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What drives pregnant women to choose their food? A qualitative study in Butajira Rural Health Programme (BRHP), Ethiopia

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List of abbreviations

Kcal –Kilocalories

SNNP- South nation nationalities people

DM- Diabetic mellitus

SGA- Small for gestational age

CNS- Central nerve system

UK- United Kingdom

HDSS - Health and Demographic Surveillance Site

SNNPR- Southern Nations, Nationalities and Peoples Region

CSA-Central Statistical Agency of Ethiopia

BRHP- Butajira Rural Health Programme

FGD- Focus group discussion

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Abstract

Background: The maternal nutrition during pregnancy is responsible for structural and physiological changes that occur in the fetus as a result of inadequate nutrients or ‘building blocks’ for the growth of specific tissues. The nutrient a mother gets depends on her food choices, signifying the importance food choice during pregnancy.

Objective: To explore factors which influence food choice among pregnant women in Butajira Rural Health Programme (BRHP), Ethiopia.

Method: Qualitative content analysis using deductive approach was applied to identify factors affecting food choice of pregnant women in rural settings. The study conducted in Health and Demographic Surveillance Site (HDSS) of Addis Ababa University School of Public Health located in Butajira, Gurage zone. A total of 43 pregnant women and 37 husbands of pregnant women participated in the study. A combination of in-depth interview and focus group discussion was applied to collect data from purposively selected participants. The data analyzed deductively, using open code version 4.02 software to code the data.

Result: Pregnant women usually ate three times a day that mainly consisted of cereal based food (Kita) and a vegetable, dark green leafy vegetable (Gomen). The study identified several factors which influence pregnant women to choose their food. Agricultural production seems to be a key determinant of consumption and is dependent on the amount of agricultural land they have and agro-ecologic conditions among the study sites. It is also identified that the major determinant of food choice is financial constraint, which determine the ability to produce or purchase the required food. Pregnant women adjust their food choice based on their appetite and gastric symptoms following consumption. The distant market is another factor identified as an obstacle to access healthy food due to high cost of transportation and unstable roads for a pregnant woman.

Conclusion: This study identified that the food choice of pregnant women is mainly determined by food availability which is governed by production and financial capacity. Pregnant women also decrease their food intake due to physiological symptoms following consumption.

Key words: Food choice, pregnant women, content analysis

1. Introduction

1.1 backgrounds

Pregnancy places extra demands on the body of the mother. During pregnancy a woman needs to increase her nutrient and energy intake to meet the increasing demand due to the growing fetus and the increase in size of her own body (1-3). To accomplish these extra needs of nutrients and energy it is important to eat food from the five food groups, namely Grains, Vegetables, Fruits, Meat, fish, and beans and Milk and milk products (4-6).

Inadequate intake of both macro and micronutrients was noted due to inadequate quantities of foods that were being consumed by the pregnant women as well as consumption of less diversified foods (7). Pregnant women follow different kinds of dietary choice based on beliefs and practices they have been through (8). In some societies women face various food proscriptions during pregnancy. Some societies avoid the consumption of some food during pregnancy associating with a particular illness or health problem while others adjust their food choice based on the discomforts they experience following consumption (9).

A report on formative research findings from Ethiopia showed that most pregnant women were aware that the quantity and type of food should ideally be different from their diet prior to pregnancy. Those women identified a range of foods they believe are important for their diets, including animal source foods, fruits, vegetables, fats, grains and legumes .However, they continued to feed on the same diet eaten by the rest of the family, without enhancement (10). Another study showed that lack of enhancement is due to the required ingredients for an adequate diet were difficult to obtain locally, or were too expensive to afford or due to religious fasting (11).

As having sufficient nutrients depends on the variety and amount of food consumed, knowing the factors pregnant women encounter when choosing their food is a get way to find an effective intervention to improve maternal nutrition. Different studies reported that food choice is affected by different factors ranging from individual level factors such as biological, knowledge, economy to environmental factors such as availability and accessibility of foods (12, 13).

Pregnancy is a time of transition in which actions are framed around the benefit of the baby. Mothers give greater attention on diet and it is a time of adjustment to dietary behaviors. Even though pregnant women are more conscious about their diet, there is still a paucity of data on how pregnant women choose their food. Certain factors may be more important than others for particular people. This study has identified the factors affecting food choice of pregnant women in rural communities. As these communities usually agrarian, the study tries to identify all the possible determinants ranging from production to consumption choices.

1.2 Statement of the problem

The maternal nutrition during pregnancy is responsible for structural and physiological changes that occur in the fetus as a result of inadequate nutrients or ‘building blocks’ for the growth of specific tissues (14). Malnutrition is one of the influences which programme the human body and has lifelong consequences. Under nutrition in utero leads to persisting changes in blood pressure, cholesterol metabolism, insulin response to glucose, and a range of other metabolic, endocrine and immune functions known to be important in human disease (15). Excessive gestational weight gain is also associated with increased risks of fetal pregnancy complications and adverse childhood cardio-metabolic, respiratory and cognitive-related health outcomes (16).

Maternal under nutrition, which is responsible for 800,000 neonatal deaths annually (17), has been linked to preterm birth which in turn results in high infant morbidity and mortality through small for gestational age (SGA) births; stunting, wasting, and micronutrient deficiencies (18). Maternal obesity during pregnancy may also lead to developmental adaptations in the offspring, predisposing to an increased risk of adverse cardio metabolic outcomes in later life (19). Maternal pre pregnancy obesity or excessive gestational weight gain result in Stillbirth, Neonatal death, Congenital anomalies, large size for gestational age at birth and Neonatal hypoglycemia (20).

A study conducted in northern Ethiopia showed that 35 % of the cohort had a birth weight of <1,500 grams and 54% a birth weight of <2,500 grams. The prevalence of diagnosed malformations was 2.1% and the number of CNS malformations was at 1.5% of all births (21). Proper nutritional status prior and during pregnancy is the most important factor to bear healthy and normal infant(22). Another study in Algeria showed that 26.67%, 55.45% of pregnant

women had hemoglobin and hematocrit level, respectively, below the WHO standards due to their food choices which is dominantly plant based (23).

Majority of these outcomes are mainly influenced by the maternal food choice during and before pregnancy (7). Women enter to pregnancy poorly nourished and will not know what foods to change during pregnancy. The choices they make on their food determine the adequacy of nutrients and energy. Given the importance of dietary behavior during pregnancy, there is scarcity of studies on how pregnant women choose their food in this country. Even though, maternal nutrition during pregnancy is crucial in reducing maternal and infant mortality, no study has been conducted to assess the behavior of mothers on food choice during pregnancy.

1.3 Rationale of the study

Improving nutrition across the life course from conception through adulthood is essential for the well-being of families and communities and for successful economic and social advancement. Different studies conducted around the globe concerning pregnant women's nutrition however there is scarce evidence on how pregnant women choose their food in rural settings of Ethiopia. One factor may vary from one individual or group of people to the next. Thus, one type of intervention to modify food choice behavior will not suit all population groups. Rather, interventions need to be geared towards different groups of the population with consideration to the many factors influencing their decisions on food choice. The goal of this study is to explore factors that influence food choice among pregnant women in rural settings.

Knowing how pregnant women make food choice will help for policy makers, educators and clinicians in identifying barriers to and enablers of healthy eating. The finding of this study helps in designing evidence-based strategy for improving maternal nutrition. The finding from the present study could also allow adapting the interventions to the local context and specifying the main barriers that communities would have to overcome for women to achieve better maternal nutrition.

2. Literature Review

Many factors influence food choices, as food choice is not a simple process. Foods are not simply chosen because they are liked. There are other reasons for consuming a particular food as stated by many literatures. Studies investigated food choice patterns among pregnant women as it is a crucial time to combat the effect of malnutrition. The food choice practices of individuals are affected by many variables that may be categorized as physiological, individual, Socio-cultural, environmental and economical.

Physiological Factors

Taste was already powerful influencers of food choices prior to pregnancy and appeared to continue to strongly affect many of these mothers during pregnancy (24). Food preferences develop at a very early age, and repeated exposure to a variety of foods enhances the probability that this taste for a wide range of foods will be maintained throughout life (25). In study conducted in Kenya to assess consumption of animal source food taste was the main reason stated by participants for their intake (26). In another study conducted in Philadelphia among pregnant women, most mothers stated that they would not eat a particular food unless it is palatable to them even though the food item is healthy and good for the baby (27).

