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Original Article

Behind the Classroom Walls: Mental Health Challenges of School-going Adolescents in Gurugram

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ABSTRACT

Introduction: Adolescence is a transformative period marked by heightened vulnerability to mental health issues. Nearly, one in four of Indian adolescents is affected particularly in urban settings where academic stress, digital exposure and social isolation play critical roles. However, these often remain largely undiagnosed due to socio-cultural stigma and limited access to mental health services in schools. Despite this, adequate epidemiological data from rapidly urbanizing regions such as Gurugram remain scarce.

Aims & Objectives: To estimate the prevalence of depression and anxiety among school going adolescents and identify the associated socio-demographic, family and lifestyle correlates.

Methodology: A cross-sectional study was conducted among 116 students (classes IX-X) from two randomly selected private schools of Gurugram using systematic random sampling. A pretested structured questionnaire was administered and depression & anxiety were screened using validated PHQ-9 and GAD-7 tools respectively. Data was analyzed in SPSS version 30 with bivariate tests and multivariable logistic regression. Model fit was evaluated with Nagelkerke R^2 and Hosmer–Lemeshow tests.

Results: The prevalence of depression (PHQ-9 ≥5) was 44% and anxiety (GAD-7 ≥8) was 28%. The mean PHQ-9 and GAD-7 scores were 7.2 ± 5.1 and 6.4 ± 4.6respectively.

Significant predictors of depression were low parental education (mother AOR 5.2; father AOR 5.8), lower SES (AOR 2.9), <1-hour outdoor activity/day (AOR 2.7), ≥4 hours screen time/day (AOR 4.8), poor academic performance (AOR 7.2), family pressure (AOR 2.5), and substance abuse in the family (AOR 4.6). For anxiety, strongest predictors included low maternal & paternal education (AOR 6.4; 7.2), lower socioeconomic status (AOR 3.9), <1-hour outdoor activity/day (AOR 3.4), poor marks (AOR 6.5) and substance abuse (AOR 8.5).

Conclusion: Depression and anxiety are highly prevalent among urban school going adolescents underscoring the imperative need for targeted school-based screening, promotion of healthy lifestyles, and family-centered interventions to mitigate the modifiable determinants.

Keywords: *Adolescents, Depression, Anxiety, Mental Health, Urban Schools, PHQ-9, GAD-7.*

INTRODUCTION

Adolescence is a formative phase characterized by rapid biological, cognitive and psychosocial transitions rendering young individuals particularly vulnerable to mental health issues such as depression and anxiety.[1]Globally, an estimated 10-20% and nearly one in four Indian adolescents is affected. [2,3]In India, the prevalence of mental disorders among those aged 13–17 years was reported around 7.3%.[4]

The risk factors are multifactorial and encompass adverse childhood experiences such as abuse, domestic violence, bullying at school, poverty, social marginalization and limited educational opportunities. Additionally, parental psychiatric disorders, marital conflict, and increased social or psychological stress also elevate the risk.[5] Other factors such as academic pressure, changing family dynamics and excessive screen exposure further compound their susceptibility. Nearly 50% of adult mental health disorders begin by age 14, yet most cases go undiagnosed and untreated owing to sociocultural stigma and the inadequate availability of mental health services within schools [4,6]

Despite this considerable disease burden, there remains a paucity of epidemiological data from rapidly urbanizing settings such as Gurugram. The lack of such local evidence poses a major barrier to developing effective & context-specific interventions. Recognizing this, the present study was undertaken to estimate the prevalence of depression and anxiety among urban school-going adolescents and to identify their associated socio-demographic, familial and lifestyle determinants.

METHODOLOGY

Study Design and Setting: Cross-sectional study conducted in two urban senior secondary schools located within a 10 km radius of the study site

Study population: School going adolescents studying in classes IX–XII in the selected schools
Inclusion criteria: Students who were willing to participate after providing informedassent
Exclusion criteria: Students who were absent on two consecutive visits during data collection
Sample Size: The sample size was calculated using Cochran's formula for estimating a single proportion:
$n= Z^2 \times p \times q/d^2$

where $Z = 1.96$ for 95% confidence, p = expected prevalence, $q = (1–p)$, and d = allow able error (0.05).

