

Knowledge, Attitude and Practice Regarding Reproductive Health among Urban and Rural Girls: A Comparative Study

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ABSTRACT Study aims at assessing the knowledge, attitude and practice regarding reproductive health among 200 school girls in the age 15-19 years from rural and urban settings of Jaipur. Simple random sampling was used. Three point scale to assess awareness level of reproductive health was designed. The result showed 40 percent rural girls and 60 percent urban girls considered menstrual as natural phenomena while 39 percent of urban girls and 56 percent of rural girls took it as disease. 11 percent of urban and 28 percent of rural girls were not aware about the gap of periodic menstruation cycle. Differences were evident in the perception of urban and rural respondents regarding the right age of menarche. Menarche varied widely, within the population. 33 percent urban respondent had prior information regarding menstruation, 62 percent rural respondent were unaware of the right age of menarche. Majority girls had several taboos, regarding reproductive health.

INTRODUCTION

Adolescence is characterized by physical, psychological, and social changes. WHO has defined adolescence as the age range of 10 - 19 years. It is the period between childhood and adulthood, marked by enhanced food requirement and basal metabolic activities and biochemical activities, endogenous processes like hormonal secretions with their influence on the various organ systems (WHO 2001). Adolescent girls constitute about 1/5th of total female population in the world. These years have been recognized as a special period in the life cycle of adolescent girls as it requires specific and special attention (Balsubramanian 2005). This transition phase makes them vulnerable to a number of problems for example, psychosocial problems, general and reproductive health problems, and sexuality related problems (Sharma 2008). The period of adolescence for a girl is a period of physical and psychological preparation for safe motherhood. As direct reproducers for future generations, the health of adolescent girls influences not only their own health, but also the health of future generation. A vast majority of adolescent girls in India are suffering from reproductive health morbidities (Agrawal S 2007).

Reproductive health covers all aspects of adolescent health. It is an umbrella concept, con-

sisting of several distinct, yet related issues such as abortion, child birth, sexuality, contraception and maternal mortality. Biological, social, cultural, economical and behavioral factors play an important role in determination of reproductive health (Sandana R 2002).

In India, adolescent girls account for a little more than one-fifth of the population (21.4%). Out of an estimated 200 million adolescents, girls account for slightly less than 100 million due to disproportionate sex ratio (Census 2001).

Menarche marks the beginning of women's menstrual and reproductive life and occurs during early adolescence when teenage girls are beginning to emotionally separate themselves from their families, as well as to grapple with their unfolding female sexuality. Thus, it is pertinent to examine various influencing factors of teenage girls' expectations of menarche to facilitate the understanding of their transition to womanhood, which may have significant implications for the overall promotion of their health (Chaturvedi 1991; Lee 2001).

From the beginning of their lives, girls are groomed to accept male domination and ignore their own needs. Discrimination against the girl child in health, nutrition and education is relatively heightened in adolescence. Onset of puberty decreases autonomy and mobility, with increasing restrictions on speech, appearance, conduct and interaction with the opposite sex. Girls inherit their mother's domestic chores and adopt stereotypical gender roles. Low self-esteem and self-worth are common. After marriage, her husband and in-laws control the bride's life. Consequently, the girls enter the

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“culture of silence.” (CEDPA 2001) For young girls in India, poor nutrition, early childbearing and reproductive health complications compound the difficulties of adolescent physical development (CEDPA 2001).

The practice of child marriage in rural India is deeply rooted in cultural values and grounded in social structures. Despite laws that prohibit child marriage, the practice is still extremely prevalent in many regions of the nation. Though the statistics are contentious, it is estimated that in some parts of India, like the state of Rajasthan, nearly 80 percent of the marriages are among girls under the age of fifteen. In India overall, roughly 47.6 percent of girls are married by the age of eighteen (Gupta 2005).

Over 75 percent of Indian population resides in rural area in India. Approximately 30 percent of women are married between the ages of 15 - 19 years. This is normally followed by closely spaced pregnancies. The state of Rajasthan located in northwestern India, has highest level of early marriage in India, almost one out of every three girls between the ages of fifteen to nineteen is married. The prevalence of early marriage and general lack of literacy among many Rajasthani girls has created an urgent need of effective sexual and reproductive health education programs (Singh 2004).

