

# A Systematic Review and Thematic Synthesis of Qualitative Research Studies on Food Taboos Related to Pregnancy in Ethiopia

Anene Tesfa<sup>1\*</sup>, Zenebu Begna<sup>4</sup>, Daniel Sisay<sup>3</sup>, Temesgen Muche<sup>2</sup>, Robel Hussen Kabthamer<sup>2</sup>, Tizalegn Tesfaye<sup>3</sup>, Helen Ali Ewune<sup>2</sup>

<sup>1</sup>Ethiopia Public Health Institute, Addis Ababa, Ethiopia.

<sup>2</sup>Department of Human Nutrition, College of Health Science and Medicine, Dilla University, Ethiopia.

<sup>3</sup>Department of Epidemiology and Biostatistics, College of Health Science and Medicine, Dilla University, Ethiopia.

<sup>4</sup>HaSET, Harvard School of Public Health, Ethiopia.

\*Corresponding Author: Anene Tesfa.

## Abstract

**Introduction:** Pregnancy is a crucial period within newborns' 1000-day nutritional window of opportunity. However, accessing adequate and culturally acceptable foods during this time can be challenging, particularly in developing countries. In Ethiopia, food taboos related to specific foods during pregnancy persist and impact the achievement of maternal, newborn, and child health (MNCH) goals. This systematic review aims to synthesize the evidence on food taboos and their impact on pregnant women in Ethiopia.

**Methods:** A systematic search and thematic analysis of qualitative studies on food taboos and pregnancy in Ethiopia published between 2010 and 2020 were conducted. Eight articles that met the COREQ checklist criteria were retrieved from various databases including PubMed, Scopus, CINAHL, Global Health, and Google Scholar.

**Results:** The included studies revealed a consistent trend of food taboos among pregnant women in Ethiopia. Restricting certain food items was identified as a common practice throughout the country, with a reduction in meal portions and frequency observed as the gestational period progressed. These taboos were based on the perception that excessive weight gain during pregnancy could lead to complications during delivery and that the food consumed by the mother directly impacts the fetus in the womb.

**Conclusion:** The findings of this systematic review highlight the impact of food taboos on pregnant women in Ethiopia. These norms are contrary to mothers encouraged gestational weight gain and can lead to low birth weight. Therefore, a comprehensive approach is needed to change the perception of mothers and influence community members to promote MNCH.

**Keywords:** pregnancy; food taboos; nutrition; social norms; cultural sanction; optimal feeding

## Introduction

Pregnancy is a critical phase in a mother's life, as it determines the health and well-being of both the mother and the baby. The quality and quantity of food during pregnancy play a crucial role in the baby's growth and survival, and inadequate nutrition can lead to hypertension, gestational anemia, miscarriages, maternal mortality, low birth weight, and other complications [1]. A recent report by the World Health Organization (WHO) highlights the widespread prevalence of micronutrient malnutrition in pregnant women globally, with millions suffering from vitamin

and mineral deficiencies. The WHO has set a target to reduce the proportion of babies born with low birth weight by 30% by 2025 [2]. Maternal undernutrition is particularly prevalent in the least developed countries, with Ethiopia being a notable example. Maternal underweight carries a greater risk of preterm birth, and interventions to improve maternal nutrition be somewhat effective in increasing birth weight [3]. However, cultural influences and food taboos in many developing countries can put a strain on pregnant mothers and contribute to malnutrition. In Ethiopia, nearly four out of every ten children are stunted due to chronic malnutrition [4]. While individual

interventions have shown some improvement in fetal growth, an integrative approach that addresses both behavioural and practical challenges may lead to more significant and synergistic impacts on pregnancy health and birth outcomes. This study aims to synthesize social norm-related nutritional behavioural practices during pregnancy in Ethiopia, to improve maternal and child health outcomes [5].