Based on a systematic review and meta-analysis reporting an overall prevalence of 15.9% [7] among adolescents, the estimated sample size was 206. Allowing a 10% non-response rate, the final sample size was rounded to 230 participants.

Sampling Technique: A multistage sampling technique was adopted to select the study participants as depicted in Figure 1. In the first stage, all urban senior secondary schools located within a 10 km radius of the study site were listed and two schools were randomly selected using the lottery method. In the second stage, from each selected school, classes IX to XII were purposively included to ensure adequate representation of adolescents across different age groups. In the third stage, one section from each class was randomly selected. In the final stage, systematic random sampling was applied to select 29 students from each section. The class roll list served as the sampling frame, and every kth student was selected after calculating the sampling interval ($k = N \div 29$) until the required number of participants was obtained.

This process yielded a total sample size of 232 students (29 students × 4 classes × 2 schools). For the purpose of data presentation and analysis, information from only half i.e. 116 participants was included in this paper.

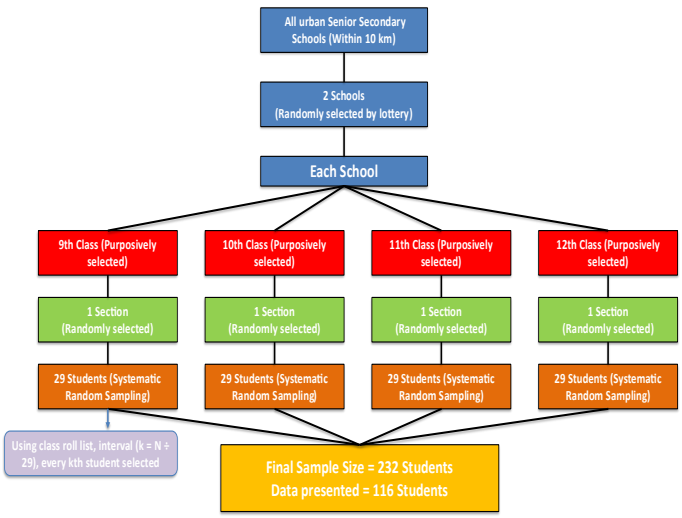

Fig 1: Multistage Sampling technique used to select study sample

Study Tool: Data was collected using a pretested, structured, self-administered questionnaire. The tool comprised of two main sections: Socio-demographic & lifestyle information and Mental health screening**.** Assessment of symptoms of depression and anxiety was done using the following validated instruments:

1. Patient Health Questionnaire–Adolescent Version (PHQ-A):The PHQ-A is a modified version of the PHQ-9 tailored for adolescents. It consists of 9 items; each rated on a 4-point Likert scale (0 = not at all to 3 = nearly every day) with total scores ranging from 0 to 27. Based on standard scoring, depression severity was categorized as none/minimal (0–4), mild (5–9), moderate (10–14), moderately severe (15–19) and severe (20–27). The PHQ-A has been widely validated for adolescent populations and shows good internal consistency (Cronbach's $\alpha > 0.80$).[8]

2. Generalized Anxiety Disorder Scale (GAD-7):The GAD-7 is a 7-item questionnaire that screens for generalized anxiety symptoms over the previous two weeks. Each item is rated from 0 (not at all) to 3 (nearly every day) giving a total possible score of 0–21. Anxiety severity was categorized as minimal (0–4), mild (5–9), moderate (10–14), and severe (15–21). The tool demonstrates strong reliability and validity in adolescent and adult populations (Cronbach's $\alpha \approx 0.89$).[9]

Statistical Analysis: Data was entered and analyzed using IBM SPSS Statistics version 30.0. Descriptive statistics such as frequencies and percentages were used to summarize socio-demographic and life style variables. Crude Odds Ratios (COR) with 95% Confidence Intervals (CI) were first calculated to identify potential predictors of depression and anxiety followed by multivariable logistic regression to obtain adjusted Odds Ratios (AOR) controlling for possible confounders. Model fit was evaluated using Nagelkerke R^2 and the Hosmer–Lemeshow test. A p-value <0.05 was considered statistically significant.

