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ORIGINAL ARTICLE

ANALYTIC STUDY OF ADOLESCENT GIRLS ATTENDING SULTANIA ZANANA HOSPITAL, BHOPAL

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ABSTRACT: AIM: Aim of our study was to analyze the reasons for which adolescent girls attend Sultania Zanana Hospital, Bhopal, which is a tertiary care Centre holding the Department of Obstetrics and Gynecology of Gandhi Medical College, Bhopal. **OBJECTIVE:** To know what percentage of patients belong to adolescent age group and there a sons they come, to SZH, Bhopal. **MATERIAL AND METHODS:** After prior approval of Review Board and Institute Ethics Committtee. This hospital based analytical study was carried out from 1st June '12 to 30th May' 13 in the Department of Obstetrics and Gynaecology, Gandhi Medical College and associated Sultania Zanana Hospital, Bhopal. All adolescent girls attending OPD, Antenatal Clinic, Family planning Clinic, and Integrated Counseling Testing Centre or admitted in Sultania Zanana Hospital, Bhopal in the age group of 10 – 19 years during the study duration was analysed. **RESULT:** Analysis revealed that during the study period, a total of 455 adolescent girls attended indoor of Sultania Zanana Hospital Bhopal which constitutes 2.7% of total indoor patient load. **CONCLUSION:** It was concluded from study that early age at menarche, early age at marriage, low education, and high incidence of genitourinary infection, lack of awareness about contraception and reproduction health issues, and non-consensual sex are major health issues of adolescent years. This is still an "unmet need" in reproductive and sexual health care of this age group. This unmet need varies among married and unmarried adolescents.
KEYWORDS: Adolescent Girls, Obs & Gyne problem in adolescent girls, SZH Bhopal.

INTRODUCTION: The word Adolescence is derived from, Latin 'Adolescere' meaning is "to grow up".[1] It is a transitional stage of physical and psychological development that generally occurs during the period from puberty to adulthood i.e. age of majority. The period of adolescence is mostly associated with teenage years[2,3,4] though its physical, psychological and cultural expression may begin earlier and later.

The adolescent girl's development and health is important, she constitutes about one-tenth of the total population. India is the second most populous country in the world with total population of over 1 billion. Adolescents form a large section of population, about 22.5 percent that is about 225 million.

This vulnerable phase of life, requires special attention by health care providers. With fast globalization the lifestyle of Indian girls is being influenced by western culture hence adolescent girl of India is at a higher risk. Being an Indian, she is the victim of gender inequality, poverty, illiteracy, evil customs like child marriage, reproductive hazards and psychological problems. So, we need to empower our adolescent girls to be able to enjoy a healthy life and also to be able to decide about their actions in positive direction.

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MATERIAL & METHODS: This hospital based analytical study entitled "Analytic Study of Adolescent Girls Attending Sultania Zanana Hospital, Bhopal'' was carried out from 1st June'12 to 30th May'13 in the Department of Obstetrics and Gynaecology, Gandhi Medical College and associated Sultania Zanana Hospital, Bhopal after prior approval of Review Board and Institute Ethics Committtee.

INCLUSION CRITERIA: All adolescent girls attending OPD, Antenatal Clinic, Family planning Clinic, Integrated Counseling Testing Centre or admitted in Sultania Zanana Hospital, Bhopal in the age group of 10 – 19 years during the study duration.

Antenatal cases were registered in the study on their initial visit and followed thereafter for any pregnancy or labor complication.

EXCLUSION CRITERIA: All girls attending Sultania Zanana Hospital, Bhopal of the age less than 10 years and more than 20 years during the study duration.

This analytical study, was done to know problems and reasons for which adolescent girls come to our hospital, to know the incidence of adolescent girls, married or otherwise attending Sultania Zanana Hospital, Bhopal and to analyze the gynecological problems they present with.

A proforma has been devised for study, keeping in the mind, that the variable reasons for attending hospital in our country, are somewhat different from the western world. A detailed history, physical examination and relevant investigation was done and findings noted in proforma.

RESULT AND ANALYSIS: During the study periods ie 1st June 2012 to 30st May 2013 a total of 1870 adolescent girls attended outdoor of Sultania Zanana Hospital Bhopal which constitutes 4.97% of total out door patient load. (Table-1)

During the study periods ie 1st June'12 to 30th May'13 a total of 455 adolescent girls attended indoor of Sultania Zanana Hospital Bhopal which constitutes 2.7% of total indoor patient load. (Table-2).