## Methods

### Design and search strategy

A methodical exploration was carried out to locate peer-reviewed journal articles concerning food taboos that are associated with pregnancy in Ethiopia. Our search entailed a systematic screening of various databases, including PubMed, Scopus, CINAHL, Global Health, and Google Scholar, for articles that met our eligibility criteria. We focused on qualitative articles written in the English language and published between 2010 and 2020, to obtain the most current and relevant information on the subject matter. To conduct our search, we utilized a set of related keywords such as food taboo, pregnancy, nutrition, social norms, cultural sanction, and others.

### Inclusion and exclusion criteria

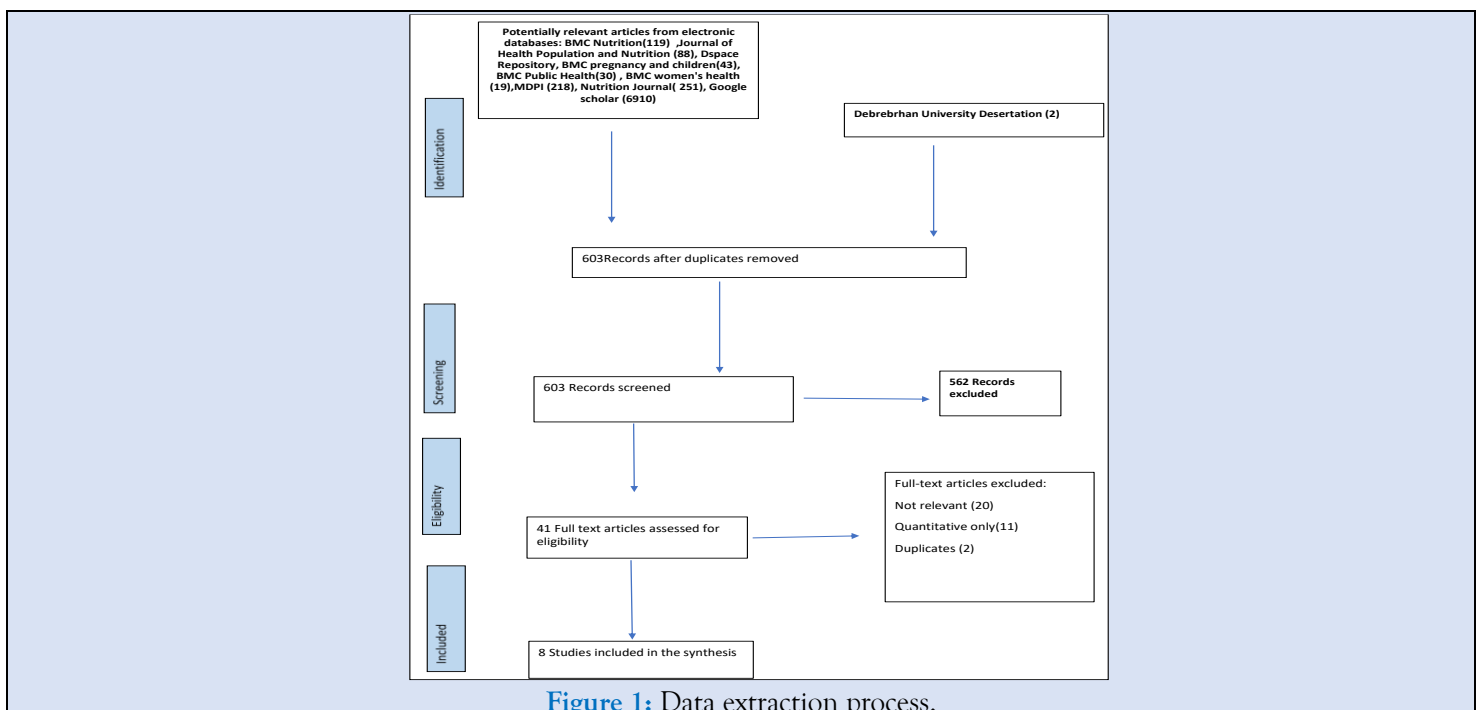
To determine which studies to include in the review, a set of four criteria was used. Firstly, studies that were conducted within the geographical boundaries of Ethiopia were deemed eligible. Secondly, only studies carried out during the period spanning from 2010 to 2020 were considered. Thirdly, studies that were qualitative or used mixed methods, and demonstrated a well-defined research methodology, were selected based on their qualitative findings. Finally, the availability of the full text of a study was also taken into account as an eligibility criterion for inclusion.

