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RESEARCH ARTICLE

Reproductive health related knowledge, attitude and practices (KAP) among adolescent girls in a rural area in North India

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ABSTRACT

Objective: The aim of the study was to learn about the knowledge, attitudes and practices of reproductive health and its gap among school going adolescent girls of rural area of Barabanki. **Methods:** This cross-sectional study done from April 2018 to May 2019 in which 550 girls were encouraged to participate. Adolescent school going girls aged 13-19 years were included. A pretested questionnaire was administered and data analyzed using SPSS software 23. **Results:** About 61.5% of the adolescents had correct knowledge about the female reproductive organ, about 63.7% had correct knowledge about puberty signs in girls, 89.5%, 66.8% & 60.4% girls had correct knowledge about cause of menstruation, source of menstrual blood and menstrual blood discharge site respectively; mostly (90.6%) had correct knowledge about appropriate age for marriage. **Conclusions:** The present study revealed that the knowledge about menstrual cycle is found to be very poor with the majority of the adolescents did not have correct knowledge about puberty, pregnancy and childbirth, family planning methods, STDs, and request for treatment.

Keywords: Reproductive health, adolescent girls, family planning.

Adolescents are a major resource of any country. According to the WHO definition of it is the phase between 10-19yr [1]. In India, pregnancies among adolescent constitute 10-15% of total pregnancies. The phase of adolescence for a girl is a time of physical and psychological construction for safe motherhood [2]. Among teenagers, girls are vulnerable to STDs including HIV infection [3] and are the victims of premature or early marriage and early and frequent childbearing, which causes high morbidity and mortality [4,5]. Traditionally Indian society discourages talks and open discussions on reproductive health (RH) [6]. Hence teenagers remain a mostly neglected and ignored. Worldwide reports reveal that many women suffer from disorders and disabilities resulting from comfortably preventable pregnancies and childbirth-related issues [7].

Studies have shown that lack of knowledge about menstruation and hygiene are likely to lead to STDs in adolescents [8,9]. The present study was taken out to study the knowledge, attitude and practices (KAP) regarding RH and gap related KAP and to suggest appropriate measures to improve the RH related awareness among adolescent girls.

Materials and methods

This cross-sectional study was carried out between April 2018 to March 2019 in rural area of Safedabad, surrounding Hind Institute of Medical Sciences Barabanki district. Adolescent school going girls aged 13-19 years with sound psychological status included. Informed consent was taken from the girls to participate in the study after explaining nature and objectives of the study.

Study tools

- Self-administered and self-structured questionnaire
- Three point Likert-type scale

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Sample size and calculation:

$$n = \frac{Z^2 P(1-P)}{d^2}$$

Prevalence of 10%, and precision (d) decreases to ± 2.5%, a total 550 girls were included in study [10].

Total of 550 girls were encouraged to participate in pretest assessment. A pretested questionnaire (Hindi) was administered to students which include baseline characteristics of study population, questions related to knowledge on menstruation, menstrual hygiene, pregnancy, antenatal care, contraception, STD's, AIDS followed by a health education session lasting for 30-40min. One session per day covering 50 students was conducted followed by an interactive session. Students were asked to fill an immediate post-test questionnaire to evaluate the effect of health education. This was conducted till target of 550 students was achieved.

The study protocol and the ethical issues were presented before the Institutional Human Ethics Committee and obtained clearance before the start of the study.

Statistical analysis: Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 23 for Windows. Data analysis was done by calculating the percentages of each frequency. Continuous two independent groups were compared by parametric independent student's t test, discrete (categorical) groups were compared by chi-square ($\chi 2$) test.

Results

Most (47.1.0%) of the adolescents were belongs to 15-17 years of age, mostly (84.0%) belong to nuclear family; majority were Hindu (82.2%) girls. The average age at menarche was 13.9 years (table 1).

