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RESEARCH ARTICLE

PREVALENCE OF VARIOUS MENSTRUAL DISORDERS AMONG FEMALES OF REPRODUCTIVE AGE-GROUP OF KASHMIR: A CROSS-SECTIONAL STUDY.

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 menarche.

Abstract

Topic:- Prevalence of various menstrual disorders among females in the reproductive age-group of Kashmir.

Background:- The onset of menstruation is part of the maturation process. Menstrual health plays a key role in women's sexual and reproductive life. However, variability in menstrual cycle characteristics and menstrual disorders are common. Changes in the menstrual pattern of woman may affect her physical, psychological and social well-being and may result in work-related problems. Menstrual disorders create great anxiety among the females

Aim:- This study was under taken with aim to estimate burden of various menstrual disorders among females in the reproductive age-group

Study Design: - Cross-sectional study

Methodology: - Females in the reproductive age group of Block Hazratbal were interviewed as per pretested questionnaire about menstruation and menstrual disorders.

Results:- Total 810 females participated in the study. The mean age of the females was 26.56 (\pm 8.65) years. Majority of females were literate and studied up to 10th standard (31%), lived in nuclear families (59%) & were unmarried (59%). the females belonged to the upper lower middle class families(43%) and were students(32%).The mean age of menarche in our population was 13.05 \pm 1.23 years. In this study 10 % females had irregular periods. The mean duration of bleeding was 4.89 \pm 1.45 days. Dysmenorrhea was most common menstrual disorder present in 51% females followed by PMS (48%) and menorrhagia (24%).

Conclusion:- Menstrual problems are common in Kashmiri females. Menstrual morbidities constitute an important unmet area of reproductive health services for women and attention should be given to inclusion of diagnosis and treatment of menstrual complaints within reproductive health care programs.

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Menstruation is a normal physiological process that begins at adolescence and continues till menopause (Ahamed et al. 2015). The onset of menstruation is menarche and is a part of maturation process, besides being one of the significant milestones in women's health (Godbole et al. 2013)(Kumar et al. 2013).

Although, a natural physiological process, there is huge variability in menstrual cycle and characteristics and menstrual disorders are common (Dambhare et al. 2011). Menstrual problems are said to be the major gynecological problems especially among adolescent girls (Ahamed et al. 2015). Menstrual health plays an important role in women's sexual and reproductive life (Godbole et al. 2013). Menstrual problems can be the warning signal of some underlying disease (Abdelmoty et al. 2015). Changes in menstrual pattern may affect her physical, psychological, social wellbeing besides creating great anxiety (Ahamed et al. 2015) -(Shiferaw et al. 2014). It is an important component of overall health yet is ignored and given least priority.

Although, many studies have been done on menstrual disorders but the focus is mostly on adolescent age-group. Moreover, these studies are either hospital based or are mostly school based studies. So this community based study was done to study the menstrual pattern and estimate the burden of various menstrual disorders among the females of Kashmir focusing on reproductive age as a whole.

Methods and methodology:-

A cross sectional study in the community was done from April 2014 – March 2015 in the Block Hazratbal, which is field practice area of Government Medical College, Srinagar. The study was done after obtaining the clearance from the institutional ethical committee. A total of 810 females in the reproductive age group (15-45 years) were selected for study by two stage random sampling from 16 health centers i.e. 12 sub centers and 4 PHCs of Block. The sample was divided proportionately among these 16 health centers of Block.

Then one village from each sub center and each PHC respectively was chosen by simple random sampling using lottery method for the purpose of this study. In each selected village house to house survey was done by going to the center of the selected village/Mohala and then selecting a random house as a starting point for the study. The sample for each village was calculated as per PPS sampling. All females in reproductive age group (15-45 years) in the household were explained the objectives of the study. Pregnant females, females who had delivered recently or during past one year, females who were using any hormonal contraceptive at present or during past 6 months and females who have not attained menarche or attained menarche during past 2 years were excluded.

A proper written informed consent was taken from those females who agreed to participate in the study. A pre-tested, semi-structured questionnaire was used to interview the women and obtain information regarding social demographic variables, menstrual history and the menstrual disorders. At least history of past three consecutive menstrual cycles was obtained from females. The socio-economic status of the females was obtained using modified Kuppuswamy scale (2014)(Oberoi 2015).

Result:-**Table 1: Socio- Demographic Characteristics Of The Females.**

Characteristic	Frequency(N)	Percentage
Age group*(years)		
15 – 19	225	27.78%
20 – 24	173	21.36%
25 – 29	128	15.80%
30 – 34	91	11.23%
35 – 39	104	12.84%
≥40	89	10.99%
*Mean age = 26.56 years (± 8.65)		
Educational status		
Illiterate	234	28.89%
Primary	37	4.57%
Middle	74	9.14%
High school	251	30.99%
Higher secondary	87	10.74%
Graduate	84	10.37%
Post graduate or high	43	5.31%
Marital status		
Unmarried	479	59.14%
Ever Married	330	40.86%
Family		
Nuclear	480	59.26%
Joint	330	40.74%
Occupation		
Student	261	32.22%
Home Maker	254	31.35%
Unemployed	186	22.96%
Handicraft workers	48	5.92%
Teacher	20	2.47%
Tailor	16	1.97%
Others*	25	3.08%
Socioeconomic class		
Upper lower class	243	29.96%
Lower middle class	344	42.42%
Upper middle class	216	26.63%
Upper class	8	0.99%
Total	811	100.00%

Table 2:- Menstrual Characteristics and Disorders of Females.

Characteristics	Frequency (N)	Percentage
Age at Menarche		
8	2	0.25%
9	2	0.25%
10	14	1.73%
11	33	4.07%
12	234	28.89%
13	234	28.89%
14	189	23.33%
15	90	11.11%
16	12	1.48%
Total	810	100.00%
mean age of menarche =13.05 years ± 1.23		

Pattern of cycle		
Regular	727	89.75%
Irregular	83	10.25%
Cycle length		
Less than 21	15	1.85%
21-35	723	89.25%
35 – 90	70	8.64%
>90	2	0.25%
Duration of menstrual bleeding		
2	4	0.49%
3	150	18.52%
4	167	20.62%
5	264	32.59%
6	125	15.43%
7	52	6.42%
8	35	4.32%
9	7	0.86%
10	6	0.74%
Mean duration : 4.89 ± 1.45 days		
Dysmenorrhea present		
Yes	415	51.24%
Menorrhagia		
Yes	191	24%
Premenstrual syndrome		
Yes	390	48.14%
Premenstrual symptoms		
Feeling of sickness	113	28.97%
Abdominal bloating	105	26.92%
Nausea / vomiting	57	14.61%
General Weakness	26	6.66%
Headache	65	16.66%
Change in mood	75	19.23%
Leg Pains / Cramps	21	5.38%
Breast Discomfort /heaviness	88	22.56%

Figure 1: frequency of regular and irregular periods

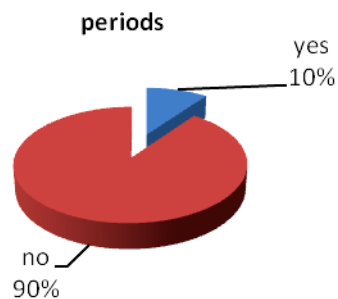
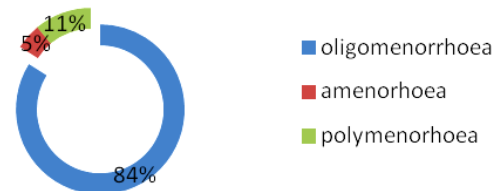


Figure 2: Oligomenorrhoea, polymenorrhoea and amenorrhoea among females with irregular periods



Results:-

Total 810 females participated in the study. The mean age of the females was $26.56 (\pm 8.65)$ years. Majority of females were literate and studied up to 10th standard (31%), lived in nuclear families (59%) & were unmarried (59%). As per Kupuswamy scale majority of the females belonged to the upper lower middle class families (43%) and were students (32%). (table 1)

As shown in table 2 the 81% (657) of females had attained menarche at the age of 12 – 14 years while as 6% (51) of girls had attained menarche before age of 12 (early menarche) and 13% (102) females had attained menarche 14 years (late menarche). the mean age of menarche in our population was 13.05 ± 1.23 years

In this study about 90% (727) of females had regular periods while 10 % (83) females had irregular periods. The length of menstrual cycle was normal i.e., 21-35 days in 89% (723) females while as 2% (15) females had polymenorrhoea i.e. menstrual interval of less than 21 days, 9% (70) females had oligomenorrhoea i.e. menstrual cycle interval greater than 35 days to 90 days and less than 1% (2) females had amenorrhoea i.e. menstrual interval greater than 90 days.

Among females with irregular periods, 80% of the females present with oligomenorrhoea, followed by polymenorrhoea in 11% and amenorrhoea in 9%. (Figure 1 and figure 2).

In our population 19% (154) of females had bleeding duration less than 4 days and 6% (48) females had bleeding duration of greater than 7 days while it was between 4 to 7 days in 75 % (608) females. The mean duration of bleeding was 4.89 ± 1.45 days (table 2)

Dysmenorrhoea was present in 51 % (415) females and menorrhagia was present in 24 % (191) of females. In our population premenstrual symptoms were reported by 48 % (390) females and the most common premenstrual symptom was feeling of sickness 29 % (113) followed by abdominal bloating 27 % (105) as shown in table 2.

Discussion:-

Menstruation though a normal physiological process is associated with disorders which not only effect the individual but the family. In our study 810 females in the reproductive age group were studied.

Various factors including physiological, racial, regional effect menarche (*). The mean age of menarche was 13.05 ± 1.23 years in our population. This age is similar to the age of menarche reported by most of the Indian studies (Patel et al. 2006) (Sharma et al. 2006). However, some Indian studies have reported mean of 12.43 years (Khatoon et al. 2011) and 14.3 years. In countries outside India also there is a vast difference in the age of menarche. It was found to be 11.7 years in Pakistan (Ahmed et al. 2016), 12.3 years in Malaysia (Lee et al. 2006), 12.49 years in Egypt (Abdelmoty et al. 2015), 13.2 years in Lebanese females (Karout et al. 2012) and 14.7 ± 1.6 years in Ethiopia (Shiferaw et al. 2014). This shows that mean age of menarche varies from population to population.

In present study about 90% of females had regular cycles while as irregular cycles were reported by about 10% of females. Similar results were reported by various Indian studies (Harlow and Campbell 2004). Among these 80% of the females had oligomenorrhoea, followed by polymenorrhoea in 11% and amenorrhoea in 9%. The irregularity in menstrual periods can be due to changes in lifestyle, stress, hormonal imbalance and needs to be evaluated at an earliest as it can be a sign of a serious problem.

The intermenstrual interval length of menstrual cycle was normal i.e., 21-35 days in 89% (723) females while as 2% females had polymenorrhoea i.e. menstrual interval of less than 21 days and 9% females had oligomenorrhoea i.e. menstrual cycle interval greater than 35 days to 90 days and less than 1% females had amenorrhoea i.e. menstrual interval greater than 90 days. A study done in south India has reported almost similar results (Godbole et al. 2013). However other Indian studies report higher percentage of irregular periods ((Ahamed et al. 2015) ((Dambhare et al. 2011) (Sachan et al. 2012). Polymenorrhoea and oligomenorrhoea in the females, the reason for this disparity can be that the study subjects in those studies are adolescent females and during initial 2-3 years of menarche periods are irregular and in our study those females have been excluded. Polymenorrhoea and oligomenorrhoea are two menstrual disorders that should be evaluated at an earliest because one can lead to anemia and latter can be a

symptom of some disease or disorder, both of which have deleterious effect not only on sexual and reproductive health of females but on overall physiological and psychological health of females.

The mean duration of menstrual bleeding was 4.89 ± 1.45 days in our study population. In a study done in Central India (Dambhare et al. 2011) mean duration was 4 days and in Egypt (Abdelmoty et al. 2015) it was reported as 5 days. The menstrual bleeding duration was found to be greater than 7 days in about 6 % of females. In study of Lebanese females (Karout et al. 2012) 11 % of females had duration greater than 7 days. The long menstrual bleeding duration again makes females vulnerable to iron deficiency anemia and these females should be supplemented with iron folic acid besides evaluation.

In our study the most common menstrual disorder was dysmenorrhea which was present in 51 % of the females. Dysmenorrhea is the most common menstrual disorder present in females not only in India but worldwide (Dambhare et al. 2011) (Harlow and Campbell 2004) (Unsal et al. 2010) (Grandi et al. 2012) (Santina et al. 2012) (Ju et al. 2014), yet it is taken lightly by females and most of the physicians. However it is a very distressing disorder and leads to great effect on health of females ranging from school absenteeism to inability to perform daily activities (Dambhare et al. 2011) (Singh et al. 2008) (Patel et al. 2006) and should be addressed properly.

Menorrhagia was present in 24 % of females in our population. In a study done in Malaysia (Lee et al. 2006) it was reported by 17 % of females.

Premenstrual syndrome (PMS) was second most common menstrual disorder (48%). The most common PMS reported were feeling of sickness, abdominal bloating, nausea /vomiting, general weakness, headache and change in mood. In many Indian and International studies PMS was second most common disorder after dysmenorrhea although reported prevalence of PMS in these studies is higher than our study (Dambhare et al. 2011) (Abdelmoty et al. 2015) (Karout et al. 2012) (Singh et al. 2008).

Conclusion:-

Menstruation is an important period in the life cycle of females and is the earliest sign of reproductive health. The menstrual disorders are common yet most ignored disorders. Menstrual disorders are prevalent among the reproductive age-group Kashmiri females. Dysmenorrhea being the most common disorder present in 51% of females followed by PMS then menorrhagia 24% and then irregular length of menstrual cycles 10%. Among irregular menstrual cycles 80% of the females present with oligomenorrhoea, followed by polymenorrhoea in 11% and amenorrhoea in 9%. The menstrual disorders are constituting the silent morbidity burden. Menstrual problems are common but are overlooked by physicians.

Menstrual morbidities constitute an important unmet area of reproductive health services for women and attention should be given to inclusion of diagnosis and treatment of menstrual complaints within reproductive health care programs.

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