



THE IMPACT OF COVID-19 ON MENTAL HEALTH OF YOUTH IN URBAN AREA OF MAHARASHTRA, INDIA: A COMMUNITY BASED OBSERVATIONAL CROSS SECTIONAL STUDY

Community Medicine

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ABSTRACT

Background The COVID-19 pandemic has posed unprecedented stress to youth. This study aimed to estimate the prevalence of Covid-19 related depression among youth and to know about the different socio-demographic factors responsible for the prevalence of depression. **Methodology:** Cross sectional community based observational study was conducted among youths in age group 15--29 years. Depression was measured using the Hamilton Depression rating Scale (HDRS). **Results:** The prevalence of depression was found 54.9%. The results indicated that there were multiple symptoms presentation among study participants, the little interest or pleasure in doing the things 86% was the most common symptom presentation. **Conclusion:** The prevalence of depression found to be high and no association with age, educational qualifications, occupations, habits and type of family.

KEYWORDS

Youth, Pandemic, Covid-19, Depression

BACKGROUND

The COVID-19 pandemic has posed unprecedented stress to youth. Despite recent speculative suggestions of poorer mental health in young people in India since the start of the pandemic, there have been no systematic efforts to measure these. Mental health issues like depression, anxiety, and stress are increasingly prevalent among Indian youth. The National Youth Policy, 2014, specifically defines youth as individuals within the 15-29 ages. The first case of the 2019-20 coronavirus pandemic in the Indian state of Maharashtra was confirmed on 17th June 2020. The state has confirmed a total of 1,16,752 cases, including 5651 deaths⁽¹⁾

People had to adapt to an exceptional situation during the confinement decreed by the global health authorities after the emergence of COVID-19. This period meant a radical change in the habits of everyone, from the youngest to the oldest, which had a high impact on different areas of life. Among the most affected, we can undoubtedly say at this point that it has been mental health⁽²⁻⁶⁾. Several sources indicated that mental health problems have increased considerably during the COVID-19 pandemic, with a significant increase in symptoms associated with depression and anxiety disorders⁽⁷⁾. As India continues to be impacted by the challenges caused by the extended Covid 19 pandemic its unprecedented impact on the mental health of the youth (15 to 29 years), who constitute nearly 27.5 per cent of our population, must be addressed. The 2021 *State of the World's Children Report*, noted that in India, 1 in 7 youth between 15 to 29 years reported feeling depressed during the pandemic. According to National Crime Records Bureau, one-third of all suicides in the country in 2020 were among the youth. Contributing factors include the disruption caused to their lives due to the loss of in-person education, routine and social opportunities which have increased stress and internalization of disorders. The pandemic has also severely affected their learning abilities, behavior and social skills.

The effect of COVID-19 on young people's mental health could be more damaging in the longer run than the infection itself⁽⁸⁾. Measuring early signs of mental health challenges such as worries and negative emotions in young people is an urgent priority for researchers as well as policy-makers, including identifying those most vulnerable to mental health difficulties.⁽⁹⁻¹⁰⁾

In this context in present study, we aimed to estimate the prevalence of Covid-19 related depression among youth in Maharashtra, India and to know about the different socio-demographic factors responsible for depression among youth population by using the Hamilton Depression rating Scale (HDRS) which was a self-assessment screening tool.

Objectives:

1. To estimate the prevalence of Covid-19 related depression among youth in Maharashtra, India.
2. To know about the different sociodemographic factors responsible for the prevalence of depression among study participants.

MATERIAL & METHODS:

The present study was conducted in urban health training centre, which is a field practice area under the department of community Medicine of our Institute

STUDY POPULATION:

The present study was conducted on youths in age group 15--29 years.

STUDY DESIGN:

Cross sectional community based observational study.

STUDY PERIOD: The duration of the study was from December 2021 to March 2022.

Sampling Technique & Sample Size: Multistage Sampling technique

- 1) Random sampling technique
- 2) Systematic random sampling technique.

Stage I:

Out of twelve areas, six areas were selected randomly.

Stage II

In selected area total population was 22000 out of that 27.5% was selected as per Youth population age group it comes 6050 of that 10% were selected it comes 605.

Stage III.

605 respondents were selected by systematic random sampling by taking every second house. First house selected randomly and then every second house was selected by systematic sampling method.

MEASURES:

Depression was measured using the Hamilton Depression rating Scale (HDRS)⁽¹¹⁾, which is a self-assessment screening tool.

STATISTICAL ANALYSIS:

Data was collected by face to face interview of the respondents by using interviewer administered questionnaire. Data was entered in SPSS-16.0 version and analyzed by using appropriate statistical tests. It was duly pre-tested among the youth in age group 15-29 years

considering the objectives, questionnaire was formed consisting both open and close ended questions.