Table 1: Participant profile

Variables		Frequency (N=550)	Percentage (%)
Age	13-15	154	28.0
	15-17	259	47.1
	17-19	137	24.9
Mean age of the respondent		16.8±2.7 (13-19 years)	
Type of family	Nuclear	462	84.0
	Joint	88	16.0
Religion	Hindu	452	82.2
	Muslim	50	9.1
	Other	48	8.7
Educational status of the mother	Illiterate	319	58.0
	Primary	137	24.9
	Secondary	78	14.2
Mean age at menarche	Mean±SD (range)	13.9	(86.5%)

About 61.5% of the adolescents had correct knowledge about the female reproductive organ, about 63.7% had correct knowledge about puberty signs in girls, 89.5%, 66.8% and 60.4% girls had correct knowledge about cause of menstruation, source of menstrual blood and menstrual blood discharge site respectively; mostly (90.6%) had correct knowledge about appropriate age for marriage (table 2).

Table 2: Distribution of female adolescents related to their knowledge about puberty, marriage, pregnancy and childbirth (N=550)

Knowledge in adolescents girls regarding		N	%
Female reproductive organ		338	61.5
Puberty signs in girls		350	63.7
About menstrual cycle	Cause of menstruation	492	89.5
	Source of menstrual blood	367	66.8
	Menstrual blood discharge site	332	60.4
Information regarding menstruation	Mother	448	81.5
	Sister	110	20.0
	Friends	143	26.0
	School	74	13.5
	No knowledge	74	13.5
Appropriate age for marriage		498	90.6
Time of ovulation each month		53	9.6
Appropriate age for the first pregnancy		503	91.5
Signs of pregnancy		355	64.5
Ideal gap between delivery and the next one		332	60.4
Meaning of abortion		28	5.0
Causes of abortion		449	81.6
Precautions for the prevention of abortion		498	90.5

Table 3: Distribution of female adolescents in terms of knowledge about family planning methods

Known family planning methods	Frequency	Percentage
Female sterilization	107	19.5
Contraceptive pills	493	89.6
Intrauterine device (IUD)	332	60.4
Breastfeeding	396	72.0
Hormonal injection	129	23.4
Condom	222	40.4
Male sterilization	124	22.5
Localized methods	106	19.2

89.4% of study patients were knowledge about contraceptive pills, and 72% were knowledgeable about breastfeeding as a method of family planning. Knowledge about female sterilization and male sterilization was poor (19.5% and 22.5%, respectively) (table 3).

Table 4: Personal hygiene maintenance

Variables	N	%
Number of times of changing sanitary pads per day	546	99.2
Towels used during menstruation	466	84.7
Number of baths during the menstruation	494	89.8
Genitalia washing	497	90.4
The method of disposing sanitary pads	498	90.5
Activities and exercises during menstruation	113	20.5
Foods and drinks that should not be taken during menstruation	513	93.3
Foods and drinks that should be taken during menstruation	234	42.5
Underwear type used during menstrual cycle	448	81.5
Education about puberty and associated changes is essential for adolescent girls	487	88.5
Attention to personal hygiene during menstruation is essential to avoid infections and STD	520	94.5
Pregnancy at young age affects the health of the fetus and the mother	278	50.5

Almost all girls (99.2%) had correct practices with respect to the number of times of changing sanitary pads per day, the number of baths during the menstruation (89.8%), method of disposing sanitary pads (90.5%), genitalia washing (90.4%), foods and drinks that should not be taken during menstruation (93.3%) (table 4). Table 4 also illustrates attitudes (88.5% and 94.5%) were toward education about puberty associated changes and attention to personal hygiene during menstruation, respectively. Most of the restrictions were related to praying (91.5%) and kitchen work (22.5%), whereas 10.5% had no restrictions at all (table 5).

Table 5: Restrictions followed during menstrual bleeding

Restrictions followed	Frequency	Percentage
School	9	1.6
Kitchen work	124	22.5
Prayers	503	91.5
Going out	90	16.4
No restrictions	58	10.5