### Ethical Clearance

Since this review utilized ethically approved research works and secondary data, no ethical clearance was sought. In addition, no human subject was involved as part of the study.

### Search results

The search process retrieved numerous articles from different data sources as indicated below.



### Quality appraisal

After the studies were identified, the data extraction process was undertaken by two independent reviewers. The Consolidated Criteria for Reporting Qualitative Research (COREQ) Checklist was used as a guide to ensure accuracy and consistency in the data extraction

process. This checklist is widely recognized as a tool for evaluating the quality of qualitative research studies. The two researchers involved in the data extraction process met every other day to discuss their findings and to ensure that a consensus was reached on the data extracted from the studies. This approach was adopted

to ensure that any discrepancies that arose during the review process were identified and addressed. By adopting this methodical and rigorous approach, the study was able to produce reliable and valid results.

## Data Analysis

All the articles that met the eligibility criteria were uploaded into NVivo 12 (QSR International) to facilitate the analysis of the data. Thematic analysis was then conducted by the researchers, where the identified study themes and conceptual categories were systematically coded, compared, and sorted based on conditions, strategies, and consequences. To ensure that the analysis was comprehensive and accurate, the

researchers attempted to translate each category about categories across studies, thereby identifying common patterns and themes across the data. Through this process, the researchers were able to gain insights into the identified food taboos, the perceived reasons for complying with them, and the influential people in the community who play a role in persuading others to observe the taboos. These themes were identified as the main categories of the synthesis, which were then written and revised several times until a coherent whole was formed. The use of NVivo 12 and thematic analysis ensured that the study produced reliable and valid findings, which will contribute to the existing body of knowledge on food taboos related to pregnancy in Ethiopia.

