

# Antenatal Nutrition Social Norms in Indonesia: A Literature Review

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## ABSTRACT

**Background:** Pregnancy was the most important initial period in a thousand days of the golden age of a child's life. Insufficient nutritional intake for pregnant women poses a risk to both the mother and the baby. In some parts of Indonesia, restrictions on food consumption related to social norms during pregnancy still exist. The nutritional content of these foods was important for pregnant women. The purpose of this study was to find a picture of various social nutritional norms during pregnancy in the territory of Indonesia.

**Methods:** This study was a literature review derived from qualitative and quantitative research. Search articles from 2010-2020 came from Google's scholar and PubMed search database with the keywords "social norm" OR "nutrition" OR "pregnancy" OR "belief" OR "food selection" OR "pregnant women" AND "Indonesia". Additional gray literature comes from the desk review and report. The inclusion criteria were only articles related to nutrition, while other behaviors or activities that were not related to nutrition were excluded. Besides, social norms during postnatal or postpartum were also not included in the study. A total of 10 articles were selected.

**Results:** The results of the study showed that some regions in Indonesia prohibit pregnant women even though the food was nutritionally good for mother and baby. Not all studies provide a ban on food and drink as well as for the nutritional social norms of pregnant women in Indonesia. Only three studies provide recommendations on foods and drinks that women should consume during pregnancy. **Conclusions:** Health workers were expected to play more roles in efforts to educate and promote good nutrition during pregnancy related to the norms prevailing in the society.

**Keywords:** antenatal, nutrition, social norm, food avoidance, pregnant

## 1. INTRODUCTION

Pregnancy is the most important initial period in the first thousand days of life as the golden day of the child's life. Nutrient intake that is not sufficient to meet the needs of pregnant women will experience energy and protein deficits. The risk posed will increase the occurrence of growth faltering from two-month-old babies to the stunting of their babies [1].

Efforts to improve nutrition in the first thousand days of life help develop children optimally, especially during pregnancy. Interventions carried out include two things, namely aspects of specific nutrition and sensitive aspects of nutrition. Besides, social-environmental support has also been proven to improve nutritional status [2].

However, in certain areas, social norms in the form of abstinence during pregnancy still exist. Prohibition or restrictions on the consumption of foods such as meat fish, eggs, vegetables, and fruit occur for some reason. The nutritional content of these foods is important for pregnant women [3]. In addition to being pregnant, the prohibition on consuming certain foods is also during postpartum because it is considered as an obstacle to the healing period after childbirth and affects the taste and quality of breast milk.

A study in Europe states that women are vulnerable to the perception of information about social expectations, (eg) the perception of social norms and the role of different reference groups like other pregnant women, family, and friends. We conducted an online trial (Study 2) testing the extent to which pregnant women are vulnerable to

social norms-based messages compared to non-pregnant women. The possibility of a moderator being explored may have an impact on women's vulnerability to social norms as well as cultural aspects which also determine which social norms and guidelines exist. The findings of this project can help design effective intervention messages in promoting healthy eating behaviors that are specifically targeted at European pregnant women [4].

In Ethiopia, in terms, of religion there is one social norm for pregnant women is fasting. This is because, according to some of them, fasting might have an impact on perinatal health [5]. In contrast to Burnika Faso West Africa, pregnant women in rural areas do not limit their diet during pregnancy. Their additional nutritional burden is not taken into account in their nutrition practices [6]. Study in Eastern Cape South Africa, some pregnant women become susceptible to nutrition due to decreased intake of foods rich in nutrients. The decline was due to belief in culture and taboo on nutritious food [7].

Some regions in Indonesia still adhere to the norms surrounding pregnancy. Like for example in Lombok. In terms of environmental health, the children there do open defecation in the open without feeling awkward at all. This is related to the social norms that apply there [8]. In terms of food intake and taboo, in Papua and East Nusa Tenggara (NTT), during pregnancy women are advised not to eat eggs, rice, tofu, and lentils [9].

There have been many studies in several regions of Indonesia regarding antenatal nutritional social norms. However, not many have made it into a comprehensive study. Therefore, this literature review is expected to be able to find a description of various social nutritional norms during pregnancy in the territory of Indonesia.

**2. METHODS**

This research is a literature review. The article used is both qualitative and quantitative research that discusses social norms during pregnancy that apply in Indonesian society. The selected article is primary data research. Sources of data used in the form of journal publications where research sites are conducted in the territory of Indonesia. Search engine article search comes from a search database on Google scholar and PubMed. Additional gray literature comes from the desk review and report.

