

# Food Taboos during Pregnancy and its Consequence for the Mother, Infant and Child in Ethiopia: A Systemic Review

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## Abstract

Food taboo is any consideration of food items by the society as improper or unacceptable that arises mainly based on religious, cultural, historical and social principles. According to the earlier literature, the consequence of not adhering to an established food taboo is always defined by the society as it causes illness or death, which is similar across different communities of the world. The objective of this review is to identify systematically, appraise and synthesize the best available evidence on food taboos for pregnant mothers and its consequence for the mother, infant and child in Ethiopia. Electronic search of Medline, Pub Med, and Google Scholar databases were conducted. Results of interest were food taboo for pregnant mothers and its consequence for the mother, infant and child. Many studies in Ethiopia concluded that the most frequent proximate consequence of food taboo for pregnant mothers include fear of having big baby and obstructed labour, abortion, evil eye and different diseases. Besides, there are also culturally recommended foods which are safe to eat like; eating Injera (Ethiopian staple food), bread and vegetables, in frequently milk and animal products during pregnancy. The diets of mothers are often overlooked, cultural beliefs, behaviors and perception on food taboos and are the major determinant factors for poor maternal feeding practice which increase not only women's chance of being malnourished but increases the chance of intrauterine growth retardation and childhood malnutrition. The effect of poor dietary habits of mothers do not end with poor birth outcomes and nutritional status of the newborn but may extend on influencing children eating behavior which results with poor health and nutritional status of children. Nutrition counseling in order to achieve optimal nutritional practice of women through behavioral change program intervention should be done to prevent harmful traditional practice or food taboos for pregnant mothers in a society.

**Keywords:** Food taboo, Culture, Behavior, Perception.

## 1. Back ground

Food taboos refer to the restriction of specific foods as a result of social or religious customs. In many

traditional societies, cultural norms and customs govern behaviors including during critical life stages like pregnancy(1). Pregnancy is a particular period when physiological nutrient demands are substantially increased. To meet this in-creased nutrient requirement for both the woman and the fetus, a pregnant woman is supposed to increase the amount and quality of foods she consumes(2). Nevertheless, when misconceptions or food taboos exist, the pregnant woman's ability to meet such increased demands can even be more compromised, hence putting the woman at a greater risk of adverse pregnancy outcomes(3). Evidence shows that food taboo accounts largely to maternal and fetal malnutrition during pregnancy(4). The practice of food taboo is high in developing countries besides, there is inconsistency on which food is considered a tabooed and the attached reason from society to society(5).

Restriction and or inadequate intake of some food items during the period of pregnancy for different reasons limit the frequency and variety of food, which makes consequences of malnutrition most awful(6). For the reason that women's energy requirements remain high during pregnancy and given the detrimental impacts of inadequate maternal nutrition on both gestational and neonatal outcomes, the health of pregnant can be affected by their adherence to food taboos (7). Besides, evidence also shows that malnutrition in women reduces their ability to work, which in turn creates ripple effects for the women, their family and the country(8).

Studies in Ethiopia shown that food taboo for pregnant mothers exist and most of the food staff restricted to consume during pregnancy are carbohydrate, Protein, vegetables and animal products and the effect will have long-term and short term on mothers and children's nutrition related problem and health consequence and from this point of view it is mandatory to review researches done on food taboo for pregnant mothers to

know the effect to develop preventive strategies on this harmful traditional practice that is, food taboo for pregnant mothers.

## 2. Methods

Based on the authors own experience, of countries in Africa including Ethiopia, Asia like India data was collected to demonstrate the existence of very different possible food taboo reasons. Electronic search of Medline, Pub Med, and Google Scholar databases up to march 2017 were conducted. Search was done using key words: (“food taboos for pregnant mothers” OR “maternal dietary practice” OR harmful traditional practice on feeding and “Impacts” OR “factors associated” OR prevalence OR feeding practice). Reference lists from research, reviews and editorials also scanned for potential articles. All literatures, including: data obtained from focus group discussion, interviewing key informant by exploring the knowledge, attitude and interviewing using structured questionnaire evaluating practice on food taboo for pregnant mothers, published in English language, were included.

