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# Barriers of eating among rural adolescent girls in Ethiopia: a qualitative study

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## Abstract

**Background** Short stature and thinness among adolescent girls continue to be a severe public health problem in Ethiopia, due mainly to inadequate dietary intake, which turn affected by several factors. Evidence shows that in low and middle-income countries, the factors related to culture and belief play a pivotal role in making a difference in eating, negatively affecting girls. In Ethiopia, the roles of these factors in influencing the eating behavior of adolescent girls have not been well investigated.

**Objective** This qualitative study was conducted to explore the barriers of eating among adolescent girls in Ethiopia.

**Methods** A qualitative study was employed in northwest Ethiopia from January to April 2021. A focus group discussion of adolescent girls and an in-depth interview of mothers and adolescent boys were separately conducted. A total of six focus group discussions involving a total of forty-three adolescent girls and an in-depth interview of twelve adolescent males and ten mothers were performed. The adolescent girls and boys were aged 15 to 19, attending grades 9–12. The participants were selected using a purposive sampling method. Content analysis was employed to identify the predominant themes. The analysis was conducted using Open Code.

**Results** Four themes emerged from the current study. These included religion, the culture of male dominance, roles and responsibilities, and perception related to girls' body food requirements and the consequences of proper feeding of adolescent girls on their behavior. Specifically, girls start fasting at an early age due to religious reasons; girls do not eat before the males eat and outside the home out of respect for males; girls spend most of their time at home doing less energy-demanding work; girls' body food requirement is lower and girls better tolerate hunger than their counterpart boys; and if girls eat well, they would not be disciplined, were among the reasons mentioned by the study participants for girls' intake of lower quality and quantity food.

**Conclusion** Religion, the culture of male dominance, roles given to females and males and the perception that girls' bodies require a lower quantity of food and well-nourished girls will not be disciplined were common factors responsible for the poor dietary behavior of adolescent girls. Educating the community about the food requirements of girls, the consequences of their inadequate feeding, and the misconception existing in the community about girls' food requirements is crucial. Strengthening policies and strategies helpful for empowering women and balancing gender inequalities may be required.

**Keywords** Qualitative study, Barriers, Eating behavior, Adolescent girls, Ethiopia

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**Text box 1. Contributions to the literature**

- It is known that adolescent girls' eating in Ethiopia is poorer.
- The current study confirmed that the causes of their poor eating have cultural origins.
- Creating awareness about the short and long-term consequences of inadequate eating may be an immediate response.
- However, advancement in socio-economic status is a lasting solution.

**Introduction**

Adolescents (10–19 years of age) are among the most vulnerable segment of the population for protein-energy under-nutrition and micronutrient deficiencies [1, 2] because of the increased requirement of nutrition by the body for the major physical change that takes place during this age. They gain up to 50% of their adult weight, 15–25% of their adult height [3] and 40% of their adult skeletal mass [4, 5], to attain the full potential of growth and development. Not meeting the increased nutritional requirement of adolescents puts them at a significantly higher risk of being undernourished [6, 7].

Poor nutrition during adolescence and young adulthood not only implies a poorer quality of life and additional health and morbidity risks for the adolescents and young women themselves but also is directly linked to the health and nutrition of their future offspring [8].

An analysis of worldwide trends in Body Mass Index (BMI), underweight, overweight, and obesity from 1975 to 2016 showed that Ethiopia is among the countries where the lowest BMIs in the world were recorded [9]. The Ethiopian Demographic and Health Survey (EDHS) has also reported that 29% of adolescent girls in Ethiopia were underweight in 2016 [10]. There are also similar recent studies in the country that reported underweight and stunting prevalences ranging from 13.6–29% [11–16] and 11.9–47.4% [13, 14, 16–19], respectively.

