

# Prospective Observational Study of Adolescent Gynaecological Problems in a Tertiary Care Hospital

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**Abstract:** ***Background:** Adolescence period in girls has been recognised as a special phase of their life. It requires special attention. This transition period makes them vulnerable to various problems e. g., general, reproductive health, sexually related and psychological problems. This period in girl's life is the preparation for their safe motherhood. Reproductive health problems of adolescent girls have its own space in the spectrum of gynaecological problems of all ages. This is because of its association with emotional and psychological factors and its unique presentation. Adolescent health determines the health of the nation. **Aim and Objectives:** To assess the gynaecological problems for adolescent girls coming to GRMH. To study the various modes of management of gynaecological disorders among adolescent girls. **Materials and Methodology:** All adolescent girls (10-19years) attending the outpatient and inpatient wards of department of obstetrics and gynaecology, GRMH are included in the study. **Results:** About 118 girls are involved in the study; maximum incidence of gynaecological problems was found in the age group of 19 years (29.7%) and next is 18 years (18.6%). Majority of the adolescent girls belonged to family of socio-economic status class IV (72.9%) and 59.3% girls are from urban areas., Abnormal Uterine bleeding is the most commonest gynaecological problem encountered in the adolescent girls of 39.8%, Polycystic Ovarian Syndrome 20.3%. Adolescent girls with dysmenorrhoea was about 11% followed by ovarian tumors of about 9.3%. **Conclusion:** Adolescence in girls has been recognised as a special phase in their life. It requires a specific approach and special attention. This period of transition makes them vulnerable to various problems. This period in a girl's life is the preparation for safe motherhood. These adolescent girls are the direct reproducer for the future generation. So, the health of these girls not only influences her own health but, also the health of future generation,*

**Keywords:** Adolescent gynaecological problem, Abnormal uterine bleeding, poly cystic ovarian syndrome, dysmenorrhoea, ovarian tumors

## 1. Introduction

Adolescence is the phase of life between the childhood and adulthood of the life, from ages 10 to 19. It is an unique stage of human development and an important time for laying the foundations of good health. Adolescents experience rapid changes in their physical, psychosocial and cognitive growth. Despite being thought of as a healthy stage of life, there is significant illness and injury in the adolescent years. Much of this is preventable or treatable. During this phase, adolescents establish patterns of behaviour-for instance, related to diet, physical activity, substance use, and sexual activity-that can protect their health and the health of others around them, or put their health at risk now and in the future. The adolescent population in a country constitute a critical segment as the future demographic, social, economic and political developments of the country depend on them. The total estimated population of the world in 2010 is 6.91 billion (1). The number of persons in the age 10-19 years (defined as Adolescents) is 1.19 billion. Adolescence period in girls is special phase of their life. Adolescent health determines the health of the nation. With this preview, my thesis entitled 'PROSPECTIVE OBSERVATIONAL STUDY OF ADOLESCENT GYNAECOLOGICAL PROBLEMS IN A TERTIARY CARE CENTRE'. I have made an attempt to analyse various gynaecological problems and factors related to development and progression of these problems in adolescent females attending gynaecological OPD and emergency casualty in Raja Mirasudarar Government Medical College Hospital, Thanjavur.

### 1.1 Aim and Objectives

**Primary Objective:** To assess the gynaecological problems for adolescent girls coming to GRMH

**Secondary Objective:** To study the various modes of management of gynaecological disorders among adolescent girls.

## 2. Materials and Methodology

All adolescent girls (10-19years) attending the outpatient and inpatient wards of department of obstetrics and gynaecology, GRMH are included in the study

### Exclusion Criteria

- Adolescent girls with surgical or medical illness with no gynaecological problem.
- Teenage pregnancy.

