অনার্স)

- পোস্ট গ্রাজুয়েট
- মাস্টার্স
- এম ফিল
- পি এইচ ডি

৪. বাচ্চার মায়ের পেশা

- সরকারি চাকরিজীবী
- বেসরকারি চাকরিজীবী
- ব্যবসায়ী
- শিক্ষক
- ব্যাংকার
- ডাক্তার
- হাউজ ওয়াইফ
- অন্যান্য

৫. বাচ্চার বাবার নামঃ

৬. বাচ্চার বাবার বয়সঃ

- ১৮-২৫ বছর
- ২৬-৩৫ বছর
- ৩৬ -৪৫ বছর
- ৪৫ বছর এর উর্ধ্বে

৭. বাচ্চার বাবার শিক্ষাগত যোগ্যতাঃ

- কখনো স্কুলে যায়নি
- ১ম থেকে পঞ্চম শ্রেণি পাশ
- ষষ্ঠ থেকে দশম শ্রেণি পাশ
- এস.এস.সি
- এইচ. এস. সি.
- গ্রাজুয়েট(ডিপ্লোমা/ ডিগ্রী/ অনার্স)
- পোস্ট গ্রাজুয়েট
- মাস্টার্স
- এম ফিল
- পি এইচ ডি

৮. বাচ্চার বাবার পেশা

- সরকারি চাকরিজীবী
- বেসরকারি চাকরিজীবী
- ব্যবসায়ী
- শিক্ষক
- ব্যাংকার
- ডাক্তার
- অন্যান্য

৯. মোট সন্তান সংখ্যাঃ

১০. বাচ্চার নাম

১১. বাচ্চার বয়স

- ৩-৪ বছর
- ৪-৫ বছর
- ৫-৬ বছর
- ৬-৭ বছর
- ৭-৮ বছর

১২. বাচ্চার লিঙ্গ

- ছেলে
- মেয়ে

১৩. নিচের কোন সমস্যাটি আপনার শিশুর ?

- অটিজম স্পেকট্রাম ডিজঅর্ডার
- ডাউন সিনড্রোম
- এটেনশন ডেফিসিট হাইপারএক্টিভিটি ডিজঅর্ডার
- লার্নিং ডিজএবিলিটি
- স্পিচ ডিলে
- অন্যান্য

কোভিড-১৯ সম্পর্কিত জ্ঞান

১৪. আপনার বিশেষ সন্তানটি কোভিড-১৯ সম্পর্কে কতটুকু বোঝে?

- কিছুই বোঝেনা
- খুবই কম বুঝে
- ভালই বুঝে

- যথেষ্ট ভাল বোঝে

১৫. কোভিড-১৯ সম্পর্কিত জাতীয় গাইডলাইন গুলো যেমন বারবার হাত ধোয়া বা মানুষের সাথে দূরত্ব বজায় রাখা মানার ক্ষেত্রে আপনার সন্তানটি কিভাবে প্রতিক্রিয়া ব্যক্ত করে?

- কোনোরকম দ্বিধা ছাড়াই মেনে চলে
- কিছুই মেনে চলতে চায়না
- মোটামটি মেনে চলে
- মেনে চলতে কিছুটা সংবেদনশীল আচরণ করে (যেমন হাত ধুতে বা মাস্ক পড়তে বললে ,সামাজিক দূরত্ব বজায় রাখতে বললে রেগে যায়)

১৬.আপনার সন্তান যখন লকডাউন এর মধ্যে বাইরে যেতে চায় আর আপনি যেতে মানা করেন তখন সে কি করে?

- কিছুই করেনা
- ম্যানেজ করা যায় এবং অত চিন্তা করেনা
- ম্যানেজ করা যায় কিন্তু কিছুটা আক্রমণাত্মক হয়ে যায়
- অত্যাধিক আক্রমণাত্মক হয়ে যায়

বিশেষ শিক্ষা ও থেরাপি সেবা

১৭.আপনার শিশুটি কি বিশেষ শিক্ষা গ্রহণ করছে লকডাউনের মধ্যে? হ্যাঁ/ না

১৮.যদি হ্যাঁ হয় তাহলে মাসে কতদিন সে স্পেশাল স্কুলের আওতাভুক্ত আছে?

১৯. এবং দিনে কত ঘণ্টা সে স্পেশাল স্কুলের আওতাভুক্ত আছে?