Although undernutrition in adolescent girls is caused by several factors, inadequate dietary intake is the most common factor. For example, a systematic review done in low and middle-income countries (LMICs) revealed that 50% of adolescent girls in LMICs eat less than 3 meals per day, and most skip breakfast [20]. Some of the most important factors causing poor dietary practices (meal skipping, low meal frequency, low dietary diversity) in adolescent girls, include sociodemographic and economic, cultural and gender norm factors, food security, accessibility, and knowledge and attitude about nutrition [6, 21–23]. In the poorest countries, adolescent girls are even more vulnerable to nutritional deficiencies than adolescent males due to community-held misconceptions and socio-cultural and gender norm barriers negatively

influencing their dietary behavior [2, 24, 25]. In some low and middle-income countries, gender discrimination plays an important role in intra-household food allocation. Because of the preference for sons, girls may receive less food and/or food inferior in quality compared to boys [26, 27]. In some parts of India, girls' food consumption is limited for the fear that they will grow too rapidly and will have to be given in marriage soon. An adolescent girl in India may need to observe a series of fasts once or twice a week to get a good husband [28]. Women and girls may be expected to eat last or eat the least. Gender norms may further dictate acceptable types of work and free time activities, and these in turn affect physical activity, energy expenditure, and income. Gender norms may, even, become increasingly important during late adolescence [6]. Longitudinal data from India shows that dietary diversity is lower in girls than boys at most ages, and the female disadvantage is the largest in adolescence [28].

In Ethiopia, although, quantitative studies show low food diversity and meal frequency among females, the communities' understanding, experiences and the underlying reasons have not been well investigated. Therefore, this qualitative study aimed to explore the barriers of adolescent girls' eating in Northwest Ethiopia.

**Methods**

To ensure standard reporting, we used the COREQ (Consolidated Criteria for Reporting Qualitative Research) checklist [29].

**Research team**

Our research team included one behavioral scientist, one epidemiologist, one public health nutritionist and one public health expert with maternal and child health specialization. All were instructors and researchers at the University of Gondar with ample experience in qualitative research course teaching and conducting qualitative research. The fieldwork was directed by the project coordinator, an epidemiologist with advanced training in qualitative research methods. The research team was assisted by health extension workers in terms of finding mothers who fulfilled the inclusion criteria in their respective kebeles (the smallest administrative area in Ethiopia).

**Study design and setting**

An exploratory qualitative study was conducted from January to April 2021 to explore the factors influencing adolescent girls' eating in Wogera District, Central Gondar Zone in Northwest Ethiopia. Wogera district is

one of the 15 districts of Central Gondar Zone located about 33kms distance from Gondar Town, the administrative center of Central Gondar Zone. According to the Central Statistical Agency of Ethiopia (CSA), Wogera district had a total population of 220,566 in 2007 of whom 112,445 were men and 108,121 were women; 91.54 were rural inhabitants. About 97% of the inhabitants practiced Ethiopian Orthodox Christianity by religion.

### Study participants

The participants of this study were rural resident adolescent girls, mothers and adolescent boys. The adolescent girls and boys were school adolescents aged from 15–19, attending grades 9 to 12. The mothers, on the other hand, were those who had adolescent girls and boys, and living in the current study area. Only adolescent girls, boys and mothers who were permanent residents of the study area were included using the purposive sampling method. The sample size was not determined ahead. Rather, we continued the inclusion of participants until no more emergence of new information.

### Data collection

The data were collected from the adolescent girls by Focus Group discussion (FGD), from mothers and male adolescents by in-depth interview using pilot-tested interviews and FGD guides. The guides were prepared in English and translated to the local language, Amharic. The topics included the current state of adolescent girls eating and the factors influencing their eating. The guides were reviewed by epidemiologists and behavioral science experts. The FGDs and in-depth interviews were conducted by the investigators after having three days of training provided by behavioral science experts, who had ample experience in teaching, and qualitative research conduction and review. Both the FGDs and in-depth interviews were conducted in convenient places for participants, like free classrooms, back of classrooms and open fields for the student participants and at their homes in a quiet place with adequate privacy for the mother participants. One of the researchers carried out the interview, whereas researchers, in pairs, conducted the FGDs, with one serving as moderator and the other as note taker. The researchers met after each round of interviews and FGDs to discuss and take notes on the main findings and potential difficulties. It also aided in the development of new topics and the adaptation of related questions. The time for FGD and interviews was based on participants' preferences. The identification of rural resident mothers who have both girls and boys was facilitated by the health extension workers situated in the respective kebele. All the FGDs and in-depth interviews were audio recorded upon the participants' permission.