## Results

	Author, Year published & Country	Coreq Score	Aim	Method & Sample	Findings
1	Znabu H et al., 2017, Afar region (7)	23	to explore foods tabooed for pregnant women and the reasons behind the practice if exists	Exploratory qualitative study, 4FGDs, 8KII in-depth interviews	Pregnant women in Ethiopia adhere to various food taboos, including avoiding excessive food consumption, fatty foods, solid foods, and cool/cold foods, to prevent difficulties during delivery, diseases such as gastritis and typhoid, and skin discoloration of the fetus. Some safe foods, such as green leafy vegetables, yoghurt, and cheese, are consumed at varying levels depending on maternal age, family composition, and literacy level. Older, less educated mothers from rural areas are more likely to follow these food taboos. Most participants dislike weight gain during pregnancy, fearing complications during the delivery of a larger infant.
2	Taddese A et al., 2016, Arsi, rural South West Ethiopia (8)	25	to explore maternal dietary habits, food taboos, and cultural beliefs that can affect nutrition during pregnancy	pregnant women and their husbands, elderly people, community leaders, health workers, and agriculture office experts 8 FGD, 38 KI in-depth interviews	Pregnant women in Ethiopia adhere to various food taboos, including avoiding excessive food consumption, fatty foods, solid foods, and cool/cold foods, to prevent difficulties during delivery, diseases such as gastritis and typhoid, and skin discoloration of the fetus. Some safe foods, such as green leafy vegetables, yoghurt, and cheese, are consumed at varying levels depending on maternal age, family composition, and literacy level. Older, less educated mothers from rural areas are more likely to follow these food taboos. Most participants dislike weight gain during pregnancy, fearing complications during the delivery of a larger infant.
3	Alga A et al. 2020, Benishangul Gumuz regional state, northwest Ethiopia (9)	16	To determine the prevalence of food taboos practices and associated factors among pregnant women attending ANC service	Mixed method, 5 FGD, Pregnant women following ANC	The women in the study mostly learned about nutrition from their mothers, grandmothers, colleagues, and friends. They commonly avoided milk/yoghurt, fatty meats, and honey. A small number of literate participants disagreed with these food taboos and beliefs.
4	Yeshalem M et al., 2020, Gojam Amhara region Northwest Ethiopia (10)	19	To assess the dietary practices and associated factors among pregnant women	Mixed method, three focus group discussions and 17 key-informant interview mothers, husbands, and health professionals.	The article suggests that pregnant women may avoid consuming animal products and skip breakfast during fasting days. However, barriers such as lack of knowledge on maternal diet, cultural restrictions, and a knowledge gap among healthcare professionals may interfere with their dietary practices during pregnancy.
5	Dereje T et al., 2019 Illu Aba Bor Zone, Southwest Ethiopia (11)	32	exploring the extent of food taboos and misconceptions during pregnancy in rural communities	8 FGD, 12 KI, pregnant women and their husbands, elderly people, health workers and health extension workers	The article identifies several food items, including vegetables like cabbage and pumpkin, dairy products, fruits like banana and avocado, and eggs, that pregnant women avoid due to the belief that they may lead to a large, fatty baby that is difficult to deliver. The underlying reasons for adhering to these food taboos are deeply embedded in personal beliefs and attitudes, as well as social and cultural norms.
6	Robert W et al., 2019 Sendafa Beke Town, Oromia Regional	19	To assess the prevalence of food taboos and associated factors among pregnant women	4FGDs	The article discusses several food taboos for pregnant women, including avoiding white-coloured foods, milk and milk products, eggs, linseed, and leafy vegetables. Some pregnant women believe that consuming linseed may lead to abortion, while eating leafy vegetables may cause particles to appear on the fetal head during delivery. There is also a belief that consuming eggs and milk products during

	State, Central Ethiopia (12)				pregnancy can cause the baby to be overweight and difficult to deliver, which can be dangerous for both the mother and child.
7	Afework M et al. 2018, Tigray Region, Northern Ethiopia (13)	20	to explore the demand and supply side barriers that limit the uptake of nutrition services among pregnant women from the rural communities	90 key informant in-depth interviews and 14 focus group discussions	The article lists various food items and their perceived effects on pregnant women and newborns. For example, Qollo (roasted) of chickpea and wheat is believed to cause abdominal cramps in newborns, green pepper is thought to affect the eyes of infants, and hot coffee is believed to cause balding in children. Senaficho, a dressing made from brassica, is believed to cause miscarriage, while alcohol is thought to affect the health of the baby. Shiro, a stew/sauce made from legumes, is believed to provide no calories/energy and does not protect against anaemia. Roasted beans, millet, niger oil, peas, beans, and maize are also associated with various negative effects during pregnancy.
8	Abdulahi H et al. 2020, Somali region, Eastern Ethiopia. (14)	19	To assess barriers to optimal maternal and child feeding practices in Pastoralist areas	17 focus group discussions and 20 in-depth interviews with mothers, grandmothers, health professionals and religious leaders	The article discusses the beliefs of mothers and grandmothers regarding the intake of food and iron tablets during pregnancy. They believe that if a pregnant mother consumes more food, the fetus will be larger than the birth canal, which can lead to complications during delivery, including the need for a caesarean section. Additionally, the intake of iron tablets is associated with pregnancy difficulty, particularly with a larger fetus and complications during delivery. These beliefs are often in contrast to the recommendations of health professionals.