RESULTS

A total of 116 adolescents participated in the study. Majority of students 64(55.2%) were in the age group of 15–16 years while the remaining52(44.8%) were aged 13–14 years. The mean age of participants was 14.7 ± 0.8 years. The gender distribution was nearly equal, with males comprising 60(51.7%) and females 56(48.3%) of the study population. Half of the respondents were studying in class IX and the remaining half in class X. Most participants 74(63.8%) belonged to nuclear families and maximum 104(89.7%) were living with both parents. Regarding parental education, 78(67.2%) of mothers and 84(72.4%) of fathers had received secondary level education or above. According to the Modified BG Prasad classification, most 76(65.5%) of the families belonged to middle and upper socioeconomic classes.

In terms of lifestyle factors, 61(52.6%) of adolescents reported engaging in outdoor activities for at least one hour per day. More than half 62(53.4%)reported screen time of four hours or more daily. Majority 72(62.1%) of students had good academic performance while more than half 68(58.6%) reported experiencing family pressure to perform well in exams. Substance abuse among family members was reported by around one-fourths 30(25.9%) of respondents. (Table 1)

Table 1. Sociodemographic profile of study participants (N = 116)

Variables	Categories	Frequency (n)	Percentage (%)
Age group (years)	13–14	52	44.8%
	15–16	64	55.2%
Gender	Male	60	51.7%
	Female	56	48.3%
Class of study	IX	58	50.0%
	X	58	50.0%
Type of family	Nuclear	74	63.8%
	Joint/Extended	42	36.2%
Parental status	Both parents	104	89.7%
	Single parent/separated	12	10.3%
Mother's education	≤ Primary	38	32.8%
	Secondary & above	78	67.2%
Father's education	≤ Primary	32	27.6%
	Secondary & above	84	72.4%
Socioeconomic status (BG Prasad)	Lower (IV–V)	40	34.5%
	Middle/Upper (I–III)	76	65.5%
Outdoor activity	<1 hr/day	55	47.4%
	≥1 hr/day	61	52.6%
Screen time	<4 hrs/day	54	46.6%
	≥4 hrs/day	62	53.4%
Academic performance	Good	72	62.1%

	Poor/Average	44	37.9%
Family pressure to perform in academics	Yes	68	58.6%
	No	48	41.4%
Any Substance abuse in family	Present	30	25.9%
	Absent	86	74.1%

Table 2 shows the pattern of depression and anxiety among study participants. Overall, depression (PHQ-A score≥ 5) was present to in 51(43.96%) of adolescents and anxiety (GAD score ≥7) was seen in 32 (27.59%) of adolescents. 20 (17.2%) students had symptoms of both depression and anxiety while less than half 53(45.7%) had no such conditions.

Table 2: Distribution of adolescents according to presence of depression and/or anxiety (N = 116)

Mental Health Condition	Number	Percentage (%)
Depression alone *(without anxiety)*	31	26.7%
Anxiety alone *(without depression)*	12	10.3%
Both Depression and Anxiety *(comorbid)*	20	17.2%
Depression or anxiety*(any condition)*	63	54.3%
No Depression or Anxiety*(no condition)*	53	45.7%

Figure 2 illustrates the severity of depression based on the PHQ-A assessment. More than half of the participants (56.0%) had no or minimal depressive symptoms, while 20.7% showed mild depression. Moderate depression was observed in 12.1%, and moderately severe and severe depression were reported in 6.0% and 5.2% of participants, respectively. The mean PHQ-A score was found to be 7.2± 5.1 ranging from a score of 0 to 23.

