



ASSESSMENT OF MENTAL HEALTH STATUS AND FACTORS AFFECTING IT AMONG SCHOOL GOING ADOLESCENTS IN JAGDALPUR CITY DURING COVID-19 PANDEMIC

Akhilesh Badge

PG Scholar, Department Of Community Medicine, Pt. J. N. M. Medical College, Raipur

Shubhra A. Gupta

Associate Professor Dept Of Community Medicine Pt. J. N. M. Raipur

Mini Sharma

Associate Professor, Dept Of Community Medicine Pt. J. N. M. Raipur

Nirmal Verma

Professor, Dept Of Community Medicine Pt. J. N. M. Raipur

ABSTRACT

Background: Adolescence is age of transition between childhood and adulthood. It represents a critical period of development during which personal lifestyle choices and behavior patterns establishes. This period includes rapid physical growth and development, social and psychological maturity and period of stress. Mental health is important at every stage of life, from childhood and adolescence to adulthood because it includes emotional, psychological, and social well-being of individual. The risk for psychiatric issues in adulthood is enlarged by childhood trouble and hardships in their daily life. **Objective:** To assess the status of Mental Health among study subjects by using Strengths and Difficulties Questionnaire during November 2020 to November 2022 in Jagdalpur city, Chhattisgarh. **Material and Method:** A school based cross sectional study was done for assessment of Mental Health Status among 380 school going adolescents in Jagdalpur city by Multistage random sampling. Mental Health Status was assessed by Strength and Difficulties Questionnaire and resultant score for total score ranges from 0 to 40, which was further graded as students having normal (0-15), borderline (16-19) & abnormal Mental Health Status (20-40). **Results:** Domain wise distribution showed that adolescents were having abnormal Mental Health Status i.e. for total Mental Health Status (15.3%), emotional domain (12.89%), Conduct domain (17.1%), Hyperactivity domain (6.31%), Peer domain (9.7%) and prosocial behavior problem (6.57%). Total Mental Health Status was found better in study subjects of government schools, lower age group, male, other than Hindu religion, unreserved category, nuclear family, illiterate parents, non-working mother, single child, living with either parent, attended and taking care at home after returning from school by parents. **Conclusion:** It was found that more than two third adolescents were coming under normal category of Mental Health Status and majority of the study subjects were having normal prosocial behavior, these were positive finding. Conduct problem was the highest problem found in study subjects.

KEYWORDS : School going adolescents, Mental Health Status, Strength and Difficulties Questionnaire.

INTRODUCTION

Adolescence is age of transition between childhood and adulthood. It represents a critical period of development during which personal lifestyle choices and behaviour patterns establishes. WHO explains adolescence in relationship of the age (age between 10 to 19 years) and in terms of a period of life marked by special traits. This period includes rapid physical growth and development, social and psychological maturity and period of stress. Every fifth person is an adolescent between 10 and 19 years in India.

WHO estimates that approximately one in the five adolescent under the age of 18 years experiences some form of developmental, emotional or behavioral problems. Mental health is defined as "a state of balance between the individual and the surrounding world, a state of harmony between oneself and others, a coexistence of the realities between self and that of other people and that of the environment" The adolescent years are formative as well as impressionable years when maximum amount of physical and psychological changes takes place.^[1] Till date no study has been published related to mental health status among school going adolescents during COVID-19 pandemic in Chhattisgarh state. Hence, present study was conducted to assess the mental health status and factors affecting it among school going adolescents in Jagdalpur city during COVID19 pandemic.

METHODOLOGY

It was a cross-sectional observational study done among 380 school going adolescents standard 6th to 12th in selected schools of Jagdalpur city, Chhattisgarh from November 2020 to November 2022. Adolescents studying in selected schools of Jagdalpur city who were presently willing to participate were included in the study, after taking informed written consent from principals of respective schools. Two government and two private schools were selected from Jagdalpur city through lottery method out of 186 schools after getting prior permission from district educational officer.

The sample size for the study was 380 subjects with 5% margin of error and 10% non-responsive rate. For collection of data a pre-designed, pretested semi structured questionnaire was used which consisting of socio-demographic profile of study subjects and Strengths & Difficulties Questionnaire for assessment of Mental Health Status developed by Robert N. Goodman for monitoring of mental health

status. Strength and difficulties questionnaires were used which was divided into five domains consisting of five questions in each domain.

On the day of data collection only those study subjects were selected who were permitted from Principal and fulfilling the study criteria. Study purpose and study tools were explained to the study subjects. The self-administered questionnaire was distributed for collecting the necessary information. Total 196 students from private schools and 184 students from government were participated from 6th to 12th standard. During the time of data collection, proforma were checked for any missing information and requested to study subjects to fill it completely.

