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## **Understanding of Puberty and related Health Problems among Female Adolescents in Karachi, Pakistan**

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### **Abstract**

**Objectives:** To understand the level of knowledge, a community based study conducted with the objectives as follows: To estimate the proportion of common facilities available and accessible and frequency of utilizing of it. To estimate the proportion of female adolescent utilizing the availability of facilities. To assess the level of understanding related to puberty and related health problems among female adolescents.

**Methods:** This cross-sectional study was conducted to determine the understanding and level of knowledge related to puberty and related health problems among female adolescents of Karachi, Pakistan. Data was collected from 150 female adolescents between 10-19 years of age. The pre-coded questionnaire was used to collect the data which was double entered and analyzed in SPSS.

**Results:** Sixty six percent (66%) of the participants were aware of the names of reproductive organs. Majority of the participants received information related to sexuality from their mothers. Sixty seven percent (67%) of the participants did not know about self breast examination. Cable and internet were cited as a major source of puberty and sexual health related information.

**Conclusion:** The study concluded that there is a lack of knowledge related to puberty and related health problems among female adolescents. This study recommends that the adolescents should be provided with health education before and during their puberty period to make them confident in dealing with their body changes during puberty effectively (JPMA 56:68;2006).

### **Introduction**

Adolescence is defined as the stage of life when individuals reach sexual maturity.<sup>1</sup> This is the time when adolescents experience a change in their physical, social, and emotional aspects of life. In order to effectively deal with this transition, they require information and a clear picture of their bodily changes to prevent them from physical problems, guilt, ambiguity, and confusion.<sup>2</sup> Therefore, reproductive health of the young people is a growing concern today and is considered a corner stone of health and a major determinant of human social development.<sup>3</sup> A study conducted among adolescent girls of African American and Latina aged 13 to 19 years attending public high schools revealed that in the presence of health care system, female adolescents were unable to receive adequate care due to confusion.<sup>4</sup>

Pakistan comprises of 16.5 and 25 million of adolescents aged 10 to 15 years and 15 to 24 years respectively.

The proportion of female adolescents of age 10-14 and 15-19 is 9 million and 6.5 million respectively.<sup>5</sup> Two third of the said population live in urban areas and remaining live in rural areas.<sup>5</sup> Yet research surrounding adolescents' reproductive issues remain limited, primarily due to the social taboos restricting open discussion of the topic specially among the young group.<sup>2,6</sup> Limited literature shows that people of Pakistan generally and adolescent group specially have limited access to puberty related health education and services.<sup>2</sup> A survey conducted by Aahung, a non-governmental organization revealed that adolescents had general lack of confidence and had inadequate information about their bodily changes. The study identified child sexual abuse, sexual harassment and shame and guilt associated with the body changes as key concerns inhibiting health-seeking behaviour of adolescents.<sup>7</sup>

A study conducted by the Population Council suggested that adolescents need more information about

**Table 1. Socio-demographic Profile of Study Population (n=106).**

| Characteristics                        | Percentages |
|--|-------------|
| <b>Area of Residency</b>               |             |
| Dastagir                               | 36          |
| Gulshan-e-Iqbal                        | 25          |
| PIB colony                             | 39          |
| <b>Religion</b>                        |             |
| Muslim                                 | 88.7        |
| Christian                              | 12.3        |
| <b>Ethnicity</b>                       |             |
| Sindhi                                 | 12          |
| Punjabi                                | 30          |
| Urdu Speaking                          | 50          |
| Pathan                                 | 8           |
| <b>Type of house</b>                   |             |
| Own                                    | 94          |
| Rented                                 | 6           |
| <b>Father education</b>                |             |
| Literate                               | 100         |
| <b>Mother education</b>                |             |
| Literate                               | 94          |
| <b>Education level of participants</b> |             |
| Literate                               | 85          |

reproductive health, including physiological changes during puberty.<sup>8</sup>

A study conducted by Pakistan Voluntary Health and Nutrition Association (PAVHNA) revealed greater awareness of puberty among boys than girls. According to the study findings, 90% of the boys and 80% of the girls had discussed bodily changes with peers and family members.<sup>9</sup> Findings of another survey showed that girls were most likely to hear about puberty from their mothers, sisters and friends. They were less likely to be informed about puberty before it occurred. The study also highlighted that the timing of information on puberty was inadequate as 75% of girls felt that they should have been informed about puberty in advance.<sup>10</sup>

A study on reproductive health awareness in adolescent girls was conducted in Peshawar.<sup>11</sup> Eighty eight percent (88%) of the students in the study clearly expressed their demand for sex education in schools. Girls were shy about discussing menstruation and felt that virginity was a virtue. The study concluded that there was a great need for multi-disciplinary educational programs in schools to give adoles-

cents "the right answers at the right time".<sup>11</sup>

Studies have also revealed that majority of female adolescents have very limited information about menstruation. A qualitative research based study in Karachi found various misconceptions about menstruation. Majority of the girls perceived menstruation as the ability to give birth and bathing as harmful during menstruation. Most girls felt it inappropriate to talk about their bodies. They also stated that they would tell their mother if they experienced any discomfort in genital area.<sup>7</sup>