Discussion

The demographic details of the studied adolescent in current study were comparable with Vanusha A [6], Gaferi SM et al [7], Goel et al [11] and Akther N et al [12], Da B et al [13], Deb and Mishra [14] studies. The present study showed that 89.5% of female adolescents gave correct answers about the cause of menstruation as a normal sign of growth and puberty. This finding is similar to the study results of Gaferi SM et al [7] and Savanthe et al [15] 66.8% know correct knowledge about site of menstrual blood among girls while it is inconsistent with the findings of Savanthe el al [15] study. Traditionally, mother is the chief source of such information to the majority of girls (81.5%) as found in our study the findings of another study are consistent with their studies. However, possibility of undergo scientific information about menstruation is more if received in schools than given by mother, but as seen in the current study very less number of girls received such information from schools (17%). Udgiri et al [16], Mittal and Goel [11] also reported that mothers were the most important source of knowledge (47.4%) regarding menstruation among the study subjects followed by friends/peers (23.8%), teachers (4.9%), and mass media (4.8%). This could be due to good communication between the mothers and daughters as many mothers are being educated nowadays. In our study, 91.6% adolescent girls had correct knowledge about appropriate age of marriage; this finding is similar to Gaferi SM et al [7] study. Awareness regarding the appropriate age for marriage was very high in the current study. These results are similar to a study done by Fatemeh et al [17].

Female students had inadequate knowledge regarding the time of ovulation per month and the timing of conception. Similar results were found by the Gaferi SM et al [7], Parasuraman et al [18], Patanwar et al [19] and Abiodun et al [20] in their respective studies.

Regarding the knowledge about family planning methods were similar to some previous studies [7]; in current study oral contraceptive pills (OCP) was the most known contraceptive method. 72.0% of the female adolescents gave correct answers regarding breastfeeding as a family planning method followed by contraceptive pills (89.6%), IUD (60.4%), these findings were similar to previous findings [7].

HIV/AIDS was the most known STD among the adolescents of the current study, and this is expected due to a current worldwide pandemic of the disease; this finding is similar to Abiodun et al [20] and Patanwar et al [19] studies. In current study some adolescents were aware of STDs like Syphilis, Gonorrhea, and ulcer in the genital area.

The majority of the students in the current study had incorrect knowledge about curable diseases. This is consistent with the studies of Gaferi SM et al [7] and Bhattacherjee et al [21]. Moreover, (99.4%) of girls correctly answered the question on frequency of changing sanitary pads per day that is similar to Gaferi SM et al [7], in contrast, a study by Mudey et al [8] reported that cleanliness of external genitalia was unsatisfactory.

In the present study, 90.5% girls followed correct practices on methods of disposal of used sanitary pads, and foods and drinks that should not be taken during menstruation by 93.3% girls whereas foods and drinks that should be taken during menstruation 42.5% girls, these findings were similar to previous studies [7]. However, these results contradict those of Fetohy who found that the mean score of students' attitudes toward personal hygiene during menstruation was low among adolescents [22]. The participants had negative attitudes toward teenage pregnancy and close frequency of pregnancies that may threaten the mother's and fetal health. This may be a result of social traditions that prefer pregnancy at a young age and gestations that are not spaced apart.

In current study, in the manner of hygiene maintenance practices of girls, all girls (100.0%) had daily bath, in hand washing practice after changing of absorbent 93.5% girls always wash their hands whereas 5.4% never and only 1.1% girls never wash their hands. 71.5% girls use soap and water for washing hands whereas only 28.5% use only water. In practice of cleaning of external genitalia, 73.5% girls clean

always whereas 20.5% sometimes and 6.0% girls never clean. Perineal hygiene was maintained by 76.9%, 41%, and 90.9% in different studies [23 - 25]. Some are studies which show that improper hygienic practices are associated with urogenital infections [26 - 28].

Most of the restrictions in our study were related to praying (91.5%) followed by kitchen work (22.5%), going out (16.4%), whereas 10.5% had no restrictions in the house. Similar observations were made by Gaferi SM et al [7], Srivastava and Chandra [29].

Strength: This study was conducted by interview method and any doubts were addressed there itself.

Limitations: Study was conducted on a limited rural area; it should be done in large area with more attributes.

Conclusion

The present study revealed that the knowledge about menstrual cycle is found to be very poor with the majority of the adolescents did not have correct knowledge about puberty, pregnancy and childbirth, family planning methods, STDs, and request for treatment.

Conflict of interest: None. **Disclaimer:** Nil.

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