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MENTAL HEALTH EFFECTS OF THE COVID-19 PANDEMIC ON CHILDREN

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ABSTRACT

Introduction: The COVID-19 outbreak brought new challenges to the everyday routine of children, such as lockdowns, school closures, and social isolation. Such disruptions have influenced the mental state of children around the world, including in Pakistan, considerably.

Objective: To assess the psychological effects of the COVID-19 pandemic on children visiting Combined Military Hospital (CMH), Abbottabad.

Material and Method: This was a descriptive, cross-sectional study carried out at CMH Abbottabad during the period of six months, January 2020 to June 2020. They selected children between 6 and 16 years of age who were registered by parents as having behavioral or emotional disturbances during lockdown. Trained clinical psychologists conducted a structured questionnaire to measure the following symptoms, including anxiety, aggression, sleep difficulties, and school regressions.

Results: Among 150 children, 61.3% experienced feelings of anxiety, 52% displayed irritability and aggressiveness, and 48% had difficulties with sleep. Dis-concentration and depressive symptoms were also common complaints. Children in the 6 to 10-year age category and rural children were more disadvantaged.

Conclusion: The impact of the pandemic on the mental health of children was substantial, and there was a noticeable rise in both emotional and behavioral disturbances. The research notes that early mental health policies and interventions against children should be done in the case of a public health emergency.

Keywords:
COVID-19, Children, Mental Health, Lockdown, Anxiety, Psychological Effects, Pakistan.

INTRODUCTION

The COVID-19 pandemic has caused significant effects on the population worldwide, yet teenagers are one of the most susceptible and have gone through the most severe impacts. Children in communities across the world went through a sudden change in their lives as governments worldwide engaged in lockdown measures as well as school closures to help in suppressing the spread of the virus. Due to disrupted schedules and a lack of social contacts, leading to a heightened level of potential family stresses and remote learning difficulties, children experienced a wide variety of these stressors that presented a major threat to their mental health (1). The psychological effects of such changes are not passing momentary irritations but have been demonstrated to present grounds on which long-term emotional, behavioral, and developmental outcomes may be viewed (2). Children find their stability in structure and order, predictability, and interactions with people, which were greatly undermined or completely compromised during the first few months of the pandemic. The emotional and psychological distress among children has escalated sharply during the pandemic, as indicated in multiple systematic reviews. These comprise the increased cases of anxiety, depression, irritability, loneliness, and behavior disturbances (1, 3). School closure not only disrupted academic learning but also denied children peer interaction and exposure to psychological support systems that traditionally were part of those systems (4). There are also other services that schools offer that are usually essential, like meals, counseling, and support for children from vulnerable backgrounds. These lockdowns disproportionately impacted the already vulnerable group (children of low-income families, individuals with preexisting mental illnesses, victims of domestic violence) by their absence (5). Under such conditions, the long-lasting disparities in mental health care access and social resources were only exacerbated.

A place of safety, once perceived as the home setting, sometimes turned into a source of stress as there were more tensions in the family, financial insecurity, and parental anxiety. Physical isolation of many children was further exacerbated by the loss of physical contact with extended family members, peers, and their mentors (6). Emotional regulation is said to be interfered with by social disconnection among young individuals, which predisposes them to abnormalities like depression and increased anxiety (7). Teenagers, especially, complained of feeling acute loneliness, because at this especially formative stage of development, they need the support of peers and collective identification (8). A substantial amount of evidence has demonstrated that the form of social isolation during the pandemic substantially changed developmental paths and aggravated pre-existing issues of mental health (9). Remote learning came out as a necessity and a psychological burden at the same time. It permitted the education to continue, but it required drastic changes among children and families. The combination of reduction of face-to-face interaction, ad hoc routines, and high screen time resulted in cognitive fatigue, attention problems, and disengagement, especially among younger individuals and those with special educational needs (10). Also, the challenge that lies with parents to monitor the learning process and having to take care of their professional tasks at the place of residence led to an emotional imbalance in the house, also influencing children (11). The cancellation of examinations, graduation milestones disruption, and future educational opportunities were new stressors that impacted adolescents (12). Such incidences would tend to result in a feeling of inability and powerlessness, which are major indicators of a poor mental state in young population groups.