Food cravings were another common experience shaping pregnant women's food choices. Satisfaction of craving is considered as important in preventing miscarriage and in meeting the nutritional needs of the fetus (28). In the Philadelphian study of pregnant women, most mothers were engaged in persistent snacking throughout the day due to intense cravings or to control nausea symptoms (27).

During pregnancy, mothers also adjust their food choices depending on the symptoms following consumption. In a study conducted in London women mentioned consumption of Leafy vegetables to minimize constipation (28) and in a study from Burkina Faso avoidance of specific foods was stated due to perceived effects of burn and induction of vomiting (29). Similar finding also reported in a study conducted in Arsi, Ethiopia where pregnant women reduce or avoid specific food intake due to pregnancy-related discomforts like nausea, vomiting, morning sickness, gastric irritation and dyspepsia (30).

Other than this Pregnancy-related fatigue and sleepiness was also reported by mothers in Philadelphian study to affect food choice as it inhibits cooking (27).

Individual Factors

Individual factors shape the boundaries of food choices that a person is willing to make. The food choice and practice of pregnant women is also influenced by their conceptualizations of health in general, as well as what they believed to constitute a healthy pregnancy (31).

Women's nutritional knowledge is among the factors which significantly influenced dietary choices including lack of knowledge regarding the quantity of certain foods required to ensure nutritional adequacy, exposure to confusing and frequently changing dietary information and misconceptions about healthy choices and alternatives (32). A report on formative research findings in Ethiopia shows that nutrition information and education offered to pregnant women and their families lack sufficient clarity about food groups and their value in the maternal diet (10). On the other study in Kenya perceived nutritional value was one of the drives to increase consumption of animal source food (26). Pregnant women incorporated different knowledge sources as well, such as family members, friends, community members, media, and their own experiential knowledge (24).

Women with higher educational attainment believe more in their own competence and ability to control their behavior and its outcome. In a literature review done in UK, reported that higher perceived self-efficacy have been found to be related to greater self-reported consumption of fruits and vegetables (25). Studies from Nigeria, North Coastal Andhra Pradesh and Ethiopia showed that illiterate women are more adhered in traditional food taboos for their food choices (30, 33, 34).

Sociocultural Factors

The woman's living situation and the role of family, partners, friends, and community members as well as health care providers in supporting and enforcing healthy eating and healthy behaviors during pregnancy were highlighted by many studies.

Households are the locus for the expression of cultural values relating to food. Many women who lived with their families had their food choices and practices tightly monitored by others (27, 32, 35). In these cases, family members regulated or enforced certain health beliefs that may or

may not have been believed by the woman herself. Livings with extended family also affect women's food choice by shifting household decision making power. In studies conducted in Nepal and Rajasthan, India, mother in law is the manager of household food resources and chooses what food to be prepared (36, 37).

The understandings of how healthy bodies were maintained or developed are partly informed by customary cultural knowledge and practices (24). Pregnant women, on the other hand, are also motivated to comply with their healthcare providers recommendations and reported making the specific dietary changes (32).

Cultural rules and systems relating to food selection and consumption commonly take the form of food proscriptions and prescriptions, i.e. foods that are to be avoided or preferentially consumed by pregnant women is generated from broader cultural systems. Different people across the world use different criteria to avoid and consume foods during pregnancy.

In studies from Canada, among Asian immigrant women and London among Bangladesh women, green leafy vegetables were mentioned by participants to be healthy to consume during pregnancy (28, 35). On the contrary in studies from Nigeria and Arsi Ethiopia, consumption of green vegetable is avoided based on the belief that these cause stomach ache and gas (38) and for the believe in their culture that it passes to the womb and attaches to the baby's head causing immediate death to the newborn (30).

Fruits are also mentioned as healthy to consume during pregnancy by some communities as it has believed to result in a lighter-skinned baby (28, 35). Although in a study from Ethiopia consumption of fruits, sugarcane, and some types of vegetables as tabooed as they perceived to be associated with having bigger babies, which is believed to lead to a difficult delivery (30).

Dairy products are viewed as healthy and consumed by some due to their belief that they are good for the development of the baby's bones (35) and for easy delivery by soothing birth canal (24) while avoided by others as they are considered harmful to the fetus (30). In a study conducted in Afar, Ethiopia, pregnant woman expected to avoid eating foods that are associated with the high-fat content such as dairy products and meat, as such "good foods" make the fetus large and cause difficulty during labor (39). On the contrary, in the Nigerian study, consumption of fish, meat and eggs is advised to keep healthy during pregnancy (38) while egg is avoided

during pregnancy in study from Gambia because of the belief that the child may be mute, dumb, or stuttering (40).

Some cereals are also subjected for food taboo among different cultures. Eating bread and millet is avoided during pregnancy in Gambian study as may lead to problems in labor (40). In Afar also solid foods (bread, injera) and roasted seed (“Kalo) are tabooed for pregnant women (39).

Cold foods are also avoided during pregnancy in Afar (39) while in a study conducted in North Coastal Andhra Pradesh; cold food items are preferable during pregnancy in which they believe that these foods are good for growth and development of the fetus (34).

Some cultural ideas of food are based on the concept of balance, originating in various medical believes. In most Asian population Ayurvedic medicine had a significant influence on the food choices women make. During pregnancy, women’s bodies are viewed as being in a ‘hot’ state and are thus in need of cooling so consumption of hot foods such as papaya, mango, pineapple, eggplant, bitter gourd, and dried dates, Fish, chicken, eggs, nuts, jiggery, cloves, and black pepper avoided (24, 35). Some also classify foods as good or bad based on their religious belief (28).

Environmental Factors

The food environment encompasses the physical surroundings and social climate of the choice setting, and specific food supply factors in the environment such as types of food, food sources and availability of foods in the food system, including seasonal or market factors (13).

Lack of convenient food corners and transportation is reported by some women as a barrier to healthy eating due to the fact travelling to a market is something that a pregnant woman may not be able to do alone (27, 41). A report on formative research findings of four Ethiopian regions shows that pregnant women identified distance to market as barriers to accessing a nutritious diet (38). So that having healthier choice is affected by easy access to unhealthy foods and inconsistent access to healthy food (27, 32).

Seasonal variation was also identified as challenges to access healthy foods. A study conducted in Colombia, reported that pregnant women found it difficult to access foods they craved in pregnancy during months when transport was difficult (41). Another study in Arsi, Ethiopia

shows that food consumption of the pregnant women, like that of the rest of the family, was mainly determined by seasonal variations and the households' agricultural production (30).

Agricultural production seems to be a key determinant of consumption and is dependent on seasonal variations and agro-ecologic conditions, which are partly governed by altitude differences (30). A study conducted in Malawi reported that agricultural land was characterized as moderately to marginally suitable for production and it was the soil compounded with highly variable climate and topographically driven evapotranspiration which limits the types of crops specie to be produced (42).

Those agro ecological limits to production are also interacting with socio-economic elements to affect agricultural production. The type of crop production is also determined by the input needed to produce. A study from Tanzania reported that most of the rice producing regions chooses to produce rice because it has low cost for inputs such as improved seed and fertilizers (43). Another study from kombolcha, Ethiopia is also reported that access to improved seed, access to fertilizers, access to credit and access to timely and accurate market information is the basic element for producers to decide what to produce and how much to produce (44). In the Ethiopian study livestock production is also limited by the shortage of grazing area (44).

Economical Factors

Resources are another influential component in making food choices. They are tangible, such as money, equipment and space, as well as intangible, in the form of skills, knowledge and time (25).

Food price is noted as a reason for consumption of many nutritious foods. In a study conducted in Kenya, price is among the main determinants for decreased consumption of animal source foods (8). Increased food price is also mentioned as a challenge in accessing adequate quality and quantity food by many women in studies from Adelaide, Australia (32), Philadelphia (27), Colombia (41) and Dhaka, Bangladesh (45). A study among Pastoral Women in Kenya and Tanzania also reported that Women in poorer households were more dependent on maize, while women in wealthier households had greater access to milk and meat (46). Apart from food price distance from markets is an important factor and depends on availability of regular and affordable transport (47).

In case of scarce financial resources whether pregnant or not the woman is expected to prioritize others' needs over her own (34). A study from Kerala, India reported that household priorities often stemmed from the perceived needs, particularly for children and those engaged in high intensity manual jobs than women (47).

