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Impact of COVID-19 Pandemic on Outpatient Child and Adolescent Mental Health Service at a Tertiary Care Hospital of Pakistan

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ABSTRACT

Objective: to determine the impact of COVID-19 on mental health care service provision and the pattern of morbidity presenting to out-patient child psychiatry services in Pakistan.
Study Design: Cross-sectional study.
Place and Duration of Study: Child and Adolescent Mental Health Unit, Institute of Psychiatry, Rawalpindi Pakistan, Medical university, from Jan 2019 to Dec 2020.
Methodology: Hospital records for the years 2019 and 2020 were used to get data on the total number of Out-Patient Department (OPD) visits in both years, and Departmental OPD records were used to extract data on all new patients.
Results: Two thousand two hundred thirty-two OPD visits were recorded in 2019 versus 536 in 2020, a 76% decline. Eight hundred fifty-six new patients were seen in 2019 vs 259 in 2020. The detailed OPD record analysis revealed that the predominant age group reporting was adolescents in both years. 377(44%) patients reported with behavioural problems in 2019 vs 138(53.3%) in 2019. Pharmacological management plans were used in 138(16.1%) in 2019 vs 66(25.5%) in 2019. Common Diagnoses seen in both years were not significantly different, (p=0.087). OPD records were found to have an increase in the "not mentioned category", thus reflecting declined quality of record keeping.
Conclusion: The COVID-19-related lockdown and pandemic led to a sharp decline in out-patient visits and deterioration and record-keeping quality. The number of children and adolescents presenting with behavioural problems increased, but the common diagnoses remained similar.

Keywords: COVID-19, Child and adolescent mental health service, Child psychiatry, Pandemic, School closure.

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INTRODUCTION

The COVID-19 pandemic, despite having relatively spared children and adolescents in terms of infection, has still brought various indirect effects on the well-being of this population group.[1] According to a message from the International Association of Child and Adolescent Psychiatry and Allied Professionals (IACAPAP) President and Executive Committee: "Even if this is not a 'childhood pandemic', it is very much a family and society pandemic.[2] Efforts to curb the spread of the virus have unfortunately led to an increase in factors causing and aggravating mental health problems in the young, and as such, this has been termed a "secondary pandemic" for youth.[3,4] Research studying the impact of the pandemic on the mental health of children and adolescents shows that psychiatric service provision has been affected, with a WHO survey showing disruption to mental health services in over 72% of the countries studied.[5] The number of patients presenting to child and adolescent mental health facilities has fallen during the pandemic.[6,7] Results also show multiple severe psychosocial adverse effects in children and adolescents ranging from medium to strong.[8] The Child and Adolescent Unit of the Institute of Psychiatry is the only specialized mental health facility for children and adolescents in Rawalpindi, catering for a large surrounding population. The services were compromised early during the pandemic when the unit was converted to a makeshift COVID Flu Filter Clinic from March to August 2020.[9,10]

In the present study, we compare the outpatient child and adolescent services before and during the pandemic to see how our service delivery was affected. We also compared the presentations of patients in these two years to see whether COVID-19 was associated with a change in the frequency and types of problems seen in the child and adolescent population. With this data, we intend to devise plans for effective service delivery in the future that can better cater for the changing demands of our clinical population in similar challenging times.

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METHODOLOGY

The cross-sectional study was conducted at the Child and Adolescent Mental Health Unit, Institute of Psychiatry, Rawalpindi Medical University, from January 2019 to December 2020. . Ethical approval was obtained from the Institutional Review Board of RMU (Letter # 187/IREF/RMU/2021).

Inclusion Criteria: All patients aged 18 years or more presented in the Child and Adolescent Psychiatry OPD from January 2019 to December 2020 were included.

Exclusion Criteria: Patients or attendants not giving informed consent or outside the study period were excluded from the study.

Outpatient records were analyzed for the years 2019 and 2020 to compare the impact of the Pandemic on service delivery and pattern of morbidity. The total number of OPD visits in the Child and Adolescent mental health unit in 2019 and 2020 were accessed from the hospital record register. The new patient records were retrieved from individual case records of all new patients presenting from 1st January 2019 to 31st December 2020 and entered in a specifically designed electronic form on Google® forms.The record was accessible only to the ones involved in data entry.