Study Tool

The questionnaire contains a 5-point Likert scale for the responses with score 0 to 2 with the statement of higher score indicating lower mental health status. Reverse scoring of the response to question number 7, 11, 14, 21 & 25 was done. All responses were summed up and the total scores of each domain were divided into 3 groups as normal (0-15), borderline (16-19) and abnormal (20-40). For each category, a higher score means that subject was having difficulties in Mental Health Status except for prosocial behavior domain. Before starting the study, Institutional Scientific and Ethical Committee approval of Pt. J.N. M. Medical College Raipur, Chhattisgarh was taken. The data obtained were entered in MS excel spreadsheet, coded and analyzed using data analysis software.

RESULT

Table 1: Distribution of study subjects on the basis of various socio demographic variable(n=380)

Socio demographic variable	No.	%	
Medium of school	Hindi	184	48.2
	English	196	51.8
Age group (in years)	10-12	114	30
	13-15	211	55.5
	16-18	55	14.5
Mean age (in years): 13.58± 1.82			
Gender	Male	208	54.7
	Female	172	45.3
Religion	Hindu	318	83.6

	Other religion	62	16.3
Category	Unreserved	164	43.1
	Reserved	216	56.9
Type of family	Joint family	145	38.2
	Nuclear family	235	61.8
Education of father	Literate	355	93.42
	Illiterate/died	25	6.5
Education of mother	Literate	327	86.0
	Illiterate/died	53	14.0
Occupation of father	Working	368	96.8
	Non-working/died	12	03.1
Occupation of mother	Working	105	27.6
	Non-working/died	275	72.4
Living status	with parents	357	93.9
	Not living with parents	23	06.1
Person attending subject after returning from school	Parents	287	75.5
	Other than parents	93	24.5
numbers of sibling	Sibling	364	95.6
	No sibling	16	4.2

Out of 380, 196 (51.8%) study subjects were studying in English medium schools and (54.7%) were males. Most of students were of age group of 13-15 years. Majority 318 (83.9%) were following Hindu religion and belonging to unreserved category (43.1%). Majority were living in nuclear family (61.8%), 93.9% were living with their parents, 16 (4.2%) were single child, 287 (75.5%) were attended by parents when they return to home from school.

Majority of the study subjects 93.43% fathers and 86.1% of mothers were educated. Mothers of only 105 (27.8%) subjects were working while almost 368 (96%) all subject's fathers were working. Most of parents were working within the city. (Table 1)

Table 2: Distribution of study subjects as per domain of overall Mental Health Status (n=380)

Mental Health Status domain	Normal	Borderline	Abnormal	Mean
Emotional problem	0-5	6	7-10	3.78±2.11

Table 3: Distribution of study subjects as per domain of overall Mental Health Status (n=380)

Sociodemographic variable	Normal	Borderline	Abnormal	Mean score	Test of significance (p value)	
Type of school	Government	126 (68.5%)	37 (20.1%)	21 (11.4%)	13.51±4.84	0.001
	Private	127 (64.8%)	32 (16.3%)	37 (18.9%)	14.21±5.39	
Mean age	Less than mean age	127 (70.2%)	34 (18.8%)	20 (11%)	13.33±4.96	0.09
	More than mean age	126 (63.3%)	35 (17.6%)	38 (19.1%)	14.37±5.26	
Gender	Male	141 (67.8%)	38 (18.3%)	29 (13.9%)	13.77±5.11	0.70
	Female	112 (65.2%)	31 (18%)	29 (16.8%)	13.99±5.18	
Religion	Hindu	212 (66.7%)	59 (18.6%)	47 (14.7%)	13.88±5.05	0.79
	Other religion	41 (66.1%)	10 (16.1%)	11 (17.8%)	13.82±5.60	
Category	Unreserved	113 (69.8%)	20 (12.3%)	29 (17.9%)	13.75±5.25	0.03
	Reserved	140 (64.2%)	49 (22.5%)	29 (13.3%)	13.96±5.06	
Type of family	Joint family	101 (69.7%)	23 (15.8%)	21 (14.5%)	14.01±4.91	0.57
	Nuclear family	152 (64.7%)	46 (19.6%)	37 (15.7%)	13.79±5.28	
Education of father	Literate	234 (65.9%)	65 (18.3%)	56 (15.8%)	13.95±5.16	0.75
	Illiterate	12 (80%)	2 (13.3%)	1 (6.7%)	12.13±4.34	
Education of mother	Literate	210 (64.4%)	60 (18.4%)	56 (17.2%)	14±10±5.23	0.05
	Illiterate	42 (79.2%)	9 (17%)	2 (3.8%)	12.45±4.33	
working status of father	working	244 (66.3%)	67 (18.2%)	57 (15.5%)	13.89±5.15	0.90
	Not working	2 (100%)	0	0	12.0±0	
working status of mother	working	62 (59%)	23 (22%)	20 (19%)	14.58±5.48	0.16
	Not working	190 (69.3%)	46 (16.8%)	38 (13.9%)	13.60±4.99	
Number of siblings	Sibling	242 (66.5%)	68 (18.7%)	54 (14.8%)	13.89±5.04	0.55
	No sibling	11 (68.8%)	1 (6.2%)	4 (25%)	13.56±7.19	
living status	with either parent	244 (68.3%)	64 (17.9%)	49 (13.7%)	13.64±5.01	0.002
	Not living with parents	9 (39.1%)	5 (21.7%)	9 (39.1%)	17.52±5.81	
Person attending after returning of the study subjects and take care at home	Parents	202 (70.4%)	45 (15.7%)	40 (13.9%)	13.45±4.97	0.02
	Other than parents	51 (54.8%)	24 (25.8%)	18 (19.4%)	15.17±5.43	