## 3. Results and Analysis

**Table 1:** Age Distribution

Age in Years	No. of Patients	Percent
12	1	0.8
13	11	9.3
14	13	11.0
15	8	6.8
16	18	15.3
17	10	8.5
18	22	18.6
19	35	29.7
<b>Total</b>	<b>118</b>	<b>100.0</b>

**Table 2:** Age Group

Age Group	No. of Patient	Percent
12-15 YRS	33	28
16-19YRS	85	72
Total	118	100

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**Table 3:** Education

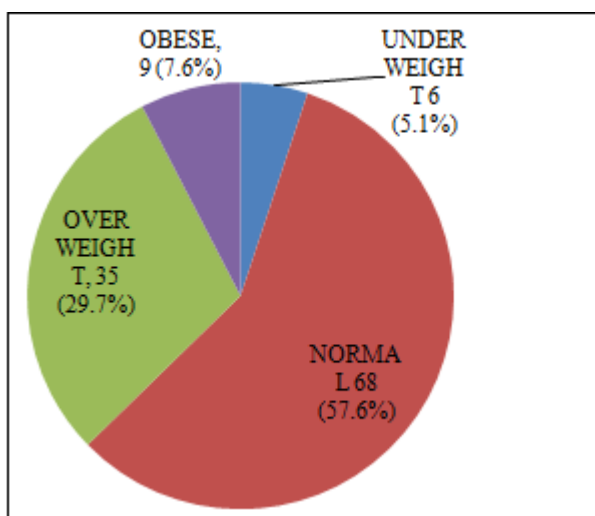
Education	No. of Patient	Percent
Secondary	29	24.6
Higher Secondary	38	32.2
College	51	43.2
Total	118	100.0

**Table 4:** Socioeconomic Status

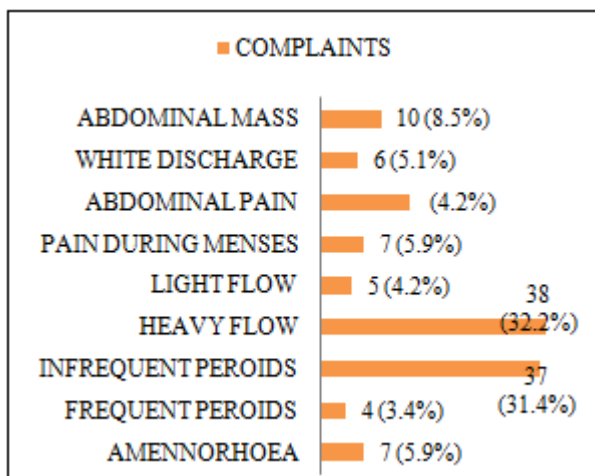
Socio- Economic Status	No. of Patient	Percent
Class III	26	22.0
Class IV	86	72.9
Class V	6	5.1
Total	118	100.0

**Table 5:** Demography

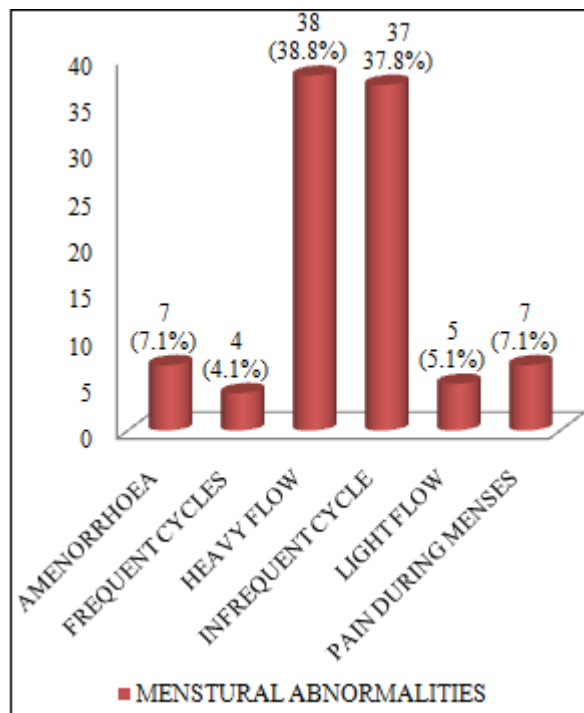
Place of Living	No. of Patient	Percent
Rural	48	40.7
Urban	70	59.3
Total	118	100.0