Statistical Package for Social Sciences (SPSS) version 24.0 was used for the data analysis. Quantitative variables were expressed as Mean±SD and qualitative variables were expressed as frequency and percentages. Chi-square test was applied to explore the inferential statistics. The *p*-value of ≤0.05 was considered statistically significant.

RESULTS

A total of 2232 Out-patient Department (OPD) visits were recorded in 2019, while 536 OPD visits were found to have occurred in 2020, a difference of 76%. OPD service remained suspended from March 2020 to August 2020 for six months. The total number of new patients for both years was 1115, of which 856 were for 2019 and only 259 for 2020, which amounts to a difference of 70%. The mean age of the new patients was 12.4 ±4.2 years for both years.

Notable in the demographic characteristics were that the patients were similar in both years for distribution age group, gender, which adult was accompanying the child and how many came for a follow-up. The data show significant differences in the distribution of whether children were in school and which grade they were studying in, whether they were referred by another doctor or not and whether they were coming from a rural or urban area. The most common presentations seen in child and adolescent OPD in both years were behavioural 515(46.2%) and emotional problems 157(14.1%). The relative change in presentation patterns in the two years is illustrated in Figure-I.

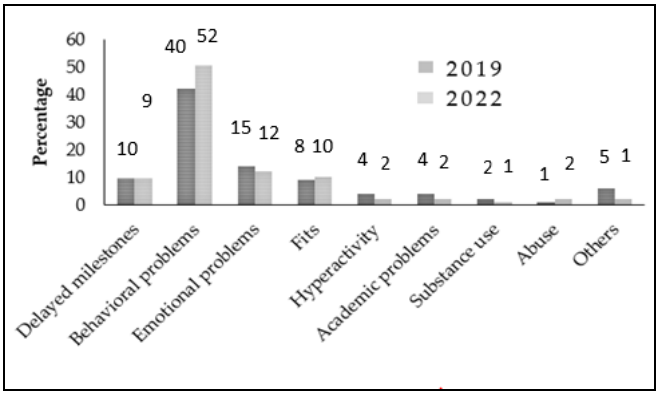

Figure-I: Presenting complaints of Patients visiting Child and Adolescent Psychiatry Department during 2019 and 2020 (n=2232)

Although the differences were subtle and statistically significant ($p<0.05$), for instance, fewer patients presented with academic problems in 2020 than in 2019 (3.9% vs 5.5%). Substance use and uncommon (coded as "others") presentations were not noted in 2020. Patients presenting with complaints of experiencing abuse increased from 0.2 to 1.2% in 2020. Similarly, an increase of 12% was seen in presentations of behavioural & emotional problems in 2020. The com-mon diagnoses noted in the OPD are shown the Table.

Table: Provisional Diagnoses of the Patients visiting the Institute of Psychiatry Child and Adolescent Psychiatric Department During 2019 to 2020 (n=2232)

Provisional Diagnosis	2019 (%)	2020(%)
Mental retardation	204(23.8)	61(23.6)
Depressive disorder	212(24.8)	58(22.4)
Not mentioned	192(22.4)	58(22.4)
Epilepsy	47(5.5)	23(8.9)
Dissociative disorder	21(3.6)	2(5.4)
Anxiety disorder	31(3.6)	14(5.4)
Others	25(2.9)	3(1.2)
Stress-related disorder	21(2.5)	2(0.8)
Autism	13(1.5)	1(0.4)
Emotionally unstable traits	9(1.1)	7(2.7)
Schizophrenia	6(0.7)	3(1.2)
Specific developmental disorder	9(1.1)	0(0.0)
Bipolar affective disorder	5(0.6)	2(0.8)
Eating or sleep disorder	7(0.8)	1(0.4)
Tic disorder	1(0.1)	0(0.0)
Behavioral disturbances (unspecified)	18(2.1)	4(1.5)
Hyperkinetic disorder	9(1.1)	6(2.3)
Substance use disorder	9(1.1)	1(0.4)
Conduct disorder	7(0.8)	1(0.4)

Depressive disorder and Mental retardation were the most diagnosed disorders. The service was also affected in terms of delivery of care. This is portrayed in the Figure-II, detailing the management plans advised the year before and during the Pandemic. This difference was statistically associated with the year of presentation (p<0.001).

