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# PREVALENCE OF MENTAL ILLNESS IN SCHOOL GOING ADOLESCENTS

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**Abstract:**

**Background and Objective:**
India has an adolescent population of 356 million, accounting for 21% of the total population of the country (1), which will form the future workforce aiding to the economic growth of the country. The fast-paced changes and evolution in the society make it imperative yet difficult for these developing young minds to adapt. Mental disorders have their onset before the age of 25 years hence, addressing the mental health needs of this population along with physical health should be primary. Neuropsychiatric disorders also add to the economic burden of the country. Focus should now be shifted more towards preventing these illnesses than intervention.
This study was done to recognize the prevalence of mental and psychological problems faced by the school going adolescents aged 14-18 years using a preformed questionnaire.
**Method:**
This is a cross sectional observational study conducted over 523 subjects. The subjects were asked to fill out a preformed questionnaire from June 2019 to December 2019. Data was filled and analyzed using excel sheets and the outcome was studied.
**Result:**
Mental health problems are highly prevalent in the study population. Psychosomatic symptoms were seen in 183 students (34.9%) of the total population. Symptoms suggesting depression were reported by 146 subjects (27.9%) of a total 523. 198 students (37.8%) showed symptoms of anxiety while 127 (24.3%) depicted eating disorders. A multidimensional approach in health systems should be modelled to target adolescent mental health. Aim should be to reduce risk factors and reinforce protective factors.

**KEY WORDS: -** Children, Mental Health, Adolescent

**Introduction:**
Adolescent period is the age between 10 to 19 years (2) that is the phase between childhood and adulthood (3). It is that age of physical and mental development when children develop the ability to understand abstract ideas, develop moral philosophies, establish and maintain satisfying relationships. Brain areas supporting high level social cognition and decision making undergo extensive maturation in this phase. Decisions and choices made by individuals in the past, may reinforce the choices they make in the future.

Mental health conditions and obesity are the most common problems in young adults. It has been found that more than 21% children suffer from different psychological problems because of several external factors. More than 50% of adult mental disorders have their onset before the age of 18 years (4). It now consists of a greater portion of their life course than ever before at a time when unprecedented social forces, including marketing and digital media, are affecting health and wellbeing across these years (3). With digitalization being an integral addition to their academics, unnecessary social media expectations and cyberbullying may contribute to the pressure.

The adolescents these days are subjected to a lot of stress like academic performance, career decisions, peer pressure, relationship problems, hormonal changes & parental pressure (5). In a highly competitive school environment, children who struggle with learning are excluded by their better-performing peers, straining peer relationships and increasing the feelings of loneliness and rejection. Classroom norms along with body image, play a pivotal role in inclusion of individuals in groups. They are under constant pressure to perform and compete

with every individual trying to move a step further on the ladder of success, simultaneously dealing with the physical and cognitive changes of puberty. Constant exposure to stress and trauma, may put them under duress making them vulnerable to develop psychiatric illness.

Parental involvement in the lives of their adolescent children can help youth learn to cope with stressors and maintain physical and mental health. Indeed, high levels of parental involvement and a strong bond between youth and their parents have been found to be associated with a decreased risk of youth depression and loneliness in high-income countries.

Asynchrony among physical, cognitive, and psychosocial development may limit the adolescents' ability to perceive and judge risk effectively and may result in adolescent views that don't align with parents or guardians (6). Those students who have been constantly under parental pressure to excel in academics, co-curricular and sports have been associated with higher risk of developing depression and frustration. It has been observed that those adolescents who have been ignored by their parents due to their job, social life are reserved, lonely and aggressive.

Almost one in seven, fit into the diagnostic criteria for mental illness (7). However, most of these go undetected and untreated. Recognition of common presentation of mental illness in young adults such as depression, self-harm, eating disorders and substance abuse, is the key to provide holistic care to these young minds (8), which can help prevent adverse academic, social and health outcomes.

