

Food Taboo and Myth Among Pregnant Mothers in Gedeo Zone, South Ethiopia: a Qualitative Study

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Abstract

Background: Food taboo is a deliberately restriction of oneself from different kinds of foods and drinks for different reasons. Even if a balanced diet is needed during pregnancy for both the health of the mother and the fetus, pregnant women restrict themselves from many essential nutrients which will endanger both the mother's and the baby's health .The study is aimed to explore food taboos and myths among pregnant women in Gedeo zone from March 25 to May 25, 2020, Ethiopia.

Methods: A community-based phenomenological approach was conducted. In-depth and key informant interviews were used to collect data from March 25 to May 25, 2020 in Gedeo. Convenient sampling was employed to recruit participants from the households of targeted villages. A total of 32 in-depth interviews with pregnant mothers, lactating women, elderly women, and husbands were conducted. The sample size was determined based on the concept of saturation. The data was collected by the investigators using semi-structured guiding questions. The collected data were analyzed using the thematic content analysis technique. Data coding and analysis were facilitated by using Open code version 4.0 software.

Result: Thirty-two study participants were involved. During pregnancy, foods that are sweet, "good", spicy foods, and much food were tabooed for pregnant.

Conclusion: Foods that are prohibited for pregnant women have been discovered in the Gedeo zone. Pregnant women avoid eating a wide variety of foods, including good foods, sweet foods, much food, and spicy foods. Not eating this foods may prone the mother even the baby for malnutrition in the short or long run.

Recommendation: Strategic health communication that focuses on refuting misconceptions such as pregnant women should eat less, certain foods cause diseases in both the mother and the fetus, and fetus skin discoloration is necessary. Maternal and child Health clinics and health extension workers must take the lead in coordinating this awareness-building effort. They should also put in place methods for identifying women on a regular basis, following food taboos, determining the reasons, and providing appropriate nutrition instruction.

Background

In the world, people have their own cultural beliefs, values, norms, customs, and practices that are built on centuries of trial and error. At certain phases of life, some foods are regarded good and others are considered undesirable [1]. Food taboo is deliberately abstaining people from food and/or beverage consumption due to religious and cultural reasons [2]. The origin of these prohibitions and commandments vary, sometimes it is associated with special events such as menstrual period, pregnancy, childbirth, lactation [3]. Permanent food taboos are avoiding food and/or drinks throughout their life, while some foods are avoided for certain periods of time [4]. Pregnant women are restricted from eating certain food items such as liver, intestines, kidney, milk, sweet potatoes, sugar, salt, eggs, and bananas fearing that these foods lead to complications, such as high birth weight, difficult birth, difficulty doing a job, obstructed labor, stomachache before giving birth, help defecation [5, 6, 7]. The same norms, however, encourage pregnant women to take certain food items such as cow's blood, sour milk, and lots of water, and to vomit following a heavy meal [5]. However, adequate maternal nutrition, which contains adequate energy, protein, vitamins, and minerals, obtained through the consumption of a variety of food during the "first 1,000 days" window, is especially critical from conception through the first 6 months of life to improve the nutritional status of both the woman and infant and reduce the risk of adverse birth outcomes [8, 9].

Nutrition is most critical during pregnancy because poor nutrition puts both mother and baby at risk Intra Uterine Growth Restrictions (IUGR); while also facing multiple threats to their own health and survival [10, 11]. Good maternal nutrition promotes optimum growth of the fetus [12]. Pregnancy is an essential period in the life of the mother and which require additional energy, protein, vitamin A, folate, calcium, iron, and iodine [13, 14].

Foods considered inappropriate for consumption during pregnancy or lactation, such as spicy, bad- smelling, and nausea-inducing foods, often led to elimination of these foods from the diet in countries like Burkina Faso, India, Indonesia, Nepal, Laos, and Senegal in Indonesia, 14 kinds of vegetables, 10 kinds of fish, 5 meat/animal-source foods, and 14 fruits

because of prohibition [15,16,17]. According to a study done in Egypt, drinking milk and consume green vegetables are forbidden during pregnancy due to they fear of difficult delivery [18].