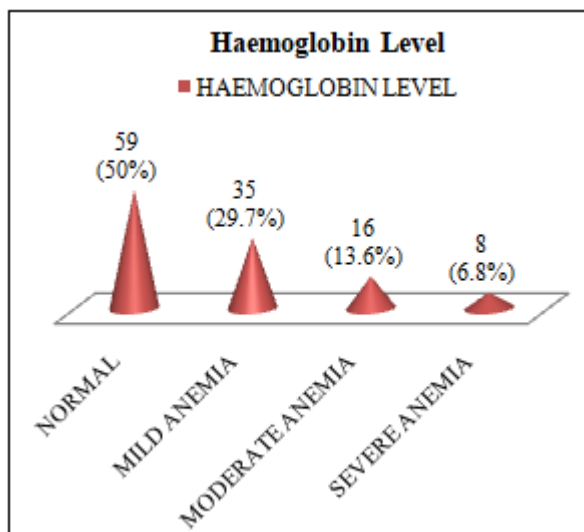
**Chart 1:** Body Mass Index



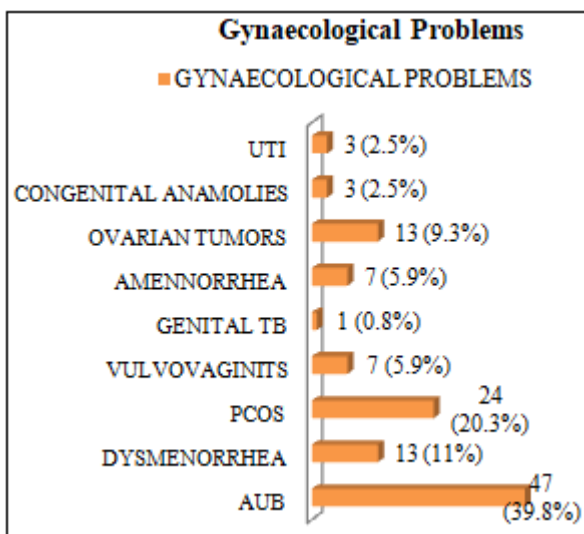
**Chart 2:** Complaints of Patients



**Chart 3:** Menstrual Abnormalities



**Chart 4:** Anemia Incidence



**Chart 5:** Adolescent Gynaecological Problems

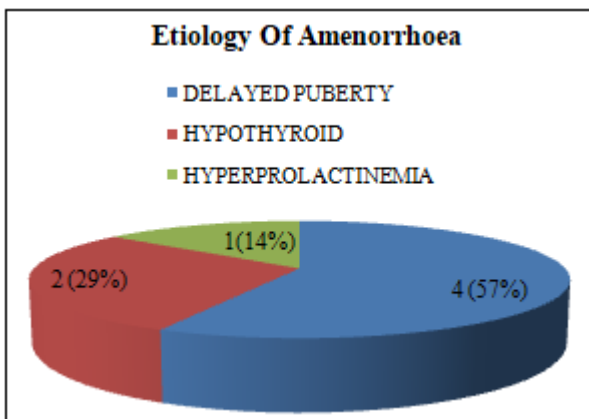


Chart 6: Etiology of Amenorrhoea

Table 6: Congenital Anamolies

Congenital Anamolies	No. of Patient	Percentage
Imperforate Hymen	1	33.33
Mullerian Anamolie With Cervical Stenosis	1	33.33
Vaginal Atresia	1	33.33