Household production is on the other hand depends on having large and fertile landholdings (47) even though in some settings productions are destined for the market and not for household consumption (30). The decision of producer to supply their product for home consumption or for market is also depends on socioeconomic status. Farmers with larger landholdings tend to sell larger shares of their food production, reflecting greater surpluses (48, 49) since increase in productivity brings additional output over and above home consumption (44). A study done in Kenya among smallholder maize producers, shows that among the surveyed households, most of these households do not produce enough from their farms to meet their home consumption needs so that as the household size or dependency ratio increases it is less likely to sell what they have produced (50). A study in Ethiopia among potato producers also emphasize the importance of access to input for market participation. This means farmers having access to irrigation have opportunities to grow potato throughout the year and the produce would be over and above home consumption this in turn results in selling their products (44).

Another determinant for market participation is income source. Farmers, who engage in farming as the primary occupation, depend almost entirely on income from the farm and hence are more likely to produce more and will sell more (51). Financial income from non-farm sources had positive effect on commercialization of households. A study from Ethiopia among potato producers in Kombolcha, reported that additional financial income increases the proportion of potato marketed by households by enabling the farmer to purchase improved inputs (44).

All this literatures identified the major factors affecting food choice of pregnant women around the globe. Influences on pregnant women's food choices range from individual to environmental factors, such as Knowledge and perception of the woman, social structure and relationships, cultural values, Agro ecological condition, Infrastructure, economical constrains and so on.

This study aims to explore the factors affecting food choice of pregnant women of rural Ethiopia since it is a step towards meeting the challenge of improving the health and nutrition of pregnant

women. The diets of pregnant women are important not just for their own health, but also for their offspring. In order to improve the diets of pregnant women it is essential to understand why they make the food choices they do.

The findings of this study could help in designing programs which helps in finding a way to improve nutritional status of pregnant women by identifying the factors which drags them from attaining normal nutritional status.

Conceptual Framework

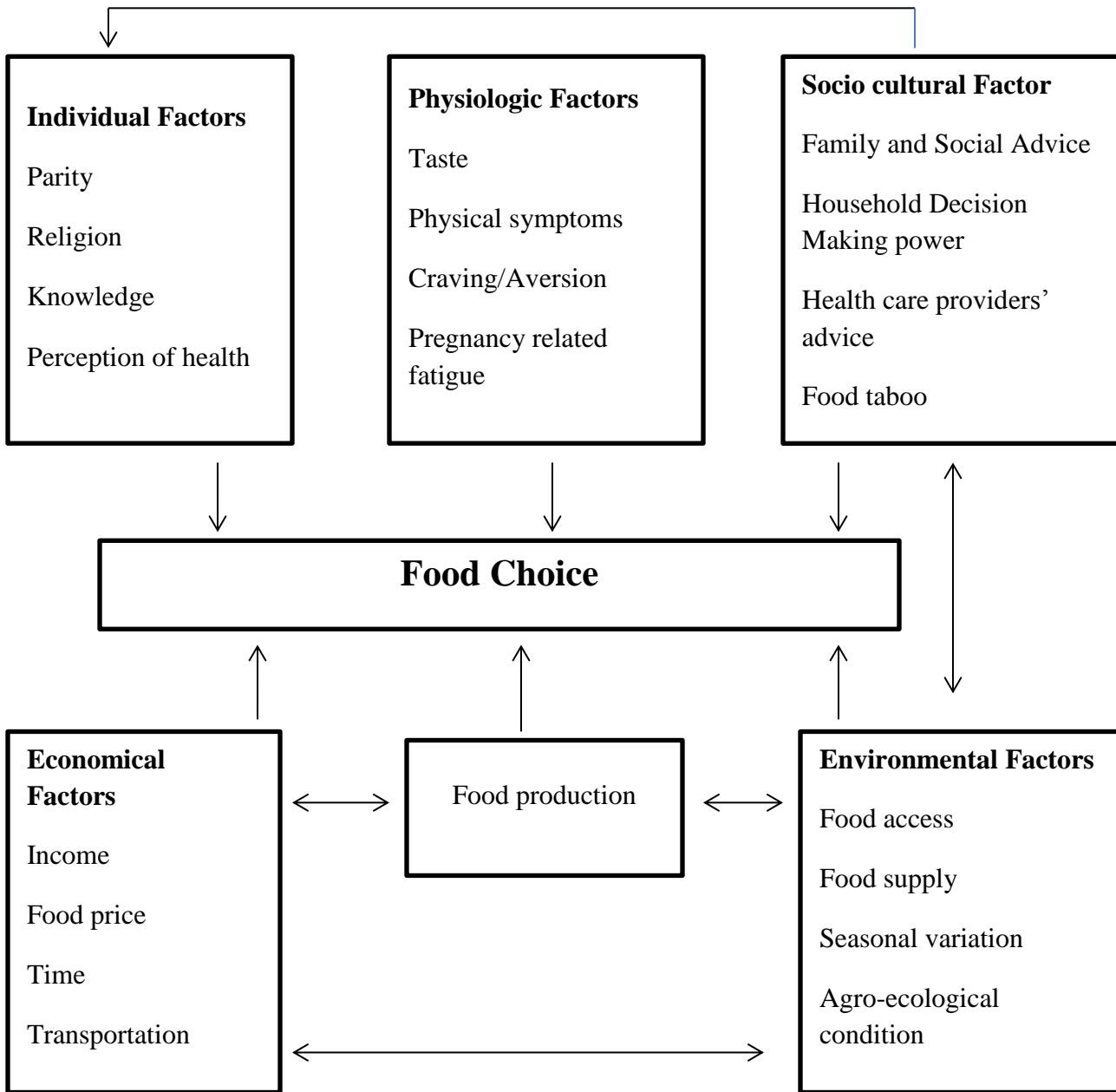


Figure 1 Conceptual framework showing factors affecting food choice of pregnant women

3. Objective

General Objective

To explore factors that influence food choice among pregnant women in Butajira Rural Health Programme (BRHP), Ethiopia

Specific Objectives

1. To explore the existing food choice practices during pregnancy in the study area
2. To explore the factors influencing pregnant women when choosing their food

4. Method and Materials

4.1 Study setting and period

The study was conducted from June to July 2018 in Health and Demographic Surveillance Site (HDSS) of Addis Ababa University School of Public Health in Butajira, Gurage zone.

Gurage is a Zone in the Ethiopian Southern Nations, Nationalities and Peoples Region (SNNPR). The zone is bordered on the South by Hadiya on the West North and East by the Oromia Region, and on the Southeast by Silte. Welkite is the administrative center of the Zone; Butajira is the largest city in this zone and the former administrative center. Based on the 2007 Census conducted by the Central Statistical Agency of Ethiopia (CSA), this Zone has a total population of 1,279,646, of whom 622,078 are men and 657,568 women; with an area of 5,893.40 square kilometers, Gurage has a population density of 217.13, While 119,822 (9.36%) are urban inhabitants.

The six largest ethnic groups reported in Gurage were the Gurage people (82%), the Mareqo or Libido (4.28%), the Amhara (3.36%), the Kebena (3.34%), the Silt'e people (2.71%), and the Oromo (1.69%); all other ethnic groups make up 2.62% of the population. The majority of the inhabitants were reported as Muslim, with 51.02%, while 41.91% practiced Ethiopian Orthodox Christianity, 5.79% were Protestants, and 1.12% Catholic.

The Butajira Rural Health Programme (BRHP), centered on the Butajira DSS, is located in Meskan and Mareko District. The HDSS area covers a sample within the District, following ten communities initially sampled from the entire District using a probability proportional to size technique. Meskan woreda consists of six kebeles while Mareko woreda consists of two kebeles, the other two are one from silte woreda and Kebele 04 of Butajira town. The DSS site covers estimated total population of 76,352. The estimated size of the District is 797 km², of which Butajira town covers approximately 9 km². The area is located 130 km south of Addis Ababa and 50 km to the west of Zway town in the Rift Valley. The study area will only involve rural kebeles.

4.2 Study approach

Explorative study using qualitative content analysis approach was conducted to explore the factors, pregnant women encounter when choosing their food.

Qualitative content analysis is a context sensitive method thus it allows to process as data texts that are significant, meaningful and informative. Using this method, the factors affecting pregnant women when choosing their food, identified in rural context. Deductive content analysis is chosen because it allows assessing the occurrence of existing data in new context (52).

4.3 Study participants

Pregnant women aged ≥ 18 years old were selected for the in-depth interview and for the FGD from the study site. The participants for the in-depth interview and FGD with husbands of pregnant women were also selected from the same sites who are aged ≥ 18 years old.