In this study out of 1870 adolescent girls, 1234 (66%) girls were for teenage pregnancy, 227 (1212%) for gynecological problem, 199 (10.63%) for vaginal infection/discharge, 2 (2.88%) for ovarian cyst, 54 (2.88%) for contraceptives, 4 (0.21%) for MTP, 150 (8.01%) for UTI. (Table-3)

Mean age of menarche in this study was 12.81 years. (Table-4) This study 2118 (90%) adolescents were 17-19 years old, 153(7%) were 14-16 years old and 54(3%) were 10- 13 years old. (Table-5)

Though the legal age for marriage in India is 18 years, out of total adolescents attending SZH, Bhopal, 1933 (83.00%) were married. (Table-6)

Out of total study group, maximum adolescents 980(42.15%) were illiterate, 249 (10.70%) had attained primary education, 685(29.46%) had attained middle school education, 336 (14.45%) had attained high school education, 75(3.25%) had attained higher secondary school education. (Table-7)

When the adolescent girls categorized according to religion, maximum 53% were Muslims and 47% were Hindus. (Table-8)

Out of total 37551 OPD patients, 1234 adolescents were antenatal. All of them belonged to 17-19 yrs age group. (Table-9)

Out of total teenage pregnancy 1232 were married and 2 were not married. 1225 were primigravida and 9 were multigravida.

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Out of total adolescents attending the OPD, 1201 were self-employed, and the rest 33 were unemployed. 584 were Hindus, and the rest 650 were Muslim.

Out of the total adolescents attending OPD, 184 belonged to rural area, and the rest 1050 belonged to urban area.

Of these most of them 96.30% attended <3 antenatal visits and rest of 3.7% had attended >3 antenatal visits. (Table-10)

Out of the total adolescents attending SZH, 148 of them had some pregnancy complication. Of these, 44 (29.72%) had PIH, 31(20.94%) had early pregnancy loss and the rest 17(11.48%) had anemia. (Table-11)

Of the total deliveries 10,650 in study period, 429 were <19 yrs of age, giving an incidence of 4.02% births in teenage mothers. Out of these, 154 of them had some labor complication. Of these, maximum i.e. 42(9.79%) had pretem labour pains, 28 had PROM, 27 had IUGR, 22 were post- date. (Table-12)

In this study out of 657 adolescent girls, 241(36.68%) had come for Menstrual problem, 199 (30.28%) for vaginal infection/discharge, 6 (0.91%) for ovarian cyst, 54 (8.21%) for contraceptives, 4 (0.60%) for MTP, 150 (22.83%) for UTI. (Table-13)

In this study 241 girls had come because of some menstrual problem. Out of these, 105 (43.35%) had dysmenorrhoea, 19 (7.88%) for puberty menorrhagia, 44 (18.25%) for menorrhagia, 35 (14.52%) for irregular heavy bleeding, 8 (3.31%) for primary amenorrhoea, 12 (4.91%) for secondary amenorrhoea.

As per the age distribution, 151 were 17-19 years old, 84 were 14-16 years old and 6 were 10- 13 years old.

Of these, 157 were married and 84 were unmarried. (Table-14)

In this study, 199 adolescents presented with vaginal discharge. Out of these, 185 belonged to 17-19 yrs, 12 belonged to 14-16 yrs and only 2 belonged to 10-13 yrs. 91 of them were married, and the rest 108 were unmarried. 118 were Muslim and the rest 81 were Hindu. Regarding the type of discharge, 98 (49%) had mixed infection, 86 (44%) had candidiasis and the rest 10 (5%) had cervicitis, there were 5 (2%) cases of PID. (Table-15)

Out of total 294 MTP done in SZH Bhopal, 4 (1.36%) were in adolescents, all were of 17-19 years age group, in which 2 adolescents were married and multigravida, 2 were unmarried and primi gravid. 2 were Hindus and 2 were Muslims. (Table-16)

Out of the total 54 Adolescent girls attending SZH Bhopal, Family Planning Clinic, for contraceptives, all were OC Pills users. In which 9 belonged to 10-13 years age group, 14 belonged to 14-16 years age group and 31 belonged to 17-19 years age group. 7 adolescents were married and 47 were unmarried, 26 were Hindu and 28 were Muslims. 47 adolescents were taking OC Pills for menstrual cycle regulation and only 7 were taken OC Pills for contraceptive purpose. (Table-17)

In this study, 18 adolescents had come to SZH in association with a medicolegal case. Of these, 9 belonged to 17-19 yrs, 7 belonged to 14-16 yrs and 2 belonged to 10-13 yrs. All of them were unmarried. 14 of them were Hindu and the rest 4 were Muslim. Regarding the type of sexual assault, 14 had penetrative sexual assault and the rest 4 had unwanted sexual touching. The sexual assault in majority i.e. 12 cases was by some known person (non-relative), 5 were by known person (Relative), and only 1 was by unknown person. (Table-18)

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DISCUSSION: This study included 1870 adolescent girls attending outdoor of Sultania Zanana Hospital Bhopal which constitutes 4.97% of total outdoor (OPD) patient load i.e 37551 and also 455 adolescents seeking admission in SZH Bhopal. Thus during this period 2325 adolescents sought health services at Sultania Zanana Hospital, Bhopal.