Another study found that females were considered unclean while menstruating. Some were made to sleep on a mat on the floor, forbidden to bath, and advised to avoid some foods.<sup>12</sup>

The above mentioned literature clearly shows a lack of knowledge related to puberty and related health among the female adolescents.<sup>13</sup> As a result, female adolescents face a number of problems during their reproductive life and especially at the time of puberty, pregnancy and childbirth.<sup>14</sup> This study was conducted to explore the understanding of puberty and related health problems among female adolescents in Karachi, Pakistan.

The objectives of the study were to estimate the proportion of common facilities available and accessible to gain knowledge about puberty among female adolescents; to estimate the proportion of female adolescent utilizing the availability of facilities; and to assess the level of understanding related to puberty and related health problems among female adolescents.

## Subjects and Methods

A community based cross sectional study was conducted among the female adolescents between 10-19 years of age. Data was collected from three areas of Karachi including Gulshan-e-Iqbal, Dastagir Colony, and PIB Colony using a structured, pre-tested questionnaire from December to January 2002. The questionnaire consisted of both open and close-ended questions. Systematic sampling method was used to select 150 participants. Every 5th household was approach to find out the presence of adolescents. Only those adolescents who consented and received permission from their parents to participate in the study were included.

After double entry of the data in EPI- info version 6.04, cleaning and consistency checks were made. Data was then transferred to Statistical Package for Social Sciences (SPSS) version 11.5 for analysis and was again checked for consistency and correctness.

Descriptive analysis was performed to describe the composition of different variables. Frequency distributions,

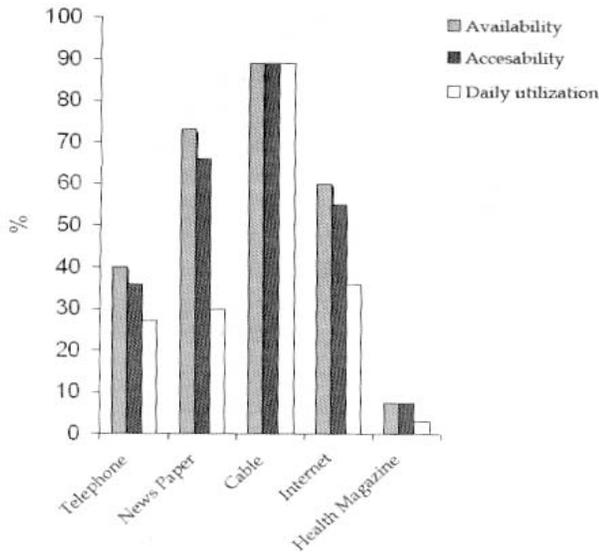


Figure. Availability, accessibility, and utilization of information facilities to the female adolescents.

percent distribution, mean, range and standard deviation were computed.

## Results

A total of 106 completed questionnaires were received revealing a response rate of 70%. The age range of the participants was 10-19 years with a mean of 14.3 years and a standard deviation of 1.7 years. Majority of them were Muslims (88.7%). Ninety percent of the participants were literate. Median income of the family as reported by the participants was Rs. 10,000. A summary of the socio-demographic details of the participants is provided in Table 1.

Common information facilities available and accessible by the participants as reported included telephone (40%), newspaper (70%), cable (90%), internet (60%) and health magazine (8%). Among these information facilities cable (90%) and internet (35%) were cited as the major source of information about sexuality, whereas only 5% of the participants reported utilization of health magazine as an information source. Data about availability, accessibility and utilization of the facilities/sources of information regarding puberty and sexual knowledge is summarized in Figure 1.

Sixty six percent (66%) of the participants were aware of the names of reproductive organs. Sixty eight percent (68%) of the participants defined menstruation as the regular monthly bleeding. Remaining were unaware of the definition. Among those who were able to define menstruation 15%, 11% and 34% reported that menstrual blood comes from the rectum, urinary bladder and urethra respectively. When asked about reasons of menstruation, 80% of the participants reported that it is the ability of a female to

become mother, in future.

Majority (98%) of the participants had received this information from their mothers who had also told them to avoid bathing (70%), praying or preaching (90%), carrying heavy weight (89%), and eating eggs, beef, and fish during menstruation. Remaining participants reported receiving information from elder sister, or a friend.

The first menstrual experience as reported by the participants was shocking (44%), fearful (30%) and stressful (18%), as according to them they were never given any information about menstruation before it occurred. Seventy eight percent (78%) of the participants reported having vaginal discharge before and after menstruation for the last six months.

