

# Knowledge, attitudes and beliefs about menarche of adolescent girls in Anand district, Gujarat

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المعارف والمواقف والمعتقدات المتعلقة ببدء الإحاضة لدى الفتيات المراهقات في منطقة أناند،  
في ولاية غوجارات الهندية

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**الخلاصة:** أُجريت دراسة مسحية بواسطة استبيان للإلمام بالمعارف والمواقف والمعتقدات المتعلقة بالحيض، في 22 مدرسة في منطقة أناند، في ولاية غوجارات. وقد كانت نسبة 38.5% فقط من بين 900 من تلميذات المدارس في الفئة العمرية 11 – 17 عاماً، يشعرن بالارتياح إزاء بدء الإحاضة، وكانت نسبة 31.0% منهن فقط يعتقدن أن الحيض مجرد عملية فزيولوجية عادية. وقد تلقت نسبة 37.2% منهن معلومات عن بدء الإحاضة قبل حدوثها، في حين كان 48.2% منهن يشعرن أنهن غير مستعدات نفسياً لبدء الإحاضة. وكان المصدر الرئيسي للمعلومات هو الأمهات (60.7%) أو الأخت الأكبر سناً (15.8%); أما دور المدرسين وسائر الأقارب فقد كان محدوداً. ومن الجدير بالذكر أنه وفي هذه المنطقة من الهند تنتشر بين العديد من الأسر عادة الاحتفال ببدء الإحاضة، مع الالتزام ببعض القيود الاجتماعية.

**ABSTRACT** A questionnaire survey of knowledge, attitudes and beliefs towards menstruation was made in 22 schools in Anand district, Gujarat state. Of 900 schoolgirls aged 11–17 years, only 38.5% felt comfortable about menarche and only 31.0% believed that menstruation was a normal physiological process. Many (37.2%) had not been informed about menarche before its onset and 48.2% felt they were not mentally prepared. The major sources of information were the mother (60.7%) or an elder sister (15.8%); teachers and others relatives played a small role. In this area of India, many families continue the custom of celebrating the first menarche and observing social restrictions.

## Connaissances, attitudes et croyances concernant la menstruation chez des adolescentes dans le district d'Anand au Gujarat

**RÉSUMÉ** Une enquête par questionnaire sur les connaissances, attitudes et croyances concernant la menstruation a été réalisée dans 22 écoles du district d'Anand, de l'État de Gujarat. Sur les 900 élèves âgées de 11 à 17 ans, 38,5 % seulement n'avaient pas d'appréhension vis-à-vis de la menstruation et 31,0 % seulement pensaient que la menstruation était un processus physiologique normal. Nombre d'entre elles (37,2 %) n'avaient pas été informées sur la menstruation avant son apparition et 48,2 % pensaient qu'elles n'y étaient pas préparées mentalement. La principale source d'information était la mère (60,7 %) ou une sœur plus âgée (15,8 %) ; les enseignants et les autres parents jouaient un rôle limité. Dans cette région de l'Inde, de nombreuses familles perpétuent la coutume de la célébration de la première menstruation et de l'observation de restrictions sociales.

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## Introduction

Of all the developmental milestones associated with the adolescent years, menarche may be the most noteworthy. The onset of the first menstrual period is a qualitative event of major significance in a woman's life, denoting the achievement of a major functional state. The bodily changes associated with puberty affect a girl's psychological and social development and the girl's life experiences influence the physical changes that are occurring as well.

In one study, researchers interviewed 35 white middle-class pre- and post-menarche girls at a summer camp [1]. The girls had learned about menstruation from friends, commercial booklets, school and their parents, especially their mothers. They perceived themselves as being knowledgeable about menstruation and used appropriate terms. However, their knowledge of female anatomy was poor. Therefore, despite their access to information about menstruation, the girls had not assimilated it well. They were most concerned about what to do when they got their periods, and many had mentally rehearsed what they would do in a variety of situations.

Brooks-Gunn and Rubble found that girls in 7th and 8th school grades had mostly negative beliefs about menstruation [2]. For example, most believed that physical discomfort, increased emotionality and a disruption of activities accompany menstruation. Williams, a nurse educator, found a more positive attitude towards menstruation in a group of 9- to 12-year-old girls, most of whom were pre-menarche [3]. These girls generally equated menstruation with growing up and being normal. However, about a third of them also believed menstruation to be embarrassing, 28% thought it a nuisance, 27% found it disgusting and 23% disliked the idea that it is not control-

lable. The girls in the sample also believed some of the popular menstrual taboos about not participating in sports or discussing the subject with boys or their fathers. In other studies menarche has been found to be an anxiety-producing or negative event and mixed feelings, such as being "excited but scared" or "happy and embarrassed", are common [4,5].

