

Spotlight on the Adolescent's Mental Health: Distress and Coping amid the COVID-19 Pandemic

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ABSTRACT

Background: COVID-19 pandemic globally challenged the healthcare sector as well as posed a serious threat to mental health among both young and adults rendering people with a sense of uncertainty and loss.

Objective

Aim: To assess the psychological burden among the adolescent population during the pandemic and lockdown.

Methodology: A cross sectional study was moderated by the research team at the Department of Psychiatry and Behavioral Sciences, Jinnah Postgraduate Medical Center between April 2020 to October 2021. All individuals between the ages of 13 to 17 years were included. The proforma was circulated among residents of the province of Sindh that assessed the emotional symptoms, conduct problems, hyperactivity-inattention, peer relationship problems, and prosocial behaviors among participants.

Results: The mean SDQ score was 24.97 with a standard deviation of 6.62. The mean scores for emotional symptoms, conduct problem, hyperactivity, peer problem, and prosocial Scale were 5.47, 6.82, 5.85, 6.82, and 3.02, respectively. A significant relationship was revealed between mental health stability and witnessing a death of a known person due to COVID-19 infection ($p=0.003$). Furthermore, the study found that Sindhi individuals had significantly higher scores as compared to other ethnic groups ($p=0.002$).

Conclusion: The young population is as equally stressed as adults and may suffer from substantial anxiety during the pandemic. Therefore, parents should be encouraged to create an atmosphere of support and goodwill.

Keywords: Adolescent, coping mechanism, covid19, pandemic, psychological distress

INTRODUCTION

The Coronavirus Disease 2019 (COVID 19) is a term that came out as a great health threat, social disaster and economic downfall. These are the main reasons which led the World Health Organization to declare it as a global pandemic in March 2020. Not only did this result in a worldwide lockdown, but usual routine life restrictions as well, in order to prevent the person to person transmission of this disease^{1,2}.

In the past, similar pandemics like the SARS outbreak, have been documented as a reason of psychological illnesses in the population in its era, such as depressive episodes, anxiety, panic attacks, delirious behaviour, psychotic episodes and even suicidal ideation³. These occurrences have now resurfaced increasingly with COVID 19 pandemic⁴ and are posing a real threat to individual mental well being, specifically highlighting cases of psychological distress, depression, anxiety, fear and panic episode^{5,6}.

COVID 19 lockdowns worldwide resulted in pause of academic activities, halt in work routines, social distancing and many other factors that left people with the feeling of loneliness, uncertainty of the situation and isolation along with losing one's self worth and feeling of zero motivation and meaning left in life⁷. A study also highlighted how students and their responses in COVID 19 pandemic revolved around stress related to fear of contracting the disease and limiting personal relations to avoid contact⁸.

Sindh is the third-largest province of Pakistan with an approximated population of 48 million. The Chief Minister of Sindh announced the closure of all educational institutes in Sindh until May 2020, and the province underwent lockdown from March till May 2020, which entailed that public bus services, shopping malls, offices, restaurants, super markets, and recreational areas were completely closed off⁹. This sudden lockdown on life took a substantial toll on the working class persons as many were laid off temporarily or permanently from work. Moreover, even though the

schools were not operating, the administrations were demanding full school fees from the parents which was quite an atrocious move. All of these challenges were quite apparent unlike the insidious nature of psychological effects on adolescents who were being forced to isolate themselves from their friends which completely jostled their normal routine¹⁰.

Therefore, the present study aimed to highlight the adolescents' psychological well being during the pandemic and lockdown.

METHODS AND MATERIALS

A prospective, observational study was moderated by the research team at the Department of Psychiatry and Behavioral Sciences, Jinnah Postgraduate Medical Center, between April 2020 to October 2021. Ethical approval was obtained from the institutional review board (IRB) of JPMC. A snowball sampling technique was employed to induct participants in the study. An online platform was utilized to disperse the questionnaires to the participants owing to the COVID-19 restrictions and government ordered lockdown.