Eligibility criteria in this study include:

1. Article with a research population of pregnant women in Indonesia
2. Interventions conducted regarding social norms of nutrition that apply in society
3. The text language used is both English and Indonesian

4. Limitation of article search is an article published from 2010 to 2020
5. Articles that have only full paper are used in this study

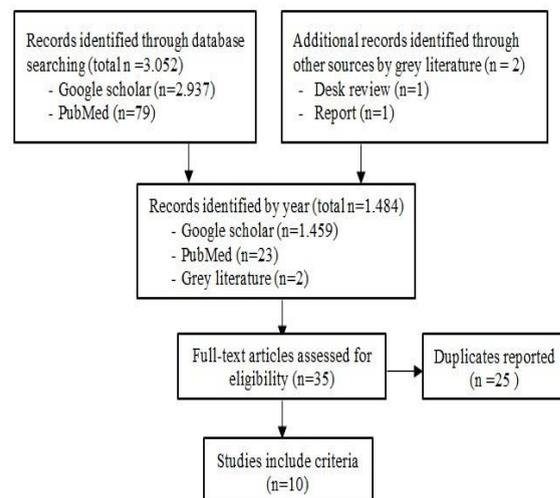
In its search strategy, data selection uses keywords in both English and Indonesian, including: "social norm" OR "nutrition" OR "pregnancy" OR "belief" OR "food selection" OR "pregnant women" AND "Indonesia".

Social norms which are inclusion criteria are only those related to nutrition, while other behaviors or activities that are not related to nutrition are excluded from this study. Social norms during postnatal or postpartum were also not included in the study.

The process of finding literature is carried out by an author. Then do a qualitative analysis of the articles that have been selected based on the extraction that has been determined together with the second and third authors.

Based on search results using keywords through search engines using the keywords in the question and filtered based on eligibility criteria obtained 35 appropriate full-text articles. Then, after further checking, there were 25 articles duplicated. Until in the end only 10 articles were analyzed. Based on the analyzed article, the data is then synthesized to obtain antenatal nutrition social norms in Indonesia.

The article search flow is as follows:



**Figure 1.** Flow of Studies Through The Selection Process

### 3. RESULT

The results of our search obtained as many as ten articles that fall into the eligibility criteria can be seen in Table 1. The ten articles came from various regions in Indonesia representing the west to the east. These areas include Banten, West Java, Bali, Bogor, Pati, Banjar, Gorontalo, Padang, Kuantan Sengingi that consist of two areas: Pasar Baru Village and Pulau Godang Kari Village.

The study taken is a study in the range 2010 to 2020 with a variety of study designs. However, studies with qualitative research and conducted through interviews are mostly found here. Participants whose data were taken were pregnant women. But some studies add information from family, husband, village shaman, or midwife. Each study consisted of at least 7 participants and at most 403 participants.

Table 2 illustrates the prohibited food consumed by pregnant women in several regions of Indonesia. In a study conducted in Banten in 2010 using qualitative villages by interviewing 20 pregnant women interventions and 20 women comparison villages. The results obtained that there are various kinds of foods and beverages that are prohibited for certain reasons. It consists of calamari, hot food (chile, pineapple), chicken giblets, meatballs, eggplants, ice, and soft drinks [10].

The results of quantitative research on 300 pregnant women in West Java, because they assume as a food taboo, there are 10 types of banned vegetables and fruits. It consists of pineapple, avocado, pomegranate, guava, durian, jack fruit, papayas, sugar cane, eggplant, and orange squash [11].

In Bali, the results of qualitative research with in-depth interviews of 18 pregnant women showed that they avoid meat a lot than vegetables because their breast milk will be a bit sour. On the other hand, nutritional norm social recommends consuming traditional herbal remedies during pregnancy to be able to become the baby was vigorous and has been passed down for many generations. Consumption of tamarind, turmeric, cinnamon, clove, and coconut does not harm their baby because it makes both women and the baby healthier [12]. A cross-sectional study in Bogor of 403 people eating cereals (rice) with little animal foods for posing a risk for poor fetal outcome [13].