RESULTS:

Total of 610 participants was included of which including 292 (47.9%) were males and 318 (52.1%) were females. Their age ranged from 15 to 29 years; most of the participants belonged to the age group of 20–24 years (62.3%) followed by 15-19 years (34.8%). Majorities (81.1%) of the participants were educated up to graduation and above followed by (15.6%) were educated up to secondary education. Almost (93.1%) were students and 67.25 were lived with a nuclear type of family [Table 1].

Table 1. Sociodemographic Characteristics of Study Participants.

Variables	Frequency n=610	percentage	
Age in Years	15-19	212	34.8
	20-24	380	62.3
	25-29	18	3.0
Gender	Male	292	47.9
	Female	318	52.1
Educational status	Illiterate	3	0.5
	Primary	17	2.8
	Secondary	95	15.6
	College and Above	495	81.1
Occupational Status:	Service	9	1.5
	Business	5	0.8
	Labourer	8	1.3
	Housewife	13	2.1
	Student	568	93.1
	Not any	7	1.1
	Habits	Tobacco	4
Smoking		7	1.1
Paan		10	1.6
Alcohol		12	2.0
Mixed		23	3.8
None		554	90.8
Type of Family		Nuclear	410
	Joint	117	19.2
	Three Generation	83	13.60

In the present study, the overall prevalence of depression among the study participants was found to be 54.9% of that 35.4% were had Mild Depression, 12.3% had Moderate depression and 7.2% had severe depression. [Table 2]

Table 2. Prevalence of Depression among the Study Participants.

Prevalence of Depression (Score)	Frequency n=610	percentage
Normal (0-7)	275	45.1
Mild Depression (8-13)	216	35.4
Moderate Depression (14-18)	75	12.3
Severe Depression (Above 19)	44	7.2
Total	610	100.0

Table.3 reveals that the association of Socio-demographic factors with Prevalence of Depression among study participants. The prevalence of depression was more in age group 20-24 years and among female as compare to male. However it was found that there was no statistical significant association between age, gender, educational status, occupation, habits and type of family of study participants.(p>0.05)

The results indicated that there were multiple symptoms presentation among study participants, little interest or pleasure in doing the things (86%) was the most common symptom presentation among study participants followed by Irritability (85.9%) , Feeling tired (84.5%) ,worrying too much about different things (83.2%) Sleep trouble (83%), Guilt feeling (77.3%) ,trouble in Concentration (74.9%) ,poor appetite (72.8%) and restlessness (65.4%) were found . [Table 4]

Table 3. Association of Socio-demographic factors with Prevalence of Depression in study participants.

Variables	Normal N= 275	Depression N=335	Total	Chi square Value (df)	P value	
Age in Years	15-19	99	113(33.7)	212	1.24(df 2)	>0.05
	20-24	170	210(62.6)	380		
	25-29	06	12(3.7)	18		
Gender	Male	132	160(47.7)	292	0.03(df- 1)	>0.05
	Female	143	175(52.3)	318		
Educational status	Illiterate	1	2	3	0.05(df- 3)	>0.05
	Primary	10	07	17		
	Secondary	47	48	95		
	College and Above	217	335	495		
Occupational Status:	Service	1	8	9	9.7(df- 6)	>0.05
	Business	4	1	5		
	Labourer	5	3	8		
	Housewife	4	9	13		
	Student	568	257	311		
	Not any	4	2	7		
Habits	Tobacco	0	4	4	5.98(df- 5)	>0.05
	Smoking	3	4	7		
	Paan	6	4	10		
	Alcohol	4	8	12		
	Mixed	8	15	23		
	None	254	300	554		
	Type of Family	Nuclear	178	232		
Joint		53	64	117		
Three Generation		44	39	83		

Table 4. Distribution of study participants according to the symptoms profile associated with depression. (Duration of at least 2 weeks.)

Symptoms Profile	Frequency (%) n=335
Little interest or pleasure in doing things.	288(86)
Becoming easily annoyed or irritable.	288(85.9)
Feeling tired or having little energy.	283(84.5)
Worrying too much about different things.	279(83.2)
Trouble falling/staying asleep, sleeping too much.	278(83)
Depressed mood and Guilt feelings)	259(77.3)
Trouble concentrating on things	251(74.9)
Poor appetite or overeating.	244(72.8)
Being so restless	219(65.4)

Discussion: The current study was a Community based descriptive, cross-sectional study to assess levels of depression in Indian youth aged 19–29 years, living in the state of Maharashtra, India. Depression was measured using the Hamilton Depression rating Scale (HDRS)), which was a self-assessment screening tool. Since the HDRS was used, scores indicated feelings of depression in the preceding 2 weeks. The study explored associations with several risk factors like age , gender, educational qualification of the participant, Occupation , habits and type of family. Symptomatology of depression among youth was analyzed.

