Biomedical and Biopharmaceutical Research
Abbreviation: Biomed. Biopharm. Res.
Volume: 22: Issue: 01 |Year: 2025
Page Number: 270-277

To study the mental health profile of adolescent girls age 10-19 years in a tertiary care hospital of southern Rajasthan

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Article Received: 10-03-2025

Article Accepted: 04-04-2025

Abstract

In India, with over 253 million adolescents, addressing mental health during this phase is critical. This study aims to assess the mental health profile of adolescent girls aged 10-19 years at a tertiary care hospital in southern Rajasthan and compare the prevalence of various mental health disorders between early (10-14 years) and late (15-19 years) adolescence.

Materials and methods: A retrospective observational study was conducted using data from the adolescent clinic at RNT Medical College Udaipur, covering January to December 2023. The study included 1,538 adolescent girls, categorized into two groups: early adolescence (n=794) and late adolescence (n=744).

Results: Stress disorders (25%) were the most common, followed by depression (17.4%) and anxiety (16.8%). Stress disorders were more prevalent in early adolescence, while depression and anxiety were more common in late adolescence. Menstrual problems (14.9%) and learning disabilities (13.1%) were notably higher in early adolescence, whereas substance abuse (3.6%) and sexual abuse (3.5%) were more frequently observed in late adolescence. Suicidal tendencies also showed a higher prevalence in late adolescence. Also this study examined the effect of season of the year on depression and other moods. Seasonal affective disorder (SAD) is a combination of biologic and mood disturbances with a seasonal pattern, typically occurring in the autumn and winter with remission in the spring or summer. The results are statistically highly significant ($p < 0.001$)

Conclusion: The study underscores the importance of adolescent clinics in providing specialized mental health care and addressing developmental and emotional challenges and this research highlights the need for comprehensive mental health services and support systems tailored to the unique needs of adolescents.

KEYWORDS: Stress, depression, anxiety, Seasonal affective disorder, adolescence.

INTRODUCTION

Adolescence is the first period of life where the major determinants of morbidity and mortality are behavioural rather than congenital or infectious. As adolescents make the transition from childhood to adulthood, they establish behaviours that affect both their current and future health. Adolescence is a time of immense biologic, psychologic, and social change[(1)].India has more than 253 million adolescents accounting for almost 21% of its population and making it one of the countries with the largest adolescent population in world. Further, around 47% of its population is female[(2)].

Navigating adolescence can be a tumultuous journey, marked by a myriad of physical, emotional, and social changes. For adolescent girls (age group 10-19 years), this transitional phase often presents unique challenges, including mental health issues such as depression, anxiety, and substance abuse, alongside physiological concerns like menstrual irregularities and hearing impairments[3]. Additionally, they may encounter various forms of violence, including sexual abuse, exacerbating their distress. These multifaceted issues not only impact their immediate well-being but also pose long-term risks, such as suicidal tendencies and chronic stress.

Adolescence can be divided into phases: early and late adolescence. Early adolescence is described as the period from 10 years to 14 years, and is characterized by fast growth in physical, cognitive, social and emotional development. Late adolescence is defined as the years from age 15 to age 19. In this phase, the physical development slows for girls but continues for boys. A continued growth in the capacity for abstract thinking, an increased capacity for setting goals, an interest in moral reasoning and reflections on the meaning of life are essential in this phase[4]

The due importance is given to the physical health of the children and adolescents in all social groups. But developmental, behavioural and emotional aspects of the children are not getting enough concerns. There is widespread lack of knowledge about child development and childhood mental disorders, limited number of professionals, lack of training in the field, poor financial assistance and relatively weak advocacy. Apart from this there are many other reasons for the under utilization of services like stigma, cultural traditions, cost, reluctance on the part of parents or children to seek help, difficulty in getting to providers etc[5].

Rashtriya Kishor Swasthya Karyakram (RKSK) highlights the need for strengthening Adolescent Friendly Health Clinics (AFHC) under its facility based approach. This approach was initiated in 2006 under RCH II in the form of Adolescent Reproductive Sexual Health (ARSH) Clinic to provide counselling on sexual & reproductive health issues. Now under RKSK, AFHC entails a whole gamut of clinical and counselling services on diverse adolescent health issues ranging from Sexual and Reproductive Health (SRH) to Nutrition, Substance abuse, Injuries and Violence (including Gender based violence, Non Communicable Diseases and Mental Health. Adolescent Friendly Health Services are delivered through trained service providers- MO, ANM and Counsellors at AFHCs located at Primary Health Centres (PHCs), Community Health Centres (CHCs) and District Hospitals (DHs) and Medical Colleges[6]. Therefore adolescent clinics are set up to give these adolescents appropriate counselling and to provide them a better future as adults.

AIM OF THIS STUDY

To study the mental health profile of adolescent girls of age 10-19 years in a tertiary care hospital of southern Rajasthan and to study and compare the prevalence of different mental health disorders among girls in early and late adolescence.

MATERIALS AND METHODS

Study population: Adolescent girls (10-19 years) attending the adolescent clinic, Department of Paediatrics, RNT medical college Udaipur constituted the study population.

Study type- Retrospective observational study

Study Period: Monthly total no. of adolescent girls who presented to adolescent clinic at the hospital (both OPD AND IPD) for 1 year from Jan 2023 to Dec 2023.

METHOD OF DATA COLLECTION

A retrospective observational study was done using data collected from adolescent clinic of this tertiary care hospital. Clinical assessments of all the adolescent girls presenting to adolescent clinic in our hospital was done by a child psychologist and diagnosis was made according to ICD-10 diagnostic guidelines[7].

Epidemiological and clinical profile of the child psychiatric morbidity pattern for each month was formulated separately as well as aggregating total to derive on the average monthly figures.

Data collected for total no. of adolescent girls divided into 2 groups A(10-14 years) and B(15-19 years) diagnosed with different disorders in adolescent clinic by child psychologist and the no. of girls in each group attending OPD and presenting from IPD to adolescent clinic were compared with previous years and also the no. of cases in individual disease categories were compared with each other to look for prevalence. Along with that the total no. of cases of each disease were also compared among both the age groups (A and B) and results were derived for prevalence of different mental health diseases in both the age groups.

INCLUSION CRITERIA-

- All newly diagnosed cases of mental health disorders among adolescent girls in both OPD and IPD.
- Age 10-19 years

EXCLUSION CRITERIA-

- Children below 10 years
- Already under treatment for any psychiatric illness.
- Adolescent girls whose parents did not give consent.

RESULTS

In this study total 1538 adolescent girls 10-19 years visited the adolescent clinic in 2023. The total data collected individually for two age groups was 794 (51.6%) girls in group A (10-14 years) and 744 (48.4%) girls in group B (15-19 years). Total no. of girls visiting clinic was higher as compared to previous years as 1402 in 2021 and 1472 in 2022.

It was seen that stress disorder (24.90%) was most common mental health morbidity followed by depression (17.36%) and anxiety (17.10%) in adolescent girls and when compared among both the groups A and B it was found that stress disorder was overall more common in early adolescence (10-14 years) (figure 1)

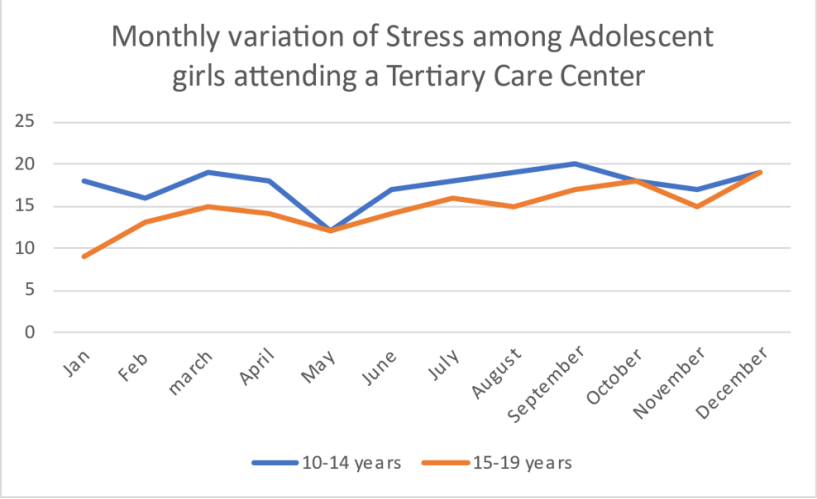

Figure 1

Depression (19.20%) and Anxiety (18.50%) both was more commonly found in late adolescence (15-19 years) and monthly trend was higher later half of year (in rainy and winter season). (figure 2 and figure 3)

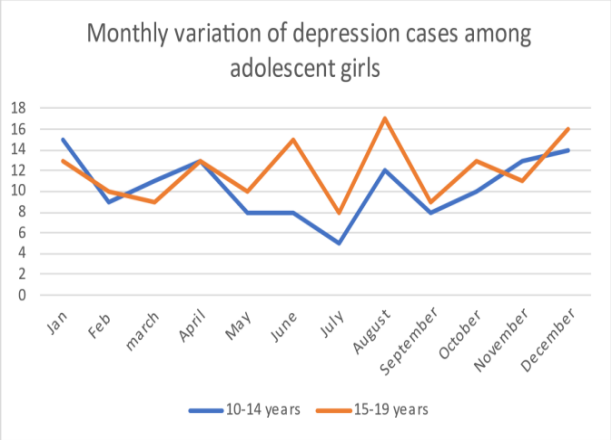

Figure-2

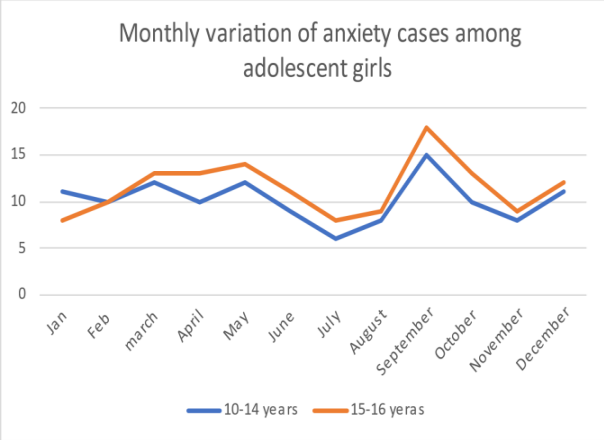

Figure- 3

Menstrual problems (15.0%) and learning disabilities (13.5%) were more common in early adolescence (figure 4). ADHD (9.0%) was also more commonly seen in early adolescence could be due to inability to deal with recent changes of adolescence.

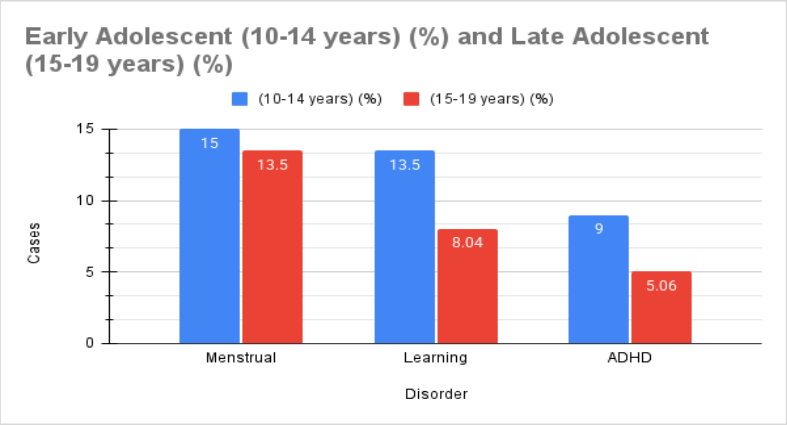

Figure- 4

Least no. of girls presented with diagnosis of substance abuse, sexual abuse and suicidal tendencies among both groups but late adolescence had more cases of substance abuse (4.2%) and sexual abuse (3.6%) (figure 5) as due to more peer pressure and a false feeling of adulthood. Monthly variation for suicidal tendencies(4.1%) was also more in late adolescence.(figure 6)

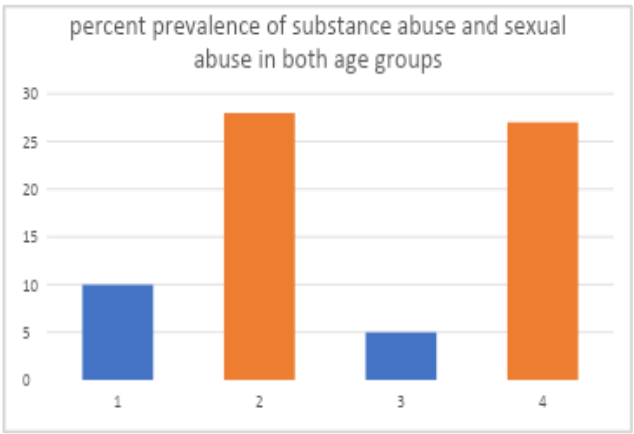

Figure 5

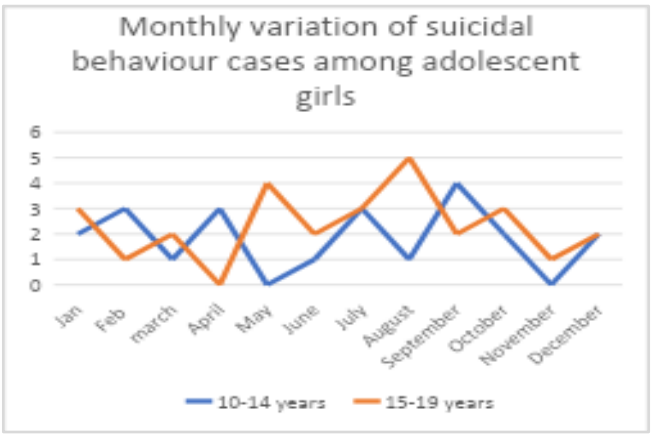

Figure- 6

Further percentage prevalence of mental health disorders for both A and B groups was calculated and compared among both the groups (table 1 and figure 7). Most common being the stress disorder followed by depression and anxiety.

TABLE-1 percentage prevalence of mental health disorders for both A and B groups

Mental Health Disorder	10-14 years	15-19 years	Row Total
Menstrual	119 (15.00%)	100 (13.50%)	219 (14.24%)
Depression	124 (15.56%)	143 (19.20%)	267 (17.36%)
Anxiety	125 (15.80%)	138 (18.50%)	263 (17.10%)
Substance	10 (1.20%)	31 (4.20%)	41 (2.67%)
Learning	107 (13.50%)	60 (8.04%)	167 (10.86%)
Stress	206 (25.94%)	177 (23.80%)	383 (24.90%)
Suicidal	25 (3.20%)	30 (4.10%)	55 (3.58%)
ADHD	72 (9.00%)	38 (5.06%)	110 (7.15%)
Sexual abuse	6 (0.80%)	27 (3.60%)	33 (2.15%)
Column Total	794 (100.00%)	744 (100.00%)	1538 (100.00%)

Since Chi-Square statistic (52.16) is much larger than the critical value (15.51), the result is statistically highly significant ($p < 0.001$). Therefore, there is a significant association between the type of mental health disorder reported and the early and late adolescence girls.

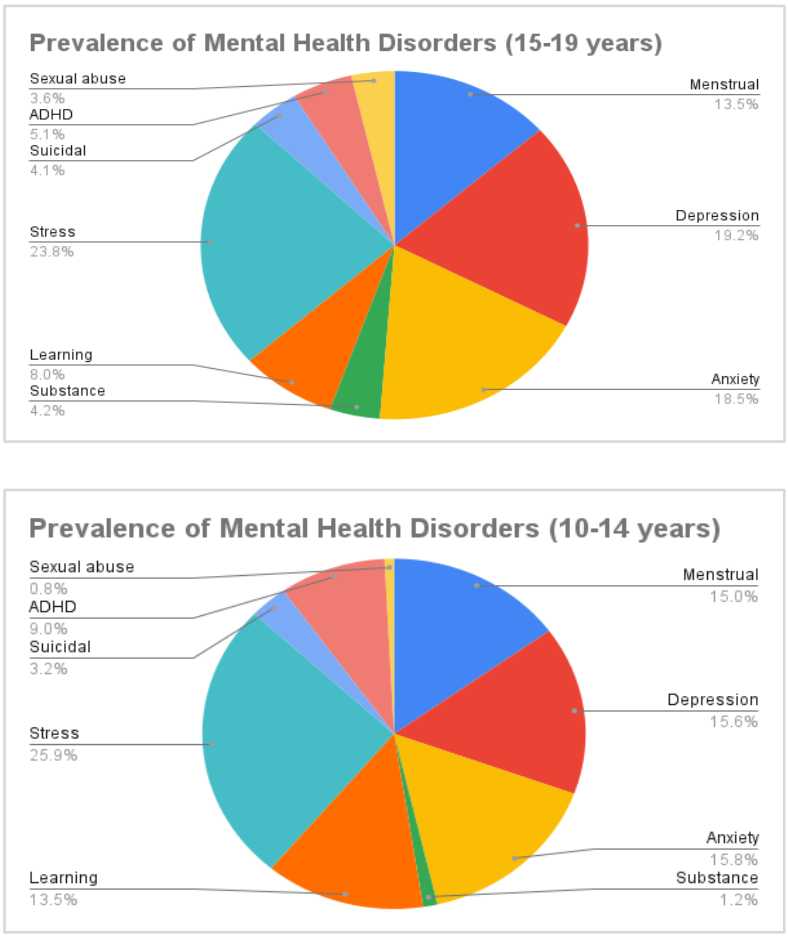

Figure 7-summary of prevalence of mental health disorders among both groups.

DISCUSSION

In our study data was taken from adolescent clinic Bal chakitsalya, RNT medical college about total no. of girls who visited adolescent clinic for 1 year in 2023. Total 1538 adolescent girls who visited the clinic were further divided into 2 age groups 51.6% belonged to 10-14 years (group A) and 48.4% to 15-19 years (group B).Girls visiting both IPD and OPD were taken.

According to our study emotional or mood disorders such as stress disorder (A-27%, B-23%) followed by anxiety (A-15.6%, B-18%) and depression (A-16.1%, B-18.8%) are more common among adolescent girls. Stress was seen common due to confrontation with peers and exploration of identity. Whereas, depression and anxiety was more common in late adolescence due to excessive peer pressure and pressure of scholastic performance.Most of the depression anxiety cases in this study were seasonal in the adolescent girls, mainly occurring in autumn and winter and this may be indicative of starting of Seasonal Affective Disorder (SAD) in them as similar to a study conducted by ***Stuart LK et al*** in ***New Jersey*** [8] which explained that Seasonal affective disorder is a combination of biologic and mood disturbances with a seasonal pattern, typically occurring in the autumn and winter with remission in the spring or summer. In these patients Light therapy is generally well tolerated, with most patients experiencing clinical improvement within one to two weeks after the start of treatment. In a similar study conducted at KMC Mangalore ***by Nawarathna SC et al*** showed a prominence of anxiety, dissociative, stress-related, somatoform and other non-psychotic mental disorders in female adolescent age group.[9]

Menstrual problems (A-14.9% B-13.2%) was seen more common among earlier age group as early adolescence is the age of menarche, and girls at this age suffer from dysmenorrhea and abnormal menses with more premenstrual syndrome as compared to late adolescence. As stated by ***Vasava D et al***Many adolescent girls with menstrual disturbances never present to their family doctor or gynaecologist due to embarrassment about discussing menstruation and fear of disease[10]. Adolescent clinics help these girls to get appropriate treatment and counselling.

In our study we found out that Learning disorders (A-13.1% B-9.9%) and behavioural disorders like ADHD (A-8.6% B-6.4%) was also common in early adolescence as was similarly seen in a study conducted by ***Kelleher I et al*** in Ireland stated that behavioural disorders and learning disorders were most commonly seen in age 9-12 years[11].

The least no. of girls visited the adolescent clinic was with diagnosis of substance abuse (A-1.3% B-3.6%),more in late adolescence due to more peer pressure and an irresistible desire to try something new.
Suicidal tendencies (A-2.8% and B-3.6%) were reported less in this study due to insufficient data but In contrary according to WHO Suicide is the fourth leading cause of death in late adolescents (15–19 years) and risk factors for suicide are multifaceted including harmful use of alcohol, abuse in childhood, stigma against help-seeking, barriers to accessing care and access to means of suicide.Digital media, like any other media, can play a significant role in either enhancing or weakening suicide prevention efforts[12].

In this study Sexual abuse (A-0.6% B- 3.5%) was seen less commonly among both age groups due to stigma regarding seeking help for it and also due to societal barriers regarding revealing the abuse among adolescents.The actual prevalence of sexual abuse may remain largely unknown due to lack of knowledge, delay in and lack of reporting of such incidences.

Kapoor et al published a paper on "Adolescent Friendly Health Clinics in India— Are They Friendly Enough?" the following indicators were used to evaluate the adolescent friendliness of AFHCs- sexual and

reproductive health (SRH) literacy of adolescents, Maintaining privacy and Confidentiality in AFHC, Treating adolescents with respect, Competency to understand address the full range of needs. Also, this artcle argues that adequate training for healthcare providers, including soft skills and reiterating the importance of privacy would make AFHCs more accessible to adolescents. Thus, increasing the utilisation of the same along with destigmatisation of conversations surrounding SRH needs[13].

LIMITATIONS-

These cases were referred by paediatricians to adolescent clinic, it does not reflect the exact prevalence of adolescent mental health issues. This study could not determine prevalence of girls with sexual abuse substance abuse and violence cases among adolescence girls. It also did not include other behavioural disorders except ADHD.

WHAT THIS STUDY ADDS?

Adolescent clinics are leaded by a child psychologist or psychiatrist along with a paediatrician and helps us to address the mental health issues of these girls at earliest by multispeciality approach and also for treatment of these issues at earliest.

Also this study helps to understand the prevalent mental issues in the community among adolescent girls and helps to cater their needs.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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