২০..লকডাউনের মধ্যে কোন পদ্ধতিতে সে স্পেশাল স্কুলের আওতাভুক্ত ছিল?
(একের অধিক উত্তর হতে পারে)

- দূর-শিক্ষণ পদ্ধতি /অনলাইনভিত্তিক ক্লাস
- নিজস্ব উদ্যোগে স্কুলের শিক্ষক দ্বারা সরাসরি পরিচালিত
- নিজ বাসায় বিশেষ ব্যবস্থায় থেরাপিস্ট দ্বারা
- অন্যান্য
- কোনটাই না

২১.আপনার শিশুটি কি থেরাপি সেবা গ্রহণ করছে লকডাউনের মধ্যে? হ্যাঁ /না

২২..যদি হ্যাঁ হয় তাহলে কোন পদ্ধতিতে? অনলাইন ক্লাস না করলে 'প্রয়োজ্য নয়' এ টিক দিন| একের অধিক উত্তর দিতে পারেন |

- দূর-শিক্ষণ পদ্ধতি /অনলাইনভিত্তিক ক্লাস
- নিজস্ব উদ্যোগে স্কুলের শিক্ষক দ্বারা সরাসরি পরিচালিত
- নিজ বাসায় বিশেষ ব্যবস্থায় থেরাপিস্ট দ্বারা
- অন্যান্য
- কোনটাই না

২৩.আপনার সন্তান কি পর্যাপ্ত প্রযুক্তিগত সহায়তা পেয়েছে অনলাইন ক্লাস করার সময়? (এ প্রশ্নটি যারা অনলাইন ক্লাস করেছে কেবল তাদের জন্য প্রযোজ্য। অনলাইন ক্লাস না করলে 'প্রযোজ্য নয়' এ টিক দিন)

- হ্যাঁ
- না
- অন্যান্য

২৪. অনলাইন ক্লাসগুলো কি উপকারী এবং সমর্থনকারী ছিল আপনার শিশুর জন্য? অনলাইন ক্লাস না করলে 'প্রযোজ্য নয়' এ টিক দিন

- একেবারেই ছিল না
- কিছুটা উপকারী ছিল
- খুবই উপকারী ছিল
- প্রযোজ্য নয়

২৫.যদি থাকে তাহলে কেন?

- শিক্ষক ও থেরাপিস্টদের পর্যাপ্ত নির্দেশনা ও সহযোগিতা
- স্পেশাল স্কুল ও থেরাপি প্রতিষ্ঠানের পর্যাপ্ত মেটেরিয়ালস থাকা
- ইন্টারনেট এর সহজলভ্যতা
- অন্যান্য

২৬.অনলাইন ক্লাস করার সময় কি ধরনের সমস্যার মুখোমুখি হতেন?

- ইন্টারনেট এর সমস্যা ল্যাপটপ বা ডিভাইস এর সমস্যা
- বাচ্চা ক্লাসে মনোযোগ দিতে পারেনা,
- বাচ্চাকে ক্লাসে কোনোভাবেই ম্যানেজ করা ও বসানো যায়না
- শিক্ষক ও থেরাপিস্টদের উপযুক্ত ট্রেনিং এর অভাব
- অন্যান্য

২৭ .স্পেশাল স্কুলগুলোতে কি অনলাইন ক্লাস এর উপযোগী পর্যাপ্ত শিক্ষামূলক উপকরণ ও সরঞ্জাম ছিল?

হ্যাঁ /না

২৮.আপনি কি মনে করেন লকডাউনে আপনার সন্তানের শিখন বিঘ্নিত হয়েছে ?হ্যাঁ/ না

২৯.যদি হ্যাঁ হয় তাহলে কি কারন থাকতে পারে?

- প্রযুক্তিগত সরঞ্জামের অপ্রাপ্যতা (যেমন ইন্টারনেট ও ডিভাইস অপ্রাপ্যতা)
- আর্থিক সংকট
- সন্তানের মনোযোগ ও আচরন ব্যবস্থাপনার অভাব
- পরিবারের আগ্রহের অভাব
- শিক্ষক ও থেরাপিস্টদের উপযুক্ত ট্রেনিং এর অভাব

খেলা

৩০.আপনার বাচ্চা কি প্যান্ডেমিকের মধ্যে তার ভাই/ বোন/ কাজিন বা প্রতিবেশীর বাচ্চার সাথে খেলে?

হ্যাঁ / না

৩১.আপনি কি কোনো পরিবর্তন লক্ষ্য করেছেন তার খেলার ধরন সম্পর্কিত?হ্যাঁ / না

৩২.যদি হ্যাঁ হয় তাহলে কি ধরনের পরিবর্তন?

- ভাই-বোন ও অন্য বাচ্চাদের সাথে খুশিমনে খেলে
- অন্য বাচ্চাদের সাথে খেলনা ,চুপচাপ পাশে নিজের মত খেলে
- সবসময় চরম নেতিবাচক আচরণ করে যেমন খেলনা নিয়ে ঝগড়া করে, মারে, ব্যথা দেয়
- অন্য বাচ্চার বেলায় ইতিবাচক কিন্তু নিজের ভাইবোনের বেলায় নেতিবাচক
- অন্য বাচ্চার বেলায় নেতিবাচক কিন্তু নিজের ভাইবোনের বেলায় ইতিবাচক
- কোনোটাই না

আক্রমণাত্মক আচরণ ও হাইপারএক্টিভিটি

৩৩.আপনার বাচ্চা প্যান্ডেমিকে কেমন আচরণ করছে?

- কোনো পরিবর্তন নেই
- পরিবারের সাথে বেশি সময় কাটাতে পেরে অত্যন্ত আনন্দিত
- দুঃখিত ও অবসাদগ্রস্ত
- হাইপারএক্টিভ থাকছে সব সময়

• অত্যন্ত বিরক্ত ও রাগান্বিত থাকছে সব সময়
৩৪. আপনার সন্তান কি প্যান্ডেমিকের আগের চেয়ে প্যান্ডেমিকের মধ্যে বেশি আগ্রাসী মনোভাব ও হাইপারএক্টিভিটি দেখিয়েছে? হ্যাঁ/ না

৩৫. যদি হ্যাঁ হয় তাহলে কি কারন হতে পারে?

- থেরাপি বন্ধ হয়ে যাওয়া
- স্পেশাল স্কুল বন্ধ হয়ে যাওয়া
- প্রয়োজনীয় ওষুধ ও চিকিৎসা ব্যবস্থার অপ্রতুলতা
- দুর্গম যোগাযোগ ব্যবস্থা
- সামাজিক বিচ্ছিন্নতা
- অসংগঠিত রুটিন
- প্রিয়জন হারানোর বেদনা
- পরিবারের আর্থিক সংকট
- পিতামাতার নেতিবাচক মনোভাব
- অন্যান্য
- মোবাইল ল্যাপটপ বা টিভির প্রতি আসক্তি বেড়ে যাওয়া
- ঘুমের ঘাটতির জন্য
- প্রযোজ্য নয়

৩৬. যদি হ্যাঁ হয় তাহলে আপনি আপনার বাচ্চা হাইপার হয়ে গেলে কিভাবে ম্যানেজ করেন?

- কিছুই করিনা
- স্কুল বা থেরাপি থেকে শেখা পদ্ধতি অবলম্বন করি
- হস্পিটালে নিয়ে যাই
- মারি বা বকা দেই
- এড়িয়ে চলি
- তাকে অন্য কোনো কিছু দিয়ে ভুলানোর চেষ্টা করি।
- ডায়েট চার্ট এ পরিবর্তন আনি
- প্রযোজ্য নয়

পরিবারের সাথে সম্পর্ক

৩৭. আপনার শিশু কি নাম ধরে ডাকলে সাড়া দেয়? হ্যাঁ/ না

৩৮. যদি না হয় তবে প্যান্ডেমিকের আগে কি নাম ধরে ডাকলে সাড়া দিত? হ্যাঁ /না

৩৯.আপনি কি মনে করেন লকডাউনের মধ্যে আপনার শিশু বাড়িতে কোনো সহিংসতার শিকার হয়েছে?? (যেমন ভয় দেখানো, মারধোর করা, বকা দেওয়া, মানসিকভাবে লাঞ্ছিত করা)

- একেবারেই হয়নি
- কিছুটা হয়েছে
- বেশ কয়েকবার হয়েছে
- অনেক বেশি হয়েছে

৪০.আপনি কি মনে করেন লকডাউনের মধ্যে পিতামাতার নেতিবাচক মনোভাব বেড়ে গেছে? হ্যাঁ না

৪১. যদি হ্যাঁ হয় তাহলে কি কি কারণ হতে পারে? (একের অধিক উত্তর দিতে পারবেন)

- চাকরি হারানো এবং অর্থনৈতিক দুর্দশা
- প্রিয়জনের বিয়োগ
- সামাজিক বিচ্ছিন্নতা ও কোয়ারেন্টাইন
- বাড়িতে বসে কাজ
- অসংগঠিত রুটিন
- ভবিষ্যৎ নিয়ে অনিশ্চয়তা
- অন্যান্য

৪২.আপনার বাচ্চাটি নতুন কোনো মানুষ কে প্যান্ডেমিকের পরে দেখলে কেমন আচরণ করছে ?

