International Journal of Community Medicine and Public Health
Nimje AT et al. Int J Community Med Public Health. 2023 Sep;10(9):3271-3275
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20232689

Original Research Article

Prevalence of psychosocial problems in adolescents of central India: a descriptive cross sectional study

Ashish T. Nimje[1]*, Avinash V. Gawande[2], Uday W. Narlawar[2]

[1]Department of Community Medicine, Government Medical College, Nandurbar, Maharashtra, India
[2]Department of Community Medicine, Government Medical College, Nagpur, Maharashtra, India

Received: 09 June 2023
Accepted: 11 August 2023

***Correspondence:**
Dr. Ashish T. Nimje,
E-mail: ashishnimjenag@gmail.com

ABSTRACT

Background: Adolescent's psychosocial disorders exhibit as iceberg phenomenon and are one of the hidden health problems in population. Adolescents suffer from psychosocial problems at one or the other time during their development. Aim of study was to study the prevalence of psychosocial problems among adolescent.
Methods: A community based descriptive cross-sectional study was conducted in urban field practice area of govt. medical college, Nagpur in Maharashtra. House to house survey was conducted and face to face interview was taken among 330 adolescents out of which 214 (64.84%) were male and 116 (35.16%) were female. Peadiatric Symptom Checklist Youth version (PSC-Y) was used as a tool to study the psychosocial problem.
Results: In present study, overall prevalence of psychosocial problem was found to be 33.03%. Prevalence of psychosocial problem in male and female was 34.11% and 31.03% respectively. Psychosocial problems were more in age group of 14-16 years (39.69%) followed by 10-13 years 34 (31.48%) and 17-19 years age group 23 (25.27%).
Conclusions: On basis of findings using PSC-Y, it is concluded that, a sizeable population (about one third of the adolescents) were suffered from psychosocial problem and the attention problem was most commonly found using PSC-Y subscales.

Keywords: Adolescent, Prevalence, Psychosocial problems, PSC-Y

INTRODUCTION

The term adolescence comes from Latin word meaning" to grow to maturity". Adolescence is defined by WHO as the age group of 10-19 years. In India, adolescents (10-19 years) constitute 21.4 percent of the population, comprising one fifth of the total population.[1-4] Adolescence is the transitional period that occurs after childhood and before adulthood which requires special attention and protection.[5-8] In this period of rapid growth and development adolescents experience physical and mental maturation, along with movement toward socio-economic independence and development of identity.[6]

Adolescence is a time when many problem related with behaviors and emotions begin or elevate. The biological, psychological and social changes that occur during adolescence can influence their behavioral and emotional development.[11] Adolescent's psychosocial disorders exhibit as iceberg phenomenon and are one of the hidden health problems in population. Adolescents suffer from psychosocial problems at one or the other time during their development to an adult. These problems are of transient nature and are often not easily noticed.[12] The term psychosocial reflects both the under-controlled, externalizing or behavioral problems such as conduct disorders, educational difficulties, hyperactivity etc., and

the over-controlled, internalizing or emotional problems like, depression, anxiety etc.[11-13]

Now a days, because of urbanization and rapid industrialization, majority of family or couple are employed and live in unitary setup, so unavoidably they get less time to look after their children. Under these circumstances, psychosocial (emotional and behavioral) problems and psychiatric problems are on the rise.[1] India, where a psychosocial problem and visit to the psychiatrist is considered a stigma, it becomes even more necessary to create awareness amongst parents and health care providers about the extent of these psychological problems as many common chronic and mental health conditions arise during childhood. These ensuing psychosocial problems are known to lead to various learning and emotional difficulties in adolescent which then have an impact on their psychological wellbeing.[12] With this rationale study was carried out with objective to study the prevalence of psychosocial problem among them.

METHODS

A community based descriptive cross sectional study was carried out in urban field practice area of Government medical college and hospital Nagpur in Maharashtra.

Study duration

Study was carried out from August 2019 to December 2021 2.5 years.

Study subjects

Study subjects consisted of adolescent girls and boys between 10-19 years of age.

Inclusion criteria

Adolescent girls and boys between 10-19 years of age included in study.