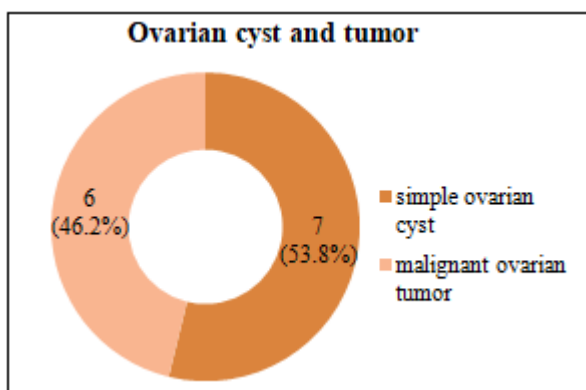


Chart 7: Ovarian Cyst and Tumor

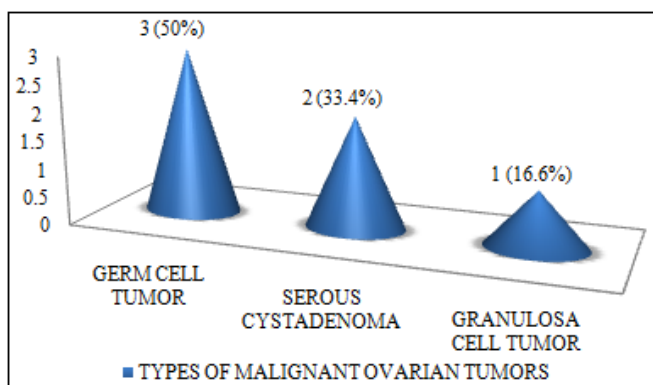


Chart 8: Types of Malignant ovarian Tumors

Table 7: Treatment for Ovarian Cyst

Type of Cyst and Tumors	Treatment Given	No of Patient
Simple Ovarian Cyst Without Torsion	Conservative Management and Follow Up	6
Ovarian Cyst with Torsion	Emergency Laporotomy	1
<b>Total</b>		<b>7</b>

Table 8: Treatment of Malignant Ovarian Tumors

Type of Tumor	Treatment Given	No. of Patients
Serous Cystadenoma	Ovarian Cystectomy and Follow Up	2
Germ Cell Tumor	Staging Laporotomy Followed By Fertility Sparing Cytoreductive Surgery And Chemotherapy And Follow Up	3
Granulosa Cell Tumor	Cytoreductive Surgery And Chemotherapy And Follow Up	1
<b>Total</b>		<b>6</b>

#### 4. Results and Discussion

This study was conducted at RAJA MIRASUDHAR HOSPITAL ATTACHED TO THANJAVUR MEDICAL COLLEGE HOSPITAL THANJAVUR to assess the gynaecological problems for adolescent girls and their mode of management.

**Table 1:** shows age distribution of adolescent girls in the study group. Maximum number of girls belong to 19 years of age (35/118) about 29.7% followed by 18 years of age (22/118) about 18.6%.

**Table 2:** From this table we can concluded that majority of the study population comes under the age group of 16 to 19 years. 85 girls out of 118 belong to 16 to 19 years of age which was about 72%.

**Table 3:** This table shows the educational status of the adolescent girls in the study group. The literacy rate among the adolescent girls in the study group is found to be 100%. Maximum number of girls is studying in the college.

**Table 4:** In this study maximum number of adolescent girls belongs to socio economic class IV (Upper lower) 86/118 (72.9%).

**Table 5:** Maximum number of girls in the study group belong to urban area (70/118) 59.3%.

**Table 6:** In this study congenital anomalies was identified in 3 girls (2.5%). A girl presented with imperforate hymen was treated by hymenotomy, vaginoplasty was done for the girl presented with vaginal atresia. Cervical dilatation was done for the girl with cervical stenosis. Two girl presented with delayed puberty diagnosed as imperforate hymen, another one with vaginal atresia. Another girl attained menarche presented with abdominal pain evaluated and diagnosed as congenital mullerian anomaly uterus didelphus with cervical stenosis. Imperforate hymen presented with hematocolpos Hymenectomy was done. Vaginoplasty done for vaginal atresia. Uterus didelphus with one side cervical stenosis managed by cervical dilatation.

**Chart 1:** In this study group most of the adolescent girls belong to normal BMI (20-24) about 57.6% followed by over weight (25-29) about 29.7%.

**Chart 2:** In this study most of the adolescent girls present with menstrual dysfunction. Majority of the girls have menstrual disturbances.