Present study identified mental health status was better in study subjects of government schools, lower age group, male, other than Hindu religion, unreserved category, nuclear family, illiterate parents, non-working mother, single child, living with either parent, attended and taking care at home after returning from school by parents. There is

	303 (79.7%)	28 (7.3%)	49 (12.8%)	
Conduct problem	0-3	4	5-10	2.83±1.89
	259 (68.1%)	56 (14.7%)	65 (17.1%)	
Hyperactivity	0-5	6	7-10	3.73±1.72
	320 (84.2%)	36 (9.4%)	24 (6.3%)	
Peer problem	0-3	4-5	6-10	3.37±1.62
	216 (56.8%)	127 (33.4%)	37 (9.7%)	
Total difficulty score	0-15	16-19	20-40	13.9±5.14
	253 (66.5%)	69 (18.1%)	58 (15.2%)	
Pro-social behaviour	6-10	5	0-4	7.85±1.83
	339 (89.2%)	16 (4.2%)	25 (6.6%)	

According to total difficulty scores majority 253 (66.5%) of subjects were graded as normal mental health, 69 (18.2%) Borderline and 58 (15.3%) abnormal Mental Health Status.

Domain wise distribution also showed majority of the students were having normal mental health status i.e. for emotional domain 303 (79.7%), Conduct domain 259 (68.1%), Hyperactivity domain 320 (84.2%) and Peer domain 216 (56.8%). It is a positive finding that 339 (89.2%) subjects are having good prosocial behavior. When problem wise analysis was done then, it was found that conduct problem is present in highest 65 (17.1%) of students followed by 49 (12.9%) emotional issue. (table 2)

It is clear that males were having less emotional problem (mean score 3.68±1.99, 9.6% abnormality) and conduct problem (mean score 2.70±1.93, 16.8% abnormality). Female were having lower hyperactivity problem (3.65±1.58, 2.9% abnormal mental health status statistically significant at p < 0.05) and peer problem (3.42±1.68, 11.6% Abnormal Mental Health Status). Prosocial behavior was found to be good in female (7.98±1.86, 8.1% abnormal Mental Health Status) and it is significant finding. Overall scores show males have slightly better mental health status than female but it is also an insignificant finding. (Table 3)

association of type of school. Living status and person attending after returning of the study subjects and taking care at home was statistically significant with the overall mental health status.

DISCUSSION

This study aims to assess the mental health status and its associated factors among school going children in tribal area using SDQ questionnaires and factors affecting it. Based on the data analysis, gender, age, socioeconomic status, family type, education status of parents, working status of parents, living status and relation and number of siblings were the affecting factors more predictive of emotional and behavioral problem among adolescents school students. According to total difficulty scores majority 253 (66.5%) of subjects were graded as normal mental health which is a good sign of mental health. In the present study 69 (18.2%) subjects were having Borderline and 58 (15.3%) abnormal Mental Health Status which is alarming sign. In a study done by (Kelhouletuo Keyhoe al 2019) found that prevalence of mental health status 17.2% at the abnormal level whereas 28.8% was at the borderline level¹. Sarkhel reported prevalence of conduct problem in 4.58% study subjects². Johny Kutty Joseph and Babitha K Devu, found the point prevalence of ADHD among children and adolescents in the included studies ranges from 1.30% to 28.9%³. Viral Patel investigated that prevalence of bullying involvement was 70% (n = 1529; 9.1% bullies, 18.6% victims, and 42.3% bully-victims) in school children⁴.