Participants' non-verbal expressions were noted by note-takers. Interviews and focus group discussions were conducted until all categories were well-defined and saturated.

### Data analysis

A qualitative content analysis approach was subsequently used to identify themes and investigate critical factors influencing eating among adolescent girls. Audio records of the FGDs and in-depth interviews were transcribed verbatim in the original language and then were translated into English language. The team verified the translations by comparing the vernacular and English transcripts. Special attention was given to terms or concepts that did not have an immediate English equivalence. Two coders conducted extensive coding of the interview and FGD transcripts to identify themes and sub-themes and organized them based on a shared commonality. A codebook of overarching themes was developed based on the major topics in the interview and FGD guides. The researchers then used content coding procedures to identify the presence of these themes in combination with inductive approaches to identify new themes that were then added to the codebook. To ensure that all significant codes were captured, the coding cycle began with a conventional, inductive qualitative content analysis. After coding was completed, we produced a summary of coding issues and analytic insights for each set of codes. The analysis was conducted using Open Code.

## Results

### Characteristics of study participants

A total of six FGDs of 43 adolescent girls and 12 and 10 in-depth interviews of adolescent boys and mothers were conducted. The average number of adolescent girls per FGD was 7 with a minimum of 6 and a maximum of 8. Most of the adolescent girls and half of the adolescent boys were aged 18 to 19. Seven of the mother participants were between the ages of 50 to 65. Concerning the grades of adolescent participants, 10, 9, 11 and 12 of the girls and 3, 4, 3 and 3 of the boys were in grades 9, 10, 11 and 12, respectively. Nine of the mothers reported that they were unable to write and read, and were housewives, by education and marital status. All the participants, the adolescent girls, the male adolescents and the mothers, were rural residents, Amhara by Ethnicity and Orthodox Christian by religion (Table 1).

### Adolescent girls' eating

#### *The perceived current state of adolescent girls' eating*

According to the discussants' and the interviewees' reports, adolescent girls, and adolescent boys and mothers, respectively, eating in general was poor in terms

**Table 1** Characteristics of study participants in Northwest Ethiopia, 2021

FGD participants		Interview participants			
Adolescent girls		Adolescent boys		Mothers	
Characteristics	N (%)	Characteristics	N	Characteristics	N
<b>Age</b>		<b>Age</b>		<b>Age</b>	
15–17	21(48.84)	15–17	6	35–49	3
18–19	22(51.16)	18–19	6	50–65	7
<b>Grade</b>		<b>Grade</b>		<b>Education</b>	
9	13(30.23)	10	3	Unable to read and write	9
10	11(25.58)	9	4	Only read and write	1
11	10(23.25)	11	3	<b>Marital status</b>	
12	9(20.93)	12	2	Married	9
				Widowed	1

of quality. They do not even get the required quantity throughout the year. It becomes insufficient during the non-harvesting season. The reason mentioned for the lower quantity of food during the non-harvesting season was lack of access to food, while lack of knowledge was the main reason for not having diversified food during the harvesting season. According to the responses of the participants, adolescent girls' eating is much lesser in frequency; and lower in quantity and quality compared to boys' even in the harvesting season, worsening during the non-harvesting season. The participants said that the girls usually miss meals, mainly breakfast and girls go to school usually without having breakfast, unlike boys.