4.4 Participant size and recruitment

Participants recruited purposively from the HDSS site. Participants selected from the two geographic locations namely highlands and lowlands in order to document diverse variations that have emerged in adapting to different conditions. As food choice mainly affected by socio cultural and economic factors, husbands of pregnant women involved in the study. To select those who can provide the most meaningful information on the topic, the participants were identified and invited with the help of the HDSS supervisors and enumerators.

A total of 43 pregnant women, 12 for in-depth interview and 31 for FGD, and 37 husbands of pregnant women, 8 for in-depth interview and 29 for FGD, participated in the study. Sample size for the in-depth interview determined by informational redundancy or saturation, the point at which no new information or categories are emerging from the data. To ascertain saturation, at the end of each day of data collection, the data were checked for the occurrence of categories and if the need for further interview in a preliminary fashion. That means the researcher moves back and forth through the data in order to find, compare, and verify the categories. After having gained an insight of what the emerging categories are and ensuing interviews are no longer generating new categories it is assured that saturation have reached.

To decide how many focus group discussions to conduct the rule of thumb applied in which to conduct at least two FGD for each defining demographic variable. Tacking sex and geographic location as defining characteristics, a total of 8 FGD conducted which are 4 from each category of sex and among them two from highlands and two from lowlands. The number of participants in each FGD ranged from 6 to 9.

4.5 The interview process

A pre interview (Formative assessment) was conducted prior to the main data collection to determine whether the interview questions were suitable for obtaining rich data that answer the proposed research questions. The tape recorder, the interview environment and the interviewer-interviewee interaction also assessed during the pre-interview and problems were identified. To avoid these problems during the main data collection, the interview guide was revised in a way that can reveal detailed explanation. In order to build a friendly environment and gain trust of the participants so as they can explain their idea in detail, the conversation was started with informal chat. To avoid the nuisance the quite place selected as much as possible.

An interview guide was used to focus on the objective of the study in a way which allows being flexible and adapted to participants response. The socio-demographic data was collected with participants' informed consent before the interview or discussion began using a one page format. For the FGD it was done individually to preserve confidentiality and anonymity. The forms are identified only by codes that correspond to code numbers that the individual participants had during the discussion.

The in depth interview was conducted by the principal investigator while focus group discussions facilitated by one moderator (principal investigator) and one note taker. Participants were oriented to use the code during the discussion instead of their actual name. The moderator was responsible for guiding the discussion, creating a comfortable climate for open exchange and encouraging participation while the note taker was in charge of observing recorder and writing the code and the first few words of each speaker in order to identify the speaker during transcription.

4.6 Data analysis

The data analyzed using content analysis methods. First all audio records transcribed and translated to English for analysis with two translators. The transcripts and translations cross checked for consistency. Transcribed notes read and re-read thoroughly to obtain the sense of the whole.

Then a code book prepared deductively based on the conceptual framework prepared from the literatures reviews. From the literatures five factors namely individual, physiological, socio-cultural, environmental and economic factors identified to influence food choice of pregnant

women. These factors putted in the category session. The sub categories in each category also identified from the literatures and modified as going through the data.

Then all the data are reviewed for content and coded line by line and categorized using open code Version 4.02 software. As the coding progress the software helped in speeding up the process by locating codes and grouping data together in categories. In order to obtain an overall impression of the content of the interviews, the transcripts read and reread and the codes revised accordingly. Finally by exploring the properties and dimensions of categories and identifying relationships between categories Conclusions was drawn from the entire study.

4.7 Trustworthiness

The trustworthiness of the study was achieved by establishing different criteria's of trustworthiness.

The study triangulated by person, in which participants are pregnant women and husbands of pregnant women and by method, in which a combination of in-depth interview and focus group discussion. By this method it is possible to reduce bias and to cross examines the integrity of participants' responses. Another method used to ensure rigor is prolonged stay in the field. The data collection took two month so that it was possible to understand the core issues that might affect the quality of the data. The support and comment gained from the advisor in data collection methods and process, data management, transcripts, data analysis procedure and report writing helped to improve the quality of the research findings. The thick description of the research process from data collection, context of the study to production of the final report is given so that one can replicate the study with similar conditions in other settings. The other method used to ensure trustworthiness is debriefing in which at the end of each data collection the participants were given a summary of what they have said in order for them to confirm that it is what they wanted to say.

4.8 Ethical consideration

Ethical clearance obtained from Addis Ababa University School of public health Research Ethics committee. Informed consent obtained from participants after given explanation on the purpose of the study.

During the introduction the participants explained what the study is about and why they have been asked to participate. They have been clarified the rights and responsibilities of participation and their informed consent obtained.

Participants explained that the findings of the study could help in addressing the factors that put constrain for pregnant women from attaining healthy food choice. They also told that their participation plays important role in the findings of the study even though they may encounter discomfort when they asked to deeply explain about their individual experiences.

Participants ascertained that their participation is completely voluntary and they have the right to leave the study anytime. They also assured that they will not be subjected to any ill treatment for the refusal. The information they will be provided will not be used for other purpose other than the study.

4.9 Result dissemination

The result of the study will be presented and submitted to Addis Ababa University School of public health. It will also be communicated to concerned bodies. It will be communicated to the study participants through the HDSS office. The result will be sent for the responsible officials in the study site for them to identify their gap and find the solution. The research paper will be sent for possible publication on relevant scientific journals

5. Result

Participant characteristics

A total of 43 pregnant women and 37 men who has pregnant wife participated in this study. Regarding the pregnant women, 12 involved in in-depth interview and the other 29 involved in the 4 focus group discussions (FGD), composed of a group of 6-9 (7 on average) pregnant women. From the total women involved in the study 13 of them were aged 25-29, 27 are in their 3rd trimester and 16 are having 3-4 numbers of children. Concerning their religion and level of education; 33 of participants were Muslim and 21 are attending no school. Almost all were farmers (Table 1). The individual in-depth interview took 40min on average, whereas each FGD with the pregnant women took about 1 hour.

Table 1 Socio demographic characteristics of pregnant women participated in the study

Socio-demographic characteristics	No	
Age	15-19	1
	20-24	11
	25-29	13
	30-34	12
	35-39	4
	40-44	2
Gestational age	First trimester	1
	Second trimester	15
	Third trimester	27
Parity	Prim gravida	5
	1-2	11
	3-4	16
	5-6	8
	>6	3
Religion	Muslim	33
	Orthodox	6
	Protestant	4
Educational status	Illiterate	21
	Primary	18
	Secondary	4
Occupation	Farmers	40
	Merchants	3

Regarding male participants, 8 men involved in in-depth interview and 29 men in FGD of 4 groups each composed of 6-8 participants. Among them 10 of the participants were aged between 25 and 29. Nearly all of the participants are Muslim in religion. The educational and occupational status of participants' are, 24 of them attending primary school and 31 of them are farmers (Table 2). It took 30 min on average to conduct individual in-depth interview and 1 hour for each FGD with husbands of pregnant women.

Table 2 Socio demographic characteristics of men who has pregnant wives participated in the study

Socio-demographic characteristics		No
Age	15-19	1
	20-24	4
	25-29	10
	30-34	8
	35-39	7
	40-44	4
	>45	3
Religion	Muslim	32
	Orthodox	5
Educational status	Illiterate	4
	Primary	24
	Secondary	7
	Tertiary	2
Occupation	Farmer	31
	Daily laborer	4
	Gov. employee	1
	Merchant	1

Pregnant women usually ate three times a day that mainly consisted of cereal based food, *Kita* (a bread baked from unfermented better) and a vegetable, *Gomen* (dark green leafy vegetable). Depending on what they have in the house some may eat other foods like a stew prepared from legumes, vegetable sauce, *Injera*, *Kocho* (a food prepared from false banana tree) and egg. Although these foods are reported by some participants, the dominant food in the study area is *Kita* with *Gomen*. Breakfast is usually consisted of coffee and small amount of *kita* or *Nifro* (boiled cereal or legumes) or *kollo* (roasted cereal). Those who cannot afford usually eat one time per day and do not usually skip the morning coffee.

