



RELATIONSHIP BETWEEN AGE, EDUCATIONAL STATUS AND MENSTRUAL PROBLEMS AMONG FEMALES OF CENTRAL INDIA

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ABSTRACT:

Adolescent girls facing the problems of menstrual problems and also some serious menstrual syndrome and diseases. It is very alarming situation in India related to the welfare of the society in India. To assess the perception regarding menstruation, its problems and practices during menstrual cycles among females of Nagpur city. This was a cross-sectional descriptive survey. Purposive sampling technique was used for the research purpose. The data collection technique was a personal interview of the study subjects. A predesigned, pretested and structural questionnaire was used in this study. Randomly selected sample size is about 108 girls and women of age between 10-50 years of Nagpur city of mixed population belonging to various communities were employed in this study. In the present study an attempt has been made to find out the menstrual problems and syndromes by questionnaire method and highlight them in result as major findings. Most of the respondents belongs to age in between 10-30 years. Educational level of father was upto higher secondary and above for 32% mother was upto 50% and respondents were upto graduate level and above 77.77%. Almost 75.92% respondents, menarche age was between 12-14 years. 79.62% experiences pain during menstrual period. Pain in abdominal area (57.40%) hip joint area was found to be more common followed by backbone pain. 62.96% respondents did not take any treatment for menstrual problem 19.44% go for treatment to private gynecologist and 6.48% respondents got treatment in government hospital. 32.25% girls skip school due to painful menstrual cycle. Irregular cycle was most common problem and menorrhagia was major menstrual syndrome found in 16.66% amongst girls and women. Most of the respondents' experiences discomfort during menses and majority of them did not take any treatment for menstrual problems. Irregular cycle was most common problem. Menorrhagia was major menstrual syndrome. Health education regarding menstrual problem is very essential in relieving stress associated with periods importantly. This study found a significantly strong relationship between practices during menstruation and prevalence of reproductive tract infections.

Keywords: - Menstruation, Relationship, Adolescent, Problems.

INTRODUCTION :

Menstruation is defined as the periodic physiological bleeding from the endometrium. Menarche occurs usually between the ages 10-14 years and menopause occurs usually between 45-55years. Each woman menstrual cycle is an individual pattern of length, intensity and variability. Different authors from various parts of the country and outside world had reported a wide range of mean menarcheal ages commonly ranging from 11-15 years. The length of the menstrual cycle is traditionally a lunar month, but only 10-15% are exactly 28 days. The range is 24 - 35 days. The average menstrual flow is approximately 30 ml, lasting for an average of 5

days. Length of the period does not appear to be an indicator of the degree of bleeding. The first menstrual period, the menarche, is a late event in the sequence of pubertal development in girls, which occurs after the peak of height spurt. It is a sign of uterine development and does not signify the attainment of full reproductive function.^[1]

It has often been associated with some degree of sufferings and embarrassment by the society. It is also been commonly observed that every woman experiences one or other type of menstrual problems in her lifetime. The prevalence of menstrual disorders has been recorded as high as 87%.^[2] Menstruation though a normal physiological process many a times is

associated with disturbances before and during menstruation.^[3] The physiological and psychological changes cause discomfort and affect the daily routine, physical as well as academic performance. These problems include headache, abdominal pain, acne ^[3] backache, leg pain, calf pain ^[4] nausea, feeling of vomiting ^[5] dizziness, confusion stress, pain in breast, pimples, skin problems ^[6] and excess bleeding. Among these dysmenorrhoea i.e. painful menstrual is the most common problem reported in adolescents ^[3,7] and a frequent cause of absenteeism from school or restriction of daily activity. ^[8,9,10] Most of the girl students avoid their participation in any physical activity and sports during their menstrual period. The degree of discomfort experienced during menstruation varies from girls to girls. Some girls are facing it comfortably while some are badly affected by unpleasant symptoms. Some of the common post menarcheal menstrual irregularities which occur mainly within few years after the onset of menarche are Ovulatory events, Amenorrhoea, Dysmenorrhoea & Dysfunctional uterine bleeding.