We chose this topic because mental health problems exist at an alarming scale in school going adolescents. By knowing this we will be able to decide the most vulnerable components of mental health and introduce effective measures to mitigate this scourge because after all the youth of today is the future and workforce of tomorrow of any nation.

## Review of literature

Adolescents especially in the late adolescent group of 16-18 years have mental, emotional, and behavioral problems that are real, painful, and costly. It is estimated that as many as one in five adolescents may have a mental health disorder that can be identified and require treatment. In some countries 'youth services' were set up to cater specifically to the problems of the adolescents which helped recognize that the previous methods did not identify the most vulnerable period of a young adult's life (8). Mental health conditions make up an increasing proportion of overall disability in society. Treating mental health conditions is 'every doctor's business' and should be given the same priority, as expected when attending to physical health needs. Psychosocial behavior relates to the psychological development in, and interaction with, a social environment. The individual may not be fully aware of this relationship with his or her environment.

According to the World Health Organization, mental disorders are to increase by 50% in 2020, to become, on the international level, one of the five main causes of morbidity in children. Studies have shown that 20% of adolescents are suffering from different psychiatric symptoms (9) with a higher prevalence in females.
Psychosis is a generic and very broad term for any mental state where the individual has lost their sense of reality, allowing normal social functioning to deteriorate. It can be treated with medication or psychotherapy. The three primary causes of psychosis are Functional (schizophrenia or bipolar disorder), organic stemming from medical rather than psychological conditions and psychoactive drugs. Psychosis is not a clinical diagnosis but a symptom in other mental illness. the prevalence of psychosis in 13- to 19-year-olds as 0.54%, increasing from 0.9 per 10,000 at age 13 years to 17.6 per 10,000 at age 18 years (10).

Psychosis is a descriptive term for hallucinations, delusions, violence, and impaired insight that may occur. It is generally given to noticeable deficits in normal behavior (negative signs) and more commonly to diverse types of hallucinations or delusional beliefs, especially as regards the relation between self and others as in grandiosity and pronoia/paranoia.

Signs and Symptoms of Psychosis:

1. Hallucinations
A hallucination is defined as sensory perception in the absence of external stimuli.

2. Delusions
Psychosis may involve delusional beliefs, some of which are paranoid in nature.

3. Catatonia
Catatonia describes a profoundly agitated state in which the experience of reality is generally considered impaired.

4. Thought disorders
Thought disorder describes an underlying disturbance to conscious thought and is classified largely by its effects on speech and writing. Affected persons show loosening of associations, that is, a disconnection and disorganization of the semantic content of speech and writing. In the severe form speech becomes incomprehensible and it is known as "word salad".

Neurosis is a class of functional mental disorders involving distress but neither delusions nor hallucinations, whereby behavior is not outside socially acceptable norms. It is also known as psychoneurosis or neurotic disorder, and thus those suffering from it is said to be neurotic.

Anxiety refers to the brain response to danger, stimuli that an organism will actively attempt to avoid. It is a normal human emotion and involves behavioral, affective, and cognitive responses to the perception of danger, present in infancy and childhood. The prevalence of anxiety disorders ranges from 4% to 20% (11). Girls have higher prevalence compared to boys, and this difference gets accentuated with development and reaches 2-3:1 by adolescence (12). Older students (12-15-year olds) had greater odds of having overall anxiety symptoms (13). In addition to adverse long-term psychopathological outcomes, it also causes impairment in functioning as well hampers general health, resulting in financial, interpersonal, and educational difficulties (14).

Depression is a leading cause of disability worldwide and is a major contributor to the overall global burden of disease affecting women more than men. Suicide is the second leading cause of death in 15-29-year-olds (15). Depression also leads to serious social and educational impairments (16), and an increased rate of smoking, substance misuse, and obesity (17). Depression is more than 8 times as likely in youths with anxiety disorders than in those without anxiety disorders (18). Approximately 60 percent of adolescents with depression have recurrences throughout adulthood (19). Although the prevalence of adolescent depression is high, it is significantly underdiagnosed and undertreated (20).

Aggressiveness is overt, often harmful, social interaction with the intention of inflicting damage upon oneself or another individual. Frustration (controlled or reactive-impulsive) due to blocked goals can lead to aggression. Physical aggression is shown to peak around age 15; social aggression around age 14. Boys consistently perpetrated more physical aggression than girls. Girls and boys perpetrated the same amount of social aggression at all ages (21). Violent behavior in children and adolescents can include a wide range of behaviors: explosive temper tantrums, physical aggression, fighting, threats or attempts to hurt others (including thoughts of wanting to kill others), use of weapons, cruelty toward animals, fire setting, intentional destruction of property and vandalism (22).

Eating disorders are defined as those disorders in which there is excessive concern with the control of body weight and shape, accompanied by grossly inadequate and irregular food intake. These disorders have an onset in adolescence. Binge eating disorder is the most common eating disorder. Lifetime prevalence estimates of anorexia nervosa, bulimia nervosa, and binge eating disorder are 0.9%, 1.5%, and 3.5% among women, and 0.3%, 0.5%, and 2.0% among men (23). Anorexia nervosa has the highest mortality rate of any psychiatric condition. Approximately half of deaths are due to suicide and the other half mostly due to cardiac arrhythmias (8).

Parental involvement in the lives of their adolescent children can help young people to learn how to cope with stressors and maintain physical and mental health. Indeed, high levels of parental involvement and a strong bond between youth and their parents have been found to be associated with a decreased risk of youth depression and loneliness in high-income countries. Older children reported lower levels of parental involvement and higher levels of poor mental health than younger students.

**Study:**
Study design: Cross-sectional observational study

Study period: 7 months

Study Population:
Inclusion Criteria: Adolescent students between ages 14 to 18 years
Exclusion Criteria: Students who denied to participate in the study

Sample size: 523

Study method: A cross sectional study was conducted to assess different psychological problems among adolescent aged 14 to 18 years of Vadodara city. After obtaining written consent of each student, a preformed and pretested questionnaire was given to them, containing a list of questions assessing their mental health. The data was collected and analysed by using appropriate statistical software and other epidemiological parameters.

Study Material: A pre-designed & pre-tested questionnaire was used which contained socio-demographic information & questions related to adolescent behavior and parental involvement.

**Result & Discussion**

The study population consisted of a total 523 students, of which 233 were females and 290 were males, between the age of 14-18 years with a maximum number of students belonging to 17 years and the minimum to 18 years.

Psychosomatic symptoms were seen in 183 students (34.9%) of the total population. Fatigue, headache and back pain were the most common symptoms experienced by the students with prevalence of these reported more amongst the girls (19%). Pscychosomatic symptoms in adolescence were associated with long-term severe mental health problems insofar as somatic symptoms did predict adult hospital-based mental health care in adulthood (24).

| Psychosomatic Symptoms | Absent | Present | Total |
|---|---|---|---|
| **Number** | 340 | 183 | 523 |
| **Percentage** | 65.1 | 34.9 | 100 |

198 students (37.8%) showed symptoms of anxiety. Most of the students were concerned about their body image and their relationships. According to a study, girls usually present with higher levels of anxiety (25), phobias and depression. In addition, anxiety disorders are highly comorbid with depressive disorders (18). Society's attitude towards shyness and avoidance as a measure of politeness is also an important factor associated with students' ability to build social interaction (26). Students with poor and moderate social support had about two times more odds to have social phobia as compared with students who had strong social support (27). Greater maternal anxiety and parental over-involvement predicted greater child anxiety. Given the high prevalence of anxiety in this set of population it is of prime importance to screen them. As recommended by The American Academy of Child and Adolescent Psychiatry in their 2007 practice parameters, an anxiety assessment should begin with screening questions, such as self-report and parent-report questionnaires, which should then be followed up with a formal evaluation, such as a structured or semi-structured interview, if a high level of symptoms are endorsed on the screening measures.

| Anxiety | Absent | Present | Total |
|---|---|---|---|
| **Number** | 325 | 198 | 523 |
| **Percentage** | 62.2 | 37.8 | 100 |

Symptoms suggesting depression were reported by 146 patients of a total 523, found to be slightly higher in females than their counterparts. Feelings of being unworthy, drastic changes in appetite and sleep were noted in most of the students. Many of those showing symptoms of depression also had concomitant anxiety while thoughts of causing self-harm was reported only by a few. It has a multifactorial etiology which includes family bereavement, separations and conflict, child maltreatment and neglect, and peer conflict and bullying (28).

According to a study, Depression is seen more among students whose parents pressurize them too much or over expect. Parenting programs are also likely to be most effective when early mental health is promoted. Training skilled individuals, tools and resources to support potential referrers (such as school counsellors) in detecting key psychiatric symptoms and functional impairment, might help increase the proportion of referrals to specialist mental health services when young people have a clear clinical need (29).

| Depression | Absent | Present | Total |
|---|---|---|---|
| **Number** | 377 | 146 | 523 |
| **Percentage** | 72.1 | 27.9 | 100 |

Eating disorders were reported amongst 127 (24.3%) out of 523 students with a female preponderance. Adolescents with eating disorders were at a substantially elevated risk for anxiety disorders, cardiovascular symptoms, chronic fatigue, chronic pain, depressive disorders, poor health, infectious diseases, insomnia, neurological symptoms, and suicide attempts during early adulthood (30). These may manifest as a reaction to a situation and as such the relapse rates of these disorders are also high (31). Hence it becomes essential to address the underlying social, psychological and biological issues (32).

| Eating disorders | Absent | Present | Total |
|---|---|---|---|
| **Number** | 396 | 127 | 523 |
| **Percentage** | 75.7 | 24.3 | 100 |

Symptoms signaling psychosis were seen in only 2.1% of the study population. Many of them noted that they had a sense of being lost in their own world. Fifty students said that they used substances such as alcohol, nicotine and other drugs. Most of them said that they wanted to try it because of their peers. Only a handful pointed out that they used it to escape an unwanted situation, while most of them reported that they were aware of the adverse effects of these substances. Regular follow-up of symptoms of mood disorders, employing social support and family education regarding the effectiveness of treatments in reducing risk of transition to a primary psychotic disorder along with the known risks of specific interventions, is utmost important.

| Psychosis | Absent | Present | Total |
|---|---|---|---|
| **Number** | 512 | 11 | 523 |
| **Percentage** | 97.9 | 2.1 | 100 |

| Substance use | Absent | Present | Total |
|---|---|---|---|
| **Number** | 473 | 50 | 523 |
| **Percentage** | 90.2 | 9 | 100 |

Aggression was seen in 104 students (19.88%). There was no significant difference between the two genders. Domestic violence, toxin exposure, drug use and child abuse may predispose children into developing aggressive behavior.

| Aggression | Absent | Present | Total |
|---|---|---|---|
| **Number** | 419 | 104 | 523 |
| **Percentage** | 80.12 | 19.88 | 100 |

Mental health conditions in adolescents are on a stark rise accounting for 16% of the global burden. About 50% students reported being more comfortable talking about their problems with friends while 48% felt that their parents understood them better. Professional health was sought by 2% of the study population. Because of lack of awareness and the social stigma attached to it, most of the conditions remain unattended which leads to the extension of these into early adulthood affecting both the physical and mental growth of the individual and limiting them to fulfill their lives as adults. Mental health promotion and prevention should be aimed at improving emotional regulation in an individual and build resilience to combat unwarranted situations, at the same time making the society more receptive and supportive of them.

## Conclusion:

Mental health problems are highly prevalent in the adolescent population. A multidimensional approach in health systems should be modelled to target adolescent mental health. Unfortunately, spending is lowest in countries with the highest youth proportions. Aim should be to reduce risk factors and reinforce protective factors. Individuals should be screened for early signs of illness. Mental health programs should be implemented in order to spread awareness amongst this population in order to remove the stigma associated with them, which may be the cause of a huge number of under reported cases. Strategies such as enhancing social skills, problem-solving skills and self-confidence of the young population can help prevent mental health problems such as conduct disorders, anxiety, depression and eating disorders as well as other risk behaviours including those that relate to sexual behaviour, substance abuse and violent behavior (1). Focus should be to promote a positive social environment and healthy interaction with peers to inculcate resilience and tolerance in them. Competent professionals and primary care givers can be trained; and adolescent care centers can be set up nationwide to cater to the needs and guide them to take necessary measures.

## Conflict of Interest

The investigators declare no conflict of interests. The research was self-funded.

## Limitations

All the adolescents were not covered and the sample size was not large enough. Purposive sampling was done. The answers are based on the student's perception and are very subjective. They might not have been true about their behavior at all times.

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Nil

## APPENDIX 1

## QUESTIONNAIRE

Do you consent to answering these questions: Yes/No?

Note: Your data shall be kept completely confidential and is for research purpose only

Personal details:

Age: Standard: Gender:

Choose the answer that suits you the best

Q. Do you experience any of these without any exaggerating physical reasons?

A. Headache
B. Nausea
C. Nothing in particular
D. Pain in stomach
E. Backache

Q. Do you worry a lot about everything in your life? YES/NO

Q. Do you feel nervous when you meet a new person or do a new task? YES/NO If yes, how do you feel? (Multiple answers allowed)

A. Shortness of breath
B. Increased perspiration
C. Muscle tension
D. Dry mouth
E. Restlessness
F. Fatigue
G. Difficulty concentrating

Q. Do you feel anxious when you have to interact with people from opposite gender? YES/NO

Q. Do you have depressed mood all the time? Yes/No

Q. Do you feel disinterested in doing things that you enjoyed earlier? YES / NO

Q. Have you noticed any significant changes in your sleep pattern? YES / NO

Q. Have you noticed any significant changes in your appetite? YES/NO

Q. Do you feel you have immense difficulty in concentrating? YES / NO

Q. Do you find life worthless or hopeless? YES / NO

Q. Do you have thoughts of harming yourself? YES/NO

Q. How often do you get angry on small issues?

(A) Never (B) Sometimes (C) Often (D) Always

Q. Do you think you are able to keep yourself in control while in anger? YES / NO

Q. Do you feel you are in your own world which is very different from others? YES / NO

Q. Do you feel people are paying special attention to you? YES/NO

Q. Do you feel that people are out to get you/talk about you? YES/NO

Q. Do you feel disoriented about time/place/person? YES / NO

Q. Do you feel that you have some special importance? What is that?

Q. HABITS: Have you smoked/ had alcohol/ done drugs (weed, marijuana)? If yes, why did you do it?

A. Peer pressure
B. Wanted to try because others are doing it
C. To feel good
D. To escape an unwanted situation

Q. Do you worry about your weight and body structure all the time? YES/NO

Q. Do you feel guilty about losing control over your appetite? YES/NO

Q. Do you try to get rid of the excessive food by vomiting/strenuously exercising or fasting for days? YES/NO

Q. Do you believe yourself to be fat when others say that you are thin? YES/NO

Q. Do you restrict yourself from eating even when you feel like eating? YES/NO

Q. Do you feel your parents are able to spend sufficient time after you? YES / NO

Q. Are your decisions/suggestions accepted in the family? YES / NO

Q. If you require to talk/take guidance from someone, you prefer to go to

A. Friends
B. Family members

C. Teachers/ Sports coach
D. School Counsellors/Professionals
E. No one