Of the 1870 OPD cases, 1234 (3.2%) adolescent girls were antenatal and 636(1.6%) adolescent girls attended for gynecological problems. Early marriage is common in India due to social and cultural pressures. After marriage the couples are coerced to prove their fertility and hence there is teenage pregnancy. Teenage pregnancy rates in India range from 8-14%.[5]Simliar incidence have been reported by Shruti S Dubashi[6] (4.5%), Ambedeker et al[7] (3.94%), Samer Rudra et al[8] 4.33%, Creatsas G 2002[9] 5.2%. UNICEF analysis shows the incidence of teenage pregnancy in USA to be 5.21% and United Kingdom to be 3.08%.

In the present study out of 2325 adolescent girls attending SZH, 2118(90%) adolescents were 17-19 years old, 153(7%) were 14-16 years old and 54(3%) were 10- 13 years old. Shruti S. Dubashi et al[6], in her study, found 25.34% of the study population to be less than 18 years.

Mean age of menarche in our study was 12.81 years, which is slightly less as compared to older studies. According to Tanner[10] age of menarche is 13.5 years. Singh N Mishra 2001 [11] reported the mean age of menarche are 13.55±0.12 years, Dipak K Adak 99[12] reported 12.84 years, Sachan B et al 2012[13] reported 12.84 years as mean age at menarche.

In Indian girls menarche is seen between 10 and 16 years with mean age of 13.2 years. Rebar in 1996 stated that girls who are skeletally advanced at the time of adolescence also menstruate early.[14]

Though the legal age for marriage in India is 18 years, in this study out of total adolescents attending SZH, Bhopal, 1933 (83.00%) were married. This variable is quite different for developed and developing countries because of different sociocultural conditions.

Though age at marriage is increasing; data from NFHS-3 (National Family Health Survey 3) shows that 27% young women and 3% young men in the age group of 15-19 year were married at the time of the survey (2005-06) and 30% women in the age group of 15-19 years have had a live birth by the age of 19 years (Source: NFHS 3). The proportion of females getting married before legal age of marriage has declined to 5.0 percent as against 12.0 percent reported in 2005 at National level. SRS 2010.

According to UNICEF 2011, 47% girls aged 15 to 19 years are married, Tan Ee Lyn 2009[15] reported 44.5%, A K Sharma et al [16] reported 43.3% girls are married before 18 years.

In this study, most adolescents, ie 980(42.15%) were illiterate, 249 (10.70%) had attained primary education, 685(29.46%) had attained middle school education, 336(14.45%) had attained high school education, 75(3.25%) had attained higher secondary school education. Poverty, lack of education of girls are leading causes of unemployment and early marriage. Among the 15-19 years old, 25% of adolescents in rural areas and 10% in urban areas are illiterate. Gender disparities persist in the education sector despite improved school enrolment rates. Girls account for less than 50% of enrolment at all stages of schooling. Rural girls are the most disadvantaged. The male–female differences grow with each level of education. NHFS 3.[17]

In developed countries most of the mother are educated. Better education postpones marriage hence postpones childbearing. While in developing countries due to low educational level teenage pregnancy rate is higher.

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In this study, when the adolescent girls were categorized according to religion, maximum 57% were Muslims and 47% were Hindus. This may reflect the fact that our hospital is in old city area were maximum population is Muslims or the fact that Muslim girls marry earlier.

In this study out of total 37551 OPD patients, 1234 adolescents were pregnant. The incidence of teenage pregnancy in Sultania Zanana Hospital is 3.2%. Teenage pregnancy is fairly common in India, its rates ranges from 8-14%.[18] Teenage pregnancy is a common public and social health problem with adverse medical consequences. Incidence of teenage pregnancy shows marked variation in developed and developing countries. In India incidence of teenage pregnancy varies from 3.2 to 18.6%.

Similiar incidence have been reported by Shruti S Dubashi[6] (4.5%), Ambedeker et al[7] (3.94%), Samer Rudra et al [8] 4.33%, Creatsas G 2002 [9] 5.2% which is very similar to the present study. UNICEF analysis shows the incidence of teenage pregnancy in USA to be 5.21% and United Kingdom to be 3.08%.

In this study out of 657 adolescent girls, attending SZH Bhopal for gynecological reasons**,** 241 (36.68%) had come for menstrual problems. Out of these, 105 (43.35%) had come for dysmenorrhoea, 19 (7.88%) for puberty menorrhagia, 44 (18.25%) for menorrhagia, 35 (14.52%) for irregular heavy bleeding, 8(3.31%) for primary amenorrhoea (Imperforate hymen 2, MRKH 2), 12(4.91%) for secondary amenorrhoea. Some girls had problems, dysmenorrhea and menstrual cycle upsets.