“ In this area we just eat’ Gomen’ and Kita: what else do we eat? (She smiled). It is the same even after I got pregnant. We can’t get different kinds of food. We just eat what we have got in our house, which is what we have produced. Otherwise if we don’t have it from where do we get it? It just depends on your ability to afford. Different kind of foods? There are even days we can’t even get ‘Kita’ and ‘Gomen’. During the dry season, we can’t have it.” (Pregnant woman, Age 33, Drama, In-depth)

Women in the study reported that they don’t follow special dietary change because they are pregnant. Unless they experienced discomfort following consumption of some food, they usually continue to eat the same food as before pregnancy. But it should not be forgotten that some women with better economic status change their routine dietary trend when they become pregnant. The consumption of different kinds of vegetables and fruits and also animal source foods depends on the availability these foods in the house. Pregnant women who have a tree of fruits, usually mango and avocado, reported that they consume it. Similarly women who raise hens reported the consumption of egg although some of them sell it to get money.

“I didn’t change my food after I became pregnant. I eat whatever I have in the house. I eat egg, vegetables ... umm I drink milk with coffee ... umm..... Sometimes I take ‘Besó’ (a food or drink prepared from a powder of roasted barley), I eat Injera prepared from teff. I also eat bread prepared from mixture of wheat and maize flour.” (Pregnant woman, Age 30, Shersherabido, in-depth)

The consumption of meat, whether pregnant or not, was limited to holydays. Some pregnant women stated that they eat meat, when they crave, from the Butchery found in the main market. No matter how much cattle they have, they don’t slaughter it just because the pregnant woman want or need to eat. Slaughtering is restricted only during holidays.

“Meat, I can’t have it always unless it is holiday. We can’t slaughter an animal for the need of one person in regular days.”(Pregnant woman, Age 22, Bati lejano, in-depth)

Factors affecting food choice

After analyzing the data factors determining the food choice of pregnant women were found to fall into five categories. These categories are Individual, physiological, socio-cultural, environmental and economic factors. The individual factors include the knowledge they have about food. The physiological factors are the pregnancy related symptoms including nausea and vomiting, appetite, food craving and food aversion. The socio-cultural aspect includes the advice pregnant women receive from health professionals, the support they receive from their partner, family and others and the family structure. The environmental factors are those conditions in the environment including agro ecological conditions, production, market character, infrastructure and transportation. The economic factors encompass the tangible and intangible assets.

These factors are interrelated at some level. Among the factors, economic factor found to be the most determinant of all. Women in the study reported that they usually eat what they have produced. Although production determined by agro ecological conditions, which is environmental, the amount of land they have plays an important role in choosing what to produce which is economic problem. Some women mentioned that they know the importance of variety of foods during pregnancy but they couldn't practice it because of financial constraints. Another environmental problem which is market accessibility and affordability is also related to the economic capacity.

Economic factors

The major determinant factor mentioned by all the participants is economical problem. Most pregnant women restricted their food choice to *kita* and *Gomen* because it is what available in the market with low market price. As maize is the mainly produced crop in the study area, the market price of it is low. As a result even though the women want to eat different kind of foods, they buy maize and prepare 'Kita' due to its price. Similarly *Gomen* is the main vegetable grows in the area so it is the cheapest one.

"The money which buys 50 kilo of maize can't buy 25 kilo of teff. So I prefer to add some money and buy 100 kilo of maize so that I can feed my family for longer time. So first we have to buy maize. We eat that 'kita' weather for breakfast or lunch or supper and so on. So that we prefer to buy maize," (Pregnant woman, Age 28, Shersherabido, In-depth)

“I choose ‘Gomen because I can buy it with 5 birr, 3 birr, ... the others because they are costly, though I need to eat them, I ignore my need and come back home with the cheapest ‘Gomen’. That is because of shortage of money. Otherwise I know the importance of potato, Avocado, beet root, mango ...all of it.” (Pregnant woman, Age 29, Misrakmeskan, In-depth)

As almost all the participants are farmers, they get their major income from the sale of their products. No matter how much they produce some of it will be sold to get money for other expenses. Among their products, those which has larger price on market, will be destined for sell and the one with small market price will be consumed. The decision to sell which crop doesn't depend on the need of the pregnant woman. Even if she wants to have the expensive one for consumption it is not possible due to a lot of expenses they have such as taxes, healthcare and certain household items. Those households which have larger agricultural land are able to produce different kind of crops in large amounts. Pregnant woman in this kind of household is able to get the kind of food she wants even though the choice of production doesn't consider her need. In these kinds of households, the expensive crops could be used for household consumption. And also since they can get a lot of money selling their products they have got a chance to buy the food they want.

“If we produce ‘teff’ we sell it to cover our expense for holidays, or for other social expenses or some other costs. We don't eat that. But maize, no matter how much we produce, we don't sell it before we save for what to eat. So our main food is maize that is ‘kita’.” (Pregnant woman, Age 27, Dobena, In-depth)

Although the importance of having a variety of foods like animal source foods, fruits and vegetables mentioned by most, they cannot have them due to their high cost. Participants reported that when they have limited resources they prioritize to buy the food item which all the families can eat than buying the varieties of foods the pregnant woman need. When they compare the price of *Gomen* with other vegetables, they reported that it is cheaper as a result they prefer to buy it. The findings suggested that women's selflessness obliges them to prioritize their husbands and children, and to share the limited family food resources with everyone in the household. Unless they have excess money, the consumption of animal source foods is not thinkable in regular days.

“We don’t eat meat unless it is holiday. Yes I need to eat meat, but I prefer to buy ‘shiro’ (a powder of beans or peas used to make stew) than buying a kilo of meat with hundred birr. We told you what pregnant woman should eat, but though we know we should eat we can’t afford it.” (Pregnant woman, Age 26, Drama, FGD)

Some participants mentioned that, though they have domestic animals they prefer to sell them or their product than eating because the money will be useful to cover other expenses. Those who have more may consume the products of those animals. But slaughtering an animal is only practiced during holidays. A pregnant woman, who has the animal in the house and need to eat meat, can’t have it because they prefer to keep the animal as an asset. The study revealed that the consumption of meat because it is needed during pregnancy is rare in the study area.

“For example if I crave meat, and have ox would I slaughter the ox and eat? No I wouldn’t. Even if I have hen, I don’t eat it. Why? Because I think that if eat it today what will I have for tomorrow? I have to save it for tomorrow. I want to keep my asset that responding my crave. We don’t eat them even if we have them.” (Pregnant woman, Age 25, Dobena, FGD)

The study also showed that those people who have better income may buy meat from city if the woman craves it.

“When I want to eat meat I sent people who go to market to buy it for me and eat it. Otherwise it is difficult to have it whenever I need it.” (Pregnant woman, Age 32, Misrak meskan, in- depth)

Apart from high cost of foods, high cost of transportation to go to the market is another obstacle. In the study area limited kinds of foods are produced. The local markets usually access the foods which are produced in the area. In order to have different kinds of foods it is a must to go to the market. As the study is conducted in the rural area the market is far from where the participants are. The participants reported that to go to a market it costs a lot of money so that it will reduce their capacity to buy other foods. As a result they came back home buying only the routine food item.

“Because we are far from city the transportation cost is high. It costs 20 birr to go to market for transportation so this 20 birr will be subtracted from the money I have got to buy food. But if I was near to city I would use the money, which I spend on transportation, to buy food.” (Pregnant woman, Age 28, Wurib, FGD)

Environmental Factors

The environmental factors include those related to the market and production. These factors identified as determinants of pregnant women nutrition by enabling the women to access foods. As the study is conducted in rural area most of their foods comes from their farm. Since they usually eat what they have produced production plays an important role in pregnant women's food choice.

Production

The study reported that the diet of pregnant women mostly rely on production. Pregnant women framed their food choice among the foods they have in the house. Since households consume a the food products they produce, the diversity of production determine the availability of different types of food for pregnant women consumption.

According to the study, the type of foods produced depends on the agro ecological conditions. The staple crop in lowlands differs from that of highlands. This difference is related to the environmental conditions. The participants reported that they choose to produce, the food they produce, because it is suitable for the air condition and the type of soils so that it gives surplus production over a small amount of land. This condition abated their ability to have access to variety of nutrient rich foods by limiting the crop production to one or two types.

“Maize is suitable for the type of soil and air condition of this area. Teff and the likes are suitable in other areas, but in ours, it is the maize which is productive.” (Husband of pregnant woman, Age 30, Bati lejano, FGD)

Another determinant factor for production is the amount of land they have. Participants reported that they receive agricultural land from their fathers. If the father has a lot of children the share for each son will be small. Those people who have small land share would be obligated to produce the type of crop which gives a lot in small land. Pregnant women in this kind of

households obliged to limit their food choice among these foods. But those who have more land could be able to produce a variety of food stuff so that their consumption will be of the varied kinds. The shortage of land is also stated as a discouraging factor to raise animals as they need shelter and grazing area which is limiting pregnant women from having animal source foods.