Exclusion criteria

Study subject not present even after three consecutive visits, seriously ill and mentally retarded adolescents and study subjects/parents not willing to give consent for study were excluded from the study.

Sample size

Sample size estimated with reference to study done by Roy et al on 420 adolescents in ward no 58 of Tangra area of Kolkata, considering overall prevalence of psychosocial problems in adolescent as 30.95%.[16]

Assuming estimated proportion of 30.95%, absolute precision (%) of 5 with desired confidence interval (1-α)%=95 produced minimum required sample size of 328. Sample size rounded to 330.

Sample size required for the study was calculated by using following formula $N = [Z^2_{1-\alpha/2} p*(1-p)]/ d^2$ Where P: Expected proportion; d: Absolute precision; 1-α/2: Desired Confidence level. A pilot study was conducted in 50 study subjects. The necessary corrections were done.

Study variables

Socio-demographic characteristics: This included age, gender, religion, marital status, education and occupation of head of family, number of family members and total family income per month, type of family, etc. Psychosocial problems: Internalizing problem (depression/anxiety), attention problem (ADHD), externalizing problem (conduct disorder), suicidality.

Pediatric symptom checklist-youth report

The Pediatric Symptom Checklist (PSC-Y) is a brief questionnaire that helps identify and assess changes in emotional and behavioral problems in adolescents.[14] The PSC-Y covers a broad range of emotional and behavioral problems and is meant to provide an assessment of psychosocial functioning.

Scoring the PSC-Y: The standard PSC form consists of 35 items and 2 separate questions on suicidality in Youth version. Each 35 item is rated as: "Never" (scored 0); "Sometimes" (scored 1); "Often" (scored 2). The total score is calculated by adding the 35 individual scores, so the total score will be 0 to 70. If one to three items are left blank, they are ignored (and given a score of 0). If four or more items are left blank, the questionnaire is considered invalid. If there is yes to any of the questions on suicidality, the study subjects is labelled as having some psychosocial problem.

PSC subscales: Subscale scores for internalizing, externalizing and attention problems can be calculated from specific items. Factor analysis of the full set of 35 items has led to the validation of three subscales for use in the identification of attentional, internalizing and externalizing problems.

RESULTS

Table 1 i.e. distribution of study subjects according to their age in years shows that majority 131 (39.70%) study subjects were from age group of 14-16 years followed by 10-13 years (32.73%) and 17-19 years (27.57%) of age group. The mean age in years of study participants was 14.27±2.68 years. Distribution of study subjects according to gender shows that majority 214 (64.84%) were male and 116 (35.16%) were female. In present study all study subjects were unmarried. Maximum of study subjects were Hindus 311 (94.24%) rest were Buddhist 19 (05.76%) (Figure 1).

Majority of study subjects belonged to nuclear family (89.93%) followed by three generation (10.32%) and rest were from joint family (05.75%) (Figure 2). Socioeconomic status was classified according to Modified Kuppuswamy socioeconomic status scale updated for the year 2021. In the present study, majority of the study subjects 208 (63.03%) belonged to socio-economic class III followed by, socio-economic class II, class IV and class I included 60 (18.19%), 54 (16.36%) and 8 (02.42%) respectively (Table 2).

Table 1: Distribution of study subjects according to age and gender (n=330).

Age in years	Male		Female		Total	
	N	%	N	%	N	
10-13 (early adolescents)	57	26.63	51	43.96	108	32.73
14-16(mid adolescents)	92	43.01	39	33.63	131	39.70
17-19 (late adolescents)	65	30.36	26	22.41	91	27.57
Total	214	100	116	100	330	100

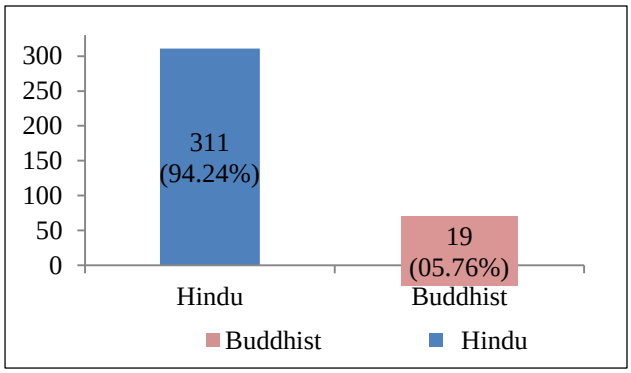

Figure 1: Distribution of study subjects according to religion (n=330).