Several researchers have found that girls who report being adequately prepared have more positive initial experiences with menstruation [6,7]. Other studies indicate a need for more and better menstrual education. In a study of 95 women from 23 foreign countries, Logan found that 28% complained of not having enough information [8]. Even girls who have had sufficient prior knowledge about menarche often feel unprepared for the event itself. In a study of 97 college women's recollections, Rierdan and Koff found that, as girls, they had wanted to know not only about menstrual physiology and menstrual hygiene—facts that are usually included in menstrual education materials—but also about menstruation as a personal event [7]. The feelings of fright and embarrassment that girls experience at menarche need to be acknowledged and the negative aspects of the menstrual experience need to be discussed in order to provide a balanced view of menstruation [6,7].

Cultural taboos about menstruation also need to be addressed. Until relatively recently, separation of menstruating women from the rest of the population was common, and it is still practised in some areas of the world. "Beliefs or superstitions about dangers inherent in menstruation" and the rituals that accompany them, are extremely common and widespread [9].

It was in the context of these concerns that the present study was carried out to study the knowledge, attitudes and beliefs

of adolescent girls in Anand district of Gujarat province with respect to menarche.

## Methods

The survey was conducted in Anand district of Gujarat state from July 1999 to August 1999. Anand and Kheda districts are 2 of the most prosperous areas, not only in Gujarat, but also the Indian subcontinent. A large inflow of earnings from migrant workers in industrialized countries means that the overall living standard of families and the status of women in these districts are very high. Anand and Kheda districts have been pioneers in the Milk Cooperative movement which has also contributed to improving the health status of the population, and particularly women, in the areas.

Out of 49 schools in Anand, girls were interviewed from 22 schools: all the 4 girl's schools run by the *panchayat*/municipality (434 respondents), all the 3 co-educational English medium convent schools run by trusts/missionaries (64 respondents) and 15 co-educational schools randomly selected from the remaining 37 schools (402 respondents). All the girls studying in grades 6 to 12 (in the age group 11–17 years) were included from the selected schools.

A pretested structured questionnaire was administered to all the 900 girl students (763 had achieved menarche). The questionnaires were distributed and collected by female medical interns who received a 1-day training. After obtaining permission from the principals of the schools, girl students were assembled in a hall in the school and the printed questionnaire was distributed among them. During this process, the female class teachers of the school were also present. The students were asked to answer the questions and were helped by the interns if they faced difficulties. The questionnaire was printed in both English

and the local Gujarati language. The students were told not to write their names or class or section of the class in order to keep confidentiality. None of the girl students refused to participate in the study.

The questionnaire was specially designed for the study and included general questions (age of first menarche, height, weight, type of diet); family information, (number of siblings, literacy and employment status of father and mother, family income); experiences of menarche (sources of information about menarche, initial perceptions at the time of first menarche, feelings about the process of menstruation, who they first informed, how long it took to tell them, social reactions to menstruation in the community). All the questions were closed-ended, some with yes/no response and some with 4 or 5 possible responses.

## Results

Around two-thirds of the 900 girls (62.7%) had been informed about menarche before its onset. From Table 1 it can be seen that the major source of information was the mother (60.7%) followed by older sisters (15.8%). Teachers and others (which included near and distant relatives) played a small role. The mother was usually the first person informed about the start of menarche (76.1%), followed by an older sister (13.4%). Two-thirds of the girls (37.2%) had no prior knowledge about the event, which accounts for the fact that 16.9% had the initial perception that it was a life-threatening disease or symptom of illness (Table 2).

Asked if they felt they had been mentally prepared (yes/no), 48.2% of girls felt they were not mentally prepared for menarche (Table 2). Table 2 shows that at the time of first menstruation, 28.3% felt shame, 12.6% felt guilt and 20.6% had a sense of

**Table 1 Knowledge about menarche and social conventions in their house among adolescent girls in Anand district, Gujarat**

| Item   | % of respondents |
|--|------------------|
| <i>Had been informed about menarche before its onset</i> (n = 763) |                  |
| Yes  | 62.7             |
| No   | 37.2             |
| <i>Source of information about menarche</i> (n = 486)              |                  |
| Mother   | 60.7             |
| Older sister   | 15.8             |
| Teacher  | 6.0              |
| Friend   | 13.6             |
| Other  | 3.9              |
| <i>First person informed about menarche</i> (n = 763)              |                  |
| Mother   | 76.1             |
| Older sister   | 13.4             |
| Friend   | 6.9              |
| Teacher  | 1.8              |
| Other  | 1.5              |
| <i>Society reaction to menarche</i> (n = 762)                      |                  |
| Social ceremony/ritual   | 43.7             |
| Isolation from prayer/household activities                         | 36.2             |
| Food restrictions  | 4.6              |
| Other  | 15.5             |

n = number of respondents to each question.

fear. Asked how they felt about the process of menstruation, a majority of girls believed that menstruation is a purging of body impurities (56.5%), 31.0% felt that it was a normal physiological event, whereas 10.0% felt it was something dirty.

In this area of India, the custom of celebrating the event of menarche continues; 43.7% of respondents reported that a social ceremony is held in their houses for the first menarche (Table 1). More than two-thirds of respondents (36.2%) reported that

**Table 2 Feelings about and mental preparedness for menarche among adolescent girls in Anand district, Gujarat**

| Item  | % of respondents |
|---|------------------|
| <i>Felt mentally prepared for menarche</i> (n = 763)              |                  |
| Yes   | 51.9             |
| No  | 48.2             |
| <i>Feelings at the time of first menstruation</i> (n = 763)       |                  |
| Normal  | 38.5             |
| Shame   | 28.3             |
| Fear  | 20.6             |
| Guilt   | 12.6             |
| <i>Feelings about the process of menstruation</i> (n = 763)       |                  |
| Normal physiology   | 31.0             |
| Dirty   | 10.0             |
| Purging of body impurities  | 56.5             |
| Other   | 2.5              |
| <i>Initial perceptions at the onset of menstruation</i> (n = 478) |                  |
| Normal  | 83.1             |
| Symptom of illness  | 14.3             |
| Sign of life-threatening disease                                  | 2.6              |

n = number of respondents to each question.

social restrictions are still observed in their family: the custom of not allowing them to hold prayers, go to the temple or enter the kitchen. A few girls reported that food restrictions are also imposed on them during menstruation, which do not allow them to consume spicy or non-vegetarian foods.

## Discussion

When respondents were asked about their feelings regarding their first menstrual period it was found that, although they have completed 9 or more years of education, a majority of girls (61.5%) still have negative feelings about menarche. In a modern soci-

ety where people have access to information through the television, radio, internet and print media, it is surprising that such a large proportion of girls (37.2%), all of whom are in school, do not have prior knowledge about such an important event.

Overall, a girl's psychological reactions to menarche are the result of a complex interplay of biological, psychological and social influences. Genes, hormones, environmental factors and nutrition influence the initiation process of menstruation. However, peer relationships, self-esteem and the way she feels about being a woman determine how the adolescent adapts to the changes menarche imposes.

Several researchers have expressed concerns about the observation that post-menarche girls, even when they are intellectually well prepared for menstruation, report more feelings of shame, apprehension and disgust and less pride than their pre-menarche peers [7]. If girls are mentally prepared for menarche, then the chances of depression or low self-esteem after experiencing menarche decrease; Ulman has reported such a finding [10].

Puberty initiation rites heralding menarche are common in many cultures. Paige reflected that societies with the highest levels of social rigidity and male solidarity also have the strongest codification of menstrual taboos [11]. This may reflect a need to maintain clear sex roles, often by controlling women and their fertility. Social

and cultural factors impact on adjustment to menses and have an effect on the early experiences of menarche. Certain common features were observed, however, in that most girls reported their mothers as a principal source of information and received some limited education about menses in school with frequent emphasis on the hygienic aspects of menstruation. Since it is a very sensitive issue, girls prefer to report such things first to the woman they trust most.

This highlights the need for health education and inclusion of such topics in their school and college curricula. Education about the menarche has come a long way in the last 50 years, although it is still given in very few schools and colleges in India. However, in trying to convey menstruation as normal and natural, and in directing girls to continue with their lives as usual, we have ignored some of the nuisance aspects of menstruation. Girls are left to find these things out for themselves, perhaps contributing to post-menarche feelings of apprehension, shame and disgust. There is a need to acknowledge both positive and negative feelings about menstruation. In addition to the facts about physiology and hygiene, girls need an opportunity to talk about their reactions to body changes, looking older, growing up and parental and peer expectations. Because girls' attitudes and ways of thinking change during early adolescence, menstrual education needs to be an ongoing process.

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#### **Adolescent sexual and reproductive health research**

The needs of adolescents remain poorly understood or served in much of the world. Neglect of this population has major implications for the future, since sexual and reproductive behaviours during adolescence have far-reaching consequences for people's lives as they develop into adulthood.

The work of the WHO Department of Reproductive Health and Research encompasses adolescent sexual and reproductive health and focuses on promoting research and filling gaps in the evidence base on the sexual health situation and needs of adolescents in developing countries; related to this are activities intended to strengthen research capacity and disseminate findings.

Further information about adolescent reproductive health research can be found at the WHO Department of Reproductive Health and Research website at <http://www.who.int/reproductive-health/adolescent/intro.en.html>