Gender wise distribution showed that mental health status was better in male study subjects compared to female. In other study (Harikrishnan et al 2021) found that only a little more than a tenth of school-going adolescents (11.5%) had emotional problems⁵. Girl students living in rural area found to have more emotional problems than boys.

One of the positive finding was found that 69.3% study subjects of non-working mother had better mental health status than those subjects whose mother was working. This finding is consistent with the other study (Gunasekaran Kalaipriya et al, 2019, Caroline Priya Kumar et al 2014)⁶ that children of working woman had emotional and behavior problems like hyperactivity, conduct problems, and peer problems. Overall total difficulty score was also found better in study subjects living with one or both parents indicating good mental health status. In study done by Aniruddh Prakash Behere et al, 2012 found Children coming from single/divorced families were less likely to have been exposed to sexual abuse but more likely to have a diagnosis of attention deficit hyperactivity disorder (ADHD) compared to other types of families⁷. table no. 3 illustrated that all those children who were attended & taken care by their parents after returning from the school showed a better mental health status for all the domains. This is seen in the form of statistically higher proportion of children having normal Mental Health Status.

Recommendations

Regular counselling sessions should be planned in the school during school timings where the counsellor counsel the school children about all the aspects of adolescent. Counselling of parents can also be done during parent teacher meeting in special cases. The responsibility of training and monitoring the services provided by the counsellor can be done under National Health Programs and School Education Department respectively. Also, Provision of "Peer Educators" should be started for each class in every school.

Promotion of Physical & Recreational activities and extracurricular activities should be put in weekly class schedule. The activities which involve more life skills and management such as team work, individual tasks and goal-oriented accomplishments can be introduced to boost their overall development. The child needs to be encouraged by parents / family to participate in physical activities like exercise, sports in their free time to get pleasure.

Parents should provide emotional support to their children by listening to their thoughts without any judgement and ensuring that their children's feelings are not dismissed or suppressed but acknowledged.

Limitation Of The Study

In present study, though major determinants were tried to cover, these were many other aspects whose influence on Mental Health Status could not be denied such as emotional & spiritual health.

Assessment of these two aspects of health was not done due to time and resource constraints during pandemic COVID-19.

CONCLUSION

Thus, it can be said that present study has provided a multifaceted look at various factors and their contribution to adolescent mental health during Corona pandemic. At the time of extreme fear & restriction, the

Mental Health Status of majority of school students were found normal which is a positive finding. Another positive finding is that, the number of students having abnormal behavior is very less. This indirectly showed that adolescents got proper attention & care during COVID Pandemic from their families as it was found as strong determinant for Mental Health.

Acknowledgements

Acknowledgement and gentle gratitude to all teachers, faculties, study participants and relevant school care takers who supported and made possible of my research.

Funding: No funding resource

Conflict Of Interest: none

Ethical Approval: The study was approved by the scientific and ethical committee

REFERENCES

1. Keyho K, Gujar NM, Ali A. Prevalence of mental health status in adolescent school children of Kohima District, Nagaland. *Annals of Indian Psychiatry*. 2019 Jan 1;3(1):39.
2. Sarkhel, S., Sinha, V. K., Arora, M., & Desarkar, P. (2006). Prevalence of conduct disorder in schoolchildren of Kanke. *Indian journal of psychiatry*, 48(3), 159-164. <https://doi.org/10.4103/0019-5545.31579>
3. Joseph JK, Devu BK. Prevalence of attention-deficit hyperactivity disorder in India: A systematic review and meta-analysis. *Indian J Psy Nsg* 2019;16:118-25
4. Patel V, Varma J, Nimbalkar S, Shah S, Phatak A. Prevalence and profile of bullying involvement among students of rural schools of Anand, Gujarat, India. *Indian journal of psychological medicine*. 2020 May;42(3):268-73.
5. Harikrishnan U, Sailo GL. Prevalence of emotional and behavioral problems among school-going adolescents: a cross-sectional study. *Indian Journal of Community Medicine: Official Publication of Indian Association of Preventive & Social Medicine*. 2021 Apr;46(2):232.
6. Gunasekaran K, Vasudevan K, Srimadhi M. Assessment of mental health status among adolescents in Puducherry, India—A mixed method study. *Journal of Family Medicine and Primary Care*. 2022 Jun 1;11(6):3089-94.
7. Seenivasan P, Kumar Cp. A Comparison Of Mental Health Of Urban Indian Adolescents Among Working And Non Working Mothers.
8. Behere AP, Basnet P, Campbell P. Effects of family structure on mental health of children: A preliminary study. *Indian journal of psychological medicine*. 2017 Jul;39(4):457-63.