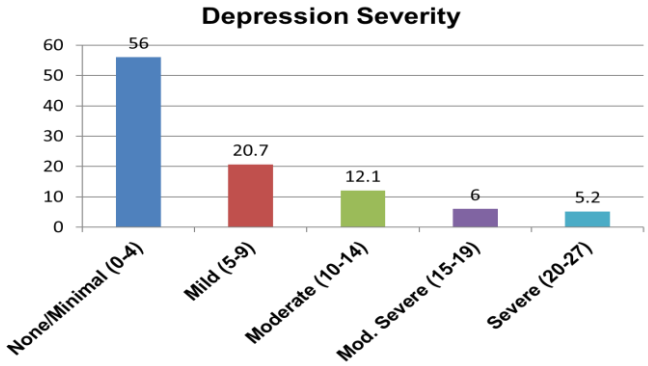

Fig 2: Bar chart illustrating the severity of depression as per PHQ-A Scale

According to the GAD-7 scale, 51.7% of adolescents had minimal or no anxiety symptoms, while 14.7% reported mild anxiety. Moderate anxiety was observed in 19.8%, and severe anxiety in 13.8% of participants. The mean GAD-7 score was found to be 6.4± 4.6ranging from a score of 0 to 20. (Figure 3)

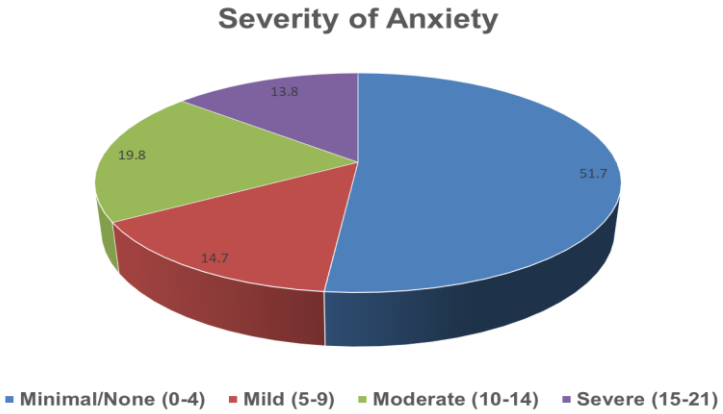

Fig 3: Pie chart illustrating the severity of Anxiety as per GAD-7 Scale

Table 3 presents the logistic regression model assessing socio-demographic and lifestyle factors associated with depressive symptoms (PHQ-A ≥ 5). In bivariate analysis, depression in adolescents was significantly associated with

living in a joint or extended family, lower parental education, lower socioeconomic status, less physical activity, higher screen time, poor academic performance and presence of substance use in the family ($p < 0.05$).

After adjustment for potential confounders, several factors remained significant predictors of depression. Adolescents whose mothers (AOR = 5.2; 95% CI: 2.0–13.9)or fathers (AOR = 5.8; 95% CI: 2.0–16.4)had education up to primary level were about five times more likely to have depressive symptoms compared with those whose parents were educated up to secondary level or higher. Participants from lower socioeconomic status households had nearly three times higher odds of depression (AOR = 2.9; 95% CI: 1.1–7.5).Coming to lifestyle factors, adolescents with screen time ≥4 hours/day were almost five times more likely to have depressive symptoms (AOR = 4.8; 95% CI: 1.8–12.6), while those engaging in <1 hour/day of physical activity had higher odds of depression (AOR = 2.7; 95% CI: 1.0–7.1). Poor academic performance was the most powerful predictor with students having seven-fold higher odds of depression (AOR = 7.2; 95% CI: 2.5–20.6). Similarly, the presence of substance use in the family significantly increased the likelihood of depression (AOR = 4.6; 95% CI: 1.6–13.5).

Other variables such as age, gender, class of study, parental status and family pressure to perform academically showed no statistically significant association with depression after adjustment. The regression model demonstrated a good fit, as indicated by an acceptable Nagelkerke R^2 value (0.46) and a non-significant Hosmer–Lemeshow test ($p = 0.58$), confirming the reliability of the model predictions.