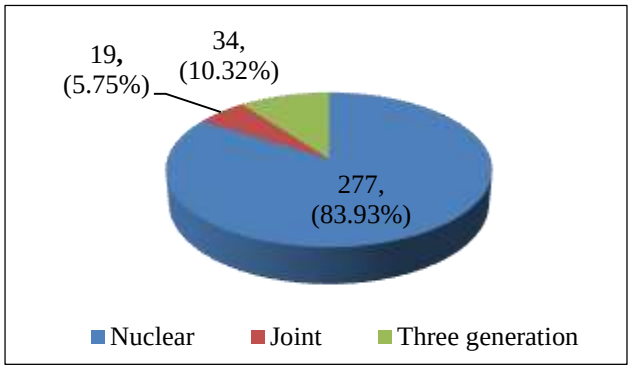

Figure 2: Distribution of study subjects according to type of family (n=330).

Table 2: Distribution of study subjects according to their socioeconomic status (n=330).

Socioeconomic status of study subject	N	%
Upper(i)	8	02.42
Upper middle(ii)	60	18.19
Lower middle(iii)	208	63.03
Upper lower (iv)	54	16.36
Lower(v)	00	00
Total	330	100

Psychosocial problems using peadiatric symptom checklist youth version shows that, out of total 330 study subjects, 109 study subjects were having psychosocial problems. Overall prevalence of psychosocial problem was found to be 33.03%. Prevalence of psychosocial problem in male and female was 34.11% and 31.03% respectively (Table 3). Psychosocial problems were more in age group of 14-16 years (39.69%) followed by 10-13 years 34 (31.48%) and 17-19 years age group 23 (25.27%) (Table 4).

Table 3: Distribution of study subjects according to psychosocial problems (PSC-Y) (n=330).

Psychosocial problems	Male		Female		Total	
	N	%	N	%	N	%
Present	73	34.11	36	31.03	109	33.03
Absent	141	65.89	80	69.97	221	66.9
Total	214	100	116	100	330	100

Table 4: Distribution of study subjects according to age and psychosocial problems (PSC-Y) (n=330).

Psychosocial problems	10-13 years		14-16 years		17-19 years		Total	
	N	%	N	%	N	%	N	%
Present	34	31.48	52	39.69	23	25.27	109	33.03
Absent	74	68.52	79	60.31	68	74.73	221	66.97
Total	108	100	131	100	91	100	330	100

Distribution of study subjects according to categorization of psychosocial problems using peadiatric symptom checklist subscales shows that most common psychosocial problem was attention problem in 93 (28.18%) study subjects followed by externalizing problem i.e. conduct disorder in 88 (26.67%) study subjects and internalizing problem i.e. depression and or

anxiety in 14 (4.24%) study subjects. Prevalence of attention problem in male and female was 31.77% and 21.55% respectively. Prevalence of externalizing problem in male and female was 30.37% and 19.82% respectively. Prevalence of internalizing problem in male and female was 4.20% and 4.31% respectively (Table 5).

Table 5: Distribution of study subjects according to categorization of psychosocial problems (using PSC-Y subscales) (n=330).

Categorization of *psychosocial problem	Male (214)		Female (116)		Total (330)	
	N	%	N	%	N	%
Internalizing problem (depression and or anxiety)	09	04.20	05	04.31	14	04.24
Attention problem (ADHD)	68	31.77	25	21.55	93	28.18
Externalizing problem (conduct disorder)	65	30.37	23	19.82	88	26.66

* Multiple problems.

Peadiatric symptom checklist subscales depicts that, the internalizing problems are more in age group of 17-19 years age group. Out of 14 study subjects who had internalizing problem, 8 were from age group of 17-19 years of age group follow by 5 from age group of 14-16 years and 1 from 10-13 years of age group. Attention problem was more in age group of 14-16 years. Out of 93 study subjects who had attention problem, 47 were from age group of 14-16 years of age group followed by 10-13 years and 15 from 17-19 years of age group. Externalizing problem i.e. conduct disorder was found more in the age group of 10-13 years of age group. Out of 88 study subjects who had conduct disorder, 32 were from age group of 10-13 years of age group followed by 29 from 14-16 years and 17 from 17-19 years of age group (Table 6).