All children between the ages of 13 to 17 years were included. Mentally retarded children, those diagnosed with neurological and psychiatric disorders were excluded from the study. A predefined proforma was used to collect data using Online Survey Software. Participants' socio demographic characteristics including age, gender, education status, parents' profession, ethnicity, number of siblings, history of COVID-19, death of a loved one due to Covid-19, etc were recorded.

SDQ measurements: The Strengths & Difficulties Questionnaires (SDQ) is based on five subscales, each with five items. The instrument assesses emotional symptoms, conduct problems, hyperactivity-inattention, peer relationship problems, and prosocial behaviors. The questionnaire was administered in Urdu language and the self-completion version was used in our study as all our participants were able to read and write Urdu/English¹¹.

All data was analyzed using SPSS Version 26. Quantitative data was presented as mean and standard deviation while all

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categorical data were presented as frequency and percentages. Association between dependent and independent variables were determined using chi square and Student t-tests where appropriate. A $p < 0.05$ was set as the statistical cut off for significance.

RESULTS

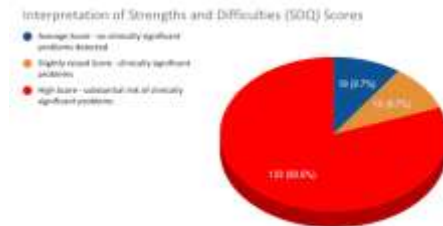
A total of 165 participants, out of which 105(63.6%) were above the age fifteen. A mean age (SD) of 15.60 1.46 years was noted. The mean number of siblings was 2.98(1.842). The majority of the participants were Urdu speaking or Sindhi. About 108(65.4%) were Karachi residents while the remainder were from Sukkur, Hyderabad, Larkana, Thatta, or Kunri (Table 1).

Association of Ethnicity with Behavioral and High SDQ Scores (Table 4): The study found that Sindhi individuals had significantly higher scores as compared to other ethnic groups. It was found that 12(75%) of the Sindhi population had raised SDQ scores indicating clinically significant problems while 55(41.40%) had substantial risk for clinically significant problems with scores between 20 and 40 ($p=0.002$).

Association between Gender with Behavioral and High SDQ Scores: There was no strong significant correlation between gender and SDQ score; however, a higher number of females had slightly raised SDQ scores as compared to males; 10(62.50%) versus 6(37.50%), $p=0.07$.

Association between Employment Status of the Father and High SDQ Scores: Only seven participants claimed that their fathers were recently terminated from their jobs, out of those six had substantial risk of behavioral and emotional difficulties. Similarly, 21(15.80%) participants with unemployed fathers also had considerably high SDQ scores; nevertheless, the difference was not statistically significant ($p=0.143$).

Figure 1: Interpretation of Strengths and Difficulties (SDQ) Scores



Association between Witnessing a COVID-19 related Death and High SDQ Scores: A significant relationship was revealed between mental health stability and witnessing a death of a known person due to COVID-19 infection. About 14 (87.50%) participants

who witnessed a COVID-19 related death had slightly raised SDQ scores indicating a likelihood of a clinically significant mental health problem while 65(48.90%) of them had very high scores establishing a substantial risk of a clinically significant problem ($p=0.003$).

The mean scores for each subscale is given in table 2. The mean SDQ score was 24.97 with a standard deviation of 6.62. The responses to individual questions in the SDQ is given in table 3 (Supplementary). In the present study, we found that four-fifths of the study population had considerably high SDQ scores indicating a severe risk of clinically significant problems (Figure 1).