#### Factors influencing adolescent girls' eating

Religion, the culture of male dominance, roles and responsibilities, and perception related to girls' body food requirements and consequences of proper feeding of adolescent girls on their behavior were the common factors identified by the current qualitative study as responsible for the poor adolescent girls' eating. More specifically, the reasons mentioned by the study participants include: girls start fasting early in their age as credit for erasing the sin of non-fasting dietary practice they will have during their pregnancy and the postpartum period; the girls are there just to care for the males and the perception of girls or women that they are powerless; the girls' jobs are less energy demanding and the girls being busy in the household activity; the girls' body food requirement is lower and resists hunger than the boys and proper feeding of girls would lead to increment in the sexual desire and disobedience of girls.

#### Religion-related barrier

Religion was found to be one of the barriers to the poor eating behavior of adolescent girls. This is related to

Orthodox Church followers that everyone should start fasting as early as his or her adolescence age. The participants said that girls are expected to start fasting at their earliest age as compared to boys due to the non-fasting dietary practice they will have during the maternity period.

*"We make adolescent girls start fasting at the age of 7 and go to school, for example, without having breakfast unlike boys as a credit for the non-fasting dietary behavior they will have during their pregnancy and postnatal period". (Mother interviewee).*

#### Culture of male dominance

As the discussants and interviewees reported, men are entitled to request food, not to prepare food. They serve themselves the food whenever they want and are privileged to choose the food they want. This is considered as respecting males or as making girls disciplined.

*"Males receive the available quality food, while the girls wait for the leftover food or another lesser quality food. The boys ask for food at any time they want but the girls eat leftover food from the boys even the boys stay at home. The boys eat early and we eat later or skip the morning meal at all". (Adolescent girl discussants).*

*"The family favors boys to eat frequently, large amounts and quality food. The mother gives the food for boys first even while the boys are staying at home. This is according to my family". (Adolescent boy interviewees).*

*"I will give the food I have to the male then the girls will stay until the next food is prepared. She is my only girl but she is like me in that she feeds the boys*

*first and later she will eat any leftovers or prepare fast food". (Mother interviewees).*

*"Since it is a culture, we females do not eat before the male eats. This is the culture that females are seen inferior to males or women are powerless". (Adolescent girl discussants).*

The participants underscored that if there is no male at home or he is temporarily away he will not come for lunch or dinner, woman will not prepare food for herself. It is uncommon or is not culturally acceptable for a woman to prepare a nice food for themselves; rather they consume uncooked and less nutritious food. On the contrary, a woman or girl is never expected to give these foods to a male or boy. The girls expressed their feelings laughing loudly ironically thinking what a bad thing will follow from the male or boy if they give uncooked or less flavored food.

*"Let alone by uncooked or less flavored food, using like pulses' powder 'Shiro', paper powder 'Berberie' or water diluted paper powder 'Chew', they do not eat food prepared yesterday. The male/boys perceive that they are not respected and as a result, they will intimidate or bet. They will say what were you doing? What is your job? They do not accept any reason. They do not think that she might have been busy etc. Whenever the boys come from outside, they act and be welcomed as a guest, not as a household member, to serve the food." (Mother interviewee).*

*"If a boy and a girl were working the same work outside and if the girl arrives at home first, she will not get the prepared food. She will be told to stay having little food with diluted paper or pulse powder until the boy comes. This is a sign of respecting males. On the contrary, if the male is told to stay for some time or if do not get the food, he will do it by force, throw the food or bet the girl." (Adolescent girl discussant).*

The adolescent girl discussants complained that boys complement the food they miss at home by buying outside, while, on the contrary, girls are not allowed to eat outside and on the street. Even, they are not allowed to eat in front of a guest or before performing or while in a task.

*"If she tries to eat on the street she will be regarded as a rude girl or considered deviated from the culture. Girls do not eat before finishing or in between thinking that they will be regarded as behaving badly and hence will not get married or they will not sustain marriage". (Adolescent girl discussants).*

### **Barriers related to roles and responsibilities of girls**

The discussants and interviewees said that males should get an adequate amount of food to make them stronger and more resistant to the worst energy-demanding scenario they may face. The participants perceive males engage in more energy-demanding work, spend most of their time outside, responsible for defending themselves, their families and property by any means, usually by force. Having a stronger boy is a pride contrary to having a stronger girl which is believed to be a shame. Almost all the male participants voiced those members of their community did the differential feeding practice of adolescents due to the above underlying reasons.