Table 6: Distribution of study subjects according to age group categorization of psychosocial problems (PSC-Y using subscales).

Category of *psychosocial problem (row total)	10-13 years		14-16 years		17-19 years		Total	
	N	%	N	%	N	%	N	%
Internalizing problem depression/anxiety)	01	07.14	05	35.71	08	57.15	14	100
Attention problem (ADHD)	31	33.33	47	50.53	15	16.14	93	100
Externalizing problem (conduct disorder)	32	36.36	29	32.95	17	30.69	88	100

*Multiple problems.

DISCUSSION

Overall prevalence of psychosocial problem using peadiatric symptom checklist was found 33.03% in study. Prevalence of psychosocial problem in male and female was 34.11% and 31.03% respectively. Almost similar findings was reported by Roy et al in their study i.e. 30.95%.[16] The problems were more in males (34.76%) as compared to females (28.10%).

In contrast to present study, Ashwini et al and Chaudary et al showed wide variation in prevalence of psychosocial problem using same scale i.e. 11.2% and 40.7% respectively.[17,9] Also study conducted by Banstola et al revealed prevalence of psychosocial problem as 21.7% in their study.[7]

In present study, psychosocial problems were more in age group of 14-16 years (39.69%) followed by 10-13 years 34 (31.48%) and 17-19 years age group 23 (25.27%). Similar finding was reported by Ahmad et al prevalence of the psychosocial problems was maximum (25.2%) in 14-15 years age group.[1] Also, Devkota et al revealed psychosocial problems were more in age group of 15-19 years of age group; about 32.2% study subjects from age group of 15-19 years had psychosocial problems in their study.[10] Findings are shown in a cross-sectional study by Timalsina et al revealed that prevalence of overall psychosocial problems were more in age group of 17-19 years(24.3%) followed by 15.8% and 4.8% in 15-16 and 12-14 years of age group.[18]

In present study, peadiatric symptom checklist subscales shows that most common psychosocial problem was attention problem in 93 (28.18%) study subjects followed by externalizing problem i.e. conduct disorder in 88 (26.67%) study subjects and internalizing problem i.e. depression and or anxiety in 14 (04.24%) study subjects. In study conducted by Ahmad et al showed that internalizing problem i.e. depression and anxiety was present in 3.1% and 3.8% study subjects which is slightly similar to present study.[1] Attention deficit hyperactive disorder (ADHD) in 25.8% study subjects was reported by Timalsina et al in their study which was almost similar to present study.[18] Chaudary et al revealed 14.8% and 15.5% study subjects had attention and externalizing problems (conduct disorder) respectively in their study.[9] In present study, attention problem was more in age group of 14-16 years. Out of 93 study subjects who had attention problem, 47 were from age group of 14-16 years of age group (mid adolescent). Externalizing problem i.e. conduct disorder was found more in the age group of 10-13 years of age group (early adolescent). Out of 88 study subjects who had conduct disorder, 32 were from age

group of 10-13 years of age group. Internalizing problem are more in age group of 17-19 years age group (late adolescent). Study by Roy et al found that conduct disorder was found to be maximum in late adolescent boys and mid adolescent girls.[16] Ahmad A et al revealed in their study that internalizing problems and conduct disorder were more in age group of 14-15 years age group.[1]

Study has all the inherent limitations of a cross-sectional study. Generalizability of the study findings may be limited to the study area. PSC-Y is subjective scale and therefore response to each question may not reflect true feeling or response to question. During the COVID-19 pandemic and the consequent lockdown in India, adolescents experienced a various changes in their personal and social environment, which could have affected the study findings.

CONCLUSION

On basis of findings using PSC-Y, it is concluded that, a sizeable population (about one third of the adolescents) were suffered from psychosocial problem and the attention problem was most commonly found using PSC-Y subscales. It is recommended that those who have psychosocial problems on the PSC-Y should be sent for further evaluation and management to a qualified psychiatrist or mental health professional. The study suggests for the further more research on other aspects of psychosocial problems and associated risk factors which was not studied in present study.