Table 1: Sociodemographics of the study participants (n=165)

Demographics	Frequency (N)	Percentage (%)
Age Groups		
13-15 years	60	36.4
> 15 years	105	63.6
Ethnicity		
Urdu Speaking	70	42.4
Sindhi	68	41.2
Punjabi	14	8.5
Others	13	7.9
Gender:		
Female	92	55.8
Male	73	44.2
Siblings		
No Siblings	9	5.5
1-3 Siblings	110	66.7
>=4 siblings	46	27.9
Age of Mother		
<40	36	21.8
41-50	92	55.6
51-60	35	21
Age of Father		
<40	6	3.6
41-50	64	38.7
51-60	76	45.9
61-70	18	10.9
Education of Participant		
Primary	14	8.5
Secondary	108	65.5
Matrix/ Intermediate	11	6.7
Undergraduate	31	18.8
Education of Father		
No Formal Education	2	1.2
Primary	2	1.2
Secondary	33	20
Graduate or higher	128	77.6
Education of Mother		
No Formal Education	11	6.7
Primary	22	13.3
Secondary	39	23.6
Graduate or higher	93	56.4
Employment Status of Father:		
Employed	137	83
Unemployed	21	12.7
Recently terminated/resigned	7	4.2
Employment Status of Mother:		
Employed	37	22.4
Unemployed	123	74.5
Recently terminated/resigned	5	3

Table 2: Responses of Study Participants to the COVID-19 Related Questions

Item	Frequency (n)	Percentage (%)
Have you previously been diagnosed with COVID-19?		
Yes	18	10.8
No	147	88.6
During the Covid-19 pandemic, financial situation has		
Same as Before	89	53.6
Improved	14	8.4
Worsened	62	37.3
Have you witnessed a death of a loved one/neighbor/distant relative/etc, due to COVID-19?		
Yes	91	54.8
No	74	44.6
As compared to the pre-Covid period; Have you spent more time with your parents/siblings during the pandemic?		
Yes	141	84.9
No	20	12
Did you give more attention to your studies during the pandemic/lockdown as compared to pre-Covid times?		
Yes	55	33.1
No	110	66.3
During the pandemic/lockdown/social distancing, have you faced increased hostility from your parents?		

Yes	75	45.2
No	90	54.2
During social distancing at your home, have your parents ever hit you?		
Yes	25	15.1
No	139	83.7
During social distancing at your home, how would you describe your screen time?		
Same as Before	21	12.7
Increased	143	86.1
Decreased	1	0.6
During social distancing at your home, how would you describe your relationship with your parents?		
Same as Before	91	54.8
Improved	53	31.9
Worsened	21	12.7
During social distancing at your home, how would you describe your relationship with your friends?		
Same as Before	73	44
Improved	35	21.1
Worsened	57	34.3
During social distancing at your home, parental conflicts have		
Same as Before	105	63.3
Increased	41	24.7
Decreased	19	11.4
Have you ever got tested for COVID-19 (Nasal swab test, etc)?		
Yes	53	31.9
No	112	67.5
Have you ever got symptoms (fever, cough, body aches, loss of taste) of COVID-19?		
Yes	61	36.7
No	104	62.7
Would you say, your academic performance has;		
Remained Unchanged during lockdown	41	24.7
Improved during lockdown	24	14.5
Worsened during lockdown	100	60.2
Individual Subscale Scores		
	Mean	SD
Emotional Symptoms Scale	5.47	2.894
Conduct Problem Scale	6.82	2.066
Hyperactivity Scale	5.85	2.328
Peer Problem Scale	6.82	1.69
Prosocial Scale	3.02	2.078
Total SDQ Score	24.97	6.62

Table 4: Association between Sociodemographic and Covid-19 related Variables and the Risk of Mental and Behavioral Problems