The study was limited to pregnant mothers, old mothers as key informant. In the primary search 50 records were found. The studies/reviews which did not examine the food taboos for pregnant mother and its consequence in developing countries, duplicated and majority of the outdated publications that were published before 2002 were excluded and 30 articles were selected. During full text screening, 19 articles were evaluated as potentially relevant considering food taboos for pregnant mothers and its consequence in developing countries. This review defined a “food taboos for pregnant mothers” which is associated with good or bad outcomes on the nutritional status of mothers and children in developing countries. The review’s date of search was done starting on March 05/ 2016/ - March, 29/ 2017, the search was done by one person, and gray literature was not included. Article selection was also done by one person and the quality of the article was assessed by ranking based on confounding and exposure control, descriptive method of analysis was used to analyze the findings.

## 3. Result

**Table1: Characteristics of articles included in the review**

Sr. No.	Authors	Method used	Study area	Study year
1.	Villa KM, Barrett CB, Just DR.	Qualitative	African pastoralists..	2011
2.	Nnam N.	Qualitative	Review	2015
3.	Ramakrishnan U, Grant F, Goldenberg T, Zongrone A,	Qualitative	Systemic review	2012
4.	Salih MA, Satti SA, Swar MO.	Qualitative	Sudan .	2013
5.	Global Health of the United States Agency for International Development (USAID).	Report	Global health	2004
6.	Marchant T, Armstrong Schellenberg JR, Edgar T, Ronsmans C, Nathan R, Abdulla S, Mukasa O, Urassa H, Lengeler C.	Qualitative	South Tanzania	2002
7.	Parmar A, Khanpara H, Kartha G. A	Qualitative	Rural, women of Surendranagar	2013
8.	Golden CD, Comaroff J.	Qualitative	Northeastern Madagascar	2015
9.	Taddese Alemu Zerfu,, Melaku Umeta, and Kaleab Baye	Qualitative	Arsi, Oromia region	2016
10.	Kuche Desalegn, Singh pragaya	Quantitative	Wondogenet	2016
11.	Znabu Hadush, Zewdie Birhanu	Qualitative	Abeala Afar rigion	2017

	,Mulugeta Chaka and Haylay Gebreyesus			
12.	Meresa Gebremedhin, Fentie Ambaw, Eleni Admassu and Haileselassie Berhane	Qualitative and quantitative	Tigray	2015
13.	Nejimu Biza Zepro	Quantitative	Shashemene , Oromia region	2015
14..	Roselyter Monchari Rianga, Jacqueline Broerse and Anne Kisaka Nangulu	Qualitative	rural Uasin Gishu County, Kenya	2017
15.	Lilian Nkengla Asi*, Deli Tize Teri	Qualitative	rural communities in Cameroon	2016
16.	Justine Kavle, Sohair Mehanna, Ghada Khan, Mohamed Hassan, Gulsen Saleh, and Rae Galloway	Qualitative	Egypt	2014
17.	Patience Otoo, Helen Habib, Augustine Ankomah	Qualitative	Western Region of Ghana	2015
18.	Uzma Eram, Tamanna, Z., Humaira, J.T.	quantitative	Rural women in Algeria	2016
19	Maznorila Mohamad* and Chong Yee Ling	Qualitative	Malaysia	2016

### 3.1 food taboos, and perceptions in Arsi harmful to the child causing death and Having big baby which leads to difficult Delivery

As author reported: community strongly believes that what a woman eats after her eight months of pregnancy goes directly to the womb to feed the baby. Thus, some foods can hurt the fetus and pregnant women, among foods considered to be taboo are leafy vegetables like cabbage. The leaf passes to the womb and attaches to the baby's head and form what they called "particles". These "particles" are considered harmful to the child and are even considered to cause immediate death to the newborn. Similarly, the consumption of dairy products like milk, yogurt, and cheese during pregnancy is considered harmful to the fetus. Pregnant women should avoid consuming dairy products like yoghurt and cheese, particularly as the gestational age advances because dairy products can pass to the womb and attach to the baby's head and witnessed these babies dying immediately after delivery. Another discussant in similar community also believe that if a pregnant woman eats sugarcane, fruits ,and some other vegetables, she may have a big baby which endangers

her life by making labor difficult. And delivering a bigger baby can be life threatening for both the mother and the newborn. No one dislikes to have a big and handsome baby; babies in fact feed to make them grow big during early childhood but, in the womb, it is very risky thus decrease food intake during pregnancy to limit the size of the fetus and facilitate its delivery(9).

### 3.2 Dietary practice in Wondement district among pregnant women

From a report of this study, regarding dietary practice majority 94% of the study participants consume foods cooked by oil and fats. More than three fourth (76%) of the study participants reported that they consumed that cereal based crops (maize, sorghum, millet wheat, barley teff) prior to the survey and about three fourth (74.5%) of the study participants consume legumes in the previous 24 hour recall. Other vegetables (tomato, Onion), dark green vegetables (green paper) were consumed by 71.2% and 66.7% of subjects respectively one day prior to the survey. Other white vegetables and tubers (yam, cassava, enset, and white sweet potato and vitamin A reach vegetables (pumpkin, carrot, orange fleshed sweet potato) were consumed by 41.8% and 20.9% of the study subjects respectively. nearly half

(49%) of the study group consumed other fruits (avocado, banana, lemon and orange white 27.5 reported that vitamin A rich fruit (ripe mango, papaya and grape). Among animal products milk and milk products were consumed largely by the study group whereas flesh meat, egg, organ meat and fish were consumed by 12.4%, 11.1%, 7.2% and 2.6% respectively. Food restrictions were high among pregnant mothers because of dislike 18.3 than because of cultural reason(10)

### **3.3 Consuming tabooed foods for pregnant women in Afar, Abeala District cause different illness**

A study report showed; participants in Aballa district of Afar region, if pregnant women eats foods that are associated with the high-fat content; meat, camel milk and yoghurt/ "Ergo" as highly fatty foods they call the foods as "good foods", can result in big fetus." Besides the pregnant woman abstain from eating much during pregnancy and limit her diet in quantity and frequency to prevent the fetus from becoming very large thus; she would not have difficulty and bleeding during delivery. Participants further specified that solid ("Burkutta", "Ambasha", "Bahamo" and "Mengelle" All are forms of bread prepared locally) foods are believed to cause gastritis (they call it as "Ali diduh") to the pregnant because they are very sharp and hard to dissolve. And "Avoiding eating them helps to avoid diarrhea, abdominal disease and vomiting for their child." Avoiding cool/cold foods (cool milk, cool meat, yoghurt and cheese) also prevents bloody diarrhea, vomiting and abdominal disease to the mother. Besides, avoiding eating fatty foods especially camel's milk and camel's meat during pregnancy preventing discoloration of the skin of the baby. If a pregnant woman eats fatty meat, the fat will be painted on the head of the fetus thus the head skin of the baby becomes yellow in color. ".Eating roasted grains (they named it "Kollo") during pregnancy explaining it could be painted on the head of the baby and should not be eaten frequently by pregnant women. It does not cause a problem for the woman but it could be painted on the head of the baby it could cause an ulcer on the place that is painted often on the head(11).

### **3.4 Institutional based study in Tigray eating non-fasting foods during pregnancy is a sinful act**

Study in Tigray from the author reported, honey shouldn't be eaten during pregnancy because it leads to a pain full false labor that persists longer and it is also

the main cause of constipation during the course of pregnancy. food items that are considered preferable based on advice of elders during pregnancy generally are all kinds of cereals their products like wheat flour and vegetables especially those that are eaten cooked besides, "Frequent consumption of linseed in the late weeks of pregnancy is helpful in softening and lubricating the body of expectant mother, there by facilitate the course of child birth. strong social ties in every aspect of life and it is difficult to ignore the advice of elder family members & neighbors regarding the diet during pregnancy, still obey their experiences since it could have truth in some instances and pregnant mothers sometimes strictly follow it despite the advice of health professionals and always felt frightened to take much animal products. Fasting beliefs and practices during pregnancy; taking non-fasting foods like meat , eggs and milk during the fasting time breaching the rules of religion." Older parents and religious rules will never accept to eat non-fasting foods what-ever pregnancy status rather they strongly advocate to fasting and have strong link with church, if you did not obey this it is considered as a sinful act. And "If some-one disobeys the religious rules(if a woman is not fasting )either the mother will face problems during child birth or the child will be born with ill health sticking with religious rule avoids unhealthy baby(12).

### **3.5 Food Taboos and Misconceptions among Pregnant Women in Shahemen, can cause Abortion evil eye and fetal abnormality**

A study report showed that, participants in Shashemene regarding food taboos during Pregnancy said that avoid one or more food items during pregnancy that is, Linseed, Honey and Milk yoghurt the belief for these food items restriction were fear of Plastered on the fetal head, makes fatty baby and difficult delivery, abortion, evil eye, fetal abnormality(13).

### **3.6 Study in Kenya perception, beliefs and practices on food taboo among pregnant women cause miscarriage and still birth**

Author reported that; women were advised to be cautious about eating any type of meat during pregnancy the main reason for restricting meat was the condition of the animal during life or upon death could in several ways be transferred to the pregnant mother and/or her unborn child. First, an animal that ever encountered pregnancy related complications, such as miscarriage, stillbirth or death due to placenta retention, besides, when a pregnant woman eats meat, it is also

believed the animal will transfer “bad blood” to the mother and she will encounter similar complications during pregnancy and child birth(14).

### **3.7 In Cameron food taboos on nutritional patterns cause malformation on the babies**

As Author reported a pregnant woman is prohibited from eating a snake. Snakes (green snake) represent a god to children in this society. Snakes therefore are used as sacrifices to the gods usually on a particular day called “country Sunday”, Violation or failure to respect this rule by pregnant women will result giving birth to a malformed baby or a baby is resembles a snake who may die before his first birthday or become mentally deranged. Besides, pregnant women are also prohibited from eating meat from wild animals (leopard, crocodile, monkey,) It is believed that eating these animals will result to the child behaving like the animals and having some features of the animals. For example, the child would become wild and will not respect the parents(15).

### **3.8 In Egypt cultural Beliefs and Perceptions of food during Pregnancy cause malformation of the body and high blood pressure**

A report from author Carbohydrates, as a food group, were viewed as “not beneficial” for pregnancy and were perceived to cause “bloating for the mother” and excessive weight gain; therefore mothers believed they should restrict their intake and “these foods should not be consumed much. Junk food and caffeinated beverages as well as salty, pickled, and spicy foods are considered culturally taboo or “bad” during pregnancy. Junk foods (e.g., lunch meat, soda, prepackaged potato chips, biscuits, and locally made potato chips); salty foods; acidic foods (e.g., foods cooked with onions and tomatoes); Cultural Beliefs and Perceptions, caffeinated beverages (e.g., tea and coffee) may adversely affect the mother and/or the child, contributing to “high blood pressure” and “deformation of unborn children(16).

### **3.9 In Western Region of Ghana Food Prohibitions and Practices in Pregnancy: cause prolonged and difficult labour**

The author reported, many of the respondents mentioned snails as one of the foods they believed make the baby salivate too much. Ripe plantain, due to its softness is believed to result in lethargic and soft babies and so causes prolonged labour. Okra was perceived to cause burning sensation of the waist and painful labour while groundnut makes them sleepy

during labour. Other foods avoided included Milo, malt, sweet potato, and mango. Drinking malt, Milo and sweet potatoes make my baby big and will let me have difficulty labour(17).

### **3.10 In rural Algeria food taboos and misconceptions among pregnant mothers cause fairer skin, itching and abortion.**

Study in Algeria as author reported intake of saffron results in fairer skin of baby. Study participant , avoid papaya, fish, badi food (which cause gas in stomach), citrus foods, groundnuts and tea or brinjal are avoided fear of causing abortion, placental disruption, itching and seizures or difficult labour or overweight (18).

### **3.11 In Malaysia Kuala Lumpur city pregnant women attending antenatal check-up at the maternal health clinic breaching Food taboos cause abortion and bleeding**

As the author mentioned most commonly tabooed foods were pineapple, followed by sugarcane juice, ‘hot foods’, carbonated drinks, ‘tapai’ or fermented glutinous rice, bamboo shoots, and ‘cold foods’. The main reason for food avoidance was mainly due to the belief that consuming these foods will lead to abortion, followed by excessive bleeding during labor, the baby also born with deformities (19).

## **4. Discussion**

Based on the final review and analysis, Food taboo is any consider attention of food items by the society as improper or unacceptable that arises mainly based on religious, cultural, historical and social principles. The consequence of not adhering to an established food taboo is always defined by the society as a fear causing illness or death, which is similar across different communities of the world(8).

Study in Arsi if a pregnant woman eats sugarcane, fruits, and some other vegetables, she may have a big baby which endangers her life by making labor difficult(9). similar study in Afar region fatty in their content (meat, camel milk and yoghurt/ “ Ergo ” as highly) pregnant woman should avoid eating fat content to prevent the fetus from becoming very large thus; she would not have difficulty and bleeding during delivery(11). the consequence of both tabooed foods in these two studies is similar increasing the body weight of the fetus and making labour difficulty but the tabooed foods are quite different the reason could be different in perception on restriction of tabooed foods. .

In Tigray hospital based study fasting beliefs and practices during pregnancy. “ Older parents and religious rules will never accept you to eat non-fasting foods during pregnancy what-ever your pregnancy status rather they strongly advocate to fasting and have strong link with church, you did not obey this it is considered as a sinful act “If some-one disobeys the religious rules(if a woman is not fasting)either the mother will face problems during child birth or the child will be born with ill health that is why pregnant mothers prefer to stick with it because they do not want to have unhealthy baby(12). Whereas respondents in shahsemene avoid one or more food items during pregnancy. Linseed, Honey and Milk yoghurt were commonly avoided food items. They believe for food restriction were Plastered on the fetal head, makes fatty baby and difficult delivery, fear of abortion, evil eye, fetal abnormality(13). Here the perception and the tabooed food in these two regions the reason could be different in socio- cultural, belief and perception.

Study in Ethiopia, Tigray region: “food items that are considered preferable based on advice of elders during pregnancy generally are all kinds of cereals their products like wheat flour and vegetables especially those that are eaten cooked. “Frequent consumption of linseed in the late weeks of pregnancy is helpful in softening and lubricating the body of expectant mother, there by facilitate the course of child birth (12) whereas study In Egypt carbohydrates, as a food group, were viewed as “not beneficial” for pregnancy and were perceived to cause “bloating for the mother” and excessive weight gain; therefore mothers believed they should restrict their intake and “these foods should not be consumed much(16). The reason could be different in cultural, belief and perception, type of tabooed foods and dietary patterns between those two countries.

Another study in Ethiopia, in Afar region, Abala district participants reported that a pregnant woman should avoid eating foods that are associated with the high-fat content. They specified meat, camel milk and yoghurt/“Ergo” as highly fatty foods. They call the foods as “good foods”, and pregnant woman should avoid eating these foods to prevent the fetus from becoming large(11).”. In Ghana Many of the respondents mentioned snails as one of the foods they believed make the baby salivate too much when given for pregnant mother. And ripe plantain, due to its softness is believed to result in lethargic and soft babies and so causes prolonged labour(17). These two studies revealed that the tabooed foods are different the reason could be different in feeding pattern and the perception of tabooed foods in these two countries.

**Strength and weakness of the review:** The strength of the review was reviewing articles by taking time more than one year and being the method used in the articles both qualitative and quantitative. And coming to its weakness this systemic review only describes the results of different studies from Ethiopia, other Africa countries and Asia descriptive analysis and I recommend to further study using different methods of analyzing results.

## 5. Conclusion and Recommendation

This systemic review revealed that pregnant mothers in Ethiopia are influenced by food taboos based on cultural perceptions, behavioral and religious belief, with the fear of increasing body weight of the fetus which can result in obstructed labour, abortion, discoloration and ulcer of the of the skin, gastritis, vomiting, sinful act which can result either the mother facing problems during child birth or the child will be born with ill health.

The most common foods prohibited as taboo are animal products like milk, meet, and eggs. And honey, sugarcane, leaf vegetables like cabbage. Omitting those food staff from the requirement during pregnancy will have long term impact to the mother and fetus making maternal and child that is, for the mother and underweight during delivery of the infant and easily susceptible to disease during child hood.

Based on the review I recommend nutritional counseling with emphasis during ant-natal care and post natal service is important. And at community level elders and religious leaders also should be given nutritional education.