Analysis of different countries, such as the UK and Italy, has recorded an increased incidence of psychological symptoms in school-going children and teenagers in the first few months of the pandemic (13). Greater irritability, mood swings, and restlessness occurred among adolescents in Italy, and more frequently, emotional distress and behavioral issues were observed among the children, because of which they got more severely affected in the UK (14). The concept of intergenerational transmission of stress became clear, where the well-being of parents was a major determinant of the psychological response of children to the crisis (15). This highlights the significance of regarding a family system in its entirety, where the pandemic's effect on the mental health of children is measured. Particularly susceptible groups, including children with neurodevelopment disorders, living in poverty, and abused or neglected children, were at risk during this period (16). Closure of schools also made these children lose safe places and social networks

where they are exposed to long periods of psychological stress. Also, people who needed to have regular care, such as therapies or counseling services, were significantly affected because they were unable to receive care in their area and received support only sporadically, which also contributed to mental health issues (17). Even though a few of the mental health services were converted to telehealth systems, not all of them could provide access to telehealth, as it had technological barriers, digital literacy, and unstable internet connection, especially in underrepresented geographic areas (18).
However, other than presenting these burdens, the pandemic revealed the strength of numerous children and families. Nevertheless, resilience was not evenly spread and was regularly based on the existence of shielding variables, which included solid connections with the family, the availability of resources, and the capacity to deal with them successfully. Children who were able to benefit from steady care providers, occupational activities, and constructive routine experiences found it easier to cope with whatever was unknown in the pandemic (19). However, the general situation highlights the importance of specific mental health initiatives and the reinforcement of social nets to secure children during large-scale health crises. Lastly, it was the COVID-19 pandemic that posed a rather complicated and multilateral challenge to the mental health of children based on factors like social isolation, education disruption, and family relations. The world literature is a clear indication of the mental health crisis experienced by younger people during the time of lockdown. With the world recovering after the pandemic, it is necessary to understand these psychological effects and ask for child and adolescent mental health to be a focus in the public health and educational policies. The proactive psychological support, family-based interventions, and inclusive education strategies will play an important role in mitigating the long-term implications of such a historically recognizable disruption.

Objective: To assess the psychological impact of the COVID-19 pandemic on children, focusing on emotional, behavioral, and social changes observed during lockdowns and school closures at Combined Military Hospital, Abbottabad.

MATERIALS AND METHODS

Study Design: Descriptive, cross-sectional study

Study Setting: The study was carried out at Combined Military Hospital (CMH) Abbottabad.

Duration of the Study: January 2020 to June 2020.

Inclusion Criteria:

Children who presented to the Combined Military Hospital (CMH) Abbottabad from January to June 2020 were deemed to be included in the study. In order to observe and report accurately, at least one parent or legal guardian was obligated to accompany every child. The selection was made based on parental reports on the changes that could be noticed in the child in emotional or behavioral aspects during the COVID-19 lockdown. Such manifestations were measured by the presence of additional anxiety, constant irritability, withdrawal, disruption of sleep patterns, decreased interest in routine affairs, or a dramatic decrease in interest and performance in school life.

Exclusion Criteria:

Children were not included in the study when they had an earlier diagnosis of any neurological disorder, including epilepsy, cerebral palsy, or neurodevelopmental disorders, which could have an independent impact on behavior or emotional regulation. Also, the participants with known intellectual disabilities that could interfere with their cognitive performances or communication skills were left out, to avoid ambiguity in the interpretation of symptoms. Those children who were already undergoing psychiatric treatment or under counseling services prior to the COVID-19 pandemic had also been excluded because their preexisting mental health conditions and interventions might have

confounded measurement of the emergence of new or pandemic-related psychological symptoms during the lockdown stage.