As per the age distribution, 151 were 17-19 years old, 84 were 14-16 years old and 6 were 10- 13 years old. Of these, 157 were married and 84 were unmarried.

Dambhare DG '2012[19] reported that Abnormal cycle length was common and affected 30.48% and the majority 56.15% experienced dysmenorrhoea and 56.16% percent had premenstrual syndrome. Sharma P et al'2008[20] reported that dysmenorrhea (67.2%) was the commonest problem and (63.1%) had one or the other symptoms of Pre-menstrual syndrome. Thakre SB et al '2012[21] reported that dysmenorrhoea is the most common gynaeocological compliant of adolescent girls with incidence of 60%. Majority of the girls (71.83%) had at least one problem related to menstrual cycles. Thirza Hillen' 1999[22] reported that the reported prevalence of dysmenorrhea among adolescent girls was 80%; 53% of those girls with dysmenorrhea reported that it limited their activities.

Beena Sachan, 2012 [23]reported 73.7% (479/650) girls had dysmenorrhea, with 74.3% (323/435) girls in urban schools and 72.6% (156/215) girls in rural schools. Dharampal G. et al 2012[24] reported that the majority 56.15% experienced dysmenorrhoea and 56.16% had premenstrual syndrome. Roychowdhury, et al 2008[25] reported that incidence of puberty menorrhagia was 9.6% in their study, 61.6% had anovulatory dysfunctional uterine bleeding(DUB), 15.4% had hematological causes.

Sr. Dr. Christina John 2007[26] reported that 70.1% of school girls had menstrual problems, the commonst being dysmenorrhea and premenstrual syndromes (88.8)%. Problems like menorrhagia, hypomenorrhea, polymenorrhea, oligomenorrhea and menometrrhagia contributed to 11.2%.

Cleckner Smith' 97[27] reported that Premenstrual symptoms as being moderate or greater in severity were found to be quite prevalent (88%) in this sample of adolescents.

In this study 6(0.91%) adolescents had come for ovarian tumor. In this study out of 657 adolescent girls, 199 adolescents had come to SZH for vaginal discharge. Out of these, 185 belonged to 17-19 yrs, 12 belonged to 14-16 yrs and only 2 belonged to 10-13 yrs. 91 of them were married,

and the rest 108 were unmarried. 118 were Muslim and the rest 81 were Hindu. Regarding the type of discharge, 98 (49%) had mixed infection, 86 (44%) had candidiasis and the rest 10 (5%) had cervicitis, there were 5(2%) cases of PID.

Sexually transmitted diseases (STDs) are a common problem in adolescents. Chlamydia trachomatis is the most prevalent bacterial STD in the United States, with the highest rates reported among adolescents.

Ranjan Kumar Prusty et al 2013,[28] reported that about 15 percent of adolescent women reported having any symptoms of RTI/STI. Sangeetha S. Balamurugan 2012[29]The prevalence of RTIs among the reproductive age group women was 40.4% based on their symptoms, with majority having abnormal vaginal discharge. The laboratory test revealed a prevalence of 34.3% with majority having Candidiasis.

Out of the total 54 Adolescent girls attending SZH Bhopal for family planning –contraception, all were OC Pills users in which 9 belonged to 10-13 years age group, 14 belonged to 14-16 years age group and 31 belonged to 17-19 years age group. 7 adolescents were married and 47 were unmarried, 2 were multigravida, 26 were Hindu and 28 were Muslims. 47 adolescents were taking OC Pills for menstrual cycle regulation and only 7 were taken OC Pills for contraception.

Tan Ee Lyn 2009[79] reported that of those, who were married before they reached the legal age of 18, all reported that they used no contraception before they had their first child, Shipra Gupta et al 2001[30] reported 5% of these women knew regarding emergency contraceptives indicating need for wider IEC. Sonia Puri et al 2007[31] reported that maximum awareness was regarding oral contraceptive pills 239(47.1%). Only 74 (7.3%) had knowledge about emergency contraceptive pills (ECP). Of them, 10 (14.7%) students knew the correct time for use of ECP, and the side effects of ECP were known to 48 (88.9%) respondents.

Out of total 294 MTP done in SZH Bhopal, 4 (1.36%) were adolescents, all were of 17-19 years age group, in which 2 adolescents were married and multigravida, 2 were unmarried and primi gravid. 2 were Hindus and 2 were Muslims. Unmarried girls presented late ie in 2nd trimester.