Pregnant women in Ethiopia's south-western and central regions are forbidden to eat any white-colored foods, such as milk, fatty meat, porridge, and potato, because they believe these foods will be plastered on the newly born baby's body, and it is also assumed that if a pregnant woman eats vegetables, the newly born baby and mother will stink. High carbohydrate and fat foods, as well as green pepper, are prohibited in the northern part of Ethiopia, on the assumption that a newborn baby will become hairless [19]. Furthermore, in Arsi, Ethiopia, women's consumption of meat, fish, fruits, and some vegetables during pregnancy remained as low as from pre-pregnancy levels, and common taboos included the consumption of green leafy vegetables, yogurt, cheese, sugar cane, and green pepper, as well as a dislike for weight gain during pregnancy due to obstetric complications associated with the delivery of a larger infant [20].

It is considered that any dietary taboo that is accepted as part of a specific group's way of life promotes in group cohesion, helps that group maintain its identity in the face of others, and therefore generates a sense of belonging. [3]. Food taboos, on the other hand, have an impact on pregnancy, despite the fact that they require around 300 extra calories each day [21,22]. The major problem of food taboos is preventing pregnant women from accessing a well-balanced diet [23]. These deficiencies have been associated with a number of adverse pregnancy and developmental outcomes [24] [25] [7] and also it play greater role on maternal and infant morbidity and mortality [26][27] [28].

Nearly half (45%) of global deaths among children under five are attributed to under-nutrition [29]. In Ethiopia, 38% of children under five have been found to be stunted [30].

Therefore,

there is an urgent need to overcome the cultural practices that are traditionally affecting the nutritional and health status of women. There is no doubt that maternal nutrition during pregnancy plays an important role in the optimum outcome of pregnancy.

Women in developing countries suffer from nutritional deficiencies including Ethiopia. However, sociocultural factors including superstition and taboos that may be associated with malnutrition are not well studied in our country and also in the study area.

This study will therefore be undertaken to explore some of the taboos and myths among pregnant mothers in Gedeo zone, SNNPR of Ethiopia.

Methods

Study Area and Period

The study was conducted from March 25 to May 25, 2020, in Dilla town administrative center of the Gedeo Zone in the Southern Nation Nationalities and People Region, which is found 360 km away from Addis Ababa and 90 km from the capital city of the region Hawassa. The total area of the town is 135 km². Total population is 102,624, among which 50,286 (48.9%) are males and 52,338 (51.1%) are females. The total reproductive age group women are 20,204. The total number of households is 20,944. The dominant ethnic group is Gedeo, and most of the people speak Gedeo-Offa and Amharic languages.

Study design

A community-based qualitative exploratory study using a phenomenological approach was conducted. Phenomenological approach is a method of qualitative study in which the investigator identifies the human experiences concerning a phenomenon. It is a systematic and subjective approach to highlight and explain lived experiences and to further give them meaning. Understanding the lived experiences marks phenomenology as a philosophy as well as a method. In this process, the researcher works to take the experiences of participants on the participants' own terms [28].

Study Population

All currently pregnant women and key informants in four areas were chosen at random. were the source population of the study. The randomly selected districts were Bule, Dilla, Yirgachefe, and Gedeb .The study included all currently pregnant women (with a gestational period of three months or more as determined by self-report), lactating women who are currently breastfeeding children aged two years or less, and elderly women and men, Health extension workers and Elderly community members with known social standing (e.g., religious leader, clan/community/ethnic leader] were eligible if they had potential information on the subject. Besides, 32 Pregnant and lactating mothers, female, elderly, male elderly, health extension workers, religious and community leaders were all purposefully chosen as key informants for the in-depth interview. With the support of community health workers and leaders.

A convenient sampling procedure was employed to choose study participants.

The potential significance of the participants in supplying a wealth of knowledge regarding dietary taboos for pregnant women was a criterion for recruitment. In order to accommodate participants with a variety of criteria such as educational status, residence, and age, the maximum variation technique was used.

Methods and tools for data collection

The study used an English translation of a semi-structured guide from Samson Korvah Arzoaquoi's doctoral dissertation, "Common dietary taboos and beliefs during pregnancy in Yilo Krobo district," published by the University of Ghana in Ghana in 2014. The tool was divided into the following sections: 1] a list of foods that are tabooed during pregnancy and lactation, 2] the amount of adherence to the food taboos by pregnant and lactating women, if any exist, and 3] the reasons for adhering to the food taboos. The instrument was then contextualized, translated into Amharic, and two sample interviews were done in two additional kebeles that were not part of the original study to assess the quality of the questions.

The investigators conducted thirty two IDIs are used to get more information in depth. The investigators used the IDI guide to conduct face-to-face interviews with the help of the interpreter. To ensure triangulation of the data with the record, the investigators used a tape recorder and collected notes, including memos of the participant's conduct and contextual elements. The IDIs took 15–25 min.

