A community-based study of menstrual beliefs in Tigray, Ethiopia

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ABSTRACT

Objective: To investigate knowledge and beliefs about menstruation in the Tigray Region of Ethiopia.

Methods: Between May 5 and May 25, 2015, a cross-sectional survey using semi-structured questionnaires was undertaken in 10 subdistricts (5 urban, 5 rural) in the Tigray Region of northern Ethiopia by trained data collectors (native speakers of the local languages). Individuals in randomly selected households who were aged 10 years or older and who were willing to participate were asked various questions regarding the nature and management of menstruation. Interviews were recorded, and handwritten field notes were taken during the interview process. Data were compiled, transcribed, translated into English, categorized, and analyzed thematically.

Results: Overall, 428 household members (349 female, 79 male) were interviewed. Reproductive anatomy and biology of menstrual regulation were poorly understood by the respondents. The belief that menstruating girls should not attend school was voiced by 17 (21.5%) male and 37 (10.6%) female respondents. Satisfactory management of menstrual hygiene was acknowledged to be a problem, and many respondents complained about the high cost of commercially produced, disposable menstrual pads.

Conclusion: Improved education on menstruation and better access to low-cost, reusable menstrual hygiene supplies would be worthwhile in the Tigray Region of Ethiopia.

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1. Introduction

Menstruation is the normal shedding of the endometrial lining that follows an ovulatory event in which fertilization does not occur. It is a fundamental part of human reproductive life. Menstruation raises two important questions for women, irrespective of the culture in which they live. First, what does menstruation signify? And second, how should the menstrual discharge be managed? These questions arise, often urgently, at menarche and have both biological and social significance. Increasing evidence from Africa and other low-income regions suggests that menstrual hygiene management is a considerable barrier to the advancement of girls and women, especially for adolescent schoolgirls in poor communities [1–13].

The Menstrual Dignity Project is a collaborative undertaking by Mekelle University, the Mariam Seba Sanitary Products Factory, and Dignity Period (a not-for-profit public charity based in the USA) to improve both knowledge about menstruation and access to low-cost, locally produced, reusable menstrual hygiene products in northern Ethiopia. As part of efforts to understand menstrual hygiene in northern Ethiopia, the aim of the present study was to investigate the menstrual knowledge and beliefs of the general population of 10 subdistricts in the Tigray Region.

2. Materials and methods

The present cross-sectional survey-based study was conducted among 428 randomly selected households in 10 subdistricts (locally called tabiyas) of the Tigray Region of northern Ethiopia between May 5 and May 25, 2015. To ensure an adequately diverse sample of informants, five subdistricts in urban areas and five in rural areas (Table 1) were chosen using a quota sampling technique to assure equal numbers from each subdistrict. The subdistricts were broadly representative of the diversity of the Tigray Region. Households for inclusion were selected randomly—every 12th household in each subdistrict was visited—and distributed equally throughout the 10 subdistricts. Individuals in the selected households were eligible for interview if they were aged 10 years or older and were willing to participate. Only one...
individual in each household was interviewed. If no one was available within the selected household, the data collector went to the house next door. The study was reviewed and approved by the institutional review boards at Ayder Referral Hospital, the College of Health Sciences at Mekele University, and the Washington University School of Medicine in St Louis, MO, USA. Informed consent was obtained from the respondents at the beginning of each interview.

Before each interview, informed consent was obtained, along with baseline demographic information. Each informant then answered a series of semi-structured questions (Box 1) and their answers were recorded. All interviews were conducted by trained health data collectors fluent in the local language (Tigrigna, Amharic, or Kunamngna). The data were transcribed into Tigrigna and then translated into English. Individuals received 50 Birr (approximately US$2.50) for their participation.

Data analyses were performed using SPSS version 16 (SPSS Inc, Chicago, IL, USA) and ATLAS.ti 7.5.4 software (Scientific Software Development, Berlin, Germany). Socioeconomic data were analyzed descriptively using simple statistics. Transcribed and translated data were placed in a Word 2010 document (Microsoft Corporation, Redmond, WA, USA); the texts were coded and grouped using ATLAS.ti, and then entered into an Excel 2010 spreadsheet (Microsoft Corporation, Redmond, WA, USA), from which they were abstracted into categories for analysis.

3. Results

During the study period, 428 household members (349 female, 79 male) from the 10 subdistricts were interviewed. The respondents were predominantly of reproductive age, had some education (primary or secondary school), were overwhelmingly of Ethiopian Orthodox religion, and worked as farmers, housewives, or merchants (Table 2).