*"My family gives priority for me to drink milk and yogurt because they believe I engage in hard work, while girls are considered to spend their time sitting at home or work less energy demanding work". (Adolescent boy interviewees).*

There are some sayings in the community as reported by the participants that discourage women's eating as compared to men's.

*"Females are females. No positive change in their work performance or role and responsibility will be so whatever their feeding is improved or not unlike boys". (Mother interviewees). "The community believes that the girls are the same whether they eat well or not in performing their activities. They are weak. Males can better perform and give protection for the family if they eat better. Males are males". (Adolescent boy interviewee).*

The other issue identified as barriers to eating related to their roles and responsibilities is girls' busyness in household work. The girls are responsible for performing the whole household activities including preparing food for the family, caring for children and father and boys. She tries to eat after she makes sure that every member of the family has already been served. She may skip breakfast, even lunch because the food might already be finished by the family members or she may have another task to be performed. The other issues mentioned were the girls' sense of responsibility, accountability and empathy in managing or allocating the available food and feeding the family members, especially the boys and the father.

*"She is the only girl I have; she usually eats leftover food after feeding the boys and father and making sure they are full, otherwise she eats non-cooked food or less nutritious food or she may skip because she worries about the adequacy of the available food and she has the empathy and she is busy like her mother, me". (Mother interviewees). "My sister gives*



*me the little available food for me because she has empathy as a mother". (Adolescent boy interviewee).*

### **Eating habits and misconception on body food requirement and consequence of adequate eating**

Eating habits and misconceptions about the nutrition of adolescent girls by themselves and misconceptions in the community about the consequence of adequate feeding of adolescent girls were also identified as negatively influencing adolescent girls' feeding. Proper feeding of girls would lead to an increment in the sexual desire and disobedience of girls. The girls have no interest in eating the food that they cannot afford whatsoever they know it is delicious and nutritious.

*"Girls do not eat food that they do not get tomorrow or after tomorrow". (Adolescent girl discussant). "The girls themselves do not worry about the timing and adequacies of the food; nutrient content of the food they eat unlike they do for fathers and boys". (Adolescent girl discussants). "The community believes the females resist hunger or they do not feel hungry and their body food demand is lower as compared to males". (Adolescent boy interviewees). "If the girls eat well, their sexual desires will increase and will not behave as expected". (Adolescent girl discussants and adolescent boy interviewees).*

### **Discussion**

In Ethiopia, short stature and thinness among adolescent girls' continues to be a severe public health problem, with inadequate dietary intake being the typical cause [9–19]. Evidence shows that eating has a strong relation with a given society's culture, beliefs and perceptions, in addition to socio-economic characteristics. In low and middle-income countries, these things have been found to play a strong role when it comes to adolescent girls, specifically [30]. In Ethiopia, however, the role of these contextual factors in adolescent girls eating has not been well investigated. Therefore, this qualitative study was conducted to explore the barriers to adolescent girls' eating behavior.

The present study revealed that eating was poor among the rural adolescent girls in the study area. Their eating was even worse compared to their counterpart adolescent boys. The barriers identified were culture and beliefs held in the community, and the knowledge and perception of the family and the girls themselves. The low dietary behavior reported by the participants in the present study is consistent with the previous quantitative studies conducted in Ethiopia, reporting less frequent eating and low diversified food [31–33]. All the participants recognized the amount and quality of food, and the frequency

of meals that girls received were insufficient. There is an established body of evidence that suboptimal dietary practice is the main cause of protein-energy under-nutrition (thinness and stunting) and micronutrient deficiency (anemia) leading to significant morbidities and mortalities, further impacting negatively the nutritional status and the productivity of the next generation [7, 34, 35].

The current study identified several barriers, classified as barriers related to religion, roles and responsibilities of girls, perception related to girls' food requirement and consequence of adequate feeding on girls' behavior, and male dominant culture.