Two villages in Kuantan Sengingi have different social norms of nutrition. In Pasar Baru Village on 26 pregnant women, a qualitative study using a questionnaire conducted in 2015 showed that there was a prohibition on the consumption of jangek crackers (cow/buffalo skin) because the women would give birth to sticky babies and the prohibition of eating spinach. After all, it would cause bleeding due to childbirth. However, they are recommended for drinking young coconut water for expediting at birth [14]. Whereas in 2019, a study was conducted in another village in Kuantan Sengingi, namely

in Pulau Godang Kari Village. Research conducted using a more complete method that is by observation, focus group discussions, and interviews on 9 pregnant women, 5 families, a village shaman, midwife. Same with Pasar Baru Village, in Pulau Godang Kari also banned for crackers who are sick because the amniotic membranes are “bad”. Besides, pregnant women are prohibited from consuming cipuik or snail, jengkol, spicy foods, cubadak or jackfruit, tape, chicken innards, cane, banana, durian, pineapple, and bamboo shoots. It is also prohibited to drink ice, coconut drink, and soft drink [18].

No	Author	Year of publication	Study design	Measure	Participants	Location
1	S. Setyowati [10]	2010	Qualitative research	Interview report	20 pregnant women from intervention villages and 20 women from comparison village	Banten
2	M. Trisyani [11]	2012	Descriptive quantitative	Questionnaires	300 pregnant women	West Java
3	L. P. L. Wulandari and A. Klinken Whelan [12]	2011	Qualitative research	In-depth interview	18 pregnant women	Bali
4	S. Madanijah <i>et al</i> [13]	2016	Cross-sectional	FFQ	403 women	Bogor

5	T. M. P. Lestari and Y. Kadarisman [14]	2015	Descriptive quantitative	Kuesioner	26 pregnant women	Pasar Baru Village, Kuantan Sengingi
6	S. Z. Rofi'ah, F. Husain, and A. A. Arsi [15]	2017	Descriptive qualitative	Interview and observation	15 pregnant women and 12 midwife and community members	Pati
7	L. S. Sari, H. Husaini, and B. Ilmi [16]	2017	Qualitative	Content analysis and in-depth interview	7 people	Banjar
8	Z. Muhamad, H. Hamalding, and H. Ahmad [17]	2019	Qualitative	Snowballing sampling	10 pregnant women	Gorontalo
9	V. Y. Tobing, Y. Afiyanti, and I. N. Rachmawati [18]	2019	Qualitative	Observation, focus group discussion, interview	9 pregnant women, 5 family, a village shaman, a midwife	Pulau Godang Kari Village, Kuantan Sengingi
10	S. Bhanbhro, T. Kamal, R. W. Diyo, N. I. Lipoeto, and H.	2020	Qualitative	Semi-structured interview	19 informan, consist of: 7 pregnant in the last twelve months, 3 their husbands, 4	Padang

**Table 1. The Summary of Data Sources from The Study**

In our study, Pati was the area with the most food prohibition and at the same time providing the most food and drink recommendations on nutritional social norms of pregnant women. The qualitative research was conducted in 2017 with interviews and observations on 15 pregnant women and 12 midwife and community members. There are 16 prohibitions on eating, including date palm, bark, palm fruit, calamari, mushroom, catfish, goldfish, crab, clam, fresh vegetables, rambutan, durian, grape, young papaya, pineapple, and eel. There are also the most widely recommended food drinks including vegetable groceries, botok rice, cassava leaf vegetables, herbs, water apple, curse fish, spinach, boiled fish, princess banana, plantain, green bean porridge, corn vegetables, red bean porridge, avocado, green bean cooking water, tofu and tempeh, egg rice, "krai" vegetables, apple, papaya, carrot soup, and pregnant milk [15].

Qualitative research results in Banjar on 7 people with content analysis and in-depth interview, pineapple, twin banana, twin eggplant, two egg yolks, very spicy food, and ice become nutritional social norms of pregnant women for prohibition [16]. In eastern Indonesia, by doing snowballing sampling on 10 Gorontalo pregnant women, nutritional social norms consist of pineapple, canned food, eggs, meatballs, soft drinks, and coffee [17].

The latest qualitative research in 2020 in western Indonesia shows that there are still nutritional social norms in force. By using semi-structured interviews with 19 informants in Padang, it was found that meat frequently, meatballs, radish, and fermented cassava was prohibited for consumption in pregnant women. Ice and young coconut water are also banned for it [19].