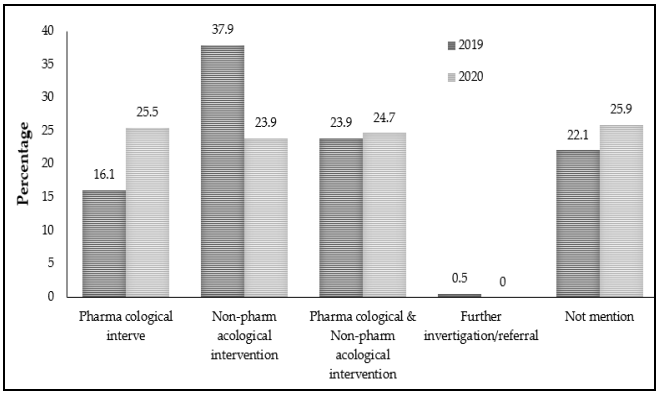

Figure-I: Presenting complaints of Patients visiting Child and Adolescent Psychiatry Department during 2019 and 2020 (n=2232)

DISCUSSION

This is the only study to report empirical data on the impact of a pandemic on child and adolescent mental health services in Pakistan and South Asia and one of the few such studies in the world. The onslaught of the COVID-19 Pandemic led to the disruption of services even in hospitals, especially for non-lifesaving departments. A WHO survey of 130 countries shows that services for mental, neurological and substance use disorders were disrupted in over 90% of places.6 Similar closures of mental health services were observed in this study, and the quantification of the impact shows that the number of patients seen during the Pandemic year dropped to nearly a quarter compared to the previous year.[11,12] This is a considerable number, though this study does not explicitly investigate effects on OPD visits past-pandemic but other reviews of CAMH services report a considerable increase in service use as the restrictions were lifted and thus straining the already under-staffed and under-provisioned service even more.[13]

School closures were pervasive during most of the Pandemic year 2020. This, coupled with lack or loss of employment, led to many parents pulling their kids out of school enrolment. Thus, it is noted in this study that the proportion of school-enrolled children was significantly lower in 2020 vs 2019(32.4% vs 25.1%). It can also be argued that children who were at least attending virtual classes or keeping up with assignments for their schools might have had lesser problems with their mental health, but current published evidence is very scarce in this regard; the few studies that do look at this have reported adverse effects of remote schooling vs in-person schooling14 but no evidence for virtual schooling vs no schooling is quoted.

Numerous studies around the globe have reported an increase in mental health problems in children and adolescents.[15,16] The common presentations are emotional and behavioural disorders like depression, anxiety, stress, and obsessive symptoms. This study has also found a significant increase in patients presenting with behavioural and emotional problems (66.4% vs 58.4%); there can be many reasons for it, including the impact of distress and emotional problems experienced by parents on children's behaviour.[17,18]

Many services providing essential and semi-essential services strived to continue care delivery while maintaining physical distancing during the pandemic; this introduced tele-psychiatry services at a large scale.[19] However, this was different for the CAMH service at the current study site, so most referrals were from nearby urban areas and were met by one member of staff members who tried to provide service while maintaining necessary COVID-19 SOPs. This led to more reliance on writing prescriptions (a 58% increase) and less on formulating behaviour management plans which are both time and resource intensive but much more beneficial. The service also needed to improve quality regarding record-keeping; fewer patient files had complete intake forms and detailed management plans. This may have been averted if the service had been managed remotely and the same team looked after patients instead of one person during most of the pandemic year 2020.

LIMITATIONS OF STUDY

This study has some limitations, the data was retrospective from out-patient records, and it was not possible to evaluate patient perspectives to understand their experience of services during and before the pandemic. Similarly, the experiences of service providers were also not explored in the study. However, the study does explain the change in the frequency of clinical presentations but cannot present data on the reasons behind this change. Another significant limitation was that the data was procured from only one facility, which was the only dedicated service provider in the public sector for child and adolescent mental health in northern Punjab, which also caters for Azad Kashmir and adjoining Khyber Pukhtunkhwa.

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CONCLUSION

The COVID-19-related lockdown and pandemic led to a sharp decline in out-patient visits and deterioration and record-keeping quality. The number of children and adolescents presenting with behavioural problems increased, but the common diagnoses remained similar.

Conflict of Interest: None.

Authors' Contribution

Following authors have made substantial contributions to the manuscript as under:

QUA & ATUDN: Conception, study design, drafting the manuscript, approval of the final version to be published.

ZU & SA: Data acquisition, data analysis, data interpretation, critical review, approval of the final version to be published.

MM & SY: Critical review, data acquisition, drafting the manuscript, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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