Strategies for improving quality

• Credibility

Prolonged engagement in the research setting helped to collect more data across various experiences. As a result, the credibility of the findings was enhanced.

• Transferability

We used verbatim transcription to transcribe the data that assured data/thick description. Thus, this would allow others to determine the transferability of the findings to their situations.

• Respondent validation

After transcribing the data collected, we presented the collected data to the study participants and confirmed their responses. The participants have given their witness to the finding.

• Peer debriefing

After transcribing the data, one transcriber has checked the transcription of the others on the recorded audio. Then the discrepancies were corrected.

Data processing and analysis

The interviews were professionally transcribed and checked by the investigators for accuracy. Each interview was coded and continued until data saturation. The analysis was done by the team members, repeatedly reading each of these transcripts, identified statements, and quotes, and then labeled and connected these to particular codes (e.g., spicy, sweets, and much). Resulting in a coding tree in open code software. The credibility of the account was strengthened by member checks

Although the findings in this study may represent experiences shared by women during pregnancy, they are limited only to the participants in this study. The transferability of study findings to other settings or countries should base on local knowledge of culture and traditions.

Ethical clearance

Ethical approval and clearance was obtained from the Dilla University Ethical Review Board with Ref No (001/19-11]. Official letters was submitted to all respective health facilities and permission was secured. Informed consent was obtained from mothers by explaining the purpose of the study , participants' involvement in the study was on a voluntary basis , and those who were unwilling to participate in the study & those who wish to quit their participation at any stage was informed to do so without any restriction. Confidentiality was maintained at all levels of the study by anonymously avoiding the name of the participants from the recorders.

Result

Socio-demographics characteristics:

This study enlisted the participation of 32 people. In terms of religion, fifteen of the participants were Protestants, ten were Orthodox, four were Catholics, and three were Orthodox. Their educational attainment ranged from no formal schooling to a bachelor's degree, and their ages ranged from 18 to 66. The participants' average age was 35.5 years. Five of the participants have no formal education, ten have primary education, eight had a secondary education, four have diploma holder, and five of them had degree level of education. And all of the participants were married.

Codebooks

Spicy foods: foods that have hard, pungent and stronger flavors like green pepper.

Much foods: much foods is considered as taking foods to fullness of abdomen.

Sweet foods: In this study, moms defined sweet foods as foods with a sweet flavor, such as mango, avocado, papaya, banana, sugarcane, sweet potato, and honey.

Good foods: Foods having a high fat content are considered good foods.

Foods tabooed for pregnant

During pregnancy, foods that are sweet, "good foods", spicy foods, and much food were tabooed for pregnant. They revealed that women who were not pregnant could eat certain foods. Furthermore, in the district, eating a large amount of food was widely considered taboo for pregnant women.

Participants also agreed that a pregnant woman should avoid foods with high fat content. Meat, particularly "white meat," milk products such as yoghurt/"Ergo," and "area" were identified as high-fat foods. They refer to these items as "excellent foods," and pregnant women should avoid eating them to avoid the fetus becoming too large, creating trouble and prolonging labor.

Even if meat is also good for pregnant women, but as a 66 year elder key informant reflects a different view on meat, "*pregnant women should avoid eating meat due to it might make the fetus larger and it will cause difficulty of labour*" and as another 32years old pregnant mother revealed, "*if I eat this foods it might stretches my stomach pushing the uterus resulting no space for the development of the baby.*" "Pregnant women should be firmly urged to avoid from eating meat during their pregnancy," said

Another 40-year health extension worker (HEW) "*She should fully cease eating meat and several other nutritious foods, especially when she reaches the seventh and eighth months of her pregnancy.*" The major raised reason for this was as a woman continues to eat foods as usual, it will cause the production of more stool, that will cause prolonged labour resulting bleeding and as the health extension says "we encourage pregnant mothers to eat less and to eat dry foods like kolo " Another 35 years old lactating mother reveals " *specially in the last trimester of pregnancy women should avoid eating good foods like "Doro wot"* since it might cause to the increment of production of stool, she laughed, because it makes us very shameful at the time of labour

Sweet foods

From this study mothers call sweet foods, foods that are sweet in their taste and they listed foods like mango, avocado, papaya, banana, sugarcane, and sweet potato and honey. The major reason raised for this type of food restriction were eating this type of food will cause the increment of baby weight that will make it difficult to labor, drooling of saliva, and delayed speech development.