**Table 2. Food Prohibition on Nutritional Social Norms of Pregnant Women**

Location	Food Prohibition	Reason
Banten	a. Calamari b. Hot food (chili, pineapple) c. Chicken giblets d. Meatballs e. Eggplant	a. Their baby would become clumsy, black, and smelly b. Painfull birth c. Make the baby blue d. Nauseous e. Produce eye damage to the baby
West Java	Pineapple, avocado, pomegranate, guava, durian, jack fruit, papayas, sugar cane, eggplant, orange squash	Assume as a food taboos

Bali	Meat a lot than vegetables	The breastmilk will be a bit sour
Bogor	Cereals (rice) with little animal foods	Posing a risk for poor fetal outcome
Pasar Baru Village, Kuantan Sengingi	a. Jangek creackers b. Spinach	a. The women will give birth to sticky baby b. Bleeding due to childbirth
Pati	a. Date palm b. Bark c. Palm fruit d. Calamari e. Mushroom f. Catfish g. Goldfish h. Crab i. Clam j. Fresh vegetables k. Rambutan l. Durian m. Grape n. Young papaya o. Pineapple p. Eel	a. The baby will be “kurmanen” b. The baby become scaly c. Child’s head gets fat d. Make children become diasable e. Make children shrink when born f. Make kids pick on their nose g. The baby become scaly and the skin yellowish h. Make children can claws like crab i. Chil’d skin becomes hard j. Raws materials and lots of bacteria k. Make children have no hair l. It’s hot and become miscarriage m. Contain a lot of alcohol n. A lot of sap and dangerous for fetus o. Hot in the stomach p. The child becomes nimble in the womb
Banjar	a. Pineapple b. Twin banana c. Twin eggplant d. Two egg yolks e. Very spicy food	a. Miscarriage b. Conjoined twins c. Conjoined twins d. Conjoined twins e. The children become angry
Gorontalo	Nanas, canned food, egg, meatballs	Beliefs about restriction/prohibition to eat certain foods
Pulau Godang Kari Village, Kuantan Sengingi	a. Crackers jangek (cow/buffalo skin) b. Cipiuk (snail) c. Jengkol d. Spicy foods e. Cubadak (jackfruit) f. Tape g. Chicken innards h. Cane i. Banana j. Durian k. Pineapple l. Bamboo shoots	a. The amniotic membranes “jangek” b. Cause heartburn c. Smell during childbirth d. Diarrhea e. Bloating f. Hot foods g. Black child’s lips or genitals h. Smelly the amniotic membranes i. Flabby uterus j. Miscarriage k. Miscarriage l. Many hairy children at birth
Padang	a. Meat frequently b. Meatballs c. Radish d. Fermentated cassava	a. Breast milk bitter b. Cause problem, contain additive c. The baby to bloated d. Miscarriage, because is hot food

Table 3 illustrates drinks that are prohibited from being consumed by pregnant women in several regions of Indonesia.

**Table 3. Drink Prohibition on Nutritional Social Norms of Pregnant Women**

Location	Drink Prohibition	Reason
Banten	a. Ice b. Soft drink	a. Baby would big b. Leading to difficult childbirth
Banjar	a. Ice	a. Big baby
Gorontalo	a. Soft drink b. Coffee	Beliefs about restriction/prohibition to eat certain foods

Pulau Godang Kari Village, Kuantan Sengingi	a. Ice b. Coconut water c. Soft drink	a. Big baby b. Bloating c. Bloating
Padang	a. Ice b. Young coconut water	a. The baby bloated b. Miscarriage, because is hot

In our study, several areas besides banning certain foods and drinks, also provided recommendations on

nutritionasocial norm in pregnant women which are described in Table 4.

**Table 4. Food and Drink Recommendations on Nutritional Social Norm**

Location	Nutrition Recommendation	Reason
Bali	a. Traditional herbal remedies b. Tamarind, turmeric, cinnamon, clove, and coconut do no harm to the baby	a. Can become the baby was very vigorous and has been passed down for many generations b. It makes both of women and the baby healthier
Pasar Baru Village, Kuantan Sengingi	a. Drinking young coconut water	a. Expedite at birth
Pati	a. Vegetables groceries b. Botok rice c. Cassava leaf vegetables d. Herb e. Water apple f. Curse fish g. Spinach h. Boiled fish i. Princess banana j. Plaintain k. Green bean porridge l. Corn vegetable m. Red bean porridge n. Avocado o. Green bean cooking water p. Tofu and tempeh q. Egg rice r. "Krai" vegetables s. Apple t. Papaya u. Carrot soup v. Pregnant milk	a. Nourish the fetus b. Healthy c. The pregnant women and fetus become strong d. Breastmilk become a lot out e. Good for health f. Children not abnormalities g. Maternal and child hemoglobin increases h. Good for health i. Get a beautiful daughter j. Get a handsome son k. Healthy l. Nutritious m. Make children have white skin n. Easily digested by the fetus o. Expedite the process of birth p. Healthy q. Source of protein r. Facilitate defecation after childbirth s. Contain a lot of vitamins t. Prevent hemorrhoids and ambient after childbirth u. Make good fetal eyes v. Improve body balance

**4. DISCUSSION**

Each region has a ban on food and beverage that is different in Indonesian pregnant women. It consists of food derived from animals and plants (vegetables and fruits). Starting from one type of food to more than ten types of foods that are prohibited. The reason for prohibiting the consumption of food is also different from one area to another. All are due to health reasons for themselves and their babies, and there are some for reasons of trust in the environment.