Various studies conducted across different regions of the country have revealed a consistent trend regarding food taboos among pregnant women in Ethiopia. Specifically, the practice of abstaining from certain types of food from essential food groups, such as vegetables, protein, and carbohydrates, has been identified as a norm throughout the country. The findings indicate that these restrictions are primarily driven by two perceptions. Firstly, there is a perception that the mother may gain excessive weight during pregnancy, which can lead to complications during delivery. Secondly, there is a perception that the food consumed by the mother is directly transmitted to the fetus through the womb, thus influencing the development and well-being of the fetus. These findings underscore the importance of understanding cultural beliefs and practices surrounding food taboos during pregnancy, to improve maternal and fetal health outcomes.

### Identified food taboos and reasons for complying

Examined research articles based on the COREQ (Consolidated Criteria for Reporting Qualitative Research) Checklist have shown similarities in the identified thematic areas as shown below in the Table 2.

Table 1: Results based on COREQ (Consolidated Criteria for Reporting Qualitative Research) Checklist.

### Influential people for adherence

Prominent individuals within the community, such as mothers-in-law, elder women, mothers, husbands, and traditional birth attendants, are exerting influence to enforce adherence to harmful taboos among women. These individuals are reinforcing social norms related

to these issues, which in turn compel women to abide by these erroneous beliefs.

### Discussion

The period of gestation in a woman's womb is a crucial time that greatly influences the health and well-being of both the foetus and the newborn child. The World Health Organization emphasizes the importance of adequate nutrition during pregnancy, as it not only prevents various health complications but also enhances the mental and physical health of both the mother and the child [2]. This systematic review aims to highlight one of the obstacles to achieving good nutrition during this critical period in Ethiopia, one of the world's least developed countries. Specifically, taboos surrounding the consumption of certain foods have emerged as a significant hindrance to maternal and child health, as numerous studies conducted across the country have demonstrated.

A study conducted in the Arsi region of Oromia revealed that pregnant women in the area believe that leafy vegetables and dairy products should be avoided as the pregnancy progresses, as they may become attached to the baby's head and cause stillbirth. Additionally, some fruits, vegetables, and sugarcane were advised against due to concerns that they may lead to bigger babies, resulting in delivery complications. A similar study conducted in the western region of Benishangul revealed that dairy products and eggs were also avoided due to the belief that they could become attached to the baby's head during delivery and cause difficulties. The abstention from a particular type of food was a commonly observed behaviour among women who participated in a study conducted in South Africa. The study's findings indicated that many

women exhibited a propensity to refrain from consuming specific food items, which may have been attributed to a variety of factors, such as cultural or religious beliefs, health concerns, personal preferences, or economic limitations [15].

The perception that certain foods can become attached to the baby's head during delivery is a misconception related to meconium stains resulting from prolonged and obstructed labour. The belief that certain foods can become attached to a baby's head during delivery is a misconception that has been perpetuated in some cultures. However, this idea is not supported by medical evidence. Instead, meconium stains, which can be mistaken for food residue, are caused by prolonged and obstructed labour. Meconium is the baby's first stool, and if the baby experiences distress during labour, they may release meconium into the amniotic fluid. This can cause the meconium to stain the baby's skin and hair, creating the mistaken impression of food residue. It is important to understand the true causes of meconium staining to ensure that appropriate medical care is provided to both the mother and the baby during delivery [16]. This knowledge gap is concerning, as it directly impacts maternal health and nutrition.

Other food items, such as honey, have also been identified as taboo. Additionally, certain foods have been identified as potentially narrowing the mother's birth canal due to weight gain. In addition to the availability of food items, proper consumption poses a significant barrier to achieving good nutrition for pregnant women in developing countries.

A mixed-method study conducted in the northern region of Gojam has revealed that women are advised to limit their meal frequency and portion sizes to prevent excessive weight gain in their babies. Additionally, these women are advised to avoid consuming linseed, pumpkin, and chickpeas during pregnancy. Similarly, women in the Iluababor region of Oromia reaffirmed these dietary restrictions. Dairy products, eggs, and sugarcane are believed to cause fatal weight gain, leading to delivery complications. In addition, bananas, avocados, pumpkins, and taro are believed to directly attach to the baby's head while passing through the womb. Furthermore, certain foods are tabooed during the early stages of gestation to alleviate morning sickness. Oily foods are thought to exacerbate this condition, while cabbage is believed to cause abdominal cramps in the baby after birth. These studies have highlighted that mother may unknowingly be avoiding foods that are rich sources of essential

nutrients for both themselves and their babies. The persistence of such food taboos in certain segments of the country is largely attributed to influential community members, mothers-in-law, and elders. The impact of community members in maintaining these cultural taboos was also seen in Cameroon communities [17].