Table 3: Logistic regression model for socio-demographic and lifestyle predictors of depression (PHQ-A score ≥5)

Variable	Category	Depressed n(%)	Not Depressed n (%)	Crude OR (95% CI)	Adjusted OR (95% CI)
Age (yrs)	13–14	19 (36.5)	33 (63.5)	Ref	Ref
	15–16	32 (50.0)	32 (50.0)	1.7 (0.8–3.5)	1.3 (0.6–2.8)
Gender	Male	22 (36.7)	38 (63.3)	Ref	Ref
	Female	29 (51.8)	27 (48.2)	1.8 (0.9–3.6)	1.5 (0.7–3.2)
Class	IX	23 (39.7)	35 (60.3)	Ref	Ref
	X	28 (48.3)	30 (51.7)	1.4 (0.7–2.9)	1.2 (0.5–2.7)
Family type	Nuclear	25 (33.8)	49 (66.2)	Ref	Ref
	Joint/Extended	26 (61.9)	16 (38.1)	**3.2 (1.4–7.1)***	2.6 (1.0–6.8)
Parental status	Both parents	44 (42.3)	60 (57.7)	Ref	Ref
	Single parent	7 (58.3)	5 (41.7)	1.9 (0.5–6.9)	1.6 (0.4–6.4)
Mother Education	Secondary+	24 (30.8)	54 (69.2)	Ref	Ref
	≤ Primary	27 (71.1)	11 (28.9)	**5.5 (2.3–13.1)***	**5.2 (2.0–13.9)***
Fathereducation	Secondary+	27 (32.1)	57 (67.9)	Ref	Ref
	≤ Primary	24 (75.0)	8 (25.0)	**6.3 (2.5–15.7)***	**5.8 (2.0–16.4)***
SES	Middle/Upper	26 (34.2)	50 (65.8)	Ref	Ref
	Lower	25 (62.5)	15 (37.5)	**3.2 (1.3–7.6)***	**2.9 (1.1–7.5)***
Physical activity	≥1 hr/day	19 (31.1)	42 (68.9)	Ref	Ref
	<1 hr/day	32 (58.2)	23 (41.8)	**3.1 (1.4–6.8)***	2.7 (1.0–7.1)
Screen time	<4 hr/day	12 (22.2)	42 (77.8)	Ref	Ref
	≥4 hr/day	39 (62.9)	23 (37.1)	**6.0 (2.6–13.8)***	**4.8 (1.8–12.6)***
Academics	Good	18 (25.0)	54 (75.0)	Ref	
	Poor	33 (75.0)	11 (25.0)	**9.0(3.7–21.8)***	**7.2 (2.5–20.6)***
Family pressure	No	17 (35.4)	31 (64.6)	Ref	Ref
	Yes	34 (50.0)	34 (50.0)	2.0 (0.9–4.5)	2.5 (1.0–6.3)
Substance use	Absent	29 (33.7)	57 (66.3)	Ref	Ref
	Present	22 (73.3)	8 (26.7)	**5.4(2.1–14.0)***	**4.6 (1.6–13.5)***

*** p< 0.05; Model statistics: Nagelkerke R^2 = 0.46; Hosmer–Lemeshow p = 0.58; Overall classification accuracy = 81%.**

Table 4 shows the bivariate and multivariate logistic regression analysis for factors associated with anxiety among adolescents. Anxiety was significantly associated with family type, parental education, socioeconomic status, physical activity, academic performance, and the presence of substance use in the family ($p < 0.05$).

After adjusting for potential confounders, several predictors remained statistically significant. Adolescents belonging to joint or extended families were about five time smore likely to experience anxiety compared to those from nuclear families (AOR = 4.9; 95% CI: 1.6–14.7). Lower levels of parental education were strong predictors- those whose mothers (AOR = 6.4; 95% CI: 2.2–18.5) or fathers (AOR = 7.2; 95% CI: 2.4–21.4)were educated up to primary level had markedly higher odds of anxiety.

Similarly, adolescents from lower socioeconomic stratahad nearly four-fold higher odds of anxiety (AOR = 3.9; 95% CI: 1.4–10.6) compared to those from middle or upper classes. Low physical activity (<1 hour/day) was also a significant determinant (AOR = 3.4; 95% CI: 1.2–9.5). Poor academic performance emerged as a strong predictor with affected students being 6.5 times more likely to have anxiety symptoms (AOR = 6.5; 95% CI: 2.2–18.9). The presence of substance use within the family was the most powerful predictor, increasing the likelihood of anxiety by more than eight-fold (AOR = 8.5; 95% CI: 2.8–25.5).