ACKNOWLEDGEMENTS

We would like to thank Department of Community Medicine, Government Medical College and Hospital, Nagpur, Maharashtra, for technical guidance whenever required to carry out present study.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee of Board of Research Studies (BORS) of Institute

REFERENCES

1. Ahmad A, Khalique N, Khan Z, Amir A. Prevalence of psychosocial problems among school going male adolescents. Ind J Commu Med. 2007;32(3):219.
2. Abu Bashar Md, Aggarwal AK, Pilania M. A study to assess pattern of morbidities among adolescents under school health program from arural block of North India. Natl J Community Med. 2017;8(12):721-5.
3. Hari Krishna BN, Sreedhar M, Madhukeerthi. Cross sectional study on nutritional status and morbidity pattern among school going adolescents in rural health training centre, Patancheru, Hyderabad District-Telangana. Indian J Basic App Med Res. 2017;6(3):5-9.
4. Yerpude PN, Jogdand KS, Jogdand M. A study of health status among school going adolescents in South India. Int J Health Sci Res. 2013;3(11):8-12.
5. Beevi NP, Manju L, Bindhu A. A study of adolescent health problems in a rural school in Thiruvanthapuram district, Kerala, India. Int J Community Med Public Health. 2017;4(1):100-3.
6. Beevi NP, Manju L, Bindhu AS, Haran JC, Jose R. Menstrual problems among adolescent girls in Thiruvananthapuram district. Int J Community Med Public Health. 2017;4(8):2995-8.
7. Banstola RS. Psychosocial problem among school-going adolescents in Pokhara, Western Nepal. Janapriya J Interdis Stud. 2017;6:121-33.
8. Jain V, Singh M, Muzammil K, Singh J. Prevalence of psychosocial problems among adolescents in rural areas of District Muzaffarnagar, Uttar Pradesh. Ind J Comm Health. 2014;26(3):243-8.
9. Chaudary J, Kishore S, Bhadoria AS, Aggarwal P. Family related factors and its impact on psychosocial health of school going adolescents of Urban Rishikesh, Uttarakhand. Ind J Soc Psych. 2020;36:333-7.
10. Devkota S, Adhikari K, Ghimire A, Koirala S, Chhetri M. Psychosocial problems among school going adolescents in Ghorai sub metropolitan city of Dang. J Chit Med Coll. 2020;10(33):61-5.
11. Mumthas NS, Muhsina M. Psycho-social problems of adolescents at higher secondary level. Guru J Behav Soci Sci. 2014;2(1):252-7.
12. Bhosale S, Singru SA, Khismatrao D. Study of psychosocial problems among adolescent students in Pune, India. Al Ameen J Med Sci. 2015;8(2):150-5.
13. Muzammil K, Kishore S, Semwal J. Prevalence of psychosocial problems among adolescents in district Dehradun, Uttarakhand. Ind J Pub Heal. 2009;53(1):1821.
14. Sawant NS, More MD. Screening for psychosocial problems in children seeking pediatric services. An Indian Study. Mala J Paediatr Child Heal. 2011;17:1-15.
15. Saleem SM, Jan SS. Modified Kuppuswamy socioeconomic scale updated for the year 2021. Ind J Forensic Community Med. 2021;8(1):1-3.
16. Roy AKS, Sau M, Madhwani KP, Das P, Singh JK. A study on psychosocial problems among adolescents in urban slums in Kolkata, West Bengal. Int J Comm Med Public Health. 2018;5(11):4932-6.
17. Ashwini S, Shantanu A, Saumya psychosocial problems among adolescents: a comparison between urban and rural high school students of dehradun. Ind J App Res. 2020:10(9).
18. Timalsina M, Kafle M, Timalsina R. Psychosocial problems among school going adolescents in Nepal. Psych J. 2018;2018.

Cite this article as: Nimje AT, Gawande AV, Narlawar UW. Prevalence of psychosocial problems in adolescents of central India: a descriptive cross sectional study. Int J Community Med Public Health 2023;10:3271-5.