Variables	Strengths and Difficulty Questionnaire			P-value
	Average Score	Slightly Raised	High Score	
Ethnicity				
Urdu Speaking	13 (81.30%)	4 (25.00%)	53 (39.80%)	0.002
Sindhi	1 (6.30%)	12 (75.00%)	55 (41.40%)	
Punjabi	2 (12.50%)	0 (0.00%)	12 (9.00%)	
Other Minorities	0 (0.00%)	0 (0.00%)	13 (9.80%)	
Gender				
Female	13 (81.30%)	10 (62.50%)	69 (51.90%)	0.07
Male	3 (18.80%)	6 (37.50%)	64 (48.10%)	
Education Status of the Participant				
Primary	0 (0.00%)	0 (0.00%)	14 (10.60%)	0.278
Secondary	13 (81.30%)	13 (81.30%)	82 (62.10%)	
Matric/ Intermediate	0 (0.00%)	0 (0.00%)	11 (8.30%)	
Undergraduate	3 (18.80%)	3 (18.80%)	25 (18.90%)	
Employment Status of the Father				
Employed	16 (100.00%)	15 (93.80%)	106 (79.70%)	0.143
Unemployed	0 (0.00%)	0 (0.00%)	21 (15.80%)	
Recently terminated/resigned	0 (0.00%)	1 (6.30%)	6 (4.50%)	
Witnessed a death of a known person diagnosed with COVID-19 infection				
Yes	12 (75.00%)	14 (87.50%)	65 (48.90%)	0.003
No	4 (25.00%)	2 (12.50%)	68 (51.10%)	

DISCUSSION

Distancing measures against the pandemic deeply impacted adolescents, especially on the account of their mental health, resulting in a rise in anxiety, dietary changes, or alterations in the dynamics of friendships and school performances¹².

First important finding the present study revealed that four-fifths of the study population had considerably high SDQ scores indicating a severe risk of clinically significant problems. Our study was comparable with the study by Hill et al., who evaluated the mental health impact, particularly the rates of suicide among adolescents. 15.8% of the population had reported that they considered suicide in the past month, while 4.3% actually attempted to hurt themselves. Suicide ideation was 1.60 times higher in March 2020 as compared to March 2019, while it was 1.45 times higher in July 2020 than July 2019¹⁵. The results implied that significant mental health issues, particularly suicidal behaviors, were elevated during the pandemic.

The current study revealed that there was no significant difference between the SDQ scores of male and female

adolescents. This finding was in contrast to a study by Ravens et al who found that the female population showed greater signs of emotional distress compared to their male counterparts⁹. While, another study by Liang et al revealed that males suffered from much higher rates of emotional distress¹⁴.

Witnessing a covid-19 related death was associated with a higher SDQ score. These findings were consistent with a study by Koçak et al which concluded that anxiety levels among the population studied were much higher in subjects who had witnessed a covid-19 death¹⁵. According to the study, 62.3% of the population experienced a covid-19 related death or had friends or family infected by the virus. On the other hand, 37.7% of the people had no such experience. However, our study found that 87.50% of the population who had witnessed a covid-19 related death had a much higher SDQ score, putting them at significant risk of developing mental issues.

Numerous researches done amidst the pandemic show that though some children and their families have coped reasonably well, some face immense distress¹⁶. A study conducted by Sprang et al., evaluated the mental health impact of disease

containing measures, like quarantine and isolation. It was found that 30% of children having to follow such restrictions suffered from mental health conditions, particularly PTSD¹⁷. Mensi et al., revealed that in an Italian population of adolescents, the rate of acute stress disorder symptoms and PTSD were 79.52% and 50.4%, respectively¹⁸.

One limitation of our study is the lack of data on participants who had a history of psychiatric comorbidity prior to the pandemic. Since, we have no means of comparing the level of anxiety, depression, and PTSD before and during the pandemic, we are not sure how big an impact prior psychiatric comorbidities may have on this sub-group.

In the present study, we highlighted the immense impact of COVID-19 pandemic on the mental health of adolescents in a developing region of Pakistan. The higher burden of psychological problems among the younger generation is a cause of concern and requires focused psychosocial care and identification of those at risk for early prevention, support, and better access to care.

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