Menstruation is named differently in the three Ethiopian languages: it is called yewor abeba (meaning “monthly flower”) in Amharic; werhawi tsigya (“monthly season or flower”) or nay adetatna (“belonging to our mothers”) in Tigrigna; and mara (“menstruation”) or gina yaka (“monthly bleeding from mothers”) in Kunamngna. Almost all respondents said they knew what menstruation was—i.e. regular monthly bleeding by female individuals of reproductive age. Two (2.5%) male respondents claimed no knowledge of menstruation.

When asked to explain why menstruation occurs, 4 (5.1%) of the 79 male participants said that they had no idea. One (1.3%) male participant said that it was the result of “God’s will.” One (0.3%) said that it occurred as the result of “God’s gift” from God to girls and women. Two of these men simply commented that “God made them that way.”

Female responses to this question were more varied. Nineteen (5.4%) female respondents said that they had no idea why menstruation occurred. It was regarded as the marker of sexual maturity and/or fertility (“to give birth”) by 179 (51.2%) female participants, whereas 124 (35.5%) simply said that it was “a natural phenomenon in females.” Thirteen (3.7%) female respondents said that it occurred because it was God’s will. One (0.3%) said that it occurred as the result of first sexual intercourse, whereas another attributed it to “pain in the backbone occurring when one becomes an adult,” presumably referring to menstrual cramps as a theoretical cause. Only 12 (3.4%) female participants were prepared to provide a plausible biological explanation for menstruation. Other revealing comments were that menstruation occurred “to remove waste products from the body in the form of blood” or to “void dirty
blood.” One (0.3%) individual saw it as “an indication that a girl can start to have sexual intercourse.”

When asked to explain the physiology of menstruation—i.e., to describe what makes menstruation happen—the participants’ responses were no more enlightening. Twelve (15.2%) male respondents admitted that they had no idea how it occurred. Only 8 (10.1%) could provide a plausible description of the reproductive biology of menstruation. Twenty-four (30.4%) male respondents simply ascribed it to “God’s will” or “nature,” whereas 33 (41.8%) simply said that it was a reflection of sexual maturity. One male respondent said that it occurred when women were “afraid of something,” and another said that it occurred “due to the burdens or stresses of daily life.”

Female participants’ explanations for how menstruation occurred were similarly confused. Sixty-six (18.9%) said that they had no idea what makes it happen, and another 66 (18.9%) said that it happened “due to the will of God.” Only 12 (3.4%) female respondents could provide a plausible biological explanation for menstruation, and 15 (4.3%) said that it occurred “so you could give birth.” Forty-two (12.0%) female participants attributed menstruation to “good health,” “good living,” “good nutrition,” or a “good environment,” indicating at least an intuitive knowledge of regular cyclic menses as a marker of good reproductive health. Twelve (3.4%) said that it occurred owing to headaches, loss of appetite, or pain. Other random explanations were that menstruation occurred from consuming too many sweet drinks, as a result of sexual desire, or to void accumulated waste from the body.

Table 3 shows the expected age of menarche as reported by participants. Although both groups placed the age of menarche in early-to-mid adolescence, female participants expected first menstruation to occur earlier than did male participants.

Most participants correctly described menstrual blood as coming from the uterus, but substantial numbers of both sexes described menstrual blood as originating either from the “internal body” in general or from the abdomen. A few female interviewees described it as originating from “all parts of the body except the head,” whereas some described it as originating from “all parts of the body starting with the head.” Two male participants (but only one female participant) described menstrual blood as coming from the vagina, and two female interviewees stated that it “came from the kidney.” Two male participants responded that menstrual blood arises metaphysically in the “mind” or “soul” of the menstruating woman, whereas nine female interviewees described menstrual blood as originating in the backbone, probably associating menstrual cramps with the place of origin of the blood.

When asked about the ill effects of menstruation and whether or not it was harmful in any way, there was a general feeling that “excessive” bleeding could cause serious problems. Among the 79 male participants, 36 (45.6%) said that there were “no problems;” 20 (25.3%) said that it caused anemia, weakness, or tiredness; 15 (19.0%) said that it caused abdominal pain or sickness; 3 (3.8%) said that it caused fear of social interactions; 1 (1.3%) said that there were problems only if “women were not clean;” 1 (1.3%) said that menstruation could cause infections and dysentery; and 3 (3.8%) did not know whether there were harmful conditions associated with menstruation.

Female participants’ opinions on the ill effects were similar: 222 (63.6%) of the 349 said that there were no problems with menstruation; 57 (16.3%) said that menses caused pain; 29 (8.3%) said that it caused anemia, weakness, or tiredness; 9 (2.6%) said that menstruation caused shyness or social isolation; and 27 (7.7%) simply answered “yes, it was harmful.” One (0.3%) female respondent did not know of any ill effects of menstruation, 2 (0.6%) said that menstruation could cause cancer and fistulas, 1 (0.3%) said that it was a cause of dysentery, and 1 (0.3%) said that excessive bleeding could cause death. Among the 57 respondents who said menstruation was associated with pain, 7 (12.3%) referred specifically to “pain/disease in the backbone” and 8 (14.0%) noted an association with headaches. One (0.3%) female interviewee remarked that menstruation could cause diseases such as “hypertension, infections, and malpositions of the uterus.”

When asked whether menstruation placed any restrictions on women, 23 (29.1%) male respondents said no. Eleven (13.9%) said that menstruating women could not go to church or visit a mosque; 15 (19.0%) said that they had to use pads and keep clean; 9 (11.4%) said that they were not allowed to touch a man, sit on a chair, or touch or prepare food or drink; 7 (8.9%) said that menstruating women were not allowed to have intercourse; 5 (6.3%) said that they had to rest; 2 (2.5%) suggested that women should go to the clinic; and 1 (1.3%) said that menstruating women could not undertake religious fasts.

Female participants had more detailed observations on the restrictions imposed by menstruation: 223 (63.9%) said that there were various restrictions, 120 (34.4%) said that they were not restricted, and 6 (1.7%) said that they did not know. The most commonly cited restrictions were the need to use menstrual cloths, commercial pads (“modess” is the brand name of a menstrual pad and is used ubiquitously for any commercially produced disposable pad), or to wear extra clothing or underpants (98 [28.1%]); the need to avoid heavy work (25 [6.6%]); and the requirement to wash more [30 [8.6%]]. Religious restrictions were commonly mentioned: 62 (17.8%) female respondents said that they could not enter a church or mosque while menstruating, 13 (3.7%) said that they had to avoid holy water, and 4 (1.1%) said that they could not be blessed by a priest while menstruating. Twenty-seven (7.7%) female interviewees said that they had to avoid social groups and activities, 54 (15.5%) said that they could not sleep with their husbands or have intercourse, 29 (8.3%) said that they were not allowed to prepare food or drink, 27 (7.7%) said that they could not greet or walk by men, and 14 (4.0%) said that they could not sit on someone else’s bed or chair.

When asked whether girls who were menstruating could go to school, 61 (77.2%) male and 306 (87.7%) female respondents said yes, whereas 17 (21.5%) male and 37 (10.6%) female respondents said no. The rest of the respondents were unsure.

When asked how menstruation should be managed, 56 (70.9%) male respondents said that women used absorbent materials such as pads (modess), cloths, or underpants; 7 (8.9%) said that they should use traditional medicines to manage it; and 11 (13.9%) said that they should use “injections, pills, or go to the clinic.” Two (2.5%) said nothing could be done about it, and 3 (3.8%) professed ignorance of the matter.

Unsurprisingly, female participants had more developed ideas about menstrual hygiene management: 231 (66.2%) said that modess should be used, 81 (23.2%) said that they needed to wear extra pants or underwear, and 180 (51.6%) said that homemade menstrual cloths were used. One (0.3%) female interviewee said that she used a “spoonage” and 1 (0.3%) coped by using tissue paper. The other responses included using traditional medicines, especially medicinal smoke (28 [8.0%]), taking tablets or injections (e.g. medroxyprogesterone acetate; 33 [9.5%]), seeking medical advice from the clinic (10 [2.9%]), drinking warm fluids

<table>
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<th>Table 3</th>
<th>Expected age of menarche.</th>
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<td>Female respondents (n = 349)*</td>
</tr>
<tr>
<td>≤ 10 y</td>
<td>1 (0.3)</td>
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<tr>
<td>10 y</td>
<td>1 (0.3)</td>
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<tr>
<td>11 y</td>
<td>6 (1.7)</td>
</tr>
<tr>
<td>12 y</td>
<td>21 (6.0)</td>
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<td>13 y</td>
<td>29 (8.3)</td>
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<tr>
<td>14 y</td>
<td>99 (28.4)</td>
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<td>15 y</td>
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<td>14 (4.0)</td>
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<td>18 y</td>
<td>11 (3.2)</td>
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<tr>
<td>≥ 18 y</td>
<td>1 (0.3)</td>
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* Values are given as number (percentage) unless indicated otherwise.
The present study is limited in that it is not possible to generate a complete picture of a society's beliefs about the nature and significance of menstruation using a community survey by itself. To produce a “thick description” [15] of menstrual beliefs and practices in the Tigray Region, more detailed ethnographic investigations using individual case studies and focus group discussions are currently underway. Nevertheless, the present survey indicates the need for improved education on menstruation and better access to low-cost, reusable menstrual hygiene supplies in the Tigray Region of Ethiopia.

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Conflict of interest

The authors have no conflicts of interest.

References