“It is a shortage of land. Those who have large land can produce everything ‘Teff’ wheat, barley... The soil can produce everything if you have large land. Those who have larger land produce different cereals and legumes, but those who don’t have just produce maize.” (Pregnant woman, Age 30, Drama, FGD)

Regarding the production of variety of vegetables, besides the shortage of land, availability of water is another factor. People in the study area engaged in annual production using rain water. The people located near to the river do irrigation and can produce different kinds of vegetables beyond household consumption. The others who could dig a hole in their yard are also able to harvest different kind of vegetables. Although pregnant women admit the importance of consumption of variety of fruits and vegetables, since they don’t produce it they are not eating it.

“We produce maize. We use the rain water to produce. Those people who are near river can do irrigation and produce. ‘Gomen’ onion, beetroot, carrot, cabbage etc. but we have no space near the river so that we produce maize once a year using the rain water. We don’t produce during the dry season because we don’t have water source. We could have dug a well and extract water using a motor, but doing it also need a lot of money so we don’t have it.” (Pregnant woman, Age 25, Dobena, In-depth)

Market

Another environmental factor which determines pregnant women’s food choice is market character. The location of the market and the types of foods available in the market has its own impact on their food choice. Almost all participants stated that all foods are available in the market although the availability of some fruits and vegetables are seasonal. The participants also reported that the market is located far from their place so that it is onerous for a pregnant woman to go there due to the vibration of the transportation as the road is rough.

“The road is not stable. Especially during the rainy season, the road becomes muddy, so the Bajaj drivers don’t want to come here. Because of that we are forced to walk this far way road. Even during the night, we have to walk all the way. If the road was good, anybody who has money can go there and bring whatever wanted.” (Pregnant woman, Age 30, Wurib, In-depth)

Physiological factors

Although pregnant women are expected to increase the amount of food they consume, they have reported to have reduced their food intake on various occasions. Feeling uncomfortable, vomiting and avoiding certain foods altogether were all challenges reported by pregnant women, particularly during their first trimester. While some pregnant women reported trying to eat three meals a day most reported eating less, especially in the first trimester when many pregnant women said they experienced a poor appetite, nausea and vomiting. Some participants mentioned that they skip their meal, usually breakfast, due to nausea and vomiting. Participants also reported that they developed aversion for some foods, including the staple foods like *kita* and *Gomen*, after the pregnancy.

“When I become pregnant, I lost my appetite for food. I wasn’t able to eat the usual diet. Because of the pregnancy, when I eat ‘kita’ or ‘injera’ I get nauseated. After the pregnancy I become selective.” (Pregnant woman, Age 30, Dobena, In-depth)

Pregnant women in the study also reported that they exclude to eat some types of foods because of its gastric irritation following consumption. Although it is reported that pregnant women arrange their food choices based on the physiologic symptoms, it is also stated that some continues to eat the usual diet irrespective of the consequences just to satisfy their hunger.

“When I eat ‘Kita’ with ‘Gomen’ my stomach doesn’t digest it. When I get hungry I eat what I have, but when I eat it, it gives me gastric discomfort. I spent three month with this feeling.” (Pregnant woman, Age 33, Drama, In-depth)

Individual factors

The nutritional knowledge is among the determinants for the choice of food. Pregnant women make their food choices based on the knowledge they have regarding good or bad foods during

pregnancy. When asked about the recommended foods for pregnant woman participants reported that they should eat balanced diet. But the description given for balanced diet has a varied meaning. Some refer to legumes when they say balanced while others mention fruits or vegetables. Participants usually mention the importance of good nutrition during pregnancy. According to most of the study participants good foods are those which have high market price like meat and juices like 'Rani'. Participants also reported that pregnant woman should increase the intake of foods and fluids from pre pregnancy time. When they say fluids some refer to gruel and others refer to packed fluids like 'Miranda'.

Participants get most of the information about which foods to use during pregnancy from health professionals. The presence of antenatal visit helps them to understand the foods need to be taken and need to be avoided. Though the degree to which this advice was understood varied considerably.

"They told us to eat variety of cereals and legumes, how to make mixture of balanced diet, uhh...to eat Shiro wot, to eat variety of vegetables, to eat freshly cooked foods etc."

(Pregnant woman, Age 33, Dobeña, FGD)

Socio cultural factors

The socio-cultural factors include the factors ranging from family to social structure and the interaction among them. The choice of food pregnant women made affected by the family structure. In the study area, after marriage women move to their husband's family house so that first pregnancy usually occur in the in-law's house. In this set up the woman eats what is served by her mother in-Law and she is also shy to ask what she wants.

"I am living with my husband's parents so I am ashamed to ask what I want. I just eat whatever they give me. If I am not comfortable with it I just leave it. In our culture when a woman gets married she stays with her husband's mother for 2 years or 3 years. She eats what her mother in law gives her. After that she will have her own house."(Pregnant woman, Age 22, Wurib, In-depth)

The second pregnancy usually occurs in the woman's own house. This time the pregnant woman gets the chance to decide on what to eat. The choice they made influenced by different socio

cultural factors. Pregnant women mentioned that the advice they get from health professionals helps them to understand what type of foods should to take. They reported that they follow the advice although most of them find it difficult to follow.

Pregnant women signified the importance of partner support in their food choice. Even though some of them do it, the women usually don't tell freely what they want to eat for their partners. As revealed by the study this is due to the fact that the woman is perceived as an extravagant or selfish if she asks her partner that she want to eat some kind of food which is not available in the house.

“If you eat what you want always, you are wasting your money. People also say that, you wasted your money only for food. If we are using money for food only, it implies that we are not thinking for our children future. So we have to save our money for them instead of buying whatever we want to eat. People also gossip that we only care for our food.”
(Pregnant woman, Age 30, Wurib, FGD)

The community also identifies a husband who carries food item for his wife from market, as effeminacy. This perception is one of the drawbacks for not receiving nutritional support from husbands. Those husbands who have the capacity and knowledge of the importance of the food may not practice the support being afraid of the gossip though some do it despite the negative feedback from the community. Some participants on the other hand stated that this kind of community perception is an old fashioned and not being practiced now a days.

“If he (husband) came home with a bag full of juice, vegetables like carrot, potato, beetroot..... the neighbors will laugh at him. They say that he is a woman. (Some of them laughed) so to avoid this gossip he comes home empty handed.” (Pregnant woman, Age 33, Drama, FGD)

The husbands also lacked to support their wives during pregnancy for other reasons. As shown in the study pregnancy is not a celebrated event in the family as the number of children gets increasing. At this time the pregnant woman does not get the support and priority in the family so that her nutrition is not an issue. She is expected to share the family meal whatever it is. The nutritional care they received from their husband is usually at the time when they get sick. This

idea is also supported by the husbands that they lack to take care of their pregnant wives due to financial constraints.

“For example if you take me, unless she is sick and the doctor told me to give her some kind food, I don’t buy her such foods. But when the doctor tells me I buy the food.” (A husband of pregnant woman, Age 30, Dobena, FGD)

Regarding food taboo, it seems like it was not a major determinant of eating practice of pregnant women. Some also mentioned that the practice of food taboo is becoming an old fashion. But it should be noted that some of participants consider foods like sugarcane and some sweet fruits should be avoided during pregnancy. The avoidance is due to the assumption that the consumption of these foods associated with having bigger babies and leading to difficult delivery.

“The cultural belief is not right. They used to say that pregnant woman should not eat balanced diet, should not drink milk and yogurt, she shouldn’t eat cheeses. I don’t accept that. They say that the whitish thing on the baby during birth, it is called natural cloth, is due to porridge she eats, the yogurt she drinks during pregnancy. That is not true. That is harmful belief.” (Pregnant woman, Age 33, Bati lejano, In-depth)

“Pregnant woman should not eat sugarcane. I heard that it is not good. It causes the fetus fat. So she would have difficulty during labor.” (Pregnant woman, Age 28, Wurib, FGD)

Although most of the participants mentioned that there is no food that a pregnant woman doesn’t take some disfavor the consumption of sweets.