In addition to the prohibition of consumption on food, some areas also prohibit certain types of drinks consumed by women during pregnancy. The results of our study, from 10 articles obtained only 5 areas that prohibit the drink, namely: Banten, Banjar, Gorontalo, Pulau

Godang Kari Village, Kuantan Sengingi, and Padang. Types of the prohibition of these drinks include ice, soft drink, coffee, and coconut water. Same with food bans, the reason for the consumption of drinks is also due to health reasons for themselves and their babies. Almost all regions forbid pregnant women to drink ice during pregnancy on the grounds of a big baby.

In addition to prohibiting the consumption of certain foods and drinks, 3 regions namely Bali, Pasar Baru Village Kuantan Sengingi, and Pati recommend the consumption of certain foods for pregnant women. Some are characteristic of the area and are not found in other areas such as "krai" vegetables in Bali. All of these recommendations are intended for health reasons.

Not only in Indonesia, but many studies abroad also show that there are restrictions on the consumption of

food and beverage on women during pregnancy. In line with the report from Australia-Indonesia Thomas, D and S, Yusran [9] restriction in NTT for eggs, and restriction for rice, tofu, and lentils in Papua. That is traditional and cultural beliefs and customs. They also kept their pregnancy secret until their bellies visibly showed, with obvious implications for delayed antenatal care. So if they keep their pregnancy a secret, on the other hand, the intake of food intake is limited, it will create a delay in the growth of the baby.

Studies in Sudan also say the same thing. During pregnancy, some pregnant women refuse to eat certain types of food such as us: red meal, eggs, white meat, and milk. Though it all has good nutrition for It was have good nutrition for the body. The reason they don't consume these foods is because of personal reasons and community reasons. Personally, their reasons are due to morning sickness, nausea, allergy, and vomiting. While for community reasons, their reasons are because they cause difficulties during labor, believe that it may cause disease, and as a social norm. The level of education also statistically influences the choice of food during pregnancy [20].

Food taboos in Malaysia avoided at least one food item due to food taboos. Pineapple and sugar cane juice was regarded as taboo foods. Hot foods consist of black pepper, chili, durian, fried foods, ginger, rambutan, turmeric, and vinegar. Cold foods consist of cabbage, coconut water, cucumber, jackfruit, kale, long beans, pumpkin, spinach, and watermelon. The other foods consist of cashew nuts, chicken liver, coffee, junk foods, mackerel, meat, oily foods, seafood, tapai, and bamboo shoots. All of them are avoidance foods in Malaysia. The reason for avoidance is a risk for pregnant women and the baby. That is fear abortion, excessive bleeding during labor, the baby may be born with deformities, uncomfortable feeling in the abdomen (pain), fever, body ache, bloated stomach, produce thick breast milk, the baby will get sick easily, difficult labor, unnecessary sickness, vomiting, dizziness, edema, dark skin baby, and the baby may be born with cognitive impairment [21].

The impact on prohibitions or restrictions on certain foods and drinks can cause nutritional deficits that endanger the body. In Indonesian women, the ban is still very strong because it is passed down from one generation to the next. Whereas on the other hand food and drinks are good for the body, so it does not need to be avoided. However, pregnant women do not have the power to refuse the prohibition of certain foods because they want to avoid conflicts with the surrounding environment and are related to anxiety in the health condition of their prospective babies [22]. Working papers in developing countries show that in certain practices, factors of trust, culture, and local practice have a more prominent place in nutritional social norms [23]. Apart from the prevailing social norms, support from the husband also influences the choice of food for his wife during pregnancy [24].

## 5. CONCLUSION

The conclusion from several studies obtained, it turns out there are still many areas in various regions of Indonesia that prohibit pregnant women even though the food is nutritionally good for mother and baby. Not all studies provide a ban on food and drink as well as for the nutritional social norms of pregnant women in Indonesia. Only three studies provide recommendations on foods and drinks that women should consume during pregnancy. The advice given is that more health workers play a greater role in efforts to educate and promote good nutrition during pregnancy related to the norms prevailing in the society.

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