In the present study, the overall prevalence of depression among the study participants was found to be 54.9% of that 35.4 % Mild Depression, 12.3% Moderate depression and 7.2% severe depression. This finding is similar with study conducted by author Mini Narayan where the prevalence rate of depression was found 51.8%, among the Youth from Maharashtra, India.(12)

While it was lowest as compare to present study in community based study conducted by author Porter et al, where it was 41 % to 43.12%. (13) Several external and intrinsic factors moderate COVID-related depression in young people and a clearer understanding of the

experience of depression during the pandemic requires an inquiry into these factors (14). Various studies among children and adolescent had reported perceived increases in depression, anxiety, and loneliness due to the effects of COVID-19. (15-17)

The high prevalence of depression may be explained by the fact that this study was conducted just after the lockdown was over, during that time youth had been in a state of prolonged social disconnect. Biological disasters like COVID-19 give rise to acute (within 2–6 months of the outbreak) and long-term (after 6 months of the outbreak) mental health issues. Youth experienced sudden and dramatic changes in their daily lives during the lockdown. With their regular schedules disrupted, increasing challenges of online education, demands of household responsibilities, rising uncertainty about examinations and career options, and the compulsion to live with restrictions, youth are at higher risk of developing increased distress during the lockdown (18).

The present study showed that prevalence of depression was more in age group 20-24 years and among female as compare to male. Similar findings were observed in study by author Russell Kabir, where females under the age of 23 had a higher prevalence of depressed symptoms [19].

Similar findings recorded by several epidemiological studies also where they found, incidence of mood disorders in the general population was that the female gender is at a higher risk of depression symptoms (20—21).

Present study had evaluated the symptom profile of study participants, and the commonly reported symptoms include little interest or pleasure in doing the things (86%) was the most common symptom presentation among study participants followed by Irritability (85.9%), Feeling tired (84.5%), worrying too much about different things (83.2%) Sleep trouble (83%), Guilt feeling (77.3%), Trouble in Concentration (74.9%), poor appetite (72.8%) and restlessness (65.4%) were found. Similar symptomatology presented in study by author Grover et al in their study the commonly reported symptoms include depressed mood, diminished interest in play activities, concentration difficulties, behavior problems in the form of anger and aggression, pessimism, decreased appetite, decreased sleep, anhedonia, and somatic symptoms. (22)

The reasons for the different symptoms among study Participants may be youth population, they were actively engaged in academic and career-related activities and the lock down may in part account for their excessive media exposure to information about the pandemic and an excessive amount of time spent online also decreased sleep quality due to increased screen time.

Conclusion: The current study of depression in the youth of Amravati District of Maharashtra found the prevalence rate of depression to be high and found no association with socio-demographic factors like age, gender, educational qualifications, occupations habits and type of family. This study was conducted just after lockdown was over; it was a major stressor for the youth population. The time period of the study, as well as the nature of tools used, could also lead to variations between studies conducted in various part of India. There are very few studies in India that have explored the symptoms of depression experienced by youth population. However, a deeper understanding of the symptoms could be valuable in helping youths to seek professional care before exacerbation of symptoms. This would allow for the planning of more useful and focused interventions for each patient.

Ethical Consideration: Institutional ethics committee clearance was obtained before commencing the study. Participant data was kept confidential and verbal consent will be taken from all participants.

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Authors Contribution: Conception and design, acquisition of data done by Dr. Tanaya S. Agrawal. Analysis and interpretation of data and drafting the article done by Dr. Vinod R. Wasnik & revising it critically for important intellectual content has been done by the author Dr. Ajay K. Jawarkar.

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REFERENCES:

- "COVID-19 Monitoring Dashboard by Public Health Department, Government of Maharashtra". Retrieved 25 April 2020.
- Husky, M.M.; Kovess-Masfety, V.; Swendsen, J.D. Stress and anxiety among university students in France during COVID-19 mandatory confinement. *Compr. Psychiatry* 2020, 102, e152191.
- Ammar, A.; Trabelsi, K.; Brach, M.; Chtourou, H.; Boukhris, O.; Masmoudi, L.; Bouaziz, B.; Bentlage, E.; How, D.; Ahmed, M.; et al. Effects of home confinement on mental health and lifestyle behaviours during the COVID-19 outbreak: Insight from the ECLB-COVID19 multicenter study. *Biol. Sport* 2021, 38, 9–21.
- Rawat, D.; Dixit, V.; Gulati, S.; Gulati, S.; Gulati, A. Impact of COVID-19 outbreak on lifestyle behaviour: A review of studies published in India. *Diabetes Metab. Syndr.* 2021, 15, 331–336.
- Balanza-Martinez, V.; Atienza-Carbonell, B.; Kapczynski, F.; De Boni, R.B. Lifestyle behaviours during the COVID-19-time to connect. *Acta Psychiatr. Scand.* 2020, 141, 399–400.
- Garre-Olmo, J.; Turró-Garriga, O.; Martí-Lluch, R.; Zacarias-Pons, L.; Alves-Cabrato, L.; Serrano-Sarboza, D.; Vilalta-Franch, J.; Ramos, R. Changes in lifestyle resulting from confinement due to COVID-19 and depressive symptomatology: A cross-sectional population-based study. *Compr. Psychiatry* 2021, 104, 152214.
- Garriga, M.; Agasi, I.; Fedida, E.; Pinzón-Espinoza, J.; Vázquez, M.; Pacchiarotti, I.; Vieta, E. The role of mental health home hospitalization care during the COVID-19 pandemic. *Acta Psychiatr. Scand.* 2020, 141, 479–480.
- Depoux A, Martin S, Karafilakis E, Preet R, Wilder-Smith A, Larson H. The pandemic of social media panic travels faster than the COVID-19 outbreak. *J Travel Med.* (2020) 27:taaa031. doi: 10.1093/jtm/taaa031
- O'Connor DB, Aggleton JP, Chakrabarti B, Cooper CL, Creswell C, Dunsmuir S, et al. Research priorities for the COVID-19 pandemic and beyond: a call to action for psychological science. *Br J Psychol.* (2020) 111:603–29. doi: 10.1111/bjop.12468
- Holmes EA, O'Connor RC, Perry VH, Tracey I, Wessely S, Arseneault L, et al. Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science. *Lancet Psychiatry.* (2020) 7:P547–60. doi: 10.1016/S2215-0366(20)30168-1
- Hamilton M. A rating scale for depression. *J Neurol Neurosurg Psychiatry* 1960;23:56–62
- Prevalence and Risk Factors in Youth from Maharashtra, India, Mini Narayanan | Sujata Sriram Human Arenas (2023) 6:869–885
- Porter, C., Favara, M., Hittmeyer, A., Scott, D., Sánchez Jiménez, A., Ellanki, R., & Stein, A. (2021). Impact of the COVID-19 pandemic on anxiety and depression symptoms of young people in the global south: Evidence from a four-country cohort study. *British Medical Journal Open*, 11(4), 1–14. <https://doi.org/10.1136/bmjopen-2021-049653>
- Rehman, U., Shah Nawaz, M. G., Khan, N. H., Kharshing, K. D., Khurshid, M., Gupta, K., & Uniyal, R. Depression, anxiety and stress among Indians in times of Covid-19 lockdown. *Community Mental Health Journal*, 2021, 57(1), 42–48. <https://doi.org/10.1007/s10597-020-00664-x>
- Chen, F., Zheng, D., Liu, J., Gong, Y., Guan, Z., & Lou, D. (2020). Depression and anxiety among adolescents during COVID-19: a cross-sectional study. *Brain, Behavior, and Immunity*, 88, 36–38. <https://doi.org/10.1016/j.bbi.2020.05.061>
- Ellis, W. E., Dumas, T. M., & Forbes, L. M. (2020). Physically isolated but socially connected: psychological adjustment and stress among adolescents during the initial COVID-19 crisis. *Canadian Journal of Behavioural Science/Revue Canadienne des Sciences du Comportement*, 52(3), 177.
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *International Journal of Environmental Research and Public Health*, 17(5), 1729.
- Magson, N. R., Freeman, J. Y. A., Rapee, R. M., Richardson, C. E., Oar, E. L., & Fardouly, J. (2021). Risk and protective factors for prospective changes in adolescent mental health during the COVID-19 pandemic. *Journal of Youth and Adolescence*, 50(1), 44–57
- Kabir R, Bai ACM, Syed HZ, Hasan MK, Vinnakota D, Kar SK, Singh R, Sathian B, Arafat SMY. The effect of COVID-19 on the mental health of the people in the Indian subcontinent: A scoping review. *Nepal J Epidemiol.* 2023;13(2):1268-1284.
- ManuelReiriz I,* , Macarena Donoso-González 2 and AnaIsabelBeltrán-Velasco 4, Impact of COVID-19 Confinement on Mental Health in Youth and Vulnerable Populations: An Extensive Narrative Review, *Sustainability* 2023, 15, 3087
- Zhou, S.J.; Zhang, L.G.; Wang, L.L.; Guo, Z.C.; Wang, J.Q.; Chen, J.C.; Liu, M.; Chen, X.; Chen, J.X. Prevalence and socio-demographic correlates of psychological health problems in Chinese adolescents during the outbreak of COVID-19. *Eur. Child Adolesc. Psychiatry* 2020, 29, 749–758.
- Grover, S., Raju, V. V., Sharman, A., & Shah, R. (2019). Depression in children and adolescents: A review of Indian studies. *Indian Journal of Psychological Medicine*, 41(3), 216–227.