Methods:

A structured questionnaire was used to collect the data, which was provided to the parents by trained clinical psychologists at CMH Abbottabad. The questionnaire was constructed in such a way that it assessed various behavioural and even emotional symptoms that children were demonstrating when they were under lockdown due to COVID-19. It consisted of the components of anxiety, fearfulness, mood changes, aggression, sleeping difficulties, social withdrawal, dependency behaviors, and academic regression. Parents were recommended to evaluate the behavior of the child during the lockdown and before it in order to see whether or not significant changes have occurred. This has been done to maintain the consistency of administration of the questionnaire through clarification where necessary and requiring detailed parental observations. Pilot-testing of the tool on a few people was done to ascertain clarity and relevance. The fixed data were classified by frequency and severity of the symptoms. Both descriptive and summary reports were prepared on a quantitative basis to find out common patterns in psychology. The analysis of results was then made to find out the history and nature of mental health disturbances in the study population.

RESULTS

This study encompassed 150 children between the ages of 6 and 16 years with a mean age of 11.2 ± 3.1 years. The sample was biased towards males, with 86 males (57.3%) and 64 females (42.7%). Most of the children, as in 107 (71.3 percent), were urbanised, whereas 43 (28.7 percent) were either rural or semi-urban. All of the children participating had at least one parent or guardian who described evident behavioural or emotional changes in their child during the lockdown period because of the COVID-19 pandemic. Anxiety was the most frequently recorded psychological symptom (92 children, 61.3%), and behavioral concerns, including irritability and aggression, were the second-most frequent (78 children, or 52%). A total of 72 children (48%) had sleep disturbances, and this means that their sleeping pattern was interrupted. Besides, 59 children (39.3%) were found to show signs of depression, including sadness, hopelessness, and withdrawal. Academic and cognitive problems, presence of difficulty in concentrating or focusing in remote learning or at home studies, were also common, and they applied to 63 children (42 percent). These results highlight the complexity of the psychological consequences of the pandemic on the emotional health of children, sleep outcomes, behavior, and academic performance, and warrant prompt mental health intervention.

Table 1: Demographic Profile of Study Participants

Variable	Frequency (n=150)	Percentage (%)
Gender		
• Male	86	57.3%
• Female	64	42.7%
Age Group (years)		
• 6–10	68	45.3%
• 11–16	82	54.7%
Residence		
• Urban	107	71.3%
• Rural/Semi-urban	43	28.7%

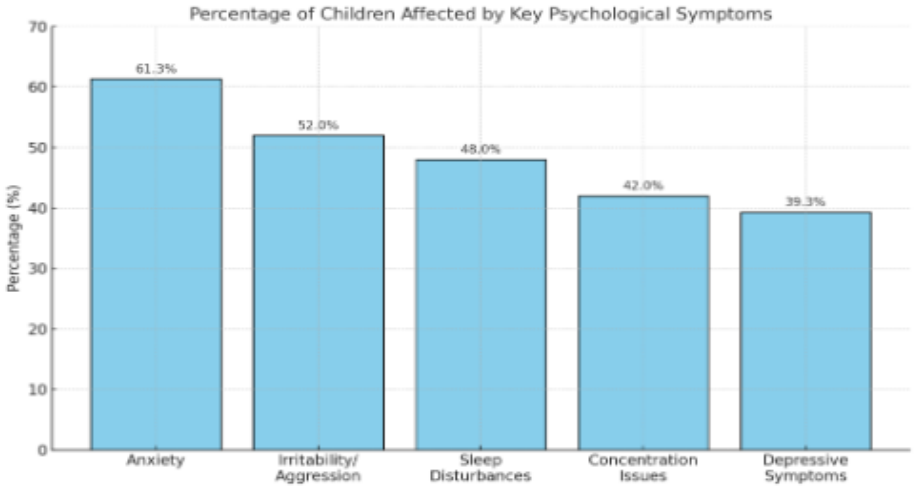
Sleep disorders involve difficulty sleeping, nightmares, and abnormal sleep-wake patterns. The symptoms of anxiety included restlessness, worrying excessively, and being clingy. The younger children (6-10 years) presented more signs of regressions, such as thumb sucking and bed wetting.

Table 2: Frequency of Psychological Symptoms Observed

Symptom	Frequency (n)	Percentage (%)
Anxiety	92	61.3%
Sleep disturbances	72	48.0%
Irritability/Aggression	78	52.0%
Depressive symptoms	59	39.3%
Concentration difficulties	63	42.0%
Regressive behaviors	41	27.3%

Besides the psychological ones, others included alteration of social behavior. The majority of the children (67.3%) were in distress because of a lack of social contact and physical schooling. According to parents, the children became too dependent and lost their motivation.

Figure 1: Percentage of Children Affected by Key Psychological Symptoms



A bar graph is given to display the distribution of anxiety, sleep disturbances, irritability/aggression, depressive symptoms, and concentration problems. The bar with the highest height is anxiety (61%), followed by irritability (52%), sleep disturbances (48%), concentration (42%), and depressive symptoms (39%). The rural children had a greater tendency to display symptoms of social withdrawal and depression, perhaps as a result of the fewer digital media opportunities and access to outdoor areas. Children of parents who perceived the stress level in their home to be high were exposed to a greater number of behavioral issues.

Table 3: Association Between Age Group and Reported Symptoms

Symptom	6–10 Years (n=68)	11–16 Years (n=82)
Anxiety	39 (57.3%)	53 (64.6%)
Sleep Disturbances	36 (52.9%)	36 (43.9%)
Irritability/Aggression	41 (60.3%)	37 (45.1%)
Concentration Issues	21 (30.9%)	42 (51.2%)

The results point to high rates of psychological distress experienced by children during the COVID-19 lockdown. Early recognition and intervention must be applied so that there are decreased effects on emotional and developmental health in the longer term.

Discussion

The present study results indicate considerable psychological and behavioral impacts of the COVID-19 pandemic on children, especially in the wake of the general lockdown and school closure at the beginning of 2020. The high rates of anxiety (61.3%), irritability (52%), disturbance of sleep (48%), and depressive symptoms (39.3%) show the impact of this pandemic on young people on an emotional level. These results are in line with the above literature that highlights the sensitivity of children to environmental factors and deviations in routine (1, 2). The above-mentioned dependence of emotional consequences can be seen in the correspondence to systematic reviews and cross-national studies. Meade (1) highlighted that the fear of sickness, social isolation, and loss of structure caused sustained anxiety and depressive symptoms among children and adolescents. On the same note, another study by Viner et al. (2, 4) stated that in addition to the disruption of learning, psychological problems and health-related behaviors were profoundly influenced by school closure. The psychological consequences in our work were especially noticeable in younger children since they showed regressive behavior and increased dependence, which led Larsen et al. (3) to attribute them to the disrupted attachment and lack of social stimulation.

The incidence of irritability and aggressive behavior is also high, according to the results presented by Rajmil et al. (5) and Luijten et al. (6), reporting on the emotional dysregulation of children with long-term confinement and uncertainty. Resistance, emotional outbursts, and frustration with home-based learning were witnessed in both the rural and urban members of our research. Such behavioral manifestations were frequently accompanied by the lack of engagement with academics and focus, which Houghton et al. (7) also confirmed in the longitudinal study of the mental health patterns of adolescents. Other findings were also significant in our study, with a strong association of social isolation with emotional distress. More than two-thirds of the children (67.3%) lacked socialization with peers and teachers, and this affirmed the major preoccupation that socialization has on the mental health of the children. Among those conducted by Mazrekaj and De Witte (8) and Hards et al. (9), it was concluded that lack of peer connectivity was a major factor leading to loneliness and poor emotional resilience. This was more so in the social category of adolescence, where they deploy much of their image shaping and emotional control in their peer relations (10).

Notably, the results emphasize the unequal load of disadvantaged populations. Children who were not exposed to technology or the outdoor environment significantly, such as in our rural cohort, exhibited high levels of sadness and anti-social tendencies. Such differences resonate with those drawn by McCluskey et al. (11) and Esposito et al. (12), who indicated that the combined factors of socio-economic underprivilege and lack of digital coverage have a significant negative impact on the mental health of children in the context of the pandemic. In addition, El-Osta et al. (13) reported a close relationship between parents' stress levels and remedial outcomes of children that supports the interrelation of family-related processes and the state of emotional well-being. The second issue that our research makes obvious is the burden of distance learning. According to the parents, children disliked online study because they found it to be dull and mentally straining. This is in line with the data provided by the international sources that virtual learning conditions can increase attention deficit and decrease intrinsic motivation (14, 15). According to Ye et al (16), both students in primary school and their parents reported a higher degree of emotional fatigue when they engaged in remote learning, which is also related to the phenomenon of academic disengagement in our sample.

These mental health issues were deepened by the second wave of the pandemic, as well as prolonged lockdowns. As stressed by Saulle et al. (17) and Chaabane et al. (18), further muscular stress and emotional instability in children and adolescents were caused by frequent disruptions in schooling and social routines, as well as by physical activity. This trend is observed in our data point, indicating that a large percentage of children showed symptoms of emotional exhaustion, demotivation, and withdrawal even when the lockdown was over in the first few months. It is important to mention that the fact is that not every child reacted negatively. The minority (12%) did not demonstrate significant changes in psychology. Such children could have had more family support, firmer homes, or more recreational opportunities. According to Chawla et al. (19), protective factors at the individual, familial, and community level determine resilience during crises. Future psychological harm may be

alleviated with interventions that buffer these sources of psychological harm, e.g., open communication, routine structuring, and mental health education. Some of the strengths of our study are the tertiary care facility and clinician-administered assessment that enables us to report the symptoms using a standardized and precise reporting. Nonetheless, some drawbacks should be acknowledged.

Our inferences are limited by a cross-sectional design in cases where we are unable to draw the long-term effects or causality. Also, parental reporting could have added recall or underreporting in the inward component of symptoms in older children. Despite this deficiency, the findings of the present study can be added to significant localized evidence in Pakistan, where child mental health is still a relatively unexplored field. The outcomes point to the imminent integration of the integrated mental health care services incorporated in pediatric care, especially in emergencies. The school-level psychological support system and child-centered communication in health emergencies, as well as affordable access to tele-mental health services to families, are urgently needed. Finally, there exists a quantifiable effect of the COVID-19 pandemic on the mental health of children, seeing that cases of anxiety, behavioral disorders, and social isolation are some of the most common ones. These results are relevant to the rest of the world literature and indicate that the psychological burden of the crisis on children is universal. Healthcare, education, and policy stakeholders need to work together to develop child-centered mental health plans that enhance resilience to promote the continuity of care throughout and post-public health emergencies.

Conclusion

Anxiety, irritability, sleep disturbances, and depressive symptoms recorded during the lockdown show that the COVID-19 pandemic has had a significant toll on the mental and emotional health of children. This research was done in the Combined Military Hospital, Abbottabad, and points to the great effect of social isolation, school shutdowns, and disruption of routines on children between the ages of 6 and 16 years. The results are consistent with those published in international literature and prove that children are very vulnerable to psychological distress in the case of a public health crisis. More vulnerable children, particularly younger children and those learning in rural and under-resourced environments, had greater emotional and behavioral needs. Such findings highlight the necessity of comprehensive mental health support systems not only in healthcare but also in academic structures. The key elements in alleviating the long-term effects of such disruption include preventive procedures, support of families, and better accessibility of child psychological services. Policymakers should not forget about the mental health of children when planning their response to disasters and preparing for the next pandemic.

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