In the Indian context, adolescent girls enter into reproductive life, with early marriage, pregnancies and child bearing resulting in detrimental effects to their general and reproductive health. Moreover, all the requirements to maintain proper reproductive health with reference to adult men and women also applies to adolescent girls who are in greater need of such health facilities, counseling related to reproduction and family planning services. Keeping in mind the important role of reproductive health of adolescent girls, the present study was conducted.

Objectives

- To study the knowledge and attitude regarding reproductive health among adolescent girls.
- To get an insight of practices regarding reproductive health among adolescent girls (urban and rural).
- To assess the knowledge about sexual matters, pregnancy, contraceptive practice, reproductive hygiene and sexually transmitted diseases /AIDs.

METHODOLOGY

The sample for the present study consisted of 200 adolescent girls between the age group of 15 - 19 years. An equal number of subjects were drawn from two ecological setting (Rural n = 100 and Urban n = 100) of Jaipur district. The sample was chosen from state government schools on the basis of availability. Simple random sampling without replacement which gives an unbiased estimate about the target population was used. Questionnaire comprising of 20 items was formulated in collaboration with specialists in sociology, gynecology and human development. Pilot study was done on a sample of 50 subjects and further the tool was standardized statistically. The questions that were not clear to the subjects were either deleted or modified. The three point scale (in Hindi) included items regarding awareness level of the reproductive health, age at menarche, source of information regarding menarche, reaction towards the onset of menstruation, social taboos and myths during menstruation, problem regarding menarche, pregnancy, contraceptive practices, reproductive hygiene, sexually transmitted diseases like Acquired Immune Defiance Syndrome (AIDS).

The data collection for the study was done from December 2009 to June 2010. Permission of the Principal of the higher secondary government school was sought and informed written consent was obtained from the subjects. After establishing a good rapport with subjects, they were made aware about the aims and objectives of study. The questionnaire was then distributed to the selected subjects with the help of the teachers. Adequate measures were observed to ensure objectivity in data collection. The data obtained was compiled, stating the frequency of every response in each item and then transcribed on a master sheet. Statistical analysis was done by calculating the percentages of each frequency. Percentages were calculated to draw out differences in the responses and to highlight major responses. Tables and graphs were drawn stating the results of the present study.

RESULTS AND DISCUSSION

Responding to the question on awareness regarding menstruation process, 60 percent ur-

ban girls were of the view that it is a natural cyclic process, whereas 56 percent rural girls were of the opinion that it is some kind of disease or a physical problem. Some 4 percent rural girls also thought it to be an internal bleeding process. This data indicates that a large number of urban populations were aware of menstruation whereas the majority (56%) of the rural girls were not fully aware of its physiological basis.

Deo (2005), in a study on awareness regarding menstruation knowledge in adolescent girls (16 – 20years) found that, most of the girls perceived menstruation as a natural occurrence of blood discharge every month. Some girls perceived it as a process by which impure blood is thrown out of the body every month; others were of the idea that it is simply blood spotting every month.

Menstrual cycle refers to the monthly physiological blood loss from the lining of uterus in the absence of pregnancy. It is a phenomenon unique to the females. 89 percent of urban and 72 percent of rural respondents reported that the physiological menstrual cycle duration is of 28 ± 4 days. 11 percent of urban and 28 percent rural respondents were not sure of the cycle interval timings. Most of the respondents as shown in the above table had correct knowledge regarding the duration of normal menstrual cycle. The knowledge of rural adolescent girls regarding the average flow and duration of cycle seemed to be adequate. The difference was found to be significant at 5 percent.

Hanson (2006), explained that though menstrual cycle is a normal monthly function of a healthy female body but the main concerns of adolescent girls are delayed menstruation, irregular cycles pertaining to hormonal fluctuation and pain during menses.