Variables such as age, gender, class of study, parental status, family pressure, and screen time did not show a statistically significant association after adjustment. The logistic regression model for anxiety also showed good fit with a Nagelkerke R^2 of 0.54 and a non-significant Hosmer–Lemeshow test ($p = 0.63$)

Table 4: Logistic regression model for socio-demographic and lifestyle predictors of Anxiety (GAD-7 score ≥7)

Variable	Category	Anxiety Present n (%)	Anxiety Absent n (%)	COR (95% CI)	AOR (95% CI)
Age (yrs)	13–14	12 (23.1)	40 (76.9)	Ref	Ref
	15–16	20 (31.3)	44 (68.7)	1.5 (0.6–3.4)	1.3 (0.5–3.3)
Gender	Male	14 (23.3)	46 (76.7)	Ref	Ref
	Female	18 (32.1)	38 (67.9)	1.6 (0.7–3.5)	1.4 (0.6–3.2)
Class	IX	15 (25.9)	43 (74.1)	Ref	Ref
	X	17 (29.3)	41 (70.7)	1.2 (0.5–2.6)	1.1 (0.4–2.7)
Family type	Nuclear	11 (14.9)	63 (85.1)	Ref	Ref
	Joint/Extended	21 (50.0)	21 (50.0)	**5.7(2.3–14.3)***	**4.9 (1.6–14.7)***
Parental status	Both parents	26 (25.0)	78 (75.0)	Ref	Ref
	Single parent	6 (50.0)	6 (50.0)	2.9 (0.8–10.7)	2.2 (0.5–9.4)
Mother Education	Secondary+	11 (14.1)	67 (85.9)	Ref	Ref
	≤ Primary	21 (55.3)	17 (44.7)	**7.5(3.0–18.8)***	**6.4 (2.2–18.5)***
Father Education	Secondary+	13 (15.5)	71 (84.5)	Ref	Ref
	≤ Primary	19 (59.4)	13 (40.6)	**8.0(3.1–20.9)***	**7.2 (2.4–21.4)***
SES	Middle/Upper	13 (17.1)	63 (82.9)	Ref	Ref
	Lower	19 (47.5)	21 (52.5)	**4.4(1.8–10.8)***	**3.9 (1.4–10.6)***
Physical activity	≥1 hr/day	9 (14.8)	52 (85.2)	Ref	Ref
	<1 hr/day	23 (41.8)	32 (58.2)	**4.1(1.6–10.3)***	**3.4 (1.2–9.5)***
Screen time	<4 hr/day	11 (20.4)	43 (79.6)	Ref	Ref
	≥4 hr/day	21 (33.9)	41 (66.1)	2.0 (0.9–4.6)	1.8 (0.7–4.6)
Academics	Good	9 (12.5)	63 (87.5)	Ref	Ref
	Poor	23 (52.3)	21 (47.7)	**7.7(3.0–19.8)***	**6.5 (2.2–18.9)***
Family pressure	No	11 (22.9)	37 (77.1)	Ref	Ref
	Yes	21 (30.9)	47 (69.1)	1.5 (0.6–3.4)	1.3 (0.5–3.6)
Substance use	Absent	13 (15.1)	73 (84.9)	Ref	Ref
	Present	19 (63.3)	11 (36.7)	**9.7(3.6–26.3)***	**8.5(2.8–25.5)***

*** p< 0.05; Model statistics: Nagelkerke R^2 = 0.54; Hosmer–Lemeshow p = 0.63; Overall classification accuracy = 84%**

DISCUSSION

The present study reveals a notably high prevalence of depression (44%) and anxiety (28%) among school-going adolescents. These figures are notably higher than the national average reported in the National Mental Health Survey (7.3%) [4]which may be attributed to the urban environment of Gurugram, characterized by marked academic competitiveness, parental expectations, excessive screen exposure and limited outdoor engagement.