6. Discussion

Pregnancy is a time at which the life of a human starts to grow and also undergone through fast growing. During this time a woman needs to give greater attention on her diet, as it is a time of dietary adjustment. Even though pregnant women are more conscious about their diet, there is still a paucity of data on how pregnant women choose their food especially on rural communities. Certain factors may be more important than others for particular peoples. This study tried to explore how pregnant women choose their food and the reasons behind. It also explored the factors pregnant women encountered from achieving healthy food choice in Butajira Rural Health Programme (BRHP) site. Acknowledging the factors may inform the design of an intervention program which aims to improve the nutritional status of pregnant women in rural communities.

Although the diet of pregnant women should be enhanced, this study identified no or little change in diet of pregnant women. The diets remain predominantly plant based with very little or no consumption of animal source foods. The base of a main dish is cereal, mainly maize with a common vegetable sauce which is *Gomen*. The consumption of different vegetables, fruits and animal source foods depends on the accessibility in the house. The consumption of meat was also limited to holydays. The poorest families do not have access to even the usual diet every meal of the day. This contradicts the recommended diet of pregnant women which should be from the five food groups, namely Grains; Vegetables; Fruits; Meat, fish, beans; Milk and milk products (6). The low consumption of fruits, vegetables, meat and other kind of foods was partly attributed to the low production and market accessibility.

This study showed that the choice of food of pregnant women mainly governed by financial ability and environmental factor. Since they are living in rural area most of their foods come from their own farm. Whether there is pregnant woman in the house or not, people in the area produce the usual food items. Production is determined by the size of their farm, seasonal variation and ecological condition. Participants in this study reported that they have very limited size of farm. With this small land they chose to produce a kind of crop which gives surplus production. They select the crop because it is suitable for the type of soil and weather condition. This shows similarity with the study conducted in Malawi which reports the types of crops to be produced depends on the type of soil compound and climatic condition (42).

The production not only depends on agro ecological limits but also on economical limits. Most of all explained that they choose to produce a specific crop on its requirement of small amount of fertilizers and water. This is in line with the study conducted in Tanzania (43). Water availability is also a factor for production of variety of vegetables. As reported in the study from Kombolcha, Ethiopia (44) this study also explains that farmers having access to irrigation have opportunities to grow more vegetables throughout the year. In the study it is also reported that shortage of grazing area is a limiting factor for livestock production.

Almost all the participants are farmers. They get their major income by selling their products. The decision of producer to supply their product for home consumption or for market depends on socioeconomic status. Those who have large landholdings and produce more, sell more products similar to the report in the study conducted in Kenya (48). However those who have small land share also forced to sell their product in order to get money although they do not produce enough.

Even though the study site is rural area, they don't produce all the foods they eat, some of it is from market. Participants stated that all foods are available in the market. But they said the market is not accessible. Since the market is located far from the rural area it is difficult for a pregnant woman travelling to a market. This result is supported by the other study in Ethiopia (38). Despite the distance food price was another obstacle for pregnant women to have variety of foods. During shopping women forced to buy the food which has low price. This is supported by other studies other countries (27, 32, 41, 45). Although most of participants understand the importance of animal source food consumption, it is impossible to have due to its high cost. The study from Kenya reports the same thing as decreased consumption of animal source foods is due to increased price (8).

Apart from financial constraints, physiological symptoms related to pregnancy stated by participants as a determining factor for food choice. In this study pregnant women reported that they adjust their food choice based on the symptoms following consumption of the food. They reduce or avoid some food or substitute it with something else which gives them relief. This result is in line with several studies around the globe (27-30). Some pregnant women decrease their food consumption due to the decreased appetite.

Concerning the nutritional knowledge; although participants reported that they receive nutritional education from health professionals, they seemed find it difficult to follow it due to financial constraints. And also the degree to which this advice was understood varied considerably. Different participants have different understanding of the idea of balanced diet and which foods should be taken. Even those participants, who can afford to buy what they want, prefer to take factory prepared fluids like ‘Rani’ juice over homemade fluids. This shows that the education they received lacks some clarity and supported by other study in Ethiopia (10).

Different literatures signify the importance of social advice and support in food choice of pregnant women. But in this study social advice about food choice is insignificant. Most of the participants reported the absence of social advice on food choice of pregnant woman. This could be due to that pregnancy may not be the event celebrated by the community. The woman also doesn’t receive support from her partner because of financial or social reasons. As reported in the study in Nepal and India (36, 37) in this study also pregnant woman living with extended family lacks the ability to decide what she wants to eat because she is served by her mother in law. The woman who lives in her own house also doesn’t have the liberty to decide what she wants to eat. Since she has to feed all the family, she prefers to prepare the food consumed by all the family. This is due to the fact that most of the participants have financial constraints to fulfill what they need. They prefer to consume the cheapest food which would be enough to feed all the family members.

In this study food taboo was not a major determinant of eating practice of pregnant women. Foods like sugarcane and some sweet fruits are avoided during pregnancy as the consumption of these foods perceived to be associated with having bigger babies and leading to difficult delivery. This result is in line with other findings from Arsi, Ethiopia (30). This is insignificant because the consumption of those foods in that area is rare and also these foods are believed to be tabooed by small number of participants. Most of the participants favor taking any kind of food available as long as they can afford it.

7. Strength and Limitation

The qualitative design of this study increases the strength by providing detailed information to explain factors affecting food choice of pregnant women. The other strength of the study is the use of multiple methods to generate data. Given that reality is defined in many ways and in many contexts, different data collection tools used to reveal a variety of perspectives from different people to conceptualize and evaluate the same situation.

When using the result of this study it should be considered that it is not without limitation. Although the interviews and FGDs were carefully conducted in a way to elicit the actual phenomena, it is not known to what extent the participants provide false information. To minimize this effect the data triangulated from different methods and persons. And also to get the real idea of participants they have been asked iteratively, in which the interviewer returns to matters previously raised by an informant through rephrased questions. Another limitation is that the data was coded by one person. But since the code book prepared from the conceptual framework used, it minimizes the unreliability. And also the support gained from the advisor on coding increases the reliability.

8. Conclusion and recommendation

The study showed that food choice of pregnant women mainly determined by financial constraints. The low economic status limited them from producing the food item which is of the varied kind and enough amounts. This shows that production plays an important role in determining pregnant women's food choice. This highlights the need to make the agriculture sector more nutrition sensitive by addressing the factors affecting production such as low land ownership. The low economic status also created obstacle for pregnant women from attaining healthy nutritious style by making the market inaccessible and unaffordable.

The physiologic symptoms related to pregnancy also played its important role in determining pregnant women's food choice. This implies the need for health professionals provide women with encouragement, strategies and advice for managing pregnancy related symptoms, including suggestions for nutrient-rich snacks and eating smaller portions more frequently throughout the day.

The other factors identified by the study in affecting the pregnant women's food choice were the nutritional knowledge, the family structure, the advice from health professional, the community perception, the support from the partner and with minimum significance food taboo. The findings indicate that these women need a better understanding of "variety" and "balance" in different food categories and their value to the maternal diet. And also findings from the study suggest that husbands of pregnant women needs to be involved in the health education for them to adopt more supportive behaviors to help improve their pregnant wives' diets and nutritional status.

In summary, this study identified important factors affecting the food choice of pregnant women in rural communities, highlights the importance of addressing the challenges in attaining healthy eating during pregnancy. The findings suggest holistic approaches to improving pregnant women's nutritional status and facilitating change at the household and community level.

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11. Annexes

Annex 1 Participant information sheet

Hello, my name is Seble Shiferaw. I am completing my master's degree on public health nutrition in Addis Ababa University. This research is part of the requirement for the fulfilment of the program.

The aim of this study is to understand the factors that affect food choice of pregnant women. The finding of the study could help for other researchers a ground work for their study and also could help other stakeholders interested in the area. Your participation plays important role in the findings of the study.

Your participation is purely based on your willingness. You have the right to choose not to take part in this study. If you choose to participate you have the right to stop anytime. You will not be subjected to any ill treatment for the refusal.

The information that you will provide will be kept confidential. No one will have access to the non-coded data except the principal investigator and the data will not be used for the purpose other than the study.

Annex 2 Consent form

I have been informed about the purpose and use of this study and the information I am going to give will be used only for the purpose of this study. I also informed that my identity as well as the information I provide will be kept confidential.

Therefore

Do you agree to participate in this study?

Yes -----

No-----

Respondent's signature-----Date-----

Investigator name-----Signature-----

Annex 3 Interview guide

Introduction

The purpose of this study is to learn about the drives, pregnant women of rural Butajira encounter, when making decisions about what to eat and why they make those particular decisions. You are chosen for this study because you are one of resource full person in this regard as you are pregnant. I appreciate your participation.