Approximately 67% of the participants did not know about self breast examination. Most (56%) of the participants stated that the problems related to sexual organs/disease should not be reported to anyone. Only 22% reported that the problem should be discussed with the family members, whereas remaining participants stated that incase of any problem a doctor should be consulted. When explored about the knowledge related to sexual disease, only 46% of the participants were able to mention the names of some diseases including AIDS (4%), Hepatitis B (28%), and Hepatitis C (14%). Remaining 54% of the participants did not have any information about any sexual disease.

Majority (72%) of the participants believed that they should be given proper information related to puberty and sexual health before and during the time of puberty. School health programs (45%), television programs (35%) and magazines (10%) were cited as the sources which could be used to provide information to the adolescents. Eighty percent of the participants believed that topics related to puberty, sexual and reproductive health should be taught as a part of the school curriculum.

## Discussion

Findings of the study support previous researches which revealed that female adolescents have limited access to puberty and sex related health education and services.<sup>2,8,13</sup> Young women gained information from limited sources including electronic media (cable and internet), family members (mother, sister) and friends. Mothers were shown to play a very important role in this respect, as majority of the participants reported receiving information from their mothers. Lack of knowledge about puberty and sexual health as shown in this study might be due to the fact that mothers themselves suffer from lack of information about reproductive functions and may not feel comfortable in discussing such issues as reported by various studies.<sup>16</sup> Open discussion of sexuality is considered inappropriate in

society and parents fear that discussing sexual issues with adolescents would imply approval of pre-marital activity.<sup>16</sup> The other explanation could be the low education level of women in Pakistan, especially with regard to pubertal changes; mothers themselves do not have sufficient knowledge related to puberty. Though electronic media including cable and internet has been cited as a major source of information for the female adolescents, it does not provide them with the appropriate information they need as reported in previous studies.

The finding that the adolescent girls believed that bathing, praying, carrying heavy weights, and avoiding certain foods during menstruation also supported previous research studies which suggest women are considered unclean during menstruation and were advised to avoid some food and to take bath.<sup>12,14</sup>

Only a small number of participants in the study were able to state that menstrual blood comes from uterus. This implies that the young females have a lack of information related to sexual and reproductive health and supports previous research in which only 33% of the participants were able to correctly identify the source of menstrual blood.<sup>5</sup>

Majority (74%) of the participants in this study reported that the first menstrual experience for them was shocking and fearful. The findings in this study support the findings of Qazi (2001)<sup>6</sup> which stated that most girls were unprepared for the trauma of their first menstrual experience. It highlighted the need for the provision of information related to menstruation before the experience to help the adolescents cope with the change effectively. Another study also highlighted parents' general lack of concern in discussing reproductive health issues with their children before there was a clear need due to the cultural tendency of seeking curative care for an ailment after it strikes rather than taking preventive measures.<sup>8</sup>

The reports of white discharge among adolescent girls in this study may suggest the presence of any gynaecological information; however, this finding should be interpreted cautiously, as it needs support of other clinical evidences. Literature suggested that association between women self reported white discharge and detectable infection is relatively low.<sup>17</sup>

Majority of the participants in this study felt that problems related to sexual and reproductive organs should not be reported to anyone. Various reasons contributing to this issue may include a feeling of shyness to discuss such issue, lack of knowledge and perceived barriers to access to health care of female adolescent. The finding supported the results of a study that has shown that lack of proper knowledge related to puberty and sexual health, and taboos

attached to the issue, female adolescents do not seek proper health care assistance for gynaecological problems.<sup>8</sup>

The finding that majority of the participants had not information about self breast examination and sexually transmitted diseases also supported the notion of lack of information related to puberty and sexual health among female adolescents in Pakistan.<sup>6,8</sup>

The finding that majority of the participants identified a need to have knowledge related to puberty and sexual health before the time of puberty is similar to previous research findings.<sup>6,8,10,11</sup> The participants of this study as well as the previous studies have identified school curriculum, school health programs and programs delivered by print and electronic media as potential sources which could be used to enhance adolescents understanding of puberty and sexual health.<sup>6,8,10,11</sup>

Findings of the study should be considered cautiously as the data was collected from only three selected areas of Karachi city. Moreover, taboos and stereotypes attached with the puberty and sexuality related information might have affected the responses of the participants.

The findings of the study revealed that the knowledge of puberty and sexual health among the female adolescents of middle income families of Karachi is lacking. Although the mothers are educated, still have lack of information on reproductive organs, normal physiology and do's and don't's. Hence, they transfer limited knowledge to their daughters. The participants suggested the need of reproductive education as a part of the school curriculum, especially in secondary school.

The study recommends that the female adolescent should be given appropriate knowledge regarding puberty and sexual health to help them confidently deal with their sexual health issues.

Community groups, peer groups, school curriculums, and other channels can be utilized as effective means of transmitting important health messages and advice to young women entering puberty. Finally, print and electronic media can be utilized to address the sexual and reproductive issues of the adolescents and specially the female adolescents in a culturally sensitive way.

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