

Mapping the knowledge and understanding of menarche, menstrual hygiene and menstrual health among adolescent girls in low- and middle-income countries

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REVIEW

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Mapping the knowledge and understanding of menarche, menstrual hygiene and menstrual health among adolescent girls in low- and middle-income countries

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Abstract

Background: Menstruation is a natural physiological process that requires proper management. Unlike other normal bodily processes, menstruation is linked with religious and cultural meanings that can affect the perceptions of young girls as well as the ways in which the adults in the communities around them respond to their needs.

Objectives: This review aims to answer the following questions: (1) how knowledgeable are adolescent girls in low- and middle-income countries about menstruation and how prepared are they for reaching menarche, (2) who are their sources of information regarding menstruation, (3) how well do the adults around them respond to their information needs, (4) what negative health and social effects do adolescents experience as a result of menstruation, and (5) how do adolescents respond when they experience these negative effects and what practices do they develop as a result?

Methods: Using a structured search strategy, articles that investigate young girls' preparedness for menarche, knowledge of menstruation and practices surrounding menstrual hygiene in LMIC were identified. A total of 81 studies published in peer-reviewed journals between the years 2000 and 2015 that describe the experiences of adolescent girls from 25 different countries were included.

Results: Adolescent girls in LMIC are often uninformed and unprepared for menarche. Information is primarily obtained from mothers and other female family members who are not necessarily well equipped to fill gaps in girls' knowledge. Exclusion and shame lead to misconceptions and unhygienic practices during menstruation. Rather than seek medical consultation, girls tend to miss school, self-medicate and refrain from social interaction. Also problematic is that relatives and teachers are often not prepared to respond to the needs of girls.

Conclusion: LMIC must recognize that lack of preparation, knowledge and poor practices surrounding menstruation are key impediments not only to girls' education, but also to self-confidence and personal development. In addition to investment in private latrines with clean water for girls in both schools and communities, countries must consider how to improve the provision of knowledge and understanding and how to better respond to the needs of adolescent girls.

Keywords: Menarche, Menstruation, Menstrual health, Menstrual health problems, Menstrual hygiene management, Adolescent girls

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Literature Review: Objectives

1.

How knowledgeable are adolescent girls in LMIC about menstruation and **how prepared** are they for reaching menarche?

2.

Who are young girls' **sources of information** regarding menstruation?

3.

How well do adults respond to girls' information needs?

4.

What **negative health and social effects** are experienced by adolescents?

5.

How do adolescents respond when they experience these negative effects and **what practices do they develop** as a result?

Literature Review: Methods

Inclusion Criteria

- Articles published in peer-reviewed journals between the years 2000 and 2015
- Evidence from low- and middle-income countries
- Data relevant to adolescents (ages 10-19)

Available Evidence

- 81 studies identified
- 21 countries

| | | |
|----------|------------|-----------|
| Ethiopia | Nigeria | Nepal |
| Kenya | Mexico | Pakistan |
| Malawi | Brazil | Sri Lanka |
| Tanzania | China | Iran |
| Uganda | Malaysia | Jordan |
| Egypt | Bangladesh | Lebanon |
| Ghana | India | Turkey |

1. **How knowledgeable** are adolescent girls in low- and middle-income countries about menstruation and **how prepared** are they for reaching menarche?

Proportion of girls aware before reaching menarche:

Ranged from 2.8% of rural girls in Rajasthan, India to 100% of urban girls in Turkey

Inadequate knowledge:

- 3/4 of Chinese girls surveyed
- Identification of the uterus as the source of menstrual blood ranged from 2.5% in India to 82.9% in Uganda of girls questioned



Plan International, Brazil

Education level: Had a significant influence on menstrual knowledge in India and Nigeria

Misconceptions:

- Menstruation is sometimes considered a curse, disease, or representation of sin in Nepal, India, Uganda
- 6% of 150 Nepalese girls recognized menstruation as physiological process

2. Who are young girls' sources of information regarding menstruation?



UNICEF/P. Vishwanathan

- **Mothers** were most often reported as the first and main source of information
- **Sisters and peers** were the next most common sources
- Nearly all studies reporting on **teachers and health professionals** reported them as the least common source (Egypt, Ghana, India, Jordan, Malaysia, Nepal, Nigeria, Sri Lanka, Turkey)
- Some girls have access to **media and the Internet**

3. How well do adults respond to girls' information needs?

In India and Tanzania, mothers **often provide information after menarche**; in Mexico, however, 94% of girls had discussed menstruation before it occurred

Adults **passed down misconceptions** about menstruation; mothers interviewed in Bangladesh attributed menstruation to God

Parents' level of education was positively correlated with pre-menarcheal knowledge in Nigeria



UNICEF/G. Pirozzi

In Kenya, adults cited **discomfort as an impediment** to discussing menstruation

4. What negative health and social effects are experienced by adolescents?

Emotional Impacts

- Menarche described as shocking or frightening
- "The girl with her period is the one to hang her head"
- Mood swings and irritability reported by more than 2/3 schoolgirls in India, Lebanon, Malaysia



UNICEF, Turkey

Physical Impacts

- Severe pain, headaches, swelling, and fatigue cited across studies
- The highest report of dysmenorrhea was among schoolgirls in Egypt (94.4%)
- Majority of rural-living girls in Malaysia considered dysmenorrhea a normal aspect of menstruation

Social Impacts

- 1/3 female students in Brazil and Egypt, 3/5 slum dwellers in India restrict daily activities
- Housework, such as cooking, prohibited while menstruating in India, Kenya, Nepal
- Abstain from religious activities in India, Malaysia, Nigeria, Pakistan
- Absenteeism from school ranged from 2.0% to 61.7%; dysmenorrhea significantly associated with missing school in Lebanon



5. How do adolescents respond when they experience these negative effects and what practices do they develop as a result?

Sanitation

- Sanitary pad use ranged from 2% in rural Nepal to 69.1-93.8% in urban Nigeria
- Many of those who reuse cloth dry washed cloth in hiding instead of under the sun
- Tissue, grass, mattress pads also reported as absorbents
- Schools had insufficient facilities and privacy; girls preferred to only change absorbents at home
- Bathing while menstruating ranged from 0% in rural India to 100% Egyptian schoolgirls

Medication

- Few consult health professionals (generally less than 1/5)
- Self-medicate to relieve pain
- Traditional remedies reported in Bangladesh, Brazil India Malaysia, Sri Lanka



YHP China

Five Takeaways

1. Girls are uninformed and unprepared for menstruation

2. Mothers, other female relatives, and female peers are the main sources of information, but it is not adequate or timely



Plan International, Nepal

3. Girls experience a variety of symptoms (e.g. pain, headaches, fatigue) and, when combined with taboos, they often cannot participate in household, school, or social activities

4. Few girls seek health care when they experience menstrual problems, and may instead resort to household remedies

5. Girls in rural and poor urban communities are less likely to obtain and use sanitary pads; they use materials made at home, and often lack access to clean water and functional toilets



Girl education project in Korogocho informal settlement, Nairobi, Kenya
Jonathan Torgovnik/Getty Images

What girls need:

1. To grow up in a context where menstruation is seen as healthy and normal
2. To be well educated about menstruation
3. To have access to sanitary products, water, soap, toilets and disposal methods
4. To be cared for and supported during their menstrual periods
5. To be able to consult a competent and caring health worker when they have menstrual health problems