As a 25 years old mother from Yirgachefe noted "during the time of my pregnancy I avoided eating sweet foods like avocado, papaya and banana. Specially I don't eat avocado because it made my previous very much complicated.....the baby was big so that I don't eat avocados and banana and other sweet foods"

A 28 years old female from Dilla said that "if a pregnant woman eats honey while she was pregnant, the newborn may face the problem like delayed speech development" A 60 years old female elderly from Blue revealed that "a pregnant woman should avoid eating sugarcane when she is pregnant because if she do so her child will be affected by excessive drooling"

Spicy foods

According to the current study, pregnant women in Gedeo zone avoid eating foods that are spicy. The study participants reported that pregnant women should avoid eating spicy foods like "mitmitadata and berrbere" during the period of their pregnancy .

A 38 years old male **stated this situation as**, "Pregnant women should avoid foods that are spicy because those things might stick on the head of the baby and make him bald" Another 26 years old mother in Yirgachefe stated "I don't eat spicy foods like green peppers, those things might cause pain to the baby" Another 42 years old pregnant mother also stated this as "even if dataa and other spices were my favorites, I don't want my baby to be bald.....it was my mother in law who told me these things so I did what she told me not to do" Another 35 years old mother also states that "eating spicy foods might result loss of hair to the baby" and as another 26 years of pregnant mother revealed "eating those kind of foods might facilitate the onset early labour which causes the baby to deliver before the due date"

Much foods

According to a recent survey, most pregnant women in the Gedeo zone are advised against overeating during pregnancy. Pregnant women should avoid eating too much food during their pregnancy, according to the study participants.

a 57-year-old female elderly said of the circumstance, "eating too much foods because that if the mother eats too much food while pregnant, the fetus will get too big and she may face difficulty during delivery time." Similarly, another 60 -year-old elderly man explained that, "Pregnant women should never eat too much food when they are pregnant because if she do so, she might go through difficult and dangerous labor." A 55-year-old lady geriatric key informant expressed similar sentiments to those expressed above., "Consuming too much foods during pregnancy may make the fetus big that will lead to difficult labor and delivery...". In the district, 29-year-old Health Extension Workers (HEW) described the situation as follows "The majority of pregnant women in the area choose to eat little food due to fear of big size fetus which may lead to difficult labor and also may lead to death due to bleeding that labor taking longer time than the usual."

Another, 30-year-old pregnant woman, also added. "... if a pregnant woman eats too much food during pregnancy, it is not good for her because the labor will be difficult and dangerous for her..." Another 28-year old Woman mentioned that "I knew a friend that when she was pregnant she used to eat too much food while she was pregnant, but at the time of labor it was very difficult for her."

A 27-year-old woman, like the majority of the respondents said that, "I during most of my pregnancy time I eat less food so that my belly won't get too big and fortunately my labor may be easier."

Almost all Participants in the survey consistently stated that a pregnant lady should avoid eating a lot during her pregnancy. According to the participants, a pregnant woman should aim to manage her diet in terms of how much and what she eats, how many times a day should she eats to keep the fetus from becoming too big so she may have a baby an easier labor process and may avoid the risk of bleeding during delivery because if the child is small she can deliver easily with minimal consequence. 40 years old women also agreed on: "... A pregnant woman should limit her food intake during pregnancy because the fetus will not become large which leads to easy delivery. But, If she eats too much, the fetus will first become too big to deliver. Second, she will have a variety of issues during delivery, including heavy bleeding and a long labor."

Another age of 50 mom reported: "A pregnant woman should minimize her food consumption during the late months of her pregnancy to promote easy and healthy delivery."

As they approach full pregnancy, pregnant women in the Gedeo zone tend to increase their practice of dietary taboo. A 29-year-old woman from Gedeb explained it as, "If a pregnant woman is towards the end of her pregnancy, she should limit her solid meal intake to help with labor."

Food taboos are important for pregnant women for a variety of reasons. According to the study participants, the dread of a large fetus and the difficulties of delivery were the main reasons for pregnant women in the Gedeo zone to follow the food taboo. Because if the fetus grows to a large size, labor may be difficult and also may lead to prolonged labor and bleeding during labor for the mother.

According to the participants, Difficulty in delivering the fetus the problem is mainly due to the big baby which may be because of too much eating of the mother while pregnant. So as a solution, The community advises that she eats less in order to keep the fetus as little as possible, which will help her cope with the difficulties she would face after childbirth.

Another older man, 52 years old, stated "I believe pregnant women should avoid milk yoghurt. Because if she do so the milk and yoghurt may make patches on the fetus head."