Date of Interview-----

Time started -----

Time ended-----

Part 1: Socio-demographic characteristics

No	Question	Categories	Remark
101	Age (in completed years)	_____	
102	Duration of pregnancy	_____ weeks	
103	No of pregnancy		
104	Family size		
105	Marital status	Single.....1 Married.....2 Divorced.....3 Widowed.....4	
106	Religion	Orthodox.....1 Muslim.....2 Protestant.....3 Catholic.....4 Other.....5	
107	Have you attend any school?	Yes.....1 No.....2	If no skip to question no 110
108	What is the highest level of education you attend?	Read and Write.....1 Primary(1-8 grade).....2 Secondary(9-10 grade).....3 Technical.....4 Higher (specify).....5	
109	Occupational status	Government employee.....1 Private employee.....2 Merchant.....3 Daily laborer.....4 Farmer.....5 House wife.....6 Other.....7	

Part 2: factors affecting food choice of pregnant women

1. What were the foods you eat before you get pregnant? How about after you get pregnant?

Follow-up: Why do you change or do not change your food?

Follow-up: Why do you choose the food you are eating now?

2. What kind of foods should you eat because you are pregnant?

Follow-up: why are these foods are important

3. What are the foods pregnant women should not eat?

Follow-up: Why is that?

Follow-up: where do you get the information?

Follow-up: Are there a food which doesn't give you comfort when you eat them? What are these?

Follow-up: Are there foods you crave: What are those?

Follow-up: What would you do if you crave the food which you think should be avoided during pregnancy?

4. Who are you living with?

Follow-up: What kind of support does your husband gives you?

Follow-up: Who decides what kind of foods should be prepared?

Follow-up: How do you accommodate the food choice of yours and other family members?

5. Where do you go when you need nutritional advice?

Follow-up: Who helps you in choosing your food?

Follow-up: Do you receive advice from health professionals about your nutrition?

Follow-up: How do you use the advice?

6. How your culture does affect your food choice?

Follow-up: What do you think about the cultural recommendation of food for pregnant woman?

Follow-up: What are the foods avoided for pregnant woman culturally?

Probe: Can you explain me the reason?

7. How does your income affect your food choice?

Follow-up: How would you change your food choice if you had better income?

Follow-up: Are there foods you want to eat but you couldn't because of its price? Tell me about it.

8. Do you have agricultural land?

Follow-up: Is it large enough to produce the amount you want?

Follow-up: How do you choose what to produce?

9. Do you raise domestic animals?

Follow-up: What are those?

Follow-up: Why do you choose them?

Follow-up: Do you use their product or sell it? Why? How do you decide?

10. How do you find your food supplies?

Follow-up: What kinds of foods are available in the market?

Follow-up: How your pregnancy does affect your shopping?

Probe: what are the things make shopping difficult for you?

11. Do you produce food items?

Follow-up: How do you choose what to produce?

Follow-up: What is the staple crop in this area?

Follow-up: Do you eat or sell what you have produced?

Follow-up: How do you decide that?

Leading topics for female FGD

1. What are the most important foods you eat? Why?
2. What are the foods pregnant women should not eat? Why? Where do you get the information?
3. Where do you go for dietary advice or guidance on what to eat?
4. How is your cultural background related to how you choose food?

What is your opinion about food beliefs during pregnancy?

What kinds of foods do you avoid during pregnancy in your culture?

What is the reason for choosing specific foods during pregnancy?

5. How easy is it to find foods that you want to eat?
6. How does your finance shape what you eat?

Are there certain foods you won't buy based on their cost? Tell me about them.

7. Tell me about how you get the food supplies. Access, Availability...

Thank you for your time

Interview guide for male

1. What are the foods your wife eats after she gets pregnant?

Follow-up: Does she change her way of eating after she gets pregnant? Why?

2. What kind of foods should your wife eat because she is pregnant? Why?
3. What are the foods she shouldn't eat? Why?

Follow-up: Where do you get the information?

4. What kind of care do you give for your wife after she gets pregnant concerning her nutrition?
5. Tell me about how you get the food supplies.

Follow-up: How does your finance shape what you eat?

Follow-up: Are there certain foods you won't buy based on their cost? Tell me about them.

Follow-up: How would you change your way of eating if you had more money?

Follow-up: What kinds of foods are available in the market?

Follow-up: How your wife being pregnancy affect your choice of food when you do shopping?

6. Do you have agricultural land? Do you produce food items?

Follow-up: How do you choose what to produce?

Follow-up: What is the staple crop in this area?

Follow-up: Do you eat or sell what you have produced?

Follow-up: How do you decide that?

Follow-up: how does your wife's pregnancy affect the type of food you produce?

7. Do you raise domestic animals?

Follow-up: What are those?

Follow-up: Why do you choose them?

Follow-up: Do you use their product or sell it? Why? How do you decide?

Leading topics for female FGD

1. What are the most important foods pregnant women eat? Why?
2. What are the foods pregnant women should not eat? Why?

Where do you get the information?

3. What kind of care do husbands give for their wives when they become pregnant nutritionally?
4. How you get the food supplies.

How you're the presence of pregnancy affect your choice of food?

5. How do you choose what to produce?

What is the staple crop in this area?

How do you decide to eat or sell what you have produced?

How does the presence of pregnant woman in the house affect the type of food you produce?

Annex 4 Amharic version of participant information sheet

የጠያቂ መረጃ ቅጽ

ጤና ይስጥልኝ ስሜ ሰብላ ሽፈራው ይባላል። የመጣሁት ከአዲስ አበባ ዩንቨርሲቲ ጤና ሳይንስ ኮሌጅ የማህበረሰብ ስነ ምግብ ትምህርት ክፍል ነው። ይህ ጥናት ለመመረቂያ ከሚያስፈልጉ ማሟያዎች አንዱ ነው።

የጥናቱ አላማ እርጉዝ ሴቶች የሚመገቡትን ምግብ በሚመርጡበት ጊዜ ተፅዕኖ የሚያሳድሩባቸው ምክንያቶች ለማወቅ ነው። በመሆኑም የዚህ ጥናት ውጤት ለሌሎች ተመራማሪዎች እንደመነሻ በዚህ ዙሪያ ለሚሰሩ አካላት ደግሞ እደመረጃ በማገልገል ለተለያዩ ማሻሻያዎች ሊውል ይችላል። እርስዎ እዚህ ጥናት ላይ በመሳተፍ ከፍተኛ አስተጽኦ ያበረክታሉ።

ፈቃደኛ ከሆኑ ቃለ መጠይቁ በድምጽ መቅጃ እንዲቀዳ ይደረጋል። ይህም ቅጂ ከዚህ ጥናት አላማ ውጪ ለሌላ አገልግሎት በፍጹም አይውልም። ቃለ መጠይቅ ላይ ግልጽ ያልሆኑ ነገሮች ካሉ በድጋሚ ተገናኝተኝ ሊያብራሩልኝ ይችላሉ። በጥናቱ ለመሳተፍ እና ላለመሳተፍ ባለሙሉ መብት ነዎት።

ለመሳተፍ ፈቃደኛ ከሆኑ በኋላ በፈለጉት ጊዜ ማቋረጥ ይችላሉ። በጥናቱ ለመሳተፍ ፈቃደኛ ከሆኑ ያልፈለጉትን ጥያቄ ያለመመለስ መብት አለዎት። ጥናቱ ላይ በመሳተፍዎ፣ ባለመሳተፍዎ ወይም በማቋረጥዎ አንዳችም የሚደርስብዎ ጉዳት የለም።

Annex 5 Amharic version of consent form

የስምምነት ማረጋገጫ ቅፅ

የጥናቱን አላማ ተረድቼዋለሁ። በመሆኑም የምሰጠው መረጃ ለዚህ ጥናት ብቻ እንደሚውል እንዲሁም የምሰጠው መረጃ ሚስጥራዊ እንደሆነ ተረድቻለሁ። በመሆኑም በዚህ ጥናት ላይ ለመሳተፍ

- ፈቃደኛ ነኝ-----
- ፈቃደኛ አይደለሁም -----

- ቃለመጠይቅ የሚደረግለት ሰው ፊርማ----- ቀን-----
- ቃለ መጠይቅ አድራጊው ስም-----

መጠይቅ

መግቢያ

የዚህ ጥናት አላማ በቡታጅራ የሚገኙ ነብሰጡር ሴቶች ምን እንደሚመገቡና የሚመገቡትን እንዲመርጡ የሚያደርