Safety Measures and Hygienic Conditions in Therapy Centers for Special Needs Children during COVID-19 Pandemic in Pakistan

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Abstract

The study focused on the safety measures taken by the therapists working with special children in their clinics during COVID-19 pandemic in Pakistan. The study was designed on the qualitative paradigm of research. The sample was constituted of five parents and twenty therapists out of which twenty-eight were speech therapists, six ABA therapists, and six Occupational therapists. A Snowball sampling technique was used to locate the respondents. Two Interview Guides were developed – one for the therapists and one for the parents, and the Observational Checklist was the tools for data collection. The interview guide contained questions about their knowledge about COVID-19, the care they must take of the place in terms of hygiene, handling of the children at the workplace, services being rendered to the clients, and changes they had carried out in their services since the outbreak. The Observation Checklist was based on the parameters given by the WHO for the safety and hygiene measures during the pandemic of COVID-19. It was found out that all the therapists were well aware of the sensitivities of the pandemic. Though they were careful about the hygiene and the recommended safety measures, these were not practically being implemented in true spirit.

Keywords: COVID-19; SARS-COV-2; hygiene; safety measures; special needs children; Therapy centers

INTRODUCTION

The first case of Coronavirus (COVID-19) in Pakistan was found in Karachi, on 26th February 2020. COVID-19 started from China and spread in Italy, Iran, and at present, there are considerable cases in Pakistan. According to the survey of the World Health Organization (WHO), 715,660 cases are confirmed with this virus. Two hundred countries are affected through COVID-19, and almost 37,832 people have died through this virus Kate Mayberry (2020). A coronavirus is a large group of viruses that cause ailments running from the basic infections to increasingly extreme sicknesses. Previous pandemics caused by Coronavirus were Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). COVID-19 is another strain that was found in December 2019 in Wuhan, China. It is a zoonotic, which means they are transmitted among mammals. Primary indications of the virus include respiratory problems, fever, nausea, and loss of smell. In progressively extreme cases, it becomes the cause of pneumonia and expires (WHO (2019). The primary origin of COVID-19 is obscure, yet the main instances were connected to a fish showcase in the city of Wuhan, the capital of the focal Hubei territory. The market was shut on 1 January 2020 as a feature of endeavors to contain the episode. The case casualty pace of COVID-19 contamination has been fluctuating as new data becomes visible Mahase (2020).

At this point, schools are shut down suddenly, but the necessary services such as hospitals, therapeutic clinics, grocery shops are open. So far, no definitive cure has been established, precaution is emphasized. Frequent and proper hand-washing is vital to shield from contamination and forestall the spread of COVID-19 and different diseases in medicinal services. The fundamental suggestions for everybody are the equivalent — wash hands frequently with soap and water for 20 seconds as the virus reportedly gets disintegrated with soap, keep away from any physical contact with individuals who are infected or exposed to suspected infection and sanitize high-contact surfaces like door handles, light switches and working counters. The most recommended precaution is social distancing and isolation.

In Pakistan, the number of cases of COVID-19 is getting higher and higher every day. The government has closed all the educational institutes in the country to keep the children safe. The COVID-19
pandemic has made particular worries for guardians and individuals with intellectual and developmental disabilities. The individuals who are more established vulnerable frameworks are generally powerless against the virus, but anybody with scholarly inability, moderate to severe formative deferral, may likewise be progressively defenseless to extreme sickness from COVID-19, as indicated by the Centers for Disease Control and Prevention. Children with special needs may skip their schools, but skipping the therapy sessions, may it be speech, occupational, or behavior, can be detrimental. Skipping one or a few sessions sometimes brings all the progress of weeks and months on the initial point of their need. Clinics and hospitals are open in this scenario. Special needs children require round the clock assistance and care. Proper treatment and medication cannot be stopped because of the children’s tantrum and behavioral issues.

It is the need of the time to explore the hygienic and working conditions in the clinics providing different types of therapies to the children with special needs. For this purpose, the current study was designed to explore the circumstances in such clinics. The objectives of the study were to find out the knowledge of the therapists providing speech, behavior, and occupational therapies to the children with special needs on COVID 19. What precautionary and safety measures they have employed in their clinics in this scenario? To what extent, parents and caregivers are satisfied with these measures? What are the benefits that could be embedded in such actions? Do these measures match international standards?

This study focuses on exploring the different ways therapists choose pre, during and post sessions to avoid the virus for special needs children. These children need special assistance and environment because children with special needs always have associated problems and mostly co-morbidity is there. These children are more sensitive to infections.

**METHODOLOGY**

The study was designed on the qualitative paradigm of research. The population of the study was the speech therapists, Applied Behavior Analysis Therapists, and occupational therapists working in private clinics and state-owned hospitals of Lahore city in Pakistan and the parents of children with special needs taking therapies from those therapists. The duration of data collection was between 20 February 2020 to 10 March 2020. The sample constituted twenty therapists and five parents (those children take therapies from therapists in the same clinics). Only parents of special needs children were selected in an interview for this study. Among these, eight were speech therapists, six ABA therapists, and six occupational therapists. Out of eight speech therapists, five were working in private clinics and three in the government hospitals. All six ABA therapists were working in a private clinic. Out of six occupational therapists, two were working in the government hospitals, and four were working for private clinics. This combination made the representative sample.

All the participants were selected from the Behavior and Special Education Services (BASES) clinic and children hospital Lahore. All the selected participants had the experience of working with children with special needs for 5-10 years. A Snowball sampling technique was used to locate the respondents. Two Interview Guides were developed – one for the therapists and one for the parents. The interview guide for therapists had seven open-ended questions, and the Interview guide for the parents had four questions. All items of each guide were covering the objectives of the study. The Observation Checklist was based on the parameters given by the WHO for the safety and hygiene measures during the pandemic of COVID-19.

Each of the research tools was validated before administration by seeking the approvals of the experts working for infectious diseases and the Ethical Review Committee of Allama Iqbal Open University, Pakistan. The administrator's permission was granted by the head of the clinic BASES. After getting permission, the head allows us to give an interview from therapists related to COVID-19 safety measures. The purpose of the current research was described to the participants before starting the interview. The participants were made comfortable before the start of the interviews. The duration of each interview was 20-30 minutes approximately.

**Interview Guide 1: For Therapists**

1. What is the Coronavirus, and how did COVID-19 start?
2. What are the symptoms of COVID-19?
3. What precautions must be taken for it?
4. What arrangements for absolute hygiene of the workplace and safety measures to handle the patients have been adopted by you since its outbreak?
5. s the Competent Authority of the hospital/Clinic monitor the hygiene and safety measures regularly?
6. What measures/instructions are for parents and their children with special needs when they come to your clinic?
7. Do you use safety costumes, gloves, hand sanitizers, etc. while handling the patients in your clinic?

**Interview Guide 2: For Parents**

1. What do you know about COVID-19?
2. Do you know about the symptoms of COVID-19?
3. At home, what safety costumes you use with your child regularly?
4. What safety measures the therapists used for your child when you bring him/her into the clinic for therapies?

Microsoft Excel was used for the data analysis process. All the data collection process was based on triangulation. One aspect was interlinked with each other and made more authentic the results of the study. Triangulation alludes to the utilization of different strategies or information sources in subjective research to create an extensive comprehension of wonders. Triangulation, moreover, has been seen as a subjective research procedure to test legitimacy through the union of data from various sources. Four sorts of triangulation are strategy triangulation, examiner triangulation, hypothesis triangulation, what's more, and information source triangulation Carter, Bryant-Lukosius, DiCenso, Blythe, and Neville (2014). Triangulation data involves acquiring the data in different ways. In this, data is obtained from people through multiple methods for the validation of data. In most of the qualitative researches, the individual experience data is collected through groups or each person. All these interview collections depend on the purpose of the study and the selection of the interview Polit and Beck (2008). Responses of the therapists and parents were transcribed in Microsoft word. Similarly, parents’ reactions to their satisfaction and about the benefits embedded in the hygiene and safety measures were transcribed in a similar format. Data were analyzed and transcribed. A separate sheet was developed to consolidate the responses. The researcher coded all the data using the theoretical concepts identified during the literature review phase and used it in the interview guide. Thus, the analysis was explicitly analyst driven (Braun & Clarke, 2006). Themes were mainly identified on the semantic or explicit level. However, at some places where there was a need to go beyond the semantic content of the data and identify underlying assumptions, ideas and conceptualizations related to the safety measures and hygiene for special needs children in the clinic. The thematic analysis process was systematically completed with Microsoft Excel. Thus facilitating the comparison and contrast was ensured data from various participants. Braun and Clarke (2006) define thematic analysis as a method for identifying, analyzing, and reporting patterns (themes) within data. In this method, there are no rigid rules to make themes. However, Braun and Clarke (2006) suggest the six steps for this type of analysis. These steps are: Become familiar with the data, generate initial codes, search for themes, review themes, define themes, and write-up.

**Results of THE study**

The results have been drawn on the therapist and parents responses and observation of the researchers.
Therapists Responses

1-What is the Coronavirus, and how did COVID-19 start?

Ten participants out of twenty thought believed that COVID-19 is an air infection that converts in someone else due to shaking hands and flu. If someone has this infection than through air and shaking hands, it transfers to another person. COVID-19 is a very dangerous infection that came from the Chinese market where all live and dead animals and birds were sold and eat. So, this virus spread in humans through this market, and haram (eatables that are forbidden in Islam) animals were kept and sold in this market. Six participants said that COVID-19 is an infection that covert person to person, and the result of this is death. They don’t know where the virus starts and where the virus came. According to them in the news channel, they heard this virus came from animals, and it spread more by applying hands to mouth. This virus is not too dangerous if you avoid touching our faces. Four participants out of twenty thought that this virus is covert in both animals and humans. This virus spreads in humans more fastly as compared to animals. It is also spread through cough and not washing hands regularly. Dust and pollution were also mentioned as a reason to spread this virus.

2-What are the symptoms of COVID-19?

Fifteen participants out of twenty mentioned that the symptoms of COVID-19 have a lot of problems in breathing, high fever, flu, and tired body. If someone feels a problem too high in breathing and high fever, then chance the person has a sign of COVID-19. They also believed that if anyone holds our breath for 10 seconds and does not have any kind of problem in keeping the breath, then there are no COVID-19 symptoms that exist. Participants discussed that this virus spread from one person to another person. Dry cough, pain in breathing and full-body pain are real symptoms of COVID-19. No proper vaccination or treatment exists in Pakistan (not even globally) against this virus. For these precautions are adequate hand-washing, if someone coughs, then do not cough in front of someone’s mouth. Proper treatment is to stay home and do a proper checkup. Five participants out of twenty purposed that these viruses made our life disturbed, and no infection is harmful. COVID-19 dangerous, but in Pakistan, no severe and critical serious case shows so why all people frightened and gave too much importance to this issue. The time limit of this virus in things is limited. It stay in objects for a limited time. In the air, it lives 2 to 3 hours. Keep a distance of 1 meter with other people that the virus is not transferred. They think fatigue, aches, pains, and headaches all are the symptoms of COVID-19.

3-What precautions must be taken for it?

According to all the participants’ hands should be washing regularly. For 20 seconds must rub the soap in hands and after this wash hands with warm water. The distance of 1 meter or 3 feet should be kept while meeting other people in the home or work area. No cough or sneezing in front of others because of the drops of cough covert this virus to others through air. They told us that with hands, we touch so many things in clinics and hospitals, so virus touches firstly in hands. Wear gloves every time to avoid spread this virus through hands. Never touch the mouth, nose, and eyes with hands without washing or sanitizers. Always wear masks, even talking in front of others. Do not touch children’s faces with hands and avoid kissing. Avoid eating unhealthy food and eating healthy food like eggs, fish, meat, daal, milk, and fresh juices. All participants prefer to take vitamins and supplement for energy and to make the immune system strong.

4-What arrangements for absolute hygiene of the workplace and safety measures to handle the patients have been adopted by you since its outbreak?

According to all twenty participants, they first wash clients’ hands before starting the session and use two times sanitizer in a limited quantity for our and child’s hands. All participants wear masks above the mouth so that any germ cannot reach the child’s mouth with breathing and cannot affect them. Before starting the session, participants clean the work station with Dettol and dry with a neat towel. During session after every 15 minutes take the child washroom and wash their hands with soap and after these dry hands with the tissue. All participants avoid touching a child’s face without wearing gloves. They wear gloves all the time. After two days, all the toys and working instructional material use during session wash with Dettol and dry under the sunlight. Clean the washroom thrice in a day. Clean the room flour with bleach and Dettol. Sanitizers must be used before the start of every session. Participants avoid sitting close to the child and keep some distance from the child chair if the center closes because of this disease, online sessions should be conducted at home. Guide parents how to deal with their child at home and run session because special child regresses if give continuously break. Should focus on special hyper children who cannot shout and touch their faces. The lunch box must be washed with soap and hot water. Maids with children also clean up themselves. Training sessions for teachers and parents should be held every weekend. Doors and doors lock clean with

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the surf and dry with a towel. The walls also are clean with the brush. Spray and natural home remedies kill the germs and infection in a natural way use to kill this infection.

5-Does the Competent Authority of the hospital/Clinic monitor the hygiene and safety measures regularly?

Thirteen participants out of twenty suggested that this virus affects more in special children as compared to normal persons or children. Special children need specific hygienic environment. All special children also have serious health issues and, with the help of doctors, they use some medication. All special needs children like autism, ADHD, intellectual disability children have a less week immune system as compare to a normal child. COVID-19 germs or virus quickly effected because these children are more sensitive than normal children, and they need special treatment and medication. Due to all these reasons, the authority takes great care ad safety for children and check in regularly bases. Cameras are attached in every room, even in the kitchen and lobby. Authority monitored, and if some therapists do not wear a mask or use sanitizer before start the session, they strictly call them and advise to use all these persecutions. Authority provided medically attested sanitizers to us. Seven participants out of twenty strongly believed that there is no difference in effect of disease between special needs and without special needs children. This virus interlinks with the immune system of the body, and they think the immune system work equally and the same as other people. Special assistance and care need both children. Authority monitors all these safety measures but not on a regular bases. Admin of the center asks the persons to follow the instructions after this only weekly bases authority visit and check.

6-What measures /instructions are for parents and their children with special needs when they come to your clinic?

All twenty Participants discussed the same instruction. They explained that they give instructions to the parents that they should wash the child’s hands before coming to the clinic and also get their child for vaccination that kept away from bacteria and other viruses. They said that parents not touch the child too much or not to be physical. Keep away face from the child’s face. Keep the children away from themselves. Never travel in public transport with children. Always wash hands before start meal and after the meal. Take syrup if you feel a cough or flu. All these precautions mentioned above and instructions have a positive and long-lasting effect on the child and session. They follow all the safety measures of a child and even for themselves. With all these precautions, they are mentally satisfied and fell relax that everything is ok and nothing is wrong around them. Parents feel relaxed and trust their clinic and therapists. In the future, if they continue all these ways, it will be a chance that students and therapists will be in the clinic regularly. Parents feel satisfied and then hold the hands of the children. Also, wear the masks in their eyes, nose and face. Keep the children away from the sink and therapists gave us instructions on how to save our children with this virus. They follow the instructions of the therapists. After every meal, they wash the hands of the child. Also, before coming to the clinic, give healthy food to the child at breakfast. Healthy eating helps to make the immune system strong. When the participants go to pick up the children from the clinic, they come by sanitized their hands and then hold the hands of the children. Also, wear the masks in their faces in front of the child. They regularly wear masks outside the home.

7-Do you use safety costumes, gloves, sanitizers, etc. while handling the patients in your clinic?

All the participants use all safety aids in the clinic regularly, even in every session. They wear masks before entering the clinic, use sanitizers 4 to 5 times, somehow before the start of every session. Clean the table, chair with sanitizers. They said that if we do not use all these safety measures, then how we protect the children from this virus. How can we instruct the parents to follow it? These safety measures help to protect them from this infection—all the time of duty 8 hours, they use all safety customs. The clinic provides on a daily bases of all material to avoid COVID-19. Every day change the mask and wear the new mask, sanitizer bottles, hand wash, towel, gloves, all things are provided to them.

Parent’s Responses

The following responses were taken from the parents of children that were involved in the therapies

1-What do you know about COVID-19?

All five participants had ample knowledge about COVID-19. According to them, COVID-19 is an infection that spread human to human. Keep distance from another person to avoid spread this virus. It has spread in more than 200 countries, and Pakistan is one of them. COVID-19 is a perilous infection through which this person can be a life risk. All the mothers were continuously in touch with the news channel because of their children. COVID-19 also spread in the air, and all these thought our children are already very sensitive so we kept our children at home. One participant said that COVID-19 came from China city Wuhan and that is spread because of the animals’ market. Do not shake hands with others.

2-Do you know about the symptoms of COVID-19?

Three participants out of five thought that fever, flu, and trouble in breathing are symptoms of COVID-19. If fever became high and low and low fever going high too much, that is a real symptom of COVID-19. Two participants out of five discussed that if anyone feels pain in the throat, chest blocking, and feeling tired too much in the body, so that means you are affected by COVID-19. Repeated breakdown of the entire body is very tired and dizzy and then falls. All these are symptoms of this virus.

3-At home, what safety costumes you use with your child regularly?

All five participants discussed that when they bring their children to a clinic or hospital before that, they wash the hands of the children in the house, sanitize the hands. The put sanitizer and hand wash in the bags of the children. They also cleaned the car seat with Dettol. Also, the parents and teachers meeting held in a clinic and authorities of the clinic, and therapists gave us instructions on how to save our children with this virus. They follow the instructions of the therapists. After every meal, they wash the hands of the child. Also, before coming to the clinic, give healthy food to the child at breakfast. Healthy eating helps to make the immune system strong. When the participants go to pick up the children from the clinic, they come by sanitized their hands and then hold the hands of the children. Also, wear the masks in their faces in front of the child. They regularly wear masks outside the home.

4-What safety measures the therapists used for your child when you bring him/her into the clinic for therapies?

Four participants out of five said that they use gloves during breakfast, lunch, and dinner before or mid of the session. Wash hands with hand wash and use sanitizers after every hand wash. Wash the toys with Dettol. Wash the pot before every use. Wear masks always at the clinic. Wash the child’s hands at least 20 to 25 seconds. Never touch the child’s eyes, nose, and face without wearing gloves. Therapists made the video every week and send in a child group in there show all the measurements used during the session. Also, in the camera, all the things they have done see clearly. At least one 1-meter distance they kept with the child. One participant discusses that when this virus spreads in China, she follows the reactions and uses safety customers at that time at home.

Observation by the Researchers

The third research tool was the observation of the researcher.

Safety measures

According to the WHO checklist COVID-19, avoid standing near each other and kept distance 1 meter. Always use sanitizers after wash hands for 20 sec. In clinics and hospitals, all therapists during the
session regularly clean the table and kitchen counter after every meal. Always use soap and hand wash. They avoid touching the nose, eyes, and face of children. In clinics, they wash toys with Dettol after every 2 days. Clean the handles of the doors and clean the floor with Dettol for germs kill.

**Safety costumes**

Therapists always wear gloves, masks in clinics. Use sanitizers and soap for safety.

**COVID-19 most spreading way**

According to WHO Shake hands, hug others, stand near with each other, touch without wash hand-eye, nose and mouth, without gloves hand all are the way to spreading the COVID-19 to another person. All therapists and even parents avoid touching the child’s face, hugging, and shaking hands. They kept a distance of 1 meter to avoid spreading COVID-19 infection.

On behalf of therapists’ responses and parents’ responses the observational checklist given by the WHO for the safety and hygiene measures during the pandemic of COVID19. All pattern of this study interview was based on the triangulation process. All are inter-related to each other. Those safety measures and hygiene use in clinics the same parents also follow and utilize the same safety measures at home reflect the checklist that WHO gives to follow during pandemic COVID-19 in Pakistan. The results of the study clearly show that all parents, therapists and children are following these standard operational checklist against COVID-19 for special needs children safety.

**DISCUSSION**

COVID-19 is spreading very fast throughout the whole country, and many people have died due to this virus in many countries. Active 117,234 cases tested due to Coronavirus in all over the world. 8,273 (9%) patients died due to this virus. In Iran, 18 March 2020, new 147 deaths accounted due to this virus (world meter, 2020). In Pakistan, this virus also affected people very severely. All the activities have been stopped due to this virus. All schools, colleges, and universities are banned. All the parks, cinemas, working places, and other activities have also been closed. So, the virus of corona should be prevented from spreading. Many studies have been done about corona-virus and the symptoms of this virus. A lot of studies have been done on this earlier that how to prevent the symptoms of this virus (Cavanagh (2007); Huang et al. (2020); Holshue et al. (2020). The results of the study show that this virus affected both normal and special needs children equally. Special needs children need more care and special precautions because they already have health-related issues. Parents of special needs children also have a piece of excellent knowledge about COVID-19, and they follow the safety measure better than other children's parents. According to parents, COVID-19 is an infection that spread human to human. Keep distance from another person to avoid spread this virus. It has spread more than 200 countries and Pakistan is one of them. COVID-19 is a very dangerous infection through this person can be a life risk. All the mothers continually remained in touch with news channels because of their children. COVID-19 also spread in the air, and all these thought our children are already susceptible so we should keep our children at home.

The results of the study show that participants first wash the client's hands before starting the session and use two times sanitizer in a limited quantity for our and child's hands. All participants wear masks above the mouth so that any germ cannot reach the child's mouth with breathing and cannot affect them. Before starting the session, participants clean the work station with Dettol and dry with a neat towel. During session after every 15 minutes, take the child washroom and wash their hands with soap and after these dry hands with the tissue. All participants avoid touching a child's face without wearing gloves. They wear gloves all the time. After two days, all the toys and working instructional material use during session wash with Dettol and dry under the sunlight. Clean the washroom thrice in a day. Clean the room flour with bleach and Dettol. Sanitizers must use before start every session. Participants avoid sitting close to the child and keep some distance from the child chair. The authority takes great care about safety for children and checks on a regular bases. Cameras are attached in every room, even in the kitchen and lobby. Authority monitored, and if some therapists not wear a mask or use sanitizer before start the session, they strictly call them and advise to use all these persecutions. Authority provided medically attested sanitizers to us. Parents use safety costumes at home with their children safe from the virus. They use gloves during breakfast, lunch and dinner. Wash hands with hand wash and use sanitizers after every hand wash. Wash the toys with Dettol. Wash the pot before every use. Wear masks always at home. Wash the child's hands at least 20 to 25 seconds. Never touch the child's eyes, nose, and face without warning gloves. At least 1 meter distance they kept with the child. Parents use these measures when this virus starts in China.

It is feasible for individuals of all ages to be get protected from infections. However, so far, there are hardly any instances of COVID-19 among kids. The virus is deadly in uncommon cases, so far, basically among more established individuals with previous ailments. They follow all the safety measures of a child and even for themselves. With all these precautions, they are mentally satisfied and feel relax that everything is OK and nothing is wrong around them. Parents feel relax and trust their clinic and therapists. In the future, if they continue all these ways, it will be a chance that students and therapists use too for this and the level of health betterment up vastly. Doctors appreciate this way and prompt to choose this method in a daily routine. On behalf of the participant’s responses, it is proved that the given WHO checklist for against COVID-19 is beneficial and use in clinics and at home is authentic and hygienic. Is it covering all aspects to safe and secure children due to COVID-19?

**RECOMMENDATIONS**

According to the results of the study, it is recommended that Awareness training sessions held for therapists and doctors about COVID-19. Provide monthly bases mask free of cost for all special teachers, therapists, and doctors. The government held a campaign on how to wash hands properly, and special care provides for special needs children at home with the help of the government. Through media, all safety measures are shown to the people again and again. Online sessions for the parents' training in therapies must be held for parents’ awareness.

**REFERENCES**