- কিছুই না আগের মতই আচরণ করে
- লজ্জা পায় কিন্তু আস্তে আস্তে ঠিক হয়
- অনেক বেশি লজ্জা পায় এবং সহজে ঠিক হয়না
- কোনো লজ্জা পায়না বরং অনেক আনন্দ পায়
- অনেক বেশি নেতিবাচক আচরণ করে (কান্না করা /চিৎকার করা/ হাইপার হওয়া)

খাওয়া ও ঘুমের প্রকৃতি

৪৩. আপনার বাচ্চার ক্ষুধা কি প্যান্ডেমিকের মধ্যে পরিবর্তন হয়েছে?

- না হয়নি
- আগের চেয়ে বেড়ে গেছে

- আগের চেয়ে কমে গেছে

৪৪. আপনার বাচ্চা প্যান্ডেমিকের মধ্যে দৈনিক গড়ে কত ঘন্টা ঘুমাচ্ছে?

- ৫ ঘন্টার কম
- ৫ - ১০ ঘন্টার মধ্যে
- ১০ - ১২ ঘন্টার মধ্যে
- ১২ ঘন্টার বেশি

নিজের যত্ন ও দৈনন্দিন জীবনযাপন দক্ষতা

৪৫. আপনার সন্তান নিচের কোন কাজ টি প্যান্ডেমিকের আগে একা একা করতে পারতো? (একের অধিক উত্তর দিতে পারবেন)

- নিজে খাওয়া
- কল খুলে হাত ধোয়া
- গোসল করা
- কাপড় পরা ও খোলা
- জুতা পরা
- বাথরুমে যাওয়ার জন্য সিগনাল দেয়া
- নিজে নিজে বাথরুম ব্যবহার করা
- নিজের খেলনা দিয়ে অন্যদের সাথে খেলা
- নিজের বই/ খেলনা গুছিয়ে রাখা

৪৬. আপনি কি মনে করেন এই প্যান্ডেমিকের কারণে আপনার সন্তান যা যা শিখেছিল তা আস্বে আস্বে ভুলে যাচ্ছে? হ্যাঁ/ না

৪৭. যদি হ্যাঁ হয় তাহলে কারন গুলো কি কি হতে পারে? (একের অধিক উত্তর দিতে পারবেন)

- স্পেশাল স্কুলগুলো ও থেরাপি সার্ভিস গুলো বন্ধ হয়ে যাওয়া
- পরিবারের সদস্যদের অপারগতা,
- পেশাদার থেরাপিস্ট এর অপ্রতুলতা
- অন্যান্য সেবা যেমন শিশুর মেইড, কেয়ারগিভার, এটেন্ডেন্স ইত্যাদি সার্ভিস বন্ধ হয়ে যাওয়া
- অন্যান্য
- কোনটাই না

স্বাস্থ্য সেবা সংক্রান্ত তথ্যের অপ্রাপ্যতা

৪৮ .আপনি কি মনে করেন যে করোনা ভাইরাস সংক্রমণের এবং মোকাবেলার ব্যপারে যথেষ্ট তথ্য আপনি পেয়েছেন?

○ হ্যাঁ/ না

৪৯.কোভিড টেস্ট করা, টেলিহেলথ সার্ভিস গুলো কিংবা অনলাইনে থেরাপি নেয়া এ সংক্রান্ত সেবা গুলো কি আপনার সন্তানের জন্য পর্যাপ্ত ছিল? হ্যাঁ / না

৫০.আপনি কি লকডাউনের মধ্যে প্রয়োজনীয় দ্রব্যাদি যেমন গ্রোসারি, স্পেশাল খাবার যেটা আপনার স্পেশাল নিড বাচ্চার জন্য প্রয়োজনীয়, হাইজিন প্রোডাক্ট, ওষুধ এগুলো সবসময় কিনতে পেরেছেন? হ্যাঁ/না

৫১ .যদি না পারেন তাহলে এগুলো কিনতে গিয়ে কি কি সমস্যার মুখোমুখি হয়েছিলেন? (যদি না হয় তবে 'প্রয়োজ্য নয়' এ টিক দিন |একের অধিক উত্তর দিতে পারবেন)

- পুরো দেশের লকডাউন
- যাতায়াত ব্যবস্থার অপ্রতুলতা
- প্রোডাক্ট এর সাপ্লাই কমে যাওয়া/ দোকানে প্রয়োজনীয় দ্রব্যটি না পাওয়া
- নিত্য প্রয়োজনীয় দ্রব্য ও ওষুধ এর দাম বেড়ে যাওয়া
- অন্যান্য
- প্রয়োজ্য নয়