Shipra Gupta et al 2001[30] reported reasons for undergoing MTP by these women were “family size completed” in 63%, “previous baby too young” in 20%, “economic reason” in 18%, and “contraceptive failure” in 9% and 29% were evasive for the reply on being asked the reason for undergoing MTP.

Sonia Trikha2003[32] reported in 83 adolescent girls, out of which 75 were unmarried. 75(90%) out of 83 adolescent girls undergoing abortions included in the study were unmarried. More than 50% of unmarried girls had a friend or fiancee as their sex partner. 42% sought abortion in the second trimester of pregnancy.

In this study, 18 adolescents had come to SZH in association with a medicolegal case. Of these, 9 belonged to 17-19 yrs, 7 belonged to 14-16 yrs and 2 belonged to 10-13 yrs. All of them were unmarred. 13 of them were Hindu and the rest 5 were Muslim. Regarding the type of sexual assault, 14 had penetrative sexual assault and the rest 4 had unwanted sexual touching. The sexual assault in majority i.e. 12 cases was by some known person (non-relative), 5 were by known person (relative), and only 1 was by unknown person. India is a one of the most dangerous places in the world for women to live as evidenced by the staggering rates of various types of abuse including hitting, kicking, choking, hair pulling, burning. Dowry death, when a wife dies from burn, bodily harm or any other unnatural circumstances at the hands of her husband or other relatives are also common.

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Satin' 92[33] in his study found that life time prevalence of forced sexual contact was 5% compare with non-victims. Rape victims had a higher incidence of sexually transmitted disease, urinary tract infection, vaginitis, drug abuse, and multiple hospitalizations.

CONCLUSION: It was concluded from study that early age at menarche, early age at marriage, low education, high incidence of genitourinary infection, lack of awareness about contraception and reproduction health issues, and non-consensual sex are major health issues of adolescent years. This is still an "unmet need" in reproductive and sexual health care of this age group. This unmet need varies among married and unmarried adolescents.

It was also concluded from present study that socio cultural pressures lead to a high incidence of marriage in late teenagers and subsequent pregnancy. There is a high incidence of the preterm labour, hypertensive disorders of pregnancy; PROM, IUGR, early pregnancy loss, and anaemia in teenage pregnancy and health services must gear to ensure adequate antenatal care, institutional deliveries and postpartum support, specially to this age group. Education and empowerment will help delay marriage and childbirth.

OPD attendance: SZH Bhopal			
S. No.		**No. of Cases**	**Percentage**
1	10-19 YRS OPD attendance	1870	4.97
2	Total OPD attendance	37551	

TABLE 1: INCDENCE OF ADOLESCENT GIRLS ATTENDING OPD SZH BHOPAL

During the study periods ie 1st June2012 to 30st May 2013 a total of 1870 adolescent girls attended outdoor of Sultania Zanana Hospital Bhopal which constitutes 4.97% of total out door patient load.

IPD ATTENDANCE			
S.No.	**IPD attendance**	**No.of Cases**	**Percentage**
1	Total IPD	16484	
2	10-19 yrs IPD attendance	455	2.7%

TABLE 2: INCIDENCE OF ADOLESCENT GIRLS ATTENDING IPD SZH BHOPAL

During the study periods ie 1st June'12 to 30th May'13 a total of 455 adolescent girls attended indoor of Sultania Zanana Hospital Bhopal which constitutes 2.7% of total indoor patient load.

S. No.	REASON FOR ADOLESCENTS ATTENDING OPD	No. of Cases	Percentage
1	Teenage Pregnancy	1234	66
2	Menstrual Problem	227	12.12
3	Vaginal discharge/ infection	199	10.63
4	Ovarian cyst	2	0.10
5	For contraceptives	54	2.88
6	For MTP*	4	0.21
7	Urinary Tract Infection	150	8.01
	Total*	**1872**	**100**

TABLE 3: REASON FOR ADOLESCENTS ATTENDING OPD SZH

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In this study out of 1870 adolescent girls, 1234 (66%) girls were for teenage pregnancy, 227 (1212%) for gynecological problem, 199(10.63%) for vaginal infection/discharge, 2(2.88%) for ovarian cyst, 54(2.88%) for contraceptives, 4(0.21%) for MTP, 150(8.01%) for UTI.

*MTP 2 cases were direct indoor admission.

S. No.	Age at Menarche	No. of Cases	Percentage
1	<10 yrs	0	
2	10-11 yrs	45	2.4
3	11-12 yrs	870	46.52
4	12-13 yrs	826	44.17
5	> 13 yrs	98	5.20
6	>16 yrs Not Attained Menarche	6	0.3
	Total*	**1852**	**100**

TABLE 4: AGE AT MENARCHE OF ADOLESCENTS ATTENDING OPD SZH BHOPAL

Mean age of menarche in this study was 12.81 years.

*18 adolescent girls did not known their age of menarche.

S. No.	Age at Presentation	No. of Cases	Percentage
1	10-13 Yrs	54	3.00
2	14-16 yrs	153	7.00
3	17-19 yrs	2118	90.00
	Total	**2325**	**100**

TABLE 5: AGE AT PRESENTATION OF ADOLESCENTS ATTENDING OPD + IPD SZH BHOPAL

In this study 2118(90%) adolescents were 17-19 years old, 153(7%) were 14-16 years old and 54(3%) were 10- 13 years old.

S. No.	Marital Status	No. of Cases	Percentage
1	Married	1933	83.00
2	Unmarried	392	17.00
	Total	**2325**	**100**

TABLE 6: MARITAL STATUS OF ADOLESCENTS ATTENDING OPD + IPD SZH BHOPAL

Though the legal age for marriage in India is 18 years, out of total adolescents attending SZH, Bhopal, 1933 (83.00%) were married.

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S. No.	Education Status	No. of Cases	Percentage
1	Illiterate	980	42.15
2	Primary School	249	10.70
3	Middle School	685	29.46
4	High School	336	14.45
5	Higher Secondary	75	3.25
	Total	**2325**	**100**

TABLE 7: EDUCATION STATUS OF ADOLESCENTS ATTENDING OPD + IPD SZH BHOPAL

Out of total study group, maximum adolescents 980(42.15%) were illiterate,249 (10.70%) had attained primary education, 685 (29.46%) had attained middle school education, 336 (14.45%) had attained high school education, 75 (3.25%) had attained higher secondary school education.

S. No.	Religion Status	No. of Cases	Percentage
1	Hindu	1106	47
2	Muslim	1219	53
	Total	**2325**	**100**

TABLE 8: RELIGION OF ADOLESCENTS ATTENDING OPD + IPD SZH BHOPAL

When the adolescent girls categorized according to religion, maximum 53% were Muslims and 47% were Hindus.

S. No.	Teenage Pregnancy	No. of Cases	Percentage
1	10-13 yrs	0	
2	14-16 yrs	0	
3	17-19 yrs	1234	100
	Total	**1234**	**100**

TABLE 9: ADOLESCENTS ATTENDING ANTENATAL CLINIC SZH BHOPAL

Out of total 37551 OPD patients, 1234 adolescents were antenatal. All of them belonged to 17-19 yrs age group.

S. No.	Marital Status	No. of Cases	Percentage
1	Married	1232	99.80
2	Unmarried	2	0.20
	Total	**1234**	**100**
S. No.	**Parity**	**No. of Cases**	**Percentage**
1	Primi	1225	99.30
2	Multi Gravida	9	0.70
	Total	**1234**	**100**

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S. No.	Socio Economic Status	No. of Cases	Percentage
1	Self Employed	1201	97.48%
2	Unemployed	33	2.67%
	Total	**1234**	
S. No.	**Religion**	**No. of Cases**	**Percentage**
1	Hindu	584	47.32
2	Muslim	650	52.67
	Total	**1234**	
S. No.	**Residence**	**No. of Cases**	**Percentage**
1	Rural	184	17.52
2	Urban	1050	85.08
	Total	**1234**	
S. No.	**Antenatal visits**	**No. of Cases**	**Percentage**
1	>3	46	03.70
2	<3	1188	96.30
	Total	**1234**	

TABLE 10: ADOLESCENTS ATTENDING ANC, SZH BHOPAL: DEMOGRAPHIC STATUS

Out of total teenage pregnancy 1232 were married and 2 were not married. 1225 were primigravida and 9 were multigravida.

Out of total adolescents attending the OPD, 1201 were self-employed, and the rest 33 were unemployed. 584 were Hindus, and the rest 650 were Muslim.

Out of the total adolescents attending OPD, 184 belonged to rural area, and the rest 1050 belonged to urban area.

Of these most of them 96.30% attended <3 antenatal visits and rest of 3.7% had attended >3 antenatal visits.

S. No.	Pregnancy Complication	No. of Cases	Percentage
1	Spontaneous abortion	31	20.94
2	Ectopic pregnancy	1	0.67
3.	Vesicular mole	1	0.67
4	Mod. Anemia	17	11.48
5	PIH	44	29.72
6	Rh negative	5	3.37
7	With malaria	4	2.7
8	With UTI	19	12.83
9	With URI	21	14.18
10	With jaundice	4	2.7
11	HIV positive	1	0.67
	Total	**148**	**100**

TABLE 11: ADOLESCENTS ATTENDING SZH BHOPAL: PREGNANCY COMPLICATION

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Out of the total adolescents attending SZH, 148 of them had some pregnancy complication. Of these, 44 (29.72%) had PIH, 31(20.94%) had early pregnancy loss and the rest 17(11.48%) had anemia.