## References

- [1] Villa KM BC, Just DR. Intra household symmetries in dietary diversity response among East African pastoralists. . Am J Agric Econ 2011; 93(4):.1062 – 81.
- [2] N. N. Improving maternal nutrition for better pregnancy outcomes. Proc Nutr Soc; 2015; 74(04)::454–9.
- [3] Ramakrishnan U GF, Goldenberg T, Zongrone A, Martorell R. Effect of women’s nutrition before and during early pregnancy on maternal and infant outcomes: a systematic review Paediatr Perinat Epidemiol 2012;26(51)::285–301.

- [4] Salih MA SS, Swar MO. Child health and nation's health. . J Paediatr Sudan 2013;13(2)::6 – 9.
- [5] Health LA b t B f G. Maternal Nutrition: United States Agency for International Development (USAID) 2004: Issues and Interventions; computer based slide presentation.
- [6] Marchant T ASJ, Edgar T, Ronsmans C, Nathan R, Abdulla S, Mukasa O, Urassa H, Lengeler C. . Anaemia during pregnancy in southern Tanzania. . Ann Trop Med Parasitol 2002;96(5)::477–87.
- [7] Parmar A KH, Kartha G. . study on taboos and misconceptions associated with pregnancy among rural women of Surendranagar district. age. . 2013; 4(1).4-10.
- [8] Golden CD CJ. Effects of social change on wildlife consumption taboos in northeastern Madagascar. . . Ecol Soc 2015;20(2)::41. <http://dx.doi.org/10.5751/ES-07589-200241>.
- [9] Taddese Alemu Zerfu MU a KB. Dietary habits, food taboos, and perceptions towards weight gain during pregnancy in Arsi, rural central Ethiopia. Journal of Health, Population and Nutrition 2016; 35:22 DOI 10.1186/s41043-016-0059-8.
- [10] kuche Desalegn SP, Mogus Debebe Dietary Practice and associated factor among pregnant women in wondogenet district south Ethiopia Journal of Pharmasitical and scientific innovation 2015;4(5):1-6.
- [11] Znabu Hadush ZB, Mulugeta Chaka and Haylay Gebreyesus. Foods tabooed for pregnant women in Abala district of Afar region, Ethiopia. BMC Nutrition 2016 3(40):1-9.
- [12] Meresa Gebremedhin FA, Eleni Admassu and Haileselassie Berhane. Maternal associated factors of low birth weight. BMC Pregnancy and Children 2015; 15(22):1-8.
- [13] Zepro NB. Food Taboos and Misconceptions among Pregnant Women of Shashemene District, Ethiopia. Science Journal of Public Health 2015;3(3): :410-6
- [14] Roselyter Monchari Rianga' JB a AKN. Food beliefs and practices among the Kalenjin pregnant women in rural Uasin Gishu County, Kenya. Journal of Ethnobiology and Ethnomedicine 2017;13(29):2-16.
- [15] Lilian Nkengla Asi\* DTT. Influence of food taboos on nutritional patterns in rural communities in Cameroon. International Review of Social Research 2016; 6(1):35–9.
- [16] Justine Kavle SM, Ghada Khan, Mohamed Hassan, Gulsen Saleh, and Rae G. Cultural Beliefs and Perceptions of Maternal Diet and Weight Gain during Pregnancy and Postpartum Family Planning in Egypt Maternal and child health integrated program 2014; from the american people 5.
- [17] Patience Otoo HH, Augustine Ankomah. Food Prohibitions and Other Traditional Practices in Pregnancy: in Western Region of Ghana. Scientific research Publishing 2015; 3: 41-9.
- [18] Ling MM a CY. Food taboos of malay pregnant women attending antenatal check-up at the maternal health clinic in Kuala Lumpur. Journal of Integrated food and nutrition Metabolism 2016; 3(1):262-7.
- [19] Nisha Catherin\* RB, Roger V, Ankita C, Ashish G, Delwin P, Deeepthi Shanbhag, Goud BR Beliefs and practices regarding nutrition during pregnancy and lactation in a rural area in Karnataka, India. International Journal of Community Medicine and Public Health 2015;2(2):116-20