"...if a pregnant woman takes milk and yoghurt, the fat will be patched on the skull of the fetus, so the head skin of the newborn becomes white in color when born," **a 25-year nursing lady explained.**

Discussion

The current study explored at the foods that are tabooed to pregnant women, as well as the reasons behind this practice in Gedeo zone. In this area, mothers are forced to abstain from some types of food during pregnancy. This finding is in line with various studies, it was seen that pregnant women in various parts of the world are forced to abstain from nutritious foods as a part of their traditional food habits [5,20,31–40].

Many barriers exist that impede adequate dietary intake in "Good meals," like foods which believed to have high nutritional value were believed to be tabooed to pregnant women, As long as the woman consumes those meals, the baby will grow in size, making delivery more difficult. As a result of the community's results, a fetus should be as small as feasible to lessen the chance of delivery problems. This reason is inline with this study done in Kenya which states the foetus should be kept small. It is considered that large foetuses are difficult to deliver, resulting in episiotomy, prolonged and obstructed labour, and possibly caesarean section (CS), which increase the chances of death of the mother or child. Eggs, oily food, meat, fresh milk, and cooked potatoes during pregnancy are believed to make the foetus grow excessively big [39]. For this reason, according to reports, pregnant women should avoid consuming a lot of healthy foods. The practice of intentionally eating less or "eating down" during pregnancy for fear of delivering a weak and large baby painful labor was cited in several countries, including Senegal, Nepal, Laos, India, Japan, Pakistan, Indonesia, and Burkina Faso[33,37,38,41–47].

This finding is also consistent with data from Ethiopia's Afar, Hadya zone, and Shashemene area, as well as South Eastern Nigeria, which revealed women's claims of difficult delivery as a result of the fetus's increased size as a result of consuming healthy foods. (20,27,32,41). This could be due to a lack of understanding about the importance of weight gain during pregnancy for both the fetus and the mother's health..

In Gedeo zone, good foods ,specially those which have higher nutritional value like Animal-based foods, such as meat, milk, and milk products, were stated to be off-limits to pregnant women because of their content, which could cause the fetus to grow too large. and milk product specially called ARERA and hot milk and the fear that this milk products might stick on the body of the fetus and make it dirty. Similar reports were made in Hadya zone and Aballa district, which demonstrated that milk and cheese are the most commonly avoided foods by pregnant mothers, with over half of the women avoiding them [27,48]. Milk and fatty meat were also tabooed for pregnant women in a study from Shahsemene, Sudan, and Nigeria [32,41,48]. However, this finding was at odds with a study conducted in Kenya that states mothers promoted to eat foods like meat,milk and milk products[39]. Sweet foods are restricted in this area, for example, the pregnant mother is restricted from taking sugercane that this sugary food is believed to make the baby messy by encouraging saliva over production and hence drooling and the other honey that believed to prevent baby speech development. This finding inline with a study done in Kenya[39] The other food group that were taboo during pregnancy were spicy foods, the reason raised here is that this type of foods could cause pain to the baby and hurt its stomachand causes baldness of the hair and this finding inline with the study done in Nepal[47].

The reasons for avoiding certain foods for pregnant women, such as consuming a lot of healthy foods, sweet foods, and spicy foods, fall into three groups. The first is to reduce the risk of a difficult delivery by shortening the labor period. The second is preventing poor baby speech development and to avoid baldness of the baby hair.

The third reason was to keep the baby's skin from discoloring after birth. Similarly, a prior study in Ethiopia's Shashemene district found that consuming certain vegetables during pregnancy caused skin darkening, with the assumption that it would be plastered on the fetal skull when the baby was born [32]. Despite community reports to the contrary, there is no proven proof that food consumed by pregnant women can be plastered on the skin of a fetus, nor that deviations from normal skin color, such as yellowish, can be related to food eaten by pregnant women. Religious affiliations were not mentioned among the reasons given for abiding by established food taboos. But in contrast, The finding from Ghana district in which religious leaders either advice or remind pregnant women to keep compliant to the foods tabooed [11].

Conclusions

Foods tabooed for pregnant women were found to exist in gedeo zone. Pregnant women avoid eating much food of any type and good foods, sweet foods,and spicy foods to prevent the fetus get large and difficult to deliver and to avoid skin discoloration and baldness, respectively Hence, food taboos could cause considerable risks of maternal malnutrition and their offspring. Besides, most of the explanations contradict with the need to increase the frequency and diversity of foods during pregnancy to satisfy the increased energy requirement. As a result, strategic health communication that focuses on refuting misconceptions such as pregnant women should eat less, certain foods cause diseases in both the mother and the fetus, and fetus skin discoloration is necessary..