There are many studies which have been conducted in and outside India regarding the knowledge and practices and discomforts felt by the females during menstruation but no such study was conducted in and around Nagpur city area Nagpur having a mixed population of rural plus urban females was found to be a good choice for study subjects. Hence we decided to conduct this study titled relationship between age, educational status and menstrual problems among females of Central India.

MATERIALS AND METHODS:

This cross sectional study was conducted for the analysis of menstrual pattern and disorders during menstruation in females of Nagpur city.

A. STUDY AREA:

Nagpur city of Maharashtra state, India was selected for this study.

B. POPULATION OF THE STUDY:

The randomly selected sample size is about 108 females of age between 10-50 years. The mixed population belonging to various communities was chosen. Maximum of the population belonged to economically middle class.

C. STUDY DESIGN:

This study is cross sectional questionnaire based study. The research was carried in the month of November to April 2017-2018. A pre-designed, pretested and structured questionnaire was used in the study. The data collection technique was a personal interview of the study subjects. Purposive sampling technique was used for the research purpose.

D. DATA COLLECTION:

i. Primary data collection:

The already prepared questionnaire was randomly distributed among the females of Nagpur city. The questionnaire was prepared carefully in consultation with medical experts and was improved over several administrations. Each question was examined for its relevance to the study and the objectives before finalizing. The questionnaire included topics which were related to awareness about menstruation, the sources of information regarding menstruation, age, problems related to menstruation. The demographic information including family details and parent's education were enquired and then documented.

ii. Secondary data collection:

The secondary data is collected by using published literature, journals, books, monographs, newspapers, websites and the data acquired by interviewing the officials involved in the health department.

iii. Selection of the Particular Age Group:

As the present study was carried out to determine the age at menarche which correlates with adolescent girls, 14 to 20 age group forms a large percentage of population and thus provides high representation. Since the age at menarche varies

from 10 years (early maturing) to 15 years (late maturing), females between the age group 10-50 years were included in the study.

iv. Filling of the Questionnaire:

All the subjects were personally asked to fill the questionnaire in Marathi and English provided to them with a identification number assigned by the researcher. Before filling the form the purpose of the study, its importance and the confidentiality of the information is shared with the subject by researcher. The filled questionnaires were collected immediately and data was entered in the excel sheet.

E. DATA ANALYSIS AND INTERPRETATION OF DATA

All questionnaires were checked in the field to ensure that they were completed fully and correctly. Collected questionnaire were arranged serially by the identification number. Responses of the respondents were entered in the master chart prepared in excel sheet.

Statistical analysis of the data was done using MS-Excel and Online Graph Pad Quick calcs Software. Values were expressed as Mean \pm SEM. Student's t-test was applied to locate significant difference between different groups at 0.05 significance level.

OBSERVATIONS AND RESULTS:

Socio-demographic information of the study population

Age of the respondents:

Among the total study population most of the respondents are below the age of 30 years (about 90%) and only about 09% respondents are above the age of 30 years.

Mean age at menarche:

In females, menarche is one of the most significant milestones in a women's life. Menarche occurs between the ages of 12-14 in most girls in developed countries. During our survey we found that, almost 75.92% of girls and women's menarche age was 12-14 year which is

usual menarche age and rest of the girls have menarche age of 15-18 years.

In the present survey the educational level of the most of the respondents is Graduate and above which represents 77.77%, 9th to HSSC are 18.51% and upto 8th class are 3.70%. None of the respondents are uneducated.

From the data it is observed that the educational level of the father in most of the cases is upto Secondary level (46.29 %) followed by Higher secondary and above (32.40 %), primary (15.74 %) and only 5.55% are found to be illiterate. In case of mother educational level upto Higher secondary and above is highest among the respondents (50.00 %) followed by secondary and primary i.e. 34.25% and 12.96% respectively. Only in 2.77 % cases the mother of respondents is illiterate.

Duration of menstruation:

It was found that, the period of menses was nearly normal in majority of the respondents with the period length of 3-7 days. Only 25% respondents have bleeding less than 03 days or more than 07 days.

Cycle length:

About 75 % of the respondents have a normal menstrual cycle length i.e. 21-35 days. About 16.66 % of respondent have the menstrual cycle of more than 35 days where as only 8.33 % respondents experiences less than 21 days of menstrual cycle.