S. No.	Labor Complication	No. of Cases	Percentage
	Normal labor	**275**	**64.1**
1	Preterm	42	9.79
2	PROM	28	6.5
3	IUGR	27	6.5
4	Post Date	22	5.12
5	Fetal Distress	14	3.26
6	Breech Presentation	1	0.23
7	IUFD	5	1.16
8	Oligohydramnios	4	0.93
9	Previous 1 LSCS	3	0.69
10	Obstructed Labour	1	0.23
11	Retained placenta	1	0.23
12	PPH	4	0.93
13	Congenital anomalies	2	0.46
	Total	**429**	

TABLE 12: ADOLESCENTS ATTENDING SZH BHOPAL: LABOR AND ITS COMPLICATION

Of the total deliveries 10,650 in study period, 429 were <19 yrs of age, giving an incidence of 4.02% births in teenage mothers. Out of these, 154 of them had some labor complication. Of these, maximum i.e. 42(9.79%) had preterm labour pains, 28 had PROM, 27 had IUGR, 22 were post-date.

S. No.	Type of Problem	No. of Cases	Percentage
1	Menstrual Problems	241	36.68
2	Vaginal Infection / Discharge	199	30.28
3	UTI	150	22.83
4	Ovarian Cyst	6	0.91
5	For Contraceptive	54	8.21
6	MTP	4	0.60
7	Bartholin cyst	1	0.15
8	Mesenteric cyst	1	0.15
9	Primary infertility	1	0.15
	Total	**657**	**100**

TABLE 13: GYNECOLOGICAL REASONS FOR ADOLESCENTS ATTENDING SZH BHOPAL

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In this study out of 657 adolescent girls, 241(36.68%) had come for Menstrual problem, 199(30.28%) for vaginal infection/discharge, 6(0.91%)for ovarian cyst, 54(8.21%) for contraceptives, 4(0.60%) for MTP, 150(22.83%) for UTI.

MENSTRUAL PROBLEM			
S. No.	**Menstrual Problem**	**No. of Cases**	**Percentage**
1	Dysmenorrhoea	105	43.35
2	Puberty Menorrhagia	19	7.88
3	Menorrhagia	44	18.25
4	Metrorrhagia	35	14.52
5	Oligomenorrhea	18	7.46
6	Primary amenorrhoea (Imperforate hymen 2, MRKH 2)	8	3.31
7	Secondary Amenorrhoea	12	4.91
	Total*	**241**	**100**
Age Distribution			
S. No.	**Age of Presentation**	**No. of Cases**	**Percentage**
1	10-13 Yrs	6	2.48
2	14-16 Yrs	84	34.85
3	17-19 Yrs	151	62.65
Marital Status			
S. No.	**Marital Status**	**No. of Cases**	**Percentage**
1	Married	157	65
2	Unmarried	84	35

TABLE 14: ADOLESCENTS ATTENDING SZH BHOPAL: MENSTRUAL PROBLEMS

*Some girls had problems, dysmenorrhea and menstrual cycle upsets.

In this study 241 girls had come because of some menstrual problem. Out of these, 105(43.35%) had dysmenorrhoea, 19(7.88%) for puberty menorrhagia, 44(18.25%) for menorrhagia, 35(14.52%) for irregular heavy bleeding, 8(3.31%) for primary amenorrhoea, 12(4.91%) for secondary amenorrhoea.

As per the age distribution, 151 were 17-19 years old, 84 were 14-16 years old and 6 were 10- 13 years old.

Of these, 157 were married and 84 were unmarried.

Age at Presentation			
S. No.	**Age at presentation**	**No.of Cases**	**Percentage**
1	10-13 Yrs	2	1.00
2	14-16 Yrs	12	6.00
3	17-19 Yrs	185	93.00
	Total	**199**	

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Marital Status			
S.No.	**Marital Status**	**No.of Cases**	**Percentage**
1	Married	91	46
2	Unmarried	108	54
	Total	199	
Religion			
S.No.	**Religion**	**No.of Cases**	**Percentage**
1	Hindu	81	41
2	Muslim	118	59
Type of Discharge			
S.No.	**Type of Discharge**	**No.of Cases**	**Percentage**
1	Mixed vaginitis	98	49
2	Candidiasis	86	44
3	Cervicitis	10	5
4	PID	5	2

TABLE 15: ADOLESCENTS ATTENDING SZH BHOPAL FOR VAGINAL DISCHARGE

In this study, 199 adolescents presented with vaginal discharge. Out of these, 185 belonged to 17-19 yrs, 12 belonged to 14-16 yrs and only 2 belonged to 10-13 yrs. 91 of them were married, and the rest 108 were unmarried. 118 were Muslim and the rest 81 were Hindu. Regarding the type of discharge, 98(49%) had mixed infection, 86(44%) had candidiasis and the rest 10(5%) had cervicitis, there were 5(2%) cases of PID.

MTP Incidence in SZH Bhopal			
S. No.	**MTP**	**No. of Cases**	**Percentage**
1	MTP (Adolescents)	4	1.36
2	Total MTP	294	
Age Distribution			
S. No.	**Age at presentation**	**No. of Cases**	**Percentage**
1	10-13 Yrs	0	0
2	14-16 Yrs	0	0
3	17-19 Yrs	4	100
Marital Status			
S. No.	**Marital Status**	**No. of Cases**	**Percentage**
1	Married	2	50
2	Unmarried	2	50
Parity Status			
S. No.	**Marital Status**	**No. of Cases**	**Percentage**
1	Primigravida	2	50
2	Multigravida	2	50

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Religion			
S. No.	**Religion**	**No. of Cases**	**Percentage**
1	Hindu	2	50
2	Muslim	2	50

TABLE 16: ADOLESCENTS ATTENDING SZH BHOPAL FOR FAMILY PLANNING MTP Total = 04

Out of total 294 MTP done in SZH Bhopal, 4 (1.36%) were in adolescents, all were of 17-19 years age group, in which 2 adolescents were married and multigravida, 2 were unmarried and primi gravid. 2 were Hindus and 2 were Muslims.

Contraceptive Use in SZH Bhopal			
S. No.	**Name of Contraception**	**No. of Cases**	**Percentage**
1	Condom	0	
2	OC Pills	54	100
3	IUCD	0	
4	Others	0	
Age Distribution			
S. No.	**Age at presentation**	**No. of Cases**	**Percentage**
1	10-13 Yrs	9	17.00
2	14-16 Yrs	14	26.00
3	17-19 Yrs	31	57.00
Marital Status			
S. No.	**Marital Status**	**No. of Cases**	**Percentage**
1	Married	7	13
2	Unmarried	47	87
Religion			
S. No.	**Religion**	**No. of Cases**	**Percentage**
1	Hindu	26	48
2	Muslim	28	52
Indication			
S. No.	**Indication**	**No. of Cases**	**Percentage**
1	For Contraceptive	7	7
2	For Menstrual Cycle Regulation	47	87

TABLE 17: ADOLESCENTS ATTENDING SZH BHOPAL FOR FAMILY PLANNING - CONTRACEPTION

Out of the total 54 Adolescent girls attending SZH Bhopal, Family Planning Clinic, for contraceptives, all were OC Pills users. In which 9 belonged to 10-13 years age group, 14 belonged to 14-16 years age group and 31 belonged to 17-19 years age group. 7 adolescents were married and 47 were unmarried, 26 were Hindu and 28 were Muslims. 47 adolescents were taking OC Pills for menstrual cycle regulation and only 7 were taken OC Pills for contraceptive purpose.

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Age at Presentation			
S. No.	**Age at presentation**	**No of Cases**	**Percentage**
1	10-13 Yrs	2	11
2	14-16 Yrs	7	39
3	17-19 Yrs	9	50
Marital Status			
S. No.	**Marital Status**	**No.of Cases**	**Percentage**
1	Married	0	
2	Unmarried	18	100
Parity Status			
S. No.	**Marital Status**	**No. of Cases**	**Percentage**
1	Primigravida	0	
2	Multigravida	0	
Religion			
S. No.	**Religion**	**No. of Cases**	**Percentage**
1	Hindu	14	78
2	Muslim	4	22
Type of assault			
S. No.	**Type of assault**	**No. of Cases**	**Percentage**
1	Sexual intercourse	14	78
2	Unwanted sexual touching	4	22
Assault by			
S. No.	**Assault by**	**No. of Cases**	**Percentage**
1	Unknown Person	1	5.55
2	Known Person (Relative)	5	27.77
3	Known Person (Non-Relative)	12	66.66
	Total	**18**	

TABLE 18: ADOLESCENTS ATTENDING SZH
BHOPAL: MEDICOLEGAL CASE TOTAL = 18

In this study, 18 adolescents had come to SZH in association with a medicolegal case. Of these, 9 belonged to 17-19 yrs, 7 belonged to 14-16 yrs and 2 belonged to 10-13 yrs. All of them were unmarried. 14 of them were Hindu and the rest 4 were Muslim. Regarding the type of sexual assault, 14 had penetrative sexual assault and the rest 4 had unwanted sexual touching. The sexual assault in majority i.e. 12 cases was by some known person (non-relative), 5 were by known person (relative), and only 1 was by unknown person.

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