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Original Research Article

Comprehensive assessment of the psychological well-being of school-going adolescent girls in Chandigarh, India

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ABSTRACT

Background: Adolescence, a crucial stage in human development, involves significant physical and psychological changes. Unfortunately, these transformations often go unnoticed, leading to an increase in psychological issues among adolescents. Objective of the study was to have a comprehensive assessment of the reasons due to which the adolescents are suffering from high psychological distress in school-going adolescent girls in Chandigarh.
Methods: A cross-sectional study was conducted in Chandigarh schools included 168 adolescent females aged 13 to 19. The data collection utilized a multi-stage random sampling approach.
Results: The research revealed that academic pressure 147 (87.5%), financial concerns of the family 77 (45.8%), difficulties in communication with family and peers 86 (51.2%) and the negative thinking pattern (83.4%, n=140) are affecting the adolescent girls' mental well-being. The study revealed that a significant number of participants frequently experienced emotions such as nervousness, guilt, social anxiety, insecurity, discrimination, and difficulty concentrating. Additionally, a substantial portion of the group reported instances of sleeplessness 92 (54.8%) and feelings of loneliness 136 (81%). Participants also indicated engaging in coping mechanisms like over thinking, procrastination, and overeating when facing stress. Alarmingly, some individuals turned to smoking, alcohol consumption, and drug abuse as stress-relief strategies, raising concerns for the community.
Conclusions: The study highlighted the fact that supportive environment at home and in schools, with open communication and counseling to address these issues. Work should be done to reduce the stigma associated with mental health issue and encourage open conversations about mental health to help adolescents feel more comfortable seeking support.

Keywords: Adolescence, Mental health, Emotions faced by the girls

INTRODUCTION

Psychosocial health issues are alarmingly prevalent among teenagers and young people, yet they often remain hidden public health concerns. The United Nations and the World Health Organization define "adolescence" as the period spanning from 10 to 19 years of age.[1,2] This phase stands as a distinct transition between childhood and adulthood and plays a pivotal role in human development. It serves as a foundational period for personality development and long-term well-being. Adolescence is a time marked by curiosity and experimentation, requiring individuals to adapt to the physical changes of adulthood, navigate shifts in social and familial roles, and cultivate a greater sense of independence in their lives. As per the previous researches the global prevalence of any psychiatric disorder among the adolescents and children was 13.4%.[3] India, with a significant adolescent population, accounting for roughly one-fifth of its total population (approximately 243 million

individuals), and faces substantial mental health challenges. Reports indicate that 6.5% of the general community and a much higher percentage, 23.3%, of school-age children and adolescents grapple with psychiatric disorders.[4] Thus; this is a stage of life which requires a special care and attention from the family and the environment.

Numerous minor life events, such as parental substance abuse, alcohol consumption, strained family relationships, academic struggles, economic hardship, a stressful home atmosphere, peer rejection, and various other factors, can exert long-lasting effects on the developing minds of adolescents. It's important to note that adolescents dealing with mental disorders are at an increased risk of encountering mental health challenges in adulthood, which can impact their ability to be economically productive, responsible citizens, and effective parents in future generations. Therefore, establishing a supportive and nurturing environment for adolescents is imperative to mitigate the potential for future mental health issues within the population.

Prior research has established that various factors, including domestic violence, child abuse, bullying, peer pressure, and substance abuse, contribute to the prevalence of poor mental health among adolescents.[4] Furthermore, a study conducted in Chandigarh in 2022 revealed a higher incidence of depressive tendencies among females, reaching 78.86%, in contrast to their male counterparts at 41.66%.[5] A similar pattern was observed in data from an adolescent health study conducted in Delhi in 2015, where 34.3% of adolescents experienced anxiety, with a higher prevalence among girls compared to boys.[6] Given this context, this study primarily focuses on the female population, as limited research has investigated the underlying causes of social anxiety and depression among girls. Moreover, no previous studies in Chandigarh have delved into the emotional well-being, perceptions of various situations, and habits of adolescent girls that might render them more susceptible to psychological issues. Hence, the aim of this study is to conduct a comprehensive assessment of the psychological well-being of school-going adolescent girls, encompassing various facets of their lives, ranging from school and personal life to peer and family relationships.

METHODS

Study area and study period

The study was conducted in Government Schools of Chandigarh, India. Chandigarh is a union territory and planned city in northern India, serving as the shared capital of the surrounding states, namely Punjab to the north, west and the south, and Haryana to the east.[7] It has a total of 115 government and 79 private schools. Of which 2 government schools were approved for data collection by the Department of Education, Chandigarh Administration. Study was conducted for a period of 6 months February 2023 to June 2023.

Study type

The study was conducted using a cross-sectional study design.

Study population

The study was conducted among the school going adolescent girls between 13 to 19 years of age group from selected government and private schools of Chandigarh.

Sample size and sample design

Sample size was calculated by using the following formula with approximation for large population.

$$n_{opt} = {Z^2}_{1-\frac{\alpha}{2}}(1-P)\Big/_{\in^2}$$

Where, P=anticipated population proportion, 1-α=confidence coefficient, $\in$=relative precision, and Z is the value of standard normal variate. On the basis of 60% of the prevalence of health issues as psychological and behavioral in nature among the adolescents of Chandigarh as the most important outcome parameter reported in existing literature and assuming 90% confidence coefficient and 10% relative precision, sample size comes out to be 168 adolescents' girls aged 13-19 years.[8] Stratified multistage random sampling technique was used. In the first stage the sample were divided into 5 clusters (students from class IX, X, XI, and XII) in the second stage the samples from this cluster sample were selected randomly.

Inclusion criteria

All the school going adolescent girls within the age group of 13-19 years was included.

Exclusion criteria

The girls above or below the specified age group, married adolescents (as they may have certain other issues) were excluded.

Study tool

A pre-tested, semi-structured questionnaire was administered to get a deep insight of study population perspective.

Statistical analysis

Descriptive and analytical statistics were applied. Categorical variables were expressed as proportion and percentage. Data analysis was carried out by using

statistical package for the social sciences (SPSS) version 27.0.

Ethical approval

ICMR 1997 ethical guidelines were strictly followed. Prior data collection formal permission was taken from the department of education, Chandigarh and from the principles of the respective schools. An Informed consent was taken from the students. Confidentiality of the study subject was strictly maintained.

RESULTS

The study was conducted on 168 school going adolescent girls between the age group of 13 to 19 years. There were (n=71) 42.3% of respondents from age 13-15 years and (n=97) 57.7% respondents were from age 16-19 years with a mean SD of 15.08±1.68. Majority, 55.9% (n=94) of the respondents were from class XI and XII of various educational streams arts, commerce and science and 44.1% (n=74) were studying in class IX and X. It was seen that 70.8% (n=119) of the respondents come from nuclear family, whereas the count of extended and joint family was almost similar 14.3% (n=24) and 14.9% (n=25) respectively. 95.2% (n=160) of the girls lived with their parents, 4.8% were living away from their family with 3.6% (n=6) living in hostels and around 1.2% (n=2) were living PG's and others (personal flat/ accommodation etc.). The socio-economic status (SES) evaluation depicts that majority of the respondents belong to low SES with 61.3% (n=103) (Table 1).

Table 1: Distribution of socio-demographic characteristics of respondents.

Characteristics	Frequency	Percentage
Age of respondent (years)		
13- 15	71	42.3
16-19	97	57.7
Educational status/class/standard in which respondent is presently studying		
Class		
9th-10th	74	44.1
11th-12th	94	55.9
Type of family		
Joint	25	14.9
Nuclear	119	70.8
Extended	24	14.3
Current living place of the respondents		
With family	160	95.2
Hostel	6	3.6
Paying guest/other	2	1.2
Socio-economic status (SES)*		
Low	103	61.3
Lower middle	32	19
Middle	14	8.3
Upper middle	19	11.3

To distribute the participants as per their socio-economic condition, the monthly family income of the respondents was evaluated and were divided in four intervals as Rupees 30000 and below (as low), 30001 to 60000 Rupees (as lower middle class family), 60001-90000 Rupees (as middle class family) and 90001 and above Rupees (as upper middle class) (Table 1).

Table 2 illustrates the common feelings the adolescent girls undergo in day to day life, 81.5% (n=137) reported of nervousness, 63.7% (n=107) felt guilty of various situation, 57.1% (n=96) felt annoyed over small issues, 54.8% (n=92) reported sleeplessness and 54.2% (n=91) felt helpless. Feeling of shyness, anxiety, lack of concentration, depression, jealousy, insecurity, inferiority and lack of attention being paid to them was also reported. The psychological analysis illustrated that 80.4% (n=135) felt stressed and anxious due to academic pressure, 67.9% (n=114) had social anxiety i.e. they felt anxious in meeting new people, 66.1% (n=111) had the feeling of lacking behind, 45.8% (n=77) of girls were stressed due to financial and economic condition of the family, 35.7% (n=60) reported to be stressed and anxious due to their menstrual cycle whereas 30.4% (n=51) and 29.8% (n=50) believed to be stressed due to lack of peer and family support respectively. Thus these reasons depict that a slight modification in the home and school environment can help the adolescent girls to grow better mentally (Table 3).

Table 2: Distribution of common emotions faced by the respondents.

Common emotions faced by the girls	Frequency (n=168)	Percentage
Despair	45	26.8
Anxiety	84	50
Nervousness	137	81.5
Depressed	74	44.6
Sleeplessness	92	54.8
Jealous	65	38.7
Scared or frightened	79	47
Shyness	89	53
Annoyed	96	57.1
Helplessness	91	54.2
Lack of concentration	77	45.8
Feeling guilty	107	63.7
Neglected	49	29.2
Sibling rivalry	41	24.4
Feeling bored	85	50.6
Inferiority	48	28.6
Over protected for their belongings	55	32.7
Lack of attention being paid	53	31.5
feeling of being hurt	84	50
Insecurity	54	32.1
Ashamed	18	10.7

In the next step, the participants were queried about the habits they engaged when they are stressed or feel anxious. A diverse range of responses emerged. Approximately 79.2% of the respondents (n=133) mentioned that they tended to over think when confronted with stressful situations. Furthermore, 58.3% (n=98) admitted to experiencing sleep difficulties and resorting to increased screen-time before bedtime. Similarly, 57.1% (n=96) reported a propensity to procrastinate when dealing with stressors. In addition to these habits, 43.5% (n=73) confessed to engaging in negative self-talk, 38.1% (n=64) expressed a strong desire to engage in compulsive cleaning (referred to locally as OCD by the participants), 28% (n=47) led a sedentary lifestyle, 23.2% (n=39) indulged in overeating while stressed, and a small percentage of 3% (n=5) resorted to smoking, with 2.4% (n=4) admitting to drug abuse, and 1.8% (n=3) turning to alcohol consumption as a coping mechanism for stress. These habits reported by the adolescents show that they are not on the right path and are harming their body in one or the other way (Table 3).

A strong and healthy mindset is reflected in an individual's overall contentment with themselves, their surroundings, and their relationships with family and friends. The absence of satisfaction in any of these aspects can serve as a potential trigger for mental health issues, particularly during adolescence. To assess this, a series of questions was administered to gauge the participants' perspectives on everyday life situations where 76.8% of the participants (n=129) reported that they often get easily irritated by minor issues, 70.2% (n=118) felt disturbed by useless thoughts, 67.3% (n=113) acknowledged experiencing difficulty in decision-making, 54.2% (n=91) expressed feelings of academic pressure and a belief that others are happier than them, leading to a sense of burden, 53.6% (n=90) felt pessimistic about their future, perceiving it as dark and gloomy. 82.7% (n=139) said that they always enjoy being with their friends and family whereas among all the participants 3% (n=5) reported that they do not enjoy company of family as well as friends. Furthermore, incidents such as perceiving their siblings receiving more privileges and feeling neglected by their parents were also reported (Table 4).

Table 3: Distribution of situations of stress and anxiety and the habits to release stress by the respondents.

Questions	Yes		No	
	Frequency	Percentage	Frequency	Percentage
Stress and anxiety felt due to various situation (n=168)				
Meeting new people (social anxiety)	114	67.9	54	32.1
Academic pressure	135	80.4	33	19.6
Feeling of lacking behind	111	66.1	57	33.9
Financial and economic condition of family	77	45.8	91	54.2
Lack of family support	50	29.8	118	70.2
Lack of friends and peer group support	51	30.4	117	69.6
Due to your menstrual cycle	60	35.7	108	64.3
Habits to release your stress and anxiety				
Smoking	5	3	163	97
Drinking alcohol	3	1.8	165	98.2
Drug abuse	4	2.4	164	97.6
Over eating	39	23.2	129	76.8
Over thinking	133	79.2	35	20.8
Urge to clean their surrounding when stressed	64	38.1	104	61.9
Negative self-talk	73	43.5	95	56.5
Procrastination	96	57.1	72	42.9
Sedentary life style	47	28	121	72
Too much screen time before bed	98	58.3	70	41.7

Table 4: Description of the perception of respondents on various day to day situations.

Perception of respondents on various day to day situations	Always		Sometimes		Never	
	Frequency	%	Frequency	%	Frequency	%
Do you feel disturbed by useless thoughts	48	28.6	118	70.2	2	1.2
Do you feel that others are happier than you	36	21.4	91	54.2	41	24.4
Do you feel that your brothers and sisters are given more privileges than you	19	11.3	52	31	97	57.7
Do you feel that you are neglected by your father and mother/guardians	12	7.1	50	29.8	106	63.1

Continued.

Perception of respondents on various day to day situations	Always		Sometimes		Never	
	Frequency	%	Frequency	%	Frequency	%
Do you get the feeling that your future will be dark and gloomy	50	29.8	90	53.6	28	16.7
Do you enjoy being with your family and friends?	139	82.7	24	14.3	5	3
Do you get irritated/annoyed easily	28	16.7	129	76.8	11	6.5
Do you remain calm and understand the situation when your wish is not fulfilled	50	29.8	97	57.7	21	12.5
Do you feel difficult to make decisions	40	23.8	113	67.3	15	8.9
Do you feel burdened by academics/responsibilities at home	56	33.3	91	54.2	21	12.5

During adolescence, peers play a pivotal role in shaping an individual's personality and exerting a substantial influence on their mindset and behavior. This is because adolescents, at this stage, are more swayed by their immediate environment and companions than by their parents. The respondents were asked about their feelings regarding peer pressure, the majority expressed receptivity to it. However, a noteworthy 21.4% (n=36) perceived it as pressuring, primarily due to the constant expectations of excelling academically, comparing financial wellbeing of family, dressing in a manner that meets certain standards, or conforming to specific behavioral norms to gain social approval. These adolescents reported that the pressure from peers makes it challenging to maintain their individuality as they engage in comparisons and compete to fit in.

Family is a fundamental cornerstone of one's life, playing a pivotal role in a person's mental development. When family support is lacking, communication is strained, and comparisons are prevalent within the family, it can have adverse effects on a child's well-being in various ways. In the study, the majority, 66.1% (n=111), reported having a very strong and positive relationship with their family. For 24.4% (n=41), their relationship was deemed as okay to good, while 9.5% (n=16) expressed dissatisfaction with their family relations. Likewise, a significant proportion, 86.9% (n=146), felt that their parents were supportive and invested in their future, whereas 13.1% (n=22) held the contrasting view, stating that their parents lacked interest in their future and offered little to no support. Effective communication is a crucial element in maintaining a healthy relationship. However, the study revealed that approximately 51.2% (n=86) of the participants felt hesitant about expressing their needs and desires to their parents.

Loneliness and the difficulty of expressing one's emotions have become increasingly prevalent in recent times. When respondents were asked about their experiences with loneliness, 16.7% (n=28) mentioned feeling it very often, 64.3% (n=108) acknowledged experiencing it sometimes, while only 19% (n=32) claimed they never felt lonely. Sharing one's thoughts and feelings is a vital aspect of maintaining good mental health. In the current study, the majority, 53% (n=89), reported that they confide in their friends, 36.9% (n=62) shared their problems with their mothers, 27.4% (n=46) shared with their sisters, and 7.7% and 5.4% found comfort in their fathers and brothers, respectively. Additionally, 14.9% indicated they shared their thoughts and feelings with other individuals, such as other family members or boyfriends.

The behaviors expressed by the survey respondents could have long-lasting consequences if not addressed promptly. Recognizing the importance of psychological well-being on par with physical health is an urgent necessity. Seeking guidance from a psychologist or counselor is a step towards this awareness and is by no means detrimental. In the study, a significant majority, approximately 64.3% (n=108) of the respondents, believe that seeking personal counseling is a suitable course of action for individuals facing serious problems or any psychological distress.

DISCUSSION

The current study was conducted among 168 school going adolescent girls between the ages of 13-19 years in Chandigarh, India to have a comprehensive assessment of the reasons due to which the adolescents are suffering from high psychological distress nowadays. Earlier studies in Chandigarh among adolescents demonstrated that 60% of the health issues were psychological in nature.[8] Another study done by Sandal et al in 2017 reported high depression, stress and anxiety among female adolescents in Chandigarh.[9] Another recent study in 2022 by Goel et al on rural school going adolescents depicted that female adolescents had significantly higher short mood and feeling questionnaire (SMQ) scores than male adolescents and also that 62% of the participants (both male and female school going adolescents) were at risk of future depression.[5] In continuation with those studies the current study focused on the reasons for psychological distress especially among girls.

In the current study 81.5% (n=137) of the respondents reported of nervousness, 63.7% (n=107) had the feeling of guilt, 45.8% (n= 77) reported lack of concentration which is in accordance with the studies done on adolescent in Iran by Khesht-Masjedi et al where they reported these as an early signs of depression specially in girls.[10] Similar results were seen in the study done by Gunasekaran et al in 2021

in Pondicherry among the adolescent where they reported behavior change of the students followed by few signs like drowsiness and lack of concentration.[11] The current study also depicts the other feelings the adolescents girls undergo which may affect them psychologically like shyness, anxiety, depression, jealousy, insecurity, inferiority and lack of attention being paid to them, peer pressure, discrimination at home in some cases.

In the current study the respondents (girls) have admitted that they feel stressed due to academic pressure, peer pressure, social anxiety (meeting new people), economic condition of the family and also due to their menstrual cycle similar results were seen in the study by Sandal et al where they depicted that adolescents were under a constant pressure to perform academically well and was also triggered as one of the cause of depression in adolescents. They also reported that the depression rate was more in the adolescents belonging to low socio economic background just as current study reports that the girls were stressed due to the financial condition of the family.[9]

The studies have reported that chances of DAS increases with the increase health risk behavior like smoking, drinking and drug abuse of the adolescents.[9,12] In the current study also the girls involved themselves in such activates up to some extent. However, other habits were also reported like over thinking, procrastination, over eating, negative self talk, sedentary lifestyle etc which has not been reported in earlier studies.

In the current study 76.8% of the participants (n=129) reported easily irritated, 70.2% (n=118) disturbed by useless thoughts, 67.3% (n=113) experiencing difficulty in decision-making, 54.2% (n=91) belief that others are happier than them, 53.6% (n=90) felt pessimistic about their future, perceiving it as dark and gloomy, this data shows that the adolescents are not very much enthusiastic towards their future. Also, many 9.5% reported that they do not share good relationship with their parents and 81% (n=136) have experienced loneliness. Around 51.2% of the participants were hesitant to express their needs and wants to their family, this shows that there is a lack of communication or parents do not have an effective communication with their kids. Likewise, 13.1% of the respondents believed that their parents are not much supportive and do not take interest in their future. Similar data was seen in study conducted in Karnataka on adolescent girls where 35.1% girls had note hope for their future and 6.3% had no emotional support from their patients.[13]

This study holds value in presenting the viewpoints of female students aged 13-19 years regarding their day to day feelings that are affecting their psychological well-being, which had not been previously explored in research. Additionally, the study also focuses on the habits in which the adolescents are engaged which could be harmful for them in future. However, it's important to note that the study exclusively focused on female adolescent students, and therefore, the findings cannot be broadly applied to boys and those not currently enrolled in school, who may also encounter similar issues. A study with a larger sample size could have offered a more comprehensive understanding of adolescents' perspectives. Nonetheless, this research serves as a valuable contribution by shedding light on the factors that are contributing to the psychological distress in adolescents. Its primary aim is to raise awareness within society, enabling a better understanding of these challenges and equipping both children and their parents to navigate the transition from childhood to adulthood successfully.

CONCLUSION

The study found that anthropometric and blood pressure measurements among the hypertensive patients were high. Although a high percentage of participants were on the recommended drug combinations their blood pressure was still high, highlighting the need for weight management among hypertensive patients as a measure for control of the blood pressure levels.

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