In regions where the Muslim community is predominant, such as the Afar region, pregnancy-related dietary taboos have been identified. Pregnant women in this region are advised to refrain from consuming solid and fatty foods, including traditionally baked bread types, meat, and milk. Shockingly, a traditional birth attendant in the area was found to support this misconception. In a country where a large number of non-institutional deliveries occur, the social acceptance of a traditional birth attendant in a specific community is significant. In this region, the aforementioned food items are expected to be avoided, particularly during the last trimester as the time for giving birth approaches. Additionally, cold or reheated foods are recommended to be avoided to prevent diseases caused by microorganisms in unheated foods. However, this recommendation may also decrease the intake of nutritious food items, such as raw fruits and vegetables. Women are also advised to reduce their food intake, both in amount and frequency, especially during the final months of pregnancy. This advice contradicts the recommendations of healthcare providers, nutrition and health guidelines, and strategies to reverse maternal and neonatal malnutrition, mortality, and morbidity rates.

Similar dietary taboos have been identified in the central region of the country, particularly in Sandafa, Oromia. In this area, dairy products are avoided to prevent excessive weight gain, while leafy vegetables are avoided due to the belief that they may attach to the baby during delivery. Linseed is also considered to cause miscarriage. A study conducted in Tigray, a northern region of the country, revealed that food taboos were one of the reasons for maternal malnutrition, in addition to other challenges faced in the area. It is believed that foods consumed by the mother will directly affect the baby through the womb, resulting in roasted chickpeas and wheat being considered as causing abdominal cramps in the fetus, while green pepper is believed to affect the fetal eyes. Similarly, hot coffee is thought to cause baldness in the fetus. Such perspectives are highly dangerous as they can significantly influence maternal food intake.

In the Somalia region, pregnant women are limited in the amount of food they consume to prevent excessive fetal growth. Additionally, iron supplementation is discouraged due to the perception that it can lead to difficult pregnancy periods for the mother, including complications during delivery and the need for a Caesarean section. However, unlike in other regions, mothers in Somalia recognize the importance of animal products for pregnant women. Such positive perceptions should be promoted to mitigate the harmful ones.

## Conclusion And Recommendation

Proper maternal nutrition during pregnancy is crucial for achieving positive outcomes in newborn and maternal health. The findings from this study can be inferred that the avoidance of certain food items is a widespread practice among women in Ethiopia, and it is a topic that warrants further investigation and analysis.

Program and policymakers should take into account underlying cultural taboos, norms, and sanctions within communities when formulating policies. Targeting influential community members and groups who strongly support these traditions and have a significant impact on the health of mothers and newborns should be a top priority. Achieving holistic change requires the involvement of all segments of the community. Religious leaders and community figures should work closely with health workers as advocates for healthy living. Healthcare providers should also actively identify and address common food taboos in their respective areas to break the cycle of maternal malnutrition and its consequences for newborns.

## Acknowledgements

We would like to express our deepest gratitude and appreciation to the diligent and hardworking research team who conducted the studies that provided us with valuable information and insights on the topics we were exploring. Without their tireless efforts and dedication to their work, our research would not have been possible.

Additionally, we would like to thank the journals that made their documents and publications available to us. Their willingness to share their knowledge and expertise has been instrumental in helping us deepen our understanding of the subject matter. Their contributions have been indispensable in enabling us to produce a comprehensive and well-researched

report. We are truly grateful for their support and generosity in sharing their resources with us, and we hope to continue collaborating with them in the future.