To make it more explicit, participants reported that girls start fasting early in their age as credit for erasing the sin of non-fasting dietary practice they would have during their pregnancy and postpartum period. This was one of the causes of skipping breakfast or going to school without having breakfast, for example, as reported by mothers. As this has a religious basis, Orthodox Christian religion, the behavior is more likely to continue negatively affecting the dietary behavior of adolescent girls [36, 37]. However, religion-adapted cognitive intervention can have a valuable contribution in modifying the behavior of adolescent girls [38].

Undermining the food requirement of girls due to the belief and perception that girls' tasks are not energy demanding, their eating has nothing to do with their life goal achievement, not valuing girls' growth and development, girls' primary job is to prepare food for male household members and to make sure that the male is full or satisfied even at the expense of their meal were also the most frequently mentioned barrier in the current study. In this regard, evidence shows that these kinds of beliefs and perceptions are common in a male-dominant community, the underlying factor of which could be culture or lack of knowledge about the negative impact of the behavior [26–28, 30]. The current study participants have also further explained that caring for males is a sign of showing respect for boys and the answer provided by the participants why such perception was in the community is a norm, which was inherent from their ancestors. The participants stated that they were leading a male-dominance life and they underscored that girls need to be empowered and gender equality needs to be advocated.

There is plenty of evidence suggesting the importance of advancing the education status of the community in general and designing policies and strategies aimed at promoting gender equality in enhancing the engagement of women in healthy life activities [39]. There is also literature showing that targeted health promotion interventions can significantly decrease the influence of those barriers on the dietary behavior of women in general and adolescent girls in particular [40, 41].

The current study has not incorporated what is held by the community leaders, husbands and stakeholders working on issues related to gender. However, as male adolescents were involved, most of their opinions might have been reflected by these participants. We triangulated the study in terms of involving mothers in addition to boys to verify the opinions of adolescent girls. An interview of adolescent girls could have been done as it might have unique insight into their eating.

## Conclusion

Religion, the culture of male dominance, and the perception of the roles and responsibilities and adolescent girls' body food requirements were found to be the common factors responsible for the poor dietary behavior of adolescent girls. Education of the community about the food requirements of girls, the consequences of their inadequate feeding, and the misconception existing in the community about girls' food requirements is crucial. There should be policies and strategies helpful for empowering women and improving gender equality.

## Abbreviations

BMI	Body Mass Index
CSA	Central Statistical Agency
EDHS	Ethiopian Demographic and Health Survey
FAO	Food and Agriculture Organization
FGD	Focus Group Discussion
LMICs	Low and Middle-Income Countries

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## Authors' contributions

FAM: Idea conception and framing of literature, formulation of aims, development of data collection guides, data collection, analysis and interpretation, drafting the article; GAB: development of data collection guides, data collection, analysis and interpretation, drafting the article; TA: formulation of aims and interpretation of data, revising the article, approval of article for publication and agreement to be accountable for all aspects of the work; NWM: development of data collection guides, data collection, analysis and interpretation of data. All authors read and approved the final manuscript.

## Funding

This protocol has received financial support from the University of Gondar.

## Data availability

No datasets were generated or analysed during the current study.

## Declarations

### Ethics approval and consent to participate

The study was approved by the Institutional Review Board (IRB) of the University of Gondar. Permission letters were obtained from relevant education authorities at different levels to reach the student participants and kebele (the smallest administrative area in Ethiopia) administration to access the rural mother participants. Informed written consent was obtained from the mothers and adolescents aged 18 and above, whereas written informed consent was obtained from caretakers of the adolescents below 18 years of age. The consent was obtained after providing the participants with the information

related to the purpose of the study, and the risks and benefits of participating in the study. They have also been told that their participation was completely based on voluntary. To ensure the confidentiality of information, codes were used to designate the information obtained from the participants. All methods were carried out as per relevant guidelines and the Declaration of Helsinki.

### Consent for publication

Not applicable.

### Competing interests

The authors declare no competing interests.

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