Regularity of cycle:

Most of the respondents (87.96 %) of the present study having regular menstrual cycle. Regularity of menstrual cycle is a good sign of healthy menstrual cycle. Remaining of respondents (12.03 %) does not have regularity in their menstrual cycle.

Pain and discomfort experienced during menstruation:

Most of the respondents experiences discomforts during their menses. In the study area it was found that, prevalence of pain was studied among

the respondents of which majority of them (79.62%) experiences pain during their menstrual period. Pain in abdominal area, hip joint area was found to be more common followed by backbone pain. Negligible respondents have not any complaint of pain during menstruation. Pain intensity is moderate in 45.37% respondents. Rest of respondents suffered mild as well as severe pain during menstruation. Severe pain seems to be the first day of menses, which was reported by 5.55% of respondents.

Treatment for menstrual problems:

Questions were asked to the respondents to know whether they take any treatment for the menstrual problems or not. From the observations it is found that most of the respondent (62.96%) did not take any treatment for menstrual problems and rest of them took a treatment for menstrual problems.

Skip school due to painful menstrual cycle:

Sometime menstruation is a very painful period in girls and women's also. During our survey we ask to school girls; they skip school during menstruation. 34.25% respondent answered yes because they suffered high pain during the menstruation and they feel discomfort in their menses. Rest of the respondents are not skip school during menstrual period.

Menstrual syndrome:

Specially in adolescent's girls Menorrhagia was major menstrual syndrome (16.66%) and 9.25% respondents have dysmenorrhea. Among the population who goes for the treatment was asked for the place where they go for treatment. There are various places where they go for treatment for menstrual problem. Some respondent (19.44%) go for treatment in private gynaecologist. 6.48% respondents got treatment in government hospitals and 12.03% take a home treatment.

DISCUSSION:

The transition from childhood to adulthood occurs during adolescence period which is characterized by major biological changes like

physical growth, sexual maturation and psycho-social development. During this phase of growth the girls' first experience menstruation and related problems which is marked by feelings of anxiety and eagerness to know about this natural phenomenon. However, they do not get the appropriate knowledge due to lack of a proper health education programme in schools.

Moreover, the traditional Indian society regards talks on such topics as taboo and discourages open discussion on these issues. This leads to culmination in repression of feelings which can cause intense mental stress and seek health advice from quacks and persons who do not have adequate knowledge on the subject. The routine health services do not have provisions for adequate care of adolescent health problems.^[1] This further exaggerates the problems manifold. Parent's educational level really matters a lot in understating the health problems related to menstruation and the health seeking behaviour of the adolescent girls, their awareness about pregnancy and reproductive health will help us in planning programmes for this vulnerable group. The reason for fear and anxiety may not due to lack of prior knowledge regarding menstruation but may be attributed to inadequate knowledge, wrong knowledge and low levels of education especially among the mothers.^[1]

In the present study, among the 108 adolescent girls and women's, majority of girls (48.14%) were of age group 10-20 years. Drakshayani et al. reported the age of menstruating girls as 14-17 years with maximum (75.92%) number of girls between 12-15 years of age which is in accordance with our findings.^[11] We observed that maximum number of girls attained menarche at 12 years, the mean age being 14 years which is in concordance with a study conducted. The mean age at menarche is about 12-14 year with the minimum value of 11 and maximum value of 16. Similarly in the studies conducted by Mittal et al. and Balaji Ramraj et