MCH clinics and health extension workers must take the lead in coordinating this awareness-building effort. They should also closely follow food taboos on a regular basis, examine the reasons for their behavior, and provide appropriate nutritional education.

During pregnancy and lactation, pregnant women should be urged to "eat up." Furthermore, health education campaigns should consider widespread beliefs about diet during pregnancy.

Abbreviations And Acronyms

ANC Ante Natal Care

DHS Demographic And Health Survey

EDHS Ethiopian Demographic And Health Survey

HC Health Center

IUGR Intrauterine Growth Restriction

NGO Non Governmental Organization

PPS Probability Proportional To Size

PRFT Pregnancy Related Food Taboo

SNNPR South Nations Nationalities And Peoples Region

SPSS Statistical Package For The Social Sciences

TBA Traditional birth attendant

UN United Nation

UNICEF United Nations Children's (Emergency) Fund

WHO World Health Organization

Declarations

Ethical Approval

Ethical clearance was obtained from Dilla University College of health and medical science Institutional Review Board [Ref No (001/19-11)].

Human and Animal Rights

It is in compliance with the guidelines of the ethic committee.

Consent

Written consent was obtained from the study participants. Confidentiality and privacy were maintained during data collection, analysis, and reporting

Availability of Data and material

The data used to support the findings of this study are available from the corresponding author upon request.

Competing interest

Authors declare that they have no conflict of interests.

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Publication consent

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Author's contribution

Ruth Tilahun: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing

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References

1. Park K. Text book of Preventive and Social medicine. 23rd ed. India: Banarasidas Bhanot Publishers; 2015. 527 & 686 p.
2. Harmful traditional practices affecting the health of women and children. "Factsheet vol. 10,; 1997. No 23.
3. Meyer-rochow VB. Food taboos : their origins and purposes. 2009;10:1–10.
4. Esther.O OE. Relation of dietary and socio economic characteristics of mothers to child growth [Master thesis]., 2008;
5. Rk O, Komokoti A. Food habits in Kenya : the effects of change and attendant methodological problems . 1999;20894.
6. Diana R, Rachmayanti RD, Anwar F, Khomsan A, Christianti DF. Food taboos and suggestions among Madurese pregnant women : Semantic scholars,a qualitative study Food taboos and suggestions among Madurese pregnant women : a qualitative study. *J Ethn Foods*. 2018;5(4):246–53.
7. Diana R, Rachmayanti RD, Anwar F, Khomsan A, Christianti DF. Food taboos and suggestions among Madurese pregnant women : a qualitative study. *J Ethn Foods*. 2018;5(4):246–53, <https://www.sciencedirect.com/science/article/pii/S2352618118301446>.
8. Re B, Cg V, Sp W, Za B, Christian P, M DO, et al. Maternal and child undernutrition and overweight in low-income and middle-income countries . 2013;20894, http://pdgmi.org/wp-content/uploads/2016/10/Black_Maternal_and_child_undernutrition_and_overweight_in.pdf.
9. Mangesha AD and Ayele TT. The impact of culture on the nutritional status of children and mothers during recurring food insecurity: the case of Boreicha Woreda (SNNPRS). 2015;3(7):849e67. *Am J Educ Res*; <https://www.researchgate.net/publication/338548355>
10. Getnet W, Aycheh W, Tessema T. Determinants of Food Taboos in the Pregnant Women of the Awabel District , East Gojjam Zone , Amhara Regional State in Ethiopia. 2018; <http://downloads.hindawi.com/journals/aph/2018/9198076.pdf>
11. Otoo P, Habib H, Ankamah A. Food Prohibitions and Other Traditional Practices in Pregnancy : A Qualitative Study in Western Region of Ghana. 2015; (August):41–9, <https://www.scirp.org/journal/paperinformation.aspx?paperid=58437>.
12. Mohammed SH, Taye H, Larijani B, Esmailzadeh A. Food taboo among pregnant Ethiopian women : magnitude , drivers , and association with anemia. 2019;1–, https://www.researchgate.net/publication/331974901_Food_taboo_among_pregnant_Ethiopian_women_Magnitude_drivers_and_association_with_anemia
13. Diana R, Khomsan A. Food taboos and suggestions among Madurese pregnant women : a qualitative study Download Button Cite this publication. 2019; <https://www.semanticscholar.org/paper/Food-taboos-and-suggestions-among-Madurese-pregnant-Diana-Rachmayanti/d8cecd6183082cdf3230dd5b5adbdc73a970c8f>.
14. Villa KM, Barrett CB JD. Whose fast and whose feast? Intrahousehold symmetries in dietary diversity response among East African pastoralists. *Am J Agric Econ*. 2011;93(4):1062–81., <https://ideas.repec.org/a/oup/ajagec/v93y2011i4p1062-1081.html>.
15. Holmes W, Bs MB, Lond CH, Hoy D, Physio B, Lockley A, et al. Influences on maternal and child nutrition in the highlands of the northern Lao PDR. 2007;16(December 2006):537–45, <https://ideas.repec.org/a/oup/ajagec/v93y2011i4p1062-1081.html>.
16. Dietary behaviour, food and nutrient intake of pregnant women in a rural community in rural community in Burkinafaso,2017, <https://pubmed.ncbi.nlm.nih.gov/27373896/>.
17. Tn H, Rs P, Lindholm L, Surjono A, Winkvist A. The importance of eating rice : changing food habits among pregnant Indonesian women during the economic crisis . 2005;20894, <https://www.diva-portal.org/smash/get/diva2:142668/fulltext01.pdf>.
18. Ea U. Nutritional Practices and Taboos Among Pregnant Women Attending Antenatal Care at General Hospital in Kano , Northwest Nigeria Nutritional Practices and Taboos Among Pregnant Women Attending Antenatal Care at General Hospital in Kano , Northwest Nigeria. 2019;2019, https://www.researchgate.net/publication/301946183_
19. Christian Relief & Development Association (Ethiopia) Development Association (Ethiopia) Church work with refugees Community development Disaster relief Economic assistance , Domestic Economic policy Emergency management Ethiopia Ethiopia–Addis Ababa Food relief International Christian Relief & Urban poor–Services for. 2019;43017, <https://www.danchurchaid.org/where-we-work/ethiopia>.
20. Zerfu TA, Umeta M, Baye K. Dietary habits , food taboos , and perceptions towards weight gain during pregnancy in Arsi , rural central Ethiopia : a qualitative cross-sectional study. *J Heal Popul Nutr [Internet]*. 2016;1–7. Available from: <http://dx.doi.org/10.1186/s41043-016-0059-8>
21. Common food taboos and beliefs during pregnancy in Yilo Krobo district ,2014;(June), <https://journals.library.columbia.edu/index.php/jgh/article/download/6436/3181/11420>.
22. Ugwa EA. Nutritional Practices and Taboos among Pregnant Women Attending Antenatal Care at General Hospital in Kano, Northwest Nigeria. 2016;8(7):20894, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4866363/>.
23. Szostak-Wegierek D. Intrauterine nutrition: Long-term consequences for vascular health. *International Journal of Women's Health* 6, 647-656. (2014): <https://pubmed.ncbi.nlm.nih.gov/25050077/>
24. Mf Y, Ph N, Oy A, Hao W, Nguyen H, Pham H, et al. The relative influence of maternal nutritional status before and during pregnancy on birth outcomes in Vietnam . 2015;20894, <https://www.ifpri.org/publication>
25. Dj B. Adult consequences of fetal growth restriction . 2006; 20894. <https://pubmed.ncbi.nlm.nih.gov/9551310/>
26. Zepro NB. Food taboos and misconceptions among pregnant women of Shashemene District, Ethiopia, 2012. *Science Journal of Public Health* 3, 410-416 (2015). <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0239451>
27. Demissie T, Muroki N, Kogi-makau W. Food taboos among pregnant women in Hadiya Zone ., (6):2–7. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0239451>
28. Re B, Lh A, Za B, Le C, M DO, Ezzati M, et al. Maternal and child undernutrition : global and regional exposures and health consequences . 2008;20894. <http://www.validnutrition.org/wp-content/uploads/2014/02/Lancet>
29. Committing to Child Survival : A Promise Renewed 2015. 2015UNICEF, <https://reliefweb.int/report/world/committing-child-survival-promise-renewed>;