Urban (32 percent) and rural (62 percent), had no prior information regarding menstruation, while 33 percent of urban and 16 percent of rural girls had a prior knowledge on this issue. Also, a very significant difference at 0.1% level was observed in population of urban girls (35%) who had partial information regarding the onset of menstruation. It can be deduced that majority of urban girls (significant difference was at 0.1%) had partial to complete prior information regarding pubertal changes whereas a higher number of rural populations were unaware of the same. Hygiene is an important aspect especially during menstruation. Proper

understanding of menarche and personal hygiene during menstruation significantly influences the reproductive health of adolescents. From Table 1 it can be seen that 80 percent of urban subjects were using company made branded sanitary napkins, which helps in maintaining bodily cleanliness and hygiene. On the contrary only 14 percent of the rural population from the given sample used this type of napkins and the difference was found to be significant at 0.1% level. 65 percent of the rural respondents used home-made disposable pads during menstruation, which were made up of old torn out clothes and would not be as safe and hygienic as readymade sanitary pads. Table 1, above also shows that 21 percent rural girls were using home-made reusable pads which meant that they washed the cloth and used it several times. Using such home-made alternative to branded and documented comparatively safe sanitary pads could be very unsafe and unhygienic if not washed and dried properly. The main reason for using home-made napkins was the inability to buy costly readymade napkins. On the whole, urban females were found to be more hygiene conscious than their rural counterparts. The girls expressed willingness to use sanitary napkins if they are available at more economical rate. Hence providing competitively priced and safe napkins to the girls can prevent many cases of infections arising from the use of unhygienic material/cloth. However, considering the logistics involved in the use of sanitary napkins in rural areas, their acceptance and popularity still remains a remote possibility in this geographic locale of the nation.

El-Gilany and Badawi (2005) revealed that the use of sanitary pads and old cloth was found to be significantly high among urban school girls and rural girls, respectively. Other researches done by Khanna (2005) and Quazi (2006) also documented similar results with most of the rural girls using cloth as a menstrual pad, and reusing the cloth after washing it with soap and water for about 4 - 5 months. Very few rural girls used sanitary napkins available in the market, perhaps due to high prices, less availability and lack of awareness in rural areas.

Table 1 unfolds that 52 percent of urban and 34 percent rural respondents took medical treatment or advice for various types of reproductive tract infection while 48 percent urban and 63 percent rural respondent went for home remedies, in view of various social taboos associ-

Table 1: Respondents responses about medical treatment or advice for various type of reproductive infection

S. No.	Responses	Urban	Rural	Chi-square (p-Value)
<i>Awareness Regarding Menstruation Process</i>				
1.	Natural cyclic process	60%	40%	8.842 (0.0120)*
2.	Disease/physical problem	39%	56%	
3.	Internal bleeding	1%	4%	
<i>Interval Between Two Menstrual Cycles</i>				
4.	25 – 28 days	89%	72%	8.154 (0.0043)**
5.	More than 28 days	11%	28%	
6.	Others	-	-	
<i>Prior Information Regarding Menstruation</i>				
7.	Yes	33%	16%	18.437 (0.0001)***
8.	No	32%	62%	
9.	Partial	35%	22%	
<i>Hygiene Practice</i>				
10.	Homemade disposable	16%	65%	87.542 (0.0001)***
11.	Homemade reusable	4%	21%	
12.	Company made branded	80%	14%	
<i>Treatment for Reproductive Tract Infection</i>				
13.	Medical treatment	52%	34%	8.794 (0.0123)*
14.	Home treatment	48%	63%	
15.	Any other	-	3%	
<i>Awareness of Legal Minimum Age of Marriage</i>				
16.	> 18 years	03%	02%	7.425 (0.024)*
17.	< 18 years	3%	10%	
18.	=18 years	94%	88%	

*Significant at 5%; ** Significant at 1%; *** Significant at 0.1% level NS-Non-Significant

ated with reproductive tract infections and sexually transmitted diseases. Significant difference at 5% level was seen between the two. The girls who use cloth were more prone to develop genital tract infection as compared to those using branded sanitary napkins. Repeated use of unclean cloth and improper drying of cloth, before reuse, results in harboring of micro-organisms resulting in the spread of vaginal infections, viz., white discharge, itching and burning during menstrual period among adolescent girls who were using home-made pads. Reproductive tract infection include a variety of bacterial, viral and protozoa infections of the reproductive tract. These are common among adolescent girls and women, but rarely recognized by them as serious health problems, even when they admit having symptoms of these infections (Acosta-Cazares 1996; Paul 2007).

It was very encouraging to see that the awareness regarding legal minimum age of marriage was very high among the subjects that is, 94

percent of urban and 88 percent of rural respondents were aware of the legal age of marriage in the backdrop of the fact that Rajasthan has the highest number of child marriages taking place every year. Significant difference was seen at 5% level.

Researchers claim that, in Rajasthan, the percentage of girls married off before age eighteen is between 55 percent to 80 percent (Yadav 2006; Burns 1998). There is overwhelming evidence that child marriage is occurring in Rajasthan in large numbers, despite laws against it. Large numbers of girls from poor households are pushed into early marriage, which is consummated almost immediately after menarche (Yadav 2006). Early marriage leading to early motherhood is associated with serious health problems to adolescent mothers and their offspring.

Menarche is an important milestone in the life of a girl which signifies the start of fertility in a woman. It can be observed in Figure 1, that differences were also evident among the urban and rural respondents regarding the onset of menstruation, 40 percent and 50 percent urban girls reported that average age of commencement of menstruation is 10 to 12 years and 12 to 14 years respectively. On the contrary among the population, 60 percent of sample rural girls had onset age of menstruation at 12 to 14 years, 22 percent had menarche at 15 to 16 years and the remaining 18 percent rural adolescent girls under study reported the age of onset of menstruation as 10 to 12 years. It is clear from the above data that the average onset age among the rural population is higher as compared to urban population. An early onset of menarche reported in urban girls is related to changing dietary habits and also due to early exposure to sexual information.

It has been established that menarche is also influenced by factors such as socioeconomic class, sports and genetic factors (Gupta 2006). Studies have shown that the age at menarche has been decreasing generally in many countries with a mean age at menarche ranging from 12 to 13 years in the majority of developed countries (Padez 2003).

It is evident from Figure 2, that 41 percent of urban and 56 percent of rural respondents received information about menarche, reproductive problems, etc. from their relatives, whereas 30 percent urban and 24 percent rural girls did the same from friends. 29 percent urban and 20

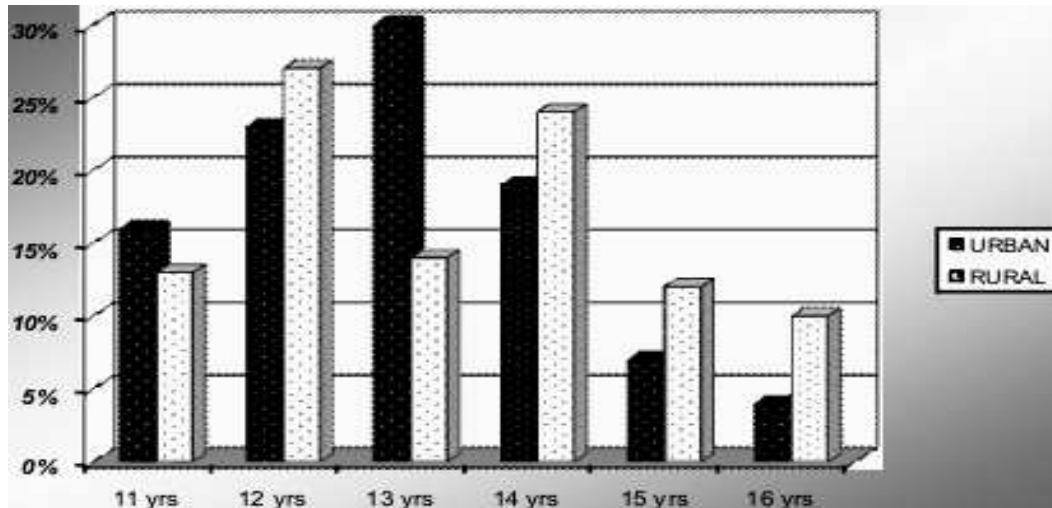


Fig. 1. Age of menarche

percent rural respondents got the information from media like T.V, radio and magazines.

Nair (2007) in their study stated that 41 percent of the girls received information about menstruation from their mothers, 22 percent got information from their elder sisters, 21 percent from their friends and 5 percent from television and 4 percent of the girls got information from books. Another study conducted by Deo (2005) among urban girls, has reported mother as the

main source of information on menstruation for 27.5 percent of the girls whereas teacher was the source for information for their rural counterparts (27.01%). A study by Echendu (2008) revealed that information on menstruation given by mothers is often incomplete and incorrect, usually being based on cultural myths, and therefore probably perpetuating negative and distorted perceptions and practices of menstruation.

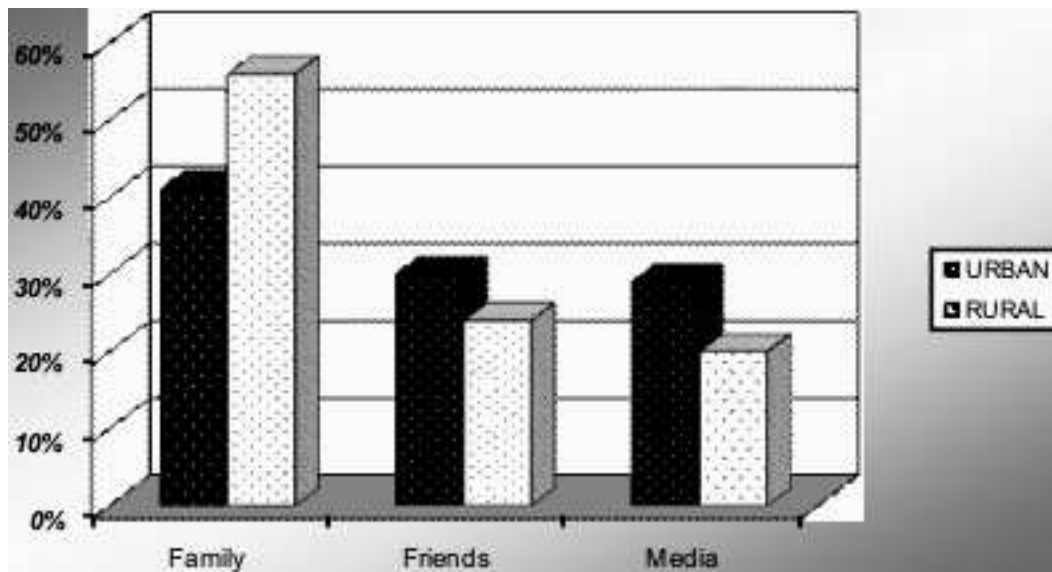


Fig. 2. Sources of information regarding pregnancy, menstruation and other reproductive

It can be observed from Table 2 that 42 percent of urban and 50 percent of rural respondents were scared when they had their first menstruation. 20 percent and 25 percent of urban and rural respondents respectively reported a feeling of discomfort. The first experience of menstrual cycle by 38 percent urban and 25 percent of rural girls was more relaxed and they took it as a natural process. Fear and panic was the dominant reaction among many girls when they first had their menses. This is true for majority of girls in rural and even in urban subjects.

Table 2: Reaction during the period of first menstruation

S. No.	Responses	Urban	Rural
1.	Normal/usual	38%	25%
2.	Scared	42%	50%
3.	Discomfort	20%	25%

Girls are generally not told anything about menstruation until they have it for the first time. Several traditional norms and beliefs, socio-economic conditions and physical infrastructure influences the practices related to menstruation. It seems that menstruation is considered as something unclean or dirty in the Indian society. This might be due to the reason that issues associated with reproductive health are not

taught in schools in detail and whatever information, these adolescents get, passes from one generation to another in a non-methodical and an unbiased manner with related societal taboos.

Sathe (2005) also stressed on the need for introducing sexuality education in schools. Adolescents lack correct and scientific knowledge on sexuality and their fears and concerns related to their sexuality are not being addressed. There are no forums where they can discuss sexuality issue without fear and guilt. They concluded that lack of knowledge particularly about sexually transmitted infections pose a serious health problem which the policy makers of the nation need to take up seriously on an urgent basis.

Urban (67%) and rural (27%) respondents were advised to eat healthy and nourishing foods which are high in protein and minerals (Fig. 3) whereas 33 percent urban respondent and 73 percent rural respondents considered it as a social taboo and were not allowed to eat certain foods and consequently had restricted eating practices. They were not allowed to enter the kitchen and worship place, not allowed to eat cold and sour food like pickles, curd etc. These girls also reported that they were not allowed to do strenuous physical during periods. The result revealed that there was a significant differ-

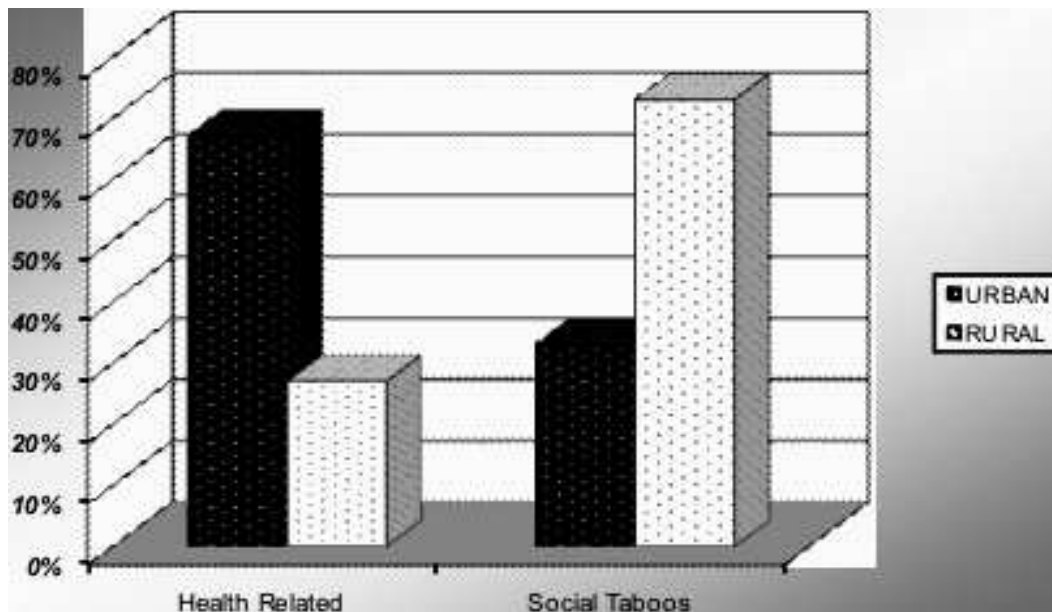


Fig. 3. Instructions and guidance given by elder

ence between urban and rural girls regarding this aspect ($\chi^2 = 30.530$ significant at 1%)

Even literate females find it difficult to go against the restrictions, owing to such strong socio-cultural beliefs and practices. Different types of restrictions practiced during menstruation were also reported by Dasgupta (2008) in their study where 70.59 percent of the girls did not attend any religious occasion, 42.65 percent did not play, 33.82 percent of them did not perform any household work and 10.29 percent of the girls did not attend any marriage ceremony during the menstrual period.

This data clearly shows that significant segment of the sample population under study was not aware of the premise that menstrual period are a normal outcome of physiological maturation of the neuro-endocrine-reproductive loci leading to regular and periodic ovulation. Table 3 shows that only 19 percent of urban and 12 percent of rural respondents appreciated the fact that menstruation is an important land mark for reproduction. 16 percent of urban girls and 24 percent of rural girls envisage that either sex (mother or father) is responsible for the determination of the gender of the child. Few urban and rural respondents had the knowledge that the sex of fetus is determined by both the parents. From the above table number 6 it is also evident that only 23 percent of urban girls and 13 percent of rural girls understood that it is

Table 3: Scientific knowledge of reproduction

S. No.	Responses	Urban		Rural	
		Yes	No	Yes	No
1.	Regular menstruation is important for pregnancy	19%	10%	12%	14%
2.	Both partners responsible for sex of the child	20%	16%	15%	24%
3.	Regular health checkups during prenatal period	23%	12%	13%	22%

important to have regular health checkups during pregnancy for safe child birth. Both urban and rural adolescent girls did not seem to be aware of the scientific basis underlying reproduction and related issues. Surprisingly, it seems that even after extensive mass media coverage and publicity by government and non - government organizations the common man is still caught in the web of superstitions and myths pertinent to these issues

The percentages profile of knowledge regarding contraceptive usage among the sampled adolescent girls is show in Figure 4. Considering their understanding about contraceptives it is evident from the graph that 16 percent urban and 23 percent rural girls used contraceptives as precautionary expedients to avoid pregnancy. 15 percent of urban and 12 percent of rural girls were of the view that contraceptives are used for prevention of sexually transmitted diseases.

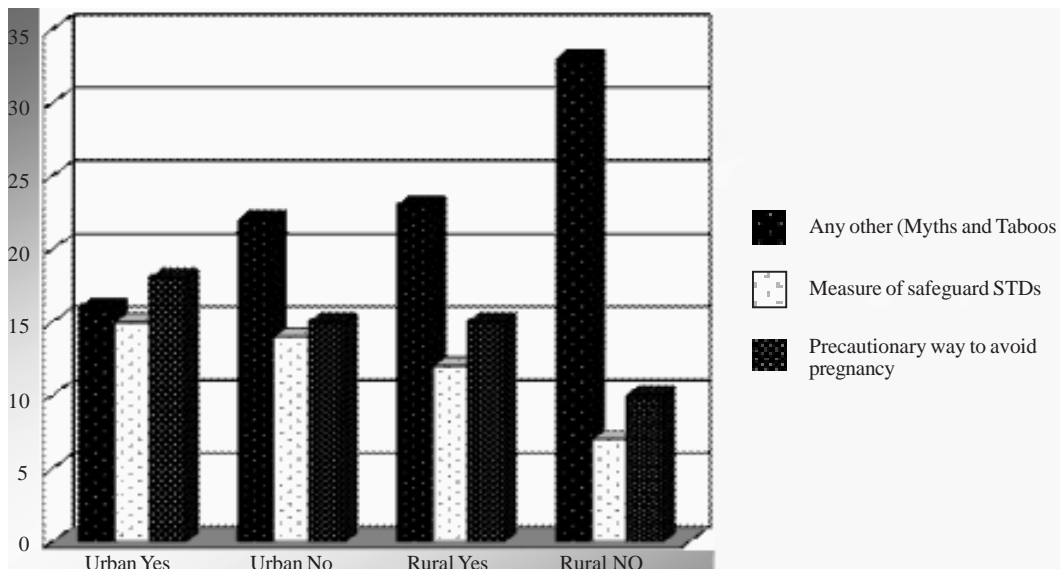


Fig. 4. Knowledge regarding contraceptive

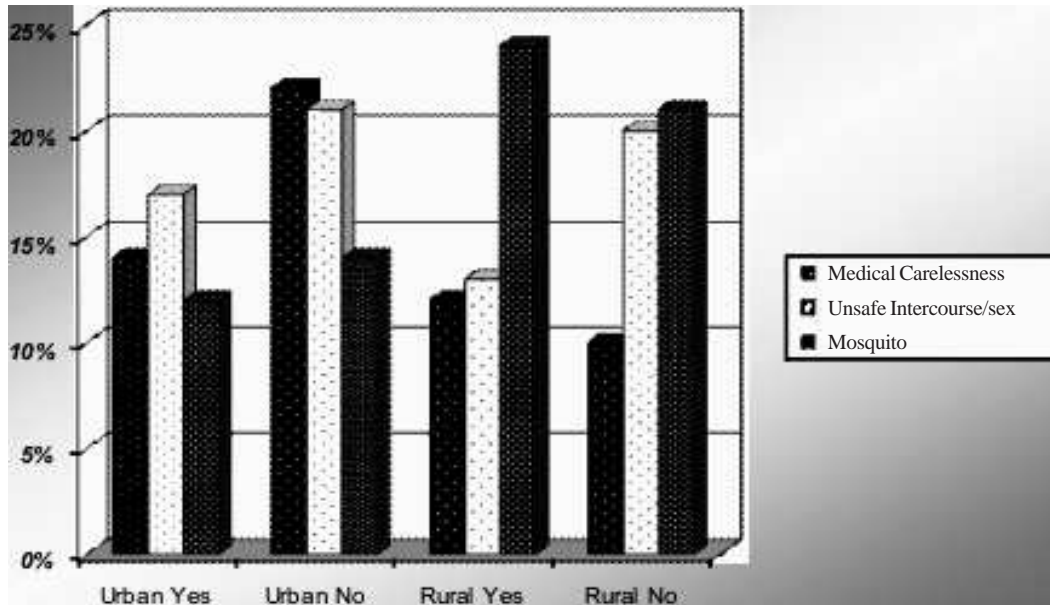


Fig. 5. Knowledge about the mode of spread of HIV/AIDS

From the Figure 5 it is also clear that some percentage of the population was not aware about the mode of spread of the disease and had unrealistic misconceptions. Figure 5 shows that 14 percent urban and 10 percent rural respondents were of the opinion that HIV/AIDS is transmitted through medical carelessness and 17 percent urban and 20 percent rural understood that the disease is spread through unsafe sex.

HIV/AIDS epidemic represents the most serious public health problem in India. There is no denial of the enormity of the problem. The prevalence of the infection in all parts of the country highlights the spread from urban to rural area and from high risk to the general population. Migration of labor, low literacy levels, low awareness, gender disparities, prevalence of sexually transmitted diseases and reproductive tract infections are some of the factors attributed to the HIV/AIDS. AIDS is a foremost problem of the youth. Nearly 50 percent of the new HIV infections are occurring in young people between 15 to 24 years old. This is partly because a large part of the world population is young, between 10 to 19 years of age (Dhondiyal 2006). Scientific knowledge about HIV/AIDS is essential for the adolescents leading them to take rational decisions regarding sexual life and protection against STDs.

CONCLUSION AND IMPLICATIONS

In India, adolescent girls, married and unmarried, lack basic knowledge about reproductive health and HIV. Gender inequalities affect their capacity to influence when, where and how sexual relations should form, rendering them vulnerable to coerced or unwanted sex, and placing them at high risk for adverse reproductive health outcomes.

The present study was carried out with the aim to assess the awareness level of adolescent girls towards reproductive health. The results revealed that on the whole majority of the respondents from both ecological settings, urban and rural, were unaware of the physiological rationale of menstrual process. Their understanding for reproductive health reflected a variety of misconceptions or ignorance, incomplete knowledge, unscientific notions and blindfold faith in cultural taboos, myths and social customs. Girls seemed to be less cognizant about menstruation at its inception. Social prohibitions and conservative attitude of parents in discussing issues openly, has blocked the access of adolescent girls to scientific information; the picture of ignorance and misunderstanding of menstrual process being even worse among rural girls. On the other hand, though urban respondents were comparatively more aware of the

physiological facts and importance of menstrual process, yet they also surprisingly continued to adopt the cultural stereotypes and taboos associated with menstrual process. Very few adolescents were able to give any scientific explanation for menarche. In the urban settings the age of onset of menstruation was found to be 12 - 13 years, while it was 13 - 14 years for the rural respondents. The early onset of menarche is influenced by many factors like climate, geographical distribution, diet, information inclusive of media exposure, etc. Thus, from the above discussion, it may be concluded that, awareness regarding reproductive health among adolescent girls in the sample population was average to low. The reason could be that most of the girls were from the low socio-economic to middle socio-economic status families in urban areas and the rest were from rural areas. Moreover, the mothers of the adolescents, who should become a source of knowledge regarding the physiological process of menstruation, were also not giving correct information as they themselves did not have adequate knowledge. With this lack of knowledge about menstruation, its relevance to reproductive profile of women along with the necessity of observing and maintaining hygiene, the adolescent girls are at a high risk of developing reproductive health problems.

In urban settings the onset of menstruation was found to be at 12 - 13 years, while the rural respondents their age of menarche by 13 - 14 years. The study reflected that rural respondents used unhygienic, old torn out clothes as protective pads during the menstruation period putting them at risk of acquiring reproductive tract bacterial infection. Moreover the management profile adopted by the rural girls was restricted to home remedies due to various social taboos associated with reproductive health again subjecting them to undue and unsolicited complications of RTIs.

RECOMMENDATIONS

In societies such as ours, parents hesitate from discussing reproductive health issues with their children and are considered a taboo. Safe reproductive health can be achieved by incorporating family education which focuses on learning about living, family and social relationships and personal development in school curricula. An integrated menstrual education

program should emphasize the physiological basis of menstruation. A scientific understanding of menarche is vital to prepare teenage girls to be physically, emotionally, socially, psychologically and spiritually healthy, leading to a flamboyant, proactive and a well-knit society and nation.

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