The prevalence of depression observed in this study aligns closely with Udaya kumar et al. study in Bengaluru who reported depression in 45.2% of adolescents.[5]Both studies were conducted in metropolitan contexts and revealed significant associations with family conflict, poor parental communication and academic pressure, suggesting that psychosocial stressors in urban schooling environments exert a profound influence on the adolescent mental health. Comparable findings were also reported by Singh et al. from Chandigarh where 40% of adolescents exhibited depressive symptoms, largely driven by examination stress and low parental support. In terms of severity, 29.7% had mild depression, 15.5% had moderate depression, 3.7% had moderately severe depression and 1.1% had severe depression which is similar to the current study.[10]In contrast, Patel et al. from Gujarat documented a relatively lower prevalence of depression (18.5%) and moderate-severe anxiety (9.9%) possibly reflecting differences in screening instruments, sample age range and socioeconomic composition.[11]

The gender pattern in the current study did not demonstrate significant differences in depression or anxiety, corroborating with findings from Parida et al. [12] in Central India but differing from the study by Jeelani et al. [13] who observed that female adolescents were more prone to both depression and anxiety. These discrepancies could stem from cultural variations in gender norms, emotional expressivity and societal expectations.

Socioeconomic and parental educational status emerged as strong determinants in the present study. These findings are consistent with studies by Udaya kumar et al. and Singh et al. [5,10]Similar associations were also noted in Parida et al. where maternal education was a significant predictor of adolescent depression.[12] These results highlight that parental literacy and socioeconomic well-being play protective roles through improved communication, stable home environments and mental health awareness.

Lifestyle behaviours particularly physical inactivity and excessive screen time were found to be major correlates of mental distress in the present study. These findings are in concordance with an online study by Saleem SM and Jan SSwho demonstrated significant positive correlations between screen time withdepression ($r = 0.32$) and anxiety ($r = 0.28$).[14] Sedentary habits and prolonged digital exposurecan exacerbate sleep disturbances, social withdrawal and emotional dysregulation.

Academic performance was also a significant predictor which is consistent with previous study by Singh et al. [10] where examination-related anxiety and dissatisfaction with academic performance were dominant contributors to depressive symptoms. Moreover, the presence of substance abuse within families emerged as a strong determinant, echoing results from both the studies. These results suggest that adolescents exposed to dysfunctional or stressful family dynamics internalize distress, predisposing them to emotional and behavioural issues.

Interestingly, the co-morbid prevalence of depression and anxiety (17%) in this study emphasizes the bidirectional relationship between these disorders. This concurrence has been reported by another studyby Sandal RK et. al where the comorbidity between depression and anxiety was as high as 57.65%, highlighting the shared psychosocial and neurobiological risk factors.[15]

Strengths & Limitations of the study

The study utilized validated screening instruments (PHQ-A and GAD-7) and employed a multistage random sampling design, ensuring methodological rigor and representativeness of urban school-going adolescents. By assessing both depression and anxiety along with their socio-demographic and lifestyle correlates, the study offers comprehensive insights into adolescent mental health in a rapidly urbanizing context. Multivariable logistic regression further strengthened the analysis by adjusting for potential confounders.

However, the cross-sectional design limits causal inference and the relatively small, school-based sample may restrict generalizability of the study. Reliance on self-reported data may also introduce reporting bias. Future longitudinal research is therefore warranted to explore the causal pathways and assess the effectiveness of preventive interventions.

Conclusion & Recommendations

An alarmingly high prevalence of depression (44%) and anxiety (28%) was observed among urban school-going adolescents with nearly one in six (17%) exhibiting comorbid symptoms. Significant predictors of depression & anxiety

included low parental education, lower SES, <1hr physical activity/day, poor academic performance and substance abuse in the family.

The study reiterates the imperative need for integrated mental health interventions: -

1. School based Strategies: Targeted school-based screening & counselling programs, teacher sensitization, peer support groups and stress management workshops
2. Promotion of healthy lifestyles: Safe & responsible digital use, regular outdoor activity, balanced academic life and resilience/life skills training
3. Family-focused actions: Parental education programs, awareness on substance abuse and improved parent–child communication
4. Policy recommendations: Incorporation in School Health and Wellness Program with strong referral linkages, capacity building & community awareness campaigns.

Ethical considerations: The approval of the Institutional Ethics Committee of Faculty of Medicine and Health Sciences, SGT University was obtained before the conduction of study.

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Declaration:

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