30. Central Statistical Agency Addis Ababa E, ICF TDP, Rockville, Maryland U. Ethiopia Demographic and Health Survey key indicators. Ethiopia; 2016. 59 p. <https://www.usaid.gov/sites/default/files/documents/1860/Ethiopia%20DHS%202016%20KIR%20-%20Final%2010-17-2016.pdf>
31. Mora JO, Nestel PS, Ph D. prenatal nutrition in developing countries. <https://www.semanticscholar.org/paper/Improving-prenatal-nutrition-in-developing-and-Mora-Nestel/16bb5f63cdd170dd10feaf151d369cdcbf4ae86f>
32. Zepro NB. Food Taboos and Misconceptions Among Pregnant Women of Shashemene District , Ethiopia , 2012. 2015;3(3):410–6. <https://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/s12884-021-03778-6>
33. Triratnawati A. Food Taboos and Codes of Conduct for Pregnant Women at Mount Sindoro , Wonosobo District , Central Java , Indonesia. 2019;13(2):83–93. <https://www.scilit.net/article/e6b417ac519d4342c04c5f29ba1fbbde>
34. Taboos F. Food Taboos During Pregnancy and Lactation Across the World. 2016;10–1.
35. Factors A, Woreda G, Zone EW, Daba G, Beyene F, Fekadu H, et al. Assessment of Knowledge of Pregnant Mothers on Maternal Nutrition and Journal of Nutrition & Food Sciences. 2013;3(6). <https://www.longdom.org>
36. Ali U. Taboos and Beliefs among Pregnant & Lactating Women. 2016;70–1. <https://ethnobiomed.biomedcentral.com/articles/10.1186/s13002-021-00451-2>
37. Considerations P. MCSP Nutrition Brief Addressing Barriers to Maternal Nutrition : Evidence and Program Considerations. 2017;(April):1–9. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5763330/>
38. Acharya J, Teijlingen E Van, Murphy J, Ellahi B. L UPINE PUBLISHERS Exploring FoodRelated Beliefs and its Impact on Preschool-Aged Children in Pokhara in Nepal : A Qualitative Review. 2018;1(4):66–76. <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-020-08860-w>
39. Monchari R, Broerse J, Nangulu AK. Food beliefs and practices among the Kalenjin pregnant women in rural Uasin Gishu County , Kenya. 2017;1–16. <https://pubmed.ncbi.nlm.nih.gov/28545533/>
40. Hm HT, Ahmed EM, N AAM. Food Taboos among Pregnant Women in Health Centers ,. 2018;5(2). <https://nutritionj.biomedcentral.com/articles/10.1186/s12937-019-0444-4>
41. Ekwochi U, Osuorah CDI, Ndu IK, Ifediora C, Asinobi IN, Eke CB. Food taboos and myths in South Eastern Nigeria: The belief and practice of mothers in the region. J Ethnobiol Ethnomed. 2016;12(1). <https://ethnobiomed.biomedcentral.com/track/pdf/10.1186/s13002-016-0079-x.pdf>
42. Oni OA, Tukur J. Identifying pregnant women who would adhere to food taboos in a rural community : a community-based study. 2012;16(September):67–75. <https://www.ajrh.info/index.php/ajrh/article/view/361>
43. Ea U. Nutritional Practices and Taboos Among Pregnant Women Attending Antenatal Care at General Hospital in Kano , Northwest Nigeria. 2016;109–14. https://pubmed.ncbi.nlm.nih.gov/sitemap?r=f_2721.xml
44. Oluleke MO, Ogunwale AO, Arulogun OS, Ademola L. Dietary intake knowledge and reasons for food restriction during pregnancy among pregnant women attending primary health care centers. 2016;2(1):103–16. <https://www.academia.edu/50843628>
45. Santana M, Alves V, Queiroz DO, Brito SM. Food consumption patterns during pregnancy : a longitudinal study in a region of the North East of Brazil. 2015;32(1):130–8. <https://www.researchgate.net/publication/281814957>
46. Kuzma J, Paofa D, Kaugla N, Catherina T, Samiak S, Kumei E. Food taboos and traditional customs among pregnant women in Papua New Guinea : Missed opportunity for education in antenatal clinics. 2013;19(November):1–11. <https://www.dwu.ac.pg/en>
47. Ozawa N, Shimojo N, Suzuki Y, Ochiai S, Nakano T, Morita Y, et al. Maternal Intake of Natto , a Japan ' s Traditional Fermented Soybean Food , during Pregnancy and the Risk of Eczema in Japanese Babies. Allergol Int [Internet]. 2014;63(2):261–6. Available from: <http://dx.doi.org/10.2332/allergolint.13-OA-0613>
48. Mehanna S, Khan G, Hassan M, Galloway R. Cultural Beliefs and Perceptions of Maternal Diet and Weight Gain during Pregnancy and Postpartum Family Planning in Egypt. 2014;(April). <https://www.semanticscholar.org/paper>