## Conflicts of Interest

The authors declare that they have no conflicts of interest. There is no external funding source that the research team used.

## References

1. Da Silva Lopes K, Ota E, Shakya P, Dagvadorj A, Balogun OO, Peña-Rosas JP, et al. (2017). Effects of nutrition interventions during pregnancy on low birth weight: An overview of systematic reviews. *BMJ Glob Heal*, 2(3):1-11.
2. World Health Organization (WHO), (2015). Children's Fund UN, Initiative M. Meeting: Multiple micronutrient supplements in pregnancy: implementation considerations for successful integration into existing programmes.
3. Ethiopia. (2016). Demographic and Health Survey - Key Findings.
4. Sightandlife. (2016). Food Taboos During Pregnancy and Lactation Across the World. 10-11.
5. Braveman P, Gottlieb L. (2014). The Social Determinants of Health: It's Time to Consider the Causes of the Causes. *Public Health*.
6. Tong A, Sainsbury P CJ. COREQ\_Checklist. (2007). *Int J Qual Heal Care*, 19:349-357.
7. Hadush Z, Birhanu Z, Chaka M, Gebreyesus H. (2017). Foods tabooed for pregnant women in Ambala district of Afar region, Ethiopia: An inductive qualitative study. *BMC Nutr*. 3(1):1-10.
8. Zerfu TA, Umeta M, Baye K. (2016). Dietary habits, food taboos, and perceptions towards weight gain during pregnancy in Arsi, rural central Ethiopia: a qualitative cross-sectional study. *J Health Popul Nutr*, 35(1):22.
9. Food taboo and associated factors among pregnant women attending a service in mandura woreda, (2020). *benishangul gumuz regional*.
10. Demilew YM, Alene GD, Belachew T. (2020). Dietary practices and associated factors among pregnant women in West Gojjam Zone, Northwest Ethiopia. *BMC Pregnancy Childbirth*. 20(1):1-11.
11. Tsegaye D, Tamiru D, Belachew T. (2020). Food-related taboos and misconceptions during pregnancy among rural communities of Illu Aba Bor Zone, *Southwest Ethiopia*. 1-17.

12. Wondimu R. (2019). Food taboo and its associated factors among pregnant women in sendafa beke town, *Oromia regional state, Ethiopia*.
13. Bezabih AM, Wereta MH, Kahsay ZH, Getahun Z, Bazzano AN. (2018). Demand and supply-side barriers that limit the uptake of nutrition services among pregnant women from rural Ethiopia: An exploratory qualitative study. *Nutrients*. 10(11).
14. Abas AH, Ahmed AT, Farah AE, Wedajo GT. (2020). Barriers to Optimal Maternal and Child Feeding Practices in Pastoralist Areas of Somali Region, Eastern Ethiopia: A Qualitative Study. *Food Nutr Sci*, 11(06):540-561.
15. Chakona G, Shackleton C. (2019). Food taboos and cultural beliefs influence food choice and dietary preferences among pregnant women in the Eastern Cape, *South Africa*. *Nutrients*.11(11):2668.
16. (2019). Influence of foetal inflammation on the development of meconium aspiration syndrome in term neonates with meconium-stained amniotic fluid.
17. Asi LN, Teri DT. (2016). Influence of food taboos on nutritional patterns in rural communities in Cameroon. *International Review of Social Research*. 6(1):35-39.

**Cite this article:** Tesfa A., Begna Z., Sisay D., Muche T., Robel H. Kabthyer. (2023). A Systematic Review and Thematic Synthesis of Qualitative Research Studies on Food Taboos Related to Pregnancy in Ethiopia. *Journal of BioMed Research and Reports*, BRS Publishers. 2(4); DOI: 10.59657/2837-4681.brs.23.022

**Copyright:** © 2023 Anene Tesfa, this is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

**Article History:** Received: April 24, 2023 | Accepted: May 25, 2023 | Published: June 05, 2023