

**Assessment of Gynecological Problems in Adolescents in Tribal Adilabad Population**Koustubha Vijayarathy<sup>1</sup>, Vijayarathy Srinivasan<sup>2</sup><sup>1</sup>Assistant Professor, Department of Obstetrics and Gynecology, Rajiv Gandhi Institute of Medical Sciences (RIMS), Adilabad, Telangana State.<sup>2</sup>Civil Assistant Surgeon, PHC Bheempur, Adilabad, Telangana State.

Received: 20-06-2023 / Revised 27-07-2023 / Accepted 21-08-2023

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Conflict of interest: Nil

**Abstract:**

**Background:** Adolescence refers to the stage of development typically spanning from 11-19 years of age, marked by significant physical, psychological, sexual, emotional, and behavioral changes. Adolescents constitute a significant of the population in India, highlighting the necessity to address the distinct challenges they face during this phase of life of females. The objective of this study was to assess the gynecological issues faced by adolescent girls who were visiting the gynecology outpatient department of a healthcare facility in Tribal Adilabad in South India.

**Methods:** This study was conducted in the Department of Gynecology, RIMS, Adilabad. After obtaining ethical clearance, adolescent girls aged between 10-19 years experiencing gynecological issues, and who had undergone a minimum of three consecutive menstrual cycles, were included in the study. Adolescent girls in the 10–19-year age group with pregnancies and associated complications were excluded.

**Results:** Among the 70 cases of gynecological issues observed, the predominant concern was menstrual disorders, accounting for 41 cases (58.57%). Notably, a relatively higher incidence of menstrual disorders was observed in late-adolescent girls, constituting 18 cases (43.90%). 41 patients (58.57%) presented with menstrual disorders, categorized as amenorrhea in 36.58% cases, polymenorrhea in 12.19% cases, and menorrhagia in 14.63% cases. Notably, the majority of menstrual disorders were observed in the late adolescence age group of girls, accounting for 48.78% of cases.

**Conclusion:** This study demonstrates that young adolescent girls in Tribal settings are at a higher risk of gynecological issues and menstrual disorders. It emphasizes the urgent need for increased awareness regarding menstruation, menstrual hygiene, reproductive health, contraception, and access to a nutritious diet is crucial. Effective implementation of programs like school health and Adolescent Reproductive and Sexual Health (ARSH) is necessary.

**Keywords:** Adolescence, Females, Reproductive and Sexual Health, Menstrual Disorders

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**Introduction**

The World Health Organization (WHO) defines adolescence as the age span between 10-19 years.

[1] Gynecological issues in adolescents are distinctive, particular, and tailored to this age group [2]. Failing to identify and address conditions such as congenital abnormalities, neglected infections contracted during childhood, and endocrine disorders, as well as the physical and psychological trauma from sexual abuse and tumors, can have long-term implications on an individual's reproductive health [3]. Various gynecological problems prevalent in adolescents encompass menstrual irregularities like abnormal uterine bleeding, primary amenorrhea, polycystic ovary syndrome (PCOS), excessive menstrual bleeding

causing severe anemia, sexual abuse, pregnancy-related complications, adnexal masses, and endocrine disorders [4]. Adolescent girls experiencing excessive menstrual bleeding need thorough investigation for potential coagulation disorders. Idiopathic thrombocytopenic purpura was the most commonly diagnosed coagulation abnormality, followed by von Willebrand disease. [5] Endocrine dysfunctions like hypothyroidism and hyperprolactinemia can result in amenorrhea or irregular bleeding. Infections like tuberculous endometritis can manifest as primary amenorrhea. Approximately 40-50% of adolescent girls suffer from dysmenorrhea, ranging from mild discomfort to severe pelvic pain accompanied by symptoms

such as headaches, nausea, vomiting, diarrhea, constipation, fainting, tender breasts, and abdominal bloating, which may persist throughout their menstrual cycle. [6]. Dysmenorrhea is a highly prevalent issue among adolescent girls, with studies from India reporting a prevalence range between 50 to 87.8%. [7] Another study conducted on 1648 adolescent girls in selected districts of Karnataka revealed an incidence of dysmenorrhea as high as 87%. [8] Sexual abuse experienced by adolescent girls can have a profound and potentially lifelong psychological impact. Unprotected sexual intercourse, sexual abuse, and repeated unsafe abortions have contributed to an increase in cases of pelvic inflammatory disease (PID) and ectopic pregnancies.

Adolescent girls may present with pelvic masses such as functional ovarian cysts or obstructions due to vaginal/uterine anomalies, ovarian tumors, tubercular masses, or pelvic kidneys. Among adolescents, the most common pelvic masses are functional or benign neoplastic ovarian masses, with Mature Cystic Teratoma being the most prevalent neoplastic tumor in children and adolescents. [9] Ultrasonography is the primary diagnostic technique for evaluating pelvic masses in adolescents, and if the results are inconclusive, CT or MRI may be employed. [10] Obstructive genital anomalies, such as imperforate hymen, transverse vaginal septa, or vaginal agenesis, can present with primary amenorrhea and a pelvic mass. Polycystic ovary syndrome (PCOD), obesity, and endocrinopathies are increasingly prevalent in the adolescent age group due to lifestyle changes, sedentary habits, and poor dietary patterns. [11] The gynecological issues specific to adolescents hold a distinct place within the spectrum of gynecological disorders across all age groups. This distinctiveness arises from the unique and age-specific physical nature of the problems, as well as the psychological factors that play a crucial role in the physical and psychological development of individuals transitioning from childhood to womanhood [1]. This study aims to evaluate the gynecological problems experienced by adolescent girls attending the gynecological outpatient department (OPD) at RIMS Adilabad which predominantly caters to the needs of the tribal population.

### Material and Methods

This cross-sectional study was conducted in the Department of Obstetrics and Gynecology, Rajiv Gandhi Institute of Medical Sciences, Adilabad, Telangana State. Institutional Ethical approval was obtained for the study. Written consent was obtained from all the participants of the study after explaining the nature of the study in the vernacular language. Cases were selected by convenience sampling method.

A structured procedure was meticulously followed to obtain approval from the hospital authority. This involved submitting a comprehensive study Proforma, encompassing the study protocol, a well-evaluated collection of biomedical literature, the data collection form, and the patient's informed consent form. Adolescent girls aged 10-19 years with gynecological problems, who had experienced at least three consecutive menstrual cycles and were willing to participate, were included. Conversely, adolescent girls within the same age group who were dealing with pregnancy and its complications were excluded from the study. A carefully devised data collection form was used to gather patient information while ensuring confidentiality. Patients were informed about the study's advantages and disadvantages before consenting to participate, using a separately designed informed consent form. Subsequently, a detailed medical history was obtained from each patient, and thorough examinations were conducted while maintaining privacy, confidentiality, and a non-judgmental approach. This encompassed a gentle general examination, including assessments of height, weight, physique, pallor, edema, secondary sexual characteristics, and hair distribution, followed by a systemic examination. In relevant cases, a local genital examination was conducted, inspecting the labia and hymen's condition. Per speculum and vaginal examinations were avoided for sexually inactive adolescent girls. A per-rectal examination was performed when necessary. Patients underwent routine investigations, and specific tests such as hormonal assessments, ultrasonography, MRI, CT scans, etc., were carried out based on individual requirements.

### Results

A total of 70 adolescent females were included in the study during the period of study. The WHO defines adolescence as the period of life between 10 and 19 years of age. [11] During this time, individuals experience significant physical, psychological, and social changes. The late adolescence age group is a time of transition from childhood to adulthood. Individuals in this age group are typically completing their secondary education and preparing for higher education or employment. They are also developing their own identities and relationships. The middle adolescence age group is a time of rapid physical and psychological change. Individuals in this age group are experiencing puberty and developing their sexual identities. They are also beginning to explore their independence and form adult relationships. The early adolescence age group is a time of transition from childhood to adolescence. Individuals in this age group are beginning to experience physical and psychological changes related to puberty. They are also developing their social identities and relationships. Table 1 shows that the

majority of adolescent females in the study were in the late adolescence age group (45.71%), followed

by the middle adolescence age group (35.71%) and the early adolescence age group (18.57%).

**Table 1: Demographic profile of the adolescent females included in the study**

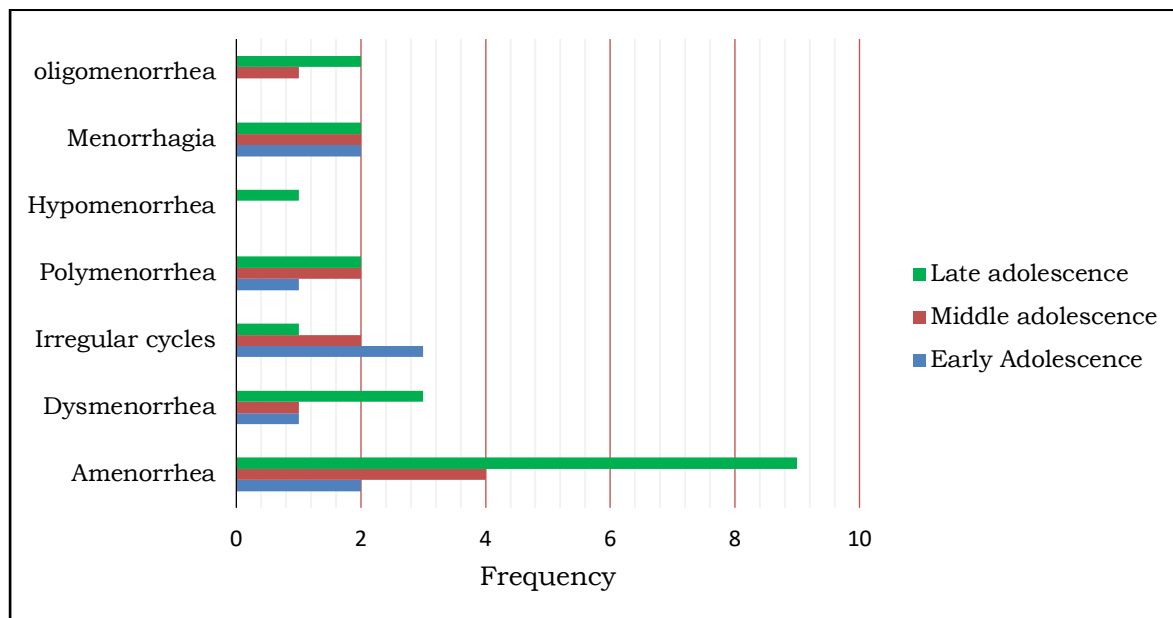
Age group (yrs)	WHO classification of Adolescent females	Frequency	Percentage
10 – 14	Early Adolescence	13	18.57
15 – 17	Middle adolescence	25	35.71
18 – 21	Late Adolescence	32	45.71
Total		70	100.00

Among the 70 cases of gynecological issues observed, the predominant concern was menstrual disorders, accounting for 41 cases (58.57%). Notably, a relatively higher incidence of menstrual disorders was observed in late-adolescent girls, constituting 18 cases (43.90%). The summarized results are presented in Table 2.

**Table 2: Showing the distribution of gynecological disorders in the study**

Gynecological disorders	Age group distribution in years			Frequency	Percentage
	10 – 14	15 – 17	18 – 21		
Menstrual disorders	8	15	18	41	58.57
Abdominal pain	3	3	3	9	12.85
WDPV	1	4	2	7	10
Heavy menstrual bleeding	1	1	3	5	7.15
PCOD	0	0	2	2	2.86
Uterine infections	2	1	3	6	8.57
Total	15	24	31	70	100.00

In our study, 41 patients (58.57%) presented with menstrual disorders, categorized as amenorrhea in 36.58% cases, polymenorrhea in 12.19% cases, and menorrhagia in 14.63% cases. Notably, the majority of menstrual disorders were observed in the late adolescence age group of girls, accounting for 48.78% of cases. Detailed results are outlined in Figure 1.



**Figure 1: Showing the distribution of menstrual disorders in the cases of the study**

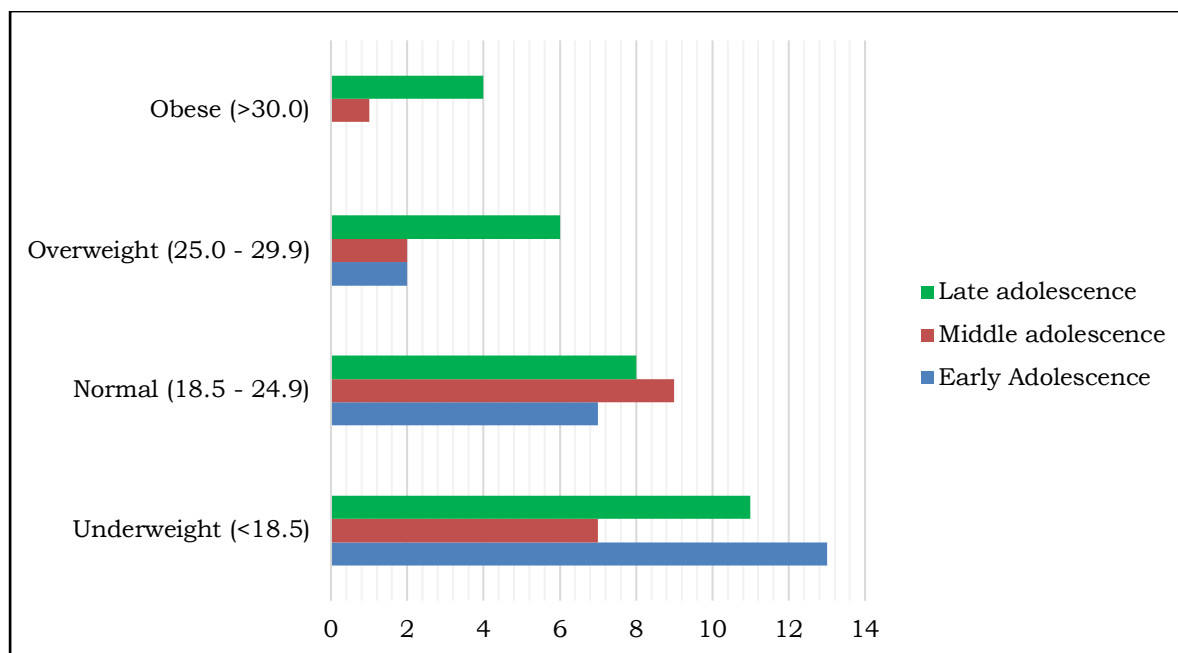


Figure 2: Showing the distribution of BMI in the cases of the study

As per the guidelines from the National Heart, Lung, and Blood Institute (NHLBI) [12], the Body Mass Index (BMI) is computed as weight in kilograms divided by the square of height in meters (kg/m<sup>2</sup>). The conventional WHO classification categorizes BMI into four groups. In our study, it was found that 44.28% of girls were underweight. 34.28% of cases were normal weight and 7.14% of adolescent girls were categorized as obese. Detailed results are presented in Figure 2.

Table 3: Classification of study subjects based on grading of anemia

Anemia	Age group distribution in years			Frequency	Percentage
	10 – 14	15 – 17	18 – 21		
Normal (Hb> 12gm/dl)	4	5	5	14.00	20.00
Anemia					
Mild Anemia (Hb 11.0 - 11.9 gm/dl)	7	10	18	35	50.00
Moderate anemia (Hb> 8 – 10.9gm/dl)	4	6	11	21	30.00
Total	11	16	29	56	80.00

The World Health Organization (WHO) defines the adolescent age group as individuals between the ages of 10 to 19 years [13]. Nutritional needs during adolescence are often overlooked, leading to growth stunting, compromised health, and anemia. Anemia is a prevalent nutritional disorder on a global scale. In our study, it was found that 80.00% of adolescent girls had normal hemoglobin levels while 20.00% were anemic. Among the anemic cases, 43.75% had moderate anemia and 26.25% had mild anemia. Detailed results are presented in Table 3.

**Discussion**

Menstrual disturbances, whether physiological or pathological, constitute the predominant presenting issue in adolescent gynecological clinics. This study reveals that menstrual disorders rank as the most prevalent gynecological dysfunction among adolescent girls, encompassing a spectrum from amenorrhea to menorrhagia. In our study involving 70 participants, late adolescence girls accounted for

45.71%, surpassing early and middle adolescence girls. These findings are subject to debate, given that some studies emphasize earlier adolescents or middle adolescent girls as the predominant demographic. [12-14] Within the 70 observed cases of gynecological issues, a significant proportion experienced menstrual disorders (58.57%), aligning with similar research outcomes: 95.8% [13], 60% [14], 84.88% [15], and 62.05% [16]. Interestingly, late-adolescent girls exhibited a higher incidence of gynecological problems (45.71%) compared to their middle and early-adolescent counterparts, which contrasts with findings in other studies [14, 17] The adolescent girls experiencing menstrual disorders presented with a range of conditions, including amenorrhea (36.58%), polymenorrhea (12.19%), menorrhagia (14.63%), dysmenorrhea (12.19%), oligomenorrhea (7.31%), and hypomenorrhea (2.4%). Among the 6 adolescent girls with heavy uterine bleeding, 50% required hospitalization for anemia correction and menorrhagia management. [18]

Furthermore, sub-clinical hypothyroidism was observed in 18.5% of adolescent girls, consistent with findings from other Indian studies. [19-21] PCOD was diagnosed in 2(2.86%) girls in our study, a prevalence comparable to another research. [22] In the present study, 34.28% were normal weight and 44.28% were underweight. Various studies have reported different proportions of adolescent girls with normal BMI: Thaker RV et al. reported 49.3%, G Chandrakala et al. reported 74%, and Nulakathati Vani et al. found 48.45% of girls falling into this category. [23-25] In contrast, Lalitha S et al. found a higher percentage of girls being underweight at 69.33%. [26] Despite the predominance of normal BMI in these studies, emerging concerns include overweight (3.4%) and obesity (14.6%), indicating a growing issue among adolescent girls. In our study, we observed that 35 (50.0%) of adolescent girls had hemoglobin levels between 11-11.9 g/dl, indicating mild anemia, while 21 (30.0%) had hemoglobin levels between 8-10.9 g/dl, indicating moderate anemia. [19] Anemia and malnutrition contribute to menstrual issues such as oligomenorrhea and hypomenorrhea. In our current study, 8.57% of adolescent girls presented with urinary tract infections (UTIs). In comparison, other studies by Lalitha S et al. [26], Sabita Rezwana R et al. [27], and Shubha [28] reported 12%, 6.6%, and 5.5% of girls with UTIs, respectively. It's important to note that in our study, the incidence of UTIs was suspected based on symptoms and clinical features, and confirmation through urine examination was not always performed, unlike the other studies where UTIs were confirmed through urine examination.

### Conclusion

In conclusion, this study demonstrates that young adolescent girls in Tribal settings are at a higher risk of gynecological issues and menstrual disorders. It emphasizes the urgent need for increased awareness regarding menstruation, menstrual hygiene, reproductive health, contraception, and access to a nutritious diet is crucial. Effective implementation of programs like school health and Adolescent Reproductive and Sexual Health (ARSH) is necessary.

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