al.^[12,13], the mean age of menarche among the adolescent girls were 13.1 years and 12.5 (± 1.42) years respectively. In a similar study in rural Andhra Pradesh on high school girls, all students had attained menarche at 12-13 years.^[11] Since it has been observed that the age of attaining menarche has shown decreasing trend in India there is an immediate necessity of early initiation and sensitization of young girls as early as 10-11 years of age especially in resource poor settings. The length of the menstrual cycle found in the present study is about 21-35 days in 75 % respondents. The mean length of 28.9 days (mode of 28 days) and the 75% range difference of 22 to 36 days compares with other studies that analyzed a cross-section of menstrual cycles. The mean lengths of the menstrual cycles from women older than 35 years compared with women younger than 25 in the studies of Munster et al., Treloar et al., and Vollman observed the length of menstrual cycle for 28.8/27.5, - 30.4/27.7 and 30.1/28.1 respectively.^[15,16,17] In the usual textbooks, range of normal menstrual cycle length is 21 to 35 days but does vary from a short cycle of 21 days to a long of 37 days. Out of 108 respondents 87% reporting regular menstruation and 12 % reporting irregular menstruation. Comparative data for the same age group was lacking, but, in a younger teenage group, similar menstrual regularity was reported amongst 11-15 year old as 67.7% by Wilson and Keye^[17] where a regular cycle pattern occurred within a range of ten days, with cycles lasting between 20-40 days. Length of menstrual bleeding for 75% of the respondents was 3-7 days, with 12.96 % completing bleeding by more than 7 days. This is nearly consistent with current literature which suggests that 80-90% of teenagers bleed menstrually for 2-7 days.^[18] The total number of girls who reported pain with menstruation in the subjects was 79%, of whom 73.3 % reported mild to moderate pain, and 5.55 % reported to severe pain. From the findings of

present study regarding menstruation and school absence rates of 34.25 % is consistent with the 14-51 % reported in the literature.^[19,20,21,22,23] In another study done in Rajasthan, Education in schools, residential status, occupation of father, caste and exposure to media tends to be the major predictors of safe menstrual practices among adolescent girls reported by Khanna et al.^[24]

CONCLUSIONS:

Most of the respondents experiences discomforts during their menses. More likely common pain is abdominal pain found in 57.40% respondents. 34.25% girls skip school due to painful menstrual cycle.

From the observations it is found that 62.96% respondents did not take any treatment for menstrual problems and rest are about 19.44% go for treatment in private gynaecologist, 6.48% respondents got treatment in government hospitals and rest of them took a home treatment. Irregular cycle is the most common problem among the respondents specially in adolescent's girls. Menorrhagia was major menstrual syndrome found in girls and women's.

Health education regarding menstrual problem is very essential in relieving stress associated with periods as it has been seen that stress increases cortisol secretion leading to dysmenorrhea, menorrhagia and irregular cycles.

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CONFLICTS OF INTEREST

There are no conflicts of interest.

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Table 1: Educational level of the respondents

Sr. No.	Educational level	No. of respondents	%
1	Uneducated	0	00
2	Upto 8 th	4	3.70
3	9 th -HSSC	20	18.51
4	Graduate and above	84	77.77

Table 2: Parents educational level of the respondents

Sr. No.	Parental educational level	No. of respondents	
		Father (%)	Mother (%)
1	Illiterate	6 (5.55)	3 (2.77)
2	Primary	17 (15.74)	14 (12.96)
3	Secondary	50 (46.29)	37 (34.25)
4	Higher secondary and above	35 (32.40)	54 (50)

Table 3: Duration of menstruation

Sr. No.	Duration of menstruation	No. of respondents	%
1	3-7 days	81	75
2	less than 3 days	13	12.03
3	more than 7 days	14	12.96

Table 4: Cycle length of the respondents

Sr. No.	Cycle length	No. of respondents	%
1	21-35 days	81	75
2	Less than 21 days	9	8.33
3	More than 35 days	18	16.66

Table 5: Regularity of cycle

Sr. No.	Regularity of cycle	No. of respondents	%
1	Regular (Normal)	95	87.96
2	Irregular	13	12.03

Table 6: Discomforts experienced during menstruation

Sr. No.	Discomforts experienced during menstruation	No. of respondents	%
1	Back bone pain	44	40.74
2	Abdominal pain	62	57.40
3	Head ache	7	6.48
4	Joint pains	15	13.88
5	Vomiting	7	6.48
6	Dysentery	3	2.77
7	General weakness	26	24.04
8	Any other	1	0.92

Table 7: Type of menstrual syndrome

Sr. No.	Menstrual syndrome	No. of respondents	%
1	Dysmenorrhea	10	9.25
2	Menorrhagia	18	16.66
3	Irregular cycles	13	12.03