In the present study heavy menstrual bleeding is the most menstrual disturbances among the adolescent girls 32.2% followed by infrequent periods 31.4%. A study of Paediatric and adolescent gynaecology services in a tertiary teaching hospital states that Forty-four percent (44%) of referrals were menstrual disorders. (2). PCOS is the one most common cause for menstrual disturbances. In the present study 20.3% adolescent girls are diagnosed with PCOS based on hyperandrogenism, menstrual irregularity and ultrasound finding. The identification of hyperinsulinemia and insulin resistance in polycystic ovary syndrome (PCOS) is not a minor issue. (3). PCOS was treated with life style modification, weight reduction and T. metformin. The most common treatments for PCOS patients were lifestyle modification (> 95%) and metformin (> 80%) (4). Joshi et al. Reported reported that about 14% of adolescent girls diagnosed with PCOD (5). A systemic review and meta-analysis conducted at 2019 states that the prevalence of polycystic ovarian syndrome in adolescent girls based on the Rotterdam criteria was 11.04%. (6). Ganie MA et al study on Epidemiology, pathogenesis, genetics & management of PCOS in India 2019-Prevalence of PCOS in India ranges from 3.7 to 22.5 per cent depending on the criteria used for diagnosis (7).

**Chart 3:** Menstrual complaints is the most common complaint among the adolescent girls in the study group. Menstrual disturbances ranged from amenorrhoea to heavy menstrual bleed. Dysmenorrhoea is also included with category of menstrual disturbances. In this present study adolescent girls presented with dysmenorrhea was about 11%. A study conducted at higher secondary school in Gwalior district states that 37.96%, suffered from severe dysmenorrhea. The three most common symptoms present on the day before and first day of menstruation are tiredness and lethargy, depression and inability to concentrate in their work. (8). A cross sectional study conducted to identify the prevalence of dysmenorrhea in France states that the prevalence of dysmenorrhea was 92.9% with 8.9% describing severe pain which had significant Impact on quality of life. About 43.3% of school absences because of dysmenorrheal (9). KABUKU C et al study of primary dysmenorrhea states that (49.8%) adolescents having dysmenorrhoea that affects daily activities during menstruation. (10).

**Chart 4:** In this study group haemoglobin estimation was done to identify the incidence of anaemia. About 50% of girls have normal haemoglobin. 29.7% of girls suffering from mild anamia. 13.6% are suffering from moderate anaemia followed by 6.8% had severe anaemia (8/118). Adolescents girls with severe anaemia are admitted and treated with blood transfusion. In India the prevalence of anaemia among adolescent girls were 56% and this amounts to an average 64 million girls at any point in time.

**Chart 5:** In this study majority of the adolescent girls found to have abnormal uterine bleeding 39.8% followed by Polycystic Ovarian Syndrome about 20.3%. Adolescent girls with dysmenorrhoea was about 11% followed by ovarian tumors of about 9.3%.

In the other study,

- 1) A profile of adolescent girls with gynaecological problems, 2004, Kolkata.
- 2) Author-Goswami Sebanti, Dutta Rekha, Sengupta Sibani, the Incidence of AUB is 32.46%  
Elmaogullar et al study on Abnormal Uterine Bleeding in Adolescents (11): AUB accounts for half of the gynaecological problems in adolescents. Anovulatory cycles, due to immature hypothalamic-pituitary-ovarian axis, is the leading etiology of AUB and Archana d roth et al (2016) study on Gynecological Problems of Adolescent Girls Attending Outpatient Department at Tertiary Care Center with Evaluation of Cases of Puberty Menorrhagia Requiring Hospitalization (12)

Menstrual disturbances (84.88 %) were the commonest indication for OPD consultation among adolescent girls.

**Table 9:** Prevalance of AUB in Other Studies

Study Group	Percent
GOWSAMI et al, 2004	58.6%
kulkarni et al, 2011	11.16%
ARCHANA D ROTH et al, 2016	84.8%
Elmaogullar et al, 2018	50%
Present study	39.8%

**Chart 6:** In our study adolescent girls presented with primary and secondary amenorrhoea was 5.9%. The etiology of the most of the girls presented with amenorrhoea is due to delayed puberty followed by hypothyroidism. Reassurance was given for the girls presented with delayed puberty. Thyroid supplementation was given for girls presented with ameborrhoea due to hypothyroid.

**Chart 7:** Ovarian cyst and tumors was found in 13 girls (9.3%). Out of this number of girls with simple ovarian cyst was 7 (53.8%) and malignanat ovarian tumor was 6 (46.2%).

The American Cancer Society provides an overview occurrence of ovarian cancer based on data from nationwide population-based cancer registries and mortality data from the National Center for Health Statistics. They also reviewed the benefits of early detection. Torre et all conducted study Ovarian cancer statistics conclude that overall ovarian cancer incidence declined by 29% from 1985 (16.6 per 100, 000) to 2014 (11.8 per 100, 000), while mortality declined by 33%  
**CHART 8:** Among malignant ovarian tumours, germ cell tumour account for 50% of cases. **TABLE 7:** Out of 7 cases of simple ovarian cyst, 1 patient with torsion was treated by emergency laparotomy followed by detorsion and 6 patients without torsion was conservatively managed.

Table 8: For patients with serous cystadenoma ovarian cystectomy done and patient followed up. For germ cell tumour, staging laparotomy followed by fertility sparing cytoreductive surgery and chemotherapy given and for granulose cell tumour, cytoreductive surgery and chemotherapy given and all were followed up.

## 5. Summary

Maximum numbers adolescent girls presented with gynaecological problems was seen in the age group of 19 years and most of them are studying in college. Maximum number of adolescent girls in our study belong to socio economic class IV (Upper lower). Girls from urban population is maximum in this study group. Menstrual disturbances was the most common presenting complaint in the adolescent girls. Maximum number of adolescent girls in the study group belongs to normal body mass index followed by overweight. Abnormal uterine bleeding (39.8%) was the most common adolescent gynaecological problem in this study. Heavy flow was the most common menstrual irregularity in the adolescent girls in this study. 50% of adolescent girls in the study group are anaemic and 6.8% of adolescent girls with severe anaemia was treated with blood transfusion. 20.3% of adolescent girls was diagnosed as polycystic ovarian syndrome. Most of them are presented with complaint of infrequent cycles followed by heavy flow. Dysmenorrhea was the third most common gynaecological problem observed in the study. Vulvovaginitis was diagnosed in 5.9% of girls in this study. Most of them are married teenage girls. Delayed puberty was the most common cause for primary amenorrhoea. Hypothyroidism next most common cause for primary amenorrhoea. 9.3% of adolescent girl in the study was diagnosed with simple ovarian cyst and malignant ovarian tumor. Simple ovarian cyst more common than malignant ovarian tumor. Congenital anomalies was diagnosed in 2.5% of adolescent girls in the study. Genital tuberculosis was diagnosed in a girl who presented with infrequent cycles and abdominal pain.

## 6. Conclusion

Adolescence in girls has been recognized as a special phase in their life. It requires a specific approach and special attention. This period of transition makes them vulnerable to various problems. This period in a girl's life is the preparation for safe motherhood. These adolescent girls are the direct reproducer for the future generation. So, the health of these girls not only influences her own health but, also the health of future generation. Abnormal Uterine Bleeding most common adolescent gynaecological problem. Heavy menstrual bleeding severely affects the quality of life in adolescent girls. Effective management of heavy menstrual bleeding is mandatory to avoid anaemia in the adolescent girls. As adolescent girls are the direct reproducer of future generation it is utmost import to avoid anaemia in adolescent which in long run reduce the maternal and perinatal morbidity and mortality. A empathetic, friendly behaviour nonjudgemental attitude and special attention should be given to the adolescent population. This was achieved by ADOLESCENT FRIENDLY HEALTH CLINICS and various health programmes implemented like RASHTRIYA KISHOR SWASTHYA KARAYAKRAM for efficient management so that they can develop as healthy parents in future and become a responsible citizen of tomorrow.

## References

- [1] World Population Prospects: The 2012 Revision, United Nations Population Division)
- [2] Menic N, Jha S. Paediatric and adolescent gynaecology services in a tertiary teaching hospital. *J Obstet Gynaecol.*2021 Oct; 41 (7): 1087-1091. doi: 10.1080/01443615.2020.1821617. Epub 2020 Nov 25. PMID: 33236971
- [3] Fulghesu AM, Piras C, Dessì A, Succu C, Atzori L, Pintus R, Gentile C, Angioni S, Fanos V. Urinary Metabolites Reveal Hyperinsulinemia and Insulin Resistance in Polycystic Ovarian Syndrome (PCOS). *Metabolites.*2021 Jul 2; 11 (7): 437. doi: 10.3390/metabo11070437. PMID: 34357331; PMCID: PMC8307496
- [4] Ma R, Zou Y, Wang W, Zheng Q, Feng Y, Dong H, Tan Z, Zeng X, Zhao Y, Deng Y, Wang Y, Sun A. Obesity management in polycystic ovary syndrome: disparity in knowledge between obstetrician-gynecologists and reproductive endocrinologists in China. *BMC Endocr Disord.*2021 Sep 6; 21 (1): 182. doi: 10.1186/s12902-021-00848-w. PMID: 34488736; PMCID: PMC8422662
- [5] Joshi S, Chella H, Shrivastava D. Study of puberty menorrhagiain adolescent girls in rural set up. *J South Asian Feder Obstet Gynae.*2012; 4 (2): 110-2
- [6] Naz MSG, Tehrani FR, Majd HA, Ahmadi F, Ozgoli G, Fakari FR, Ghasemi V. The prevalence of polycystic ovary syndrome in adolescents: A systematic review and meta-analysis. *Int J Reprod Biomed.*2019 Sep 3; 17 (8): 533-542. doi: 10.18502/ijrm.v17i8.4818. PMID: 31583370; PMCID: PMC6745085.
- [7] Agarwal AK, Agarwal A. A study of dysmenorrhea during menstruation in adolescent girls. *Indian J Community Med.*2010; 35 (1): 159-164. doi: 10.4103/0970-0218.6258
- [8] Ganie MA, Vasudevan V, Wani IA, Baba MS, Arif T, Rashid A. Epidemiology, pathogenesis, genetics & management of polycystic ovary syndrome in India. *Indian J Med Res.*2019 Oct; 150 (4): 333-344. doi: 10.4103/ijmr. IJMR\_1937\_17. PMID: 31823915; PMCID: PMC6902362
- [9] Hadjou OK, Jouannin A, Lavoue V, Leveque J, Esvan M, Bidet M. Prevalence of dysmenorrhea in adolescents in France: Results of a large cross-sectional study. *J Gynecol Obstet Hum Reprod.*2021 Dec 30; 51 (3): 102302. doi: 10.1016/j. jogh.2021.102302. Epub ahead of print. PMID: 34973478
- [10] Kabukçu C, Kabukçu Başay B, Başay Ö. Primary dysmenorrhea in adolescents: Association with attention deficit hyperactivity disorder and psychological symptoms. *Taiwan J Obstet Gynecol.*2021 Mar; 60 (2): 311-317. doi: 10.1016/j. tjog.2021.01.033. PMID: 33678333
- [11] *J Clin Res Pediatr Endocrinol.*2018 Jul 31; 10 (3): 191-197. doi: 10.4274/jcrpe.0014. Epub 2018 Feb 28. PMID: 29537383; PMCID: PMC6083466.)
- [12] Rathod AD, Chavan RP, Pajai SP, Bhagat V, Thool P. Gynecological Problems of Adolescent Girls Attending Outpatient Department at Tertiary Care Center with Evaluation of Cases of Puberty Menorrhagia Requiring Hospitalization. *J Obstet Gynaecol India.*2016; 66 (Suppl 1): 400-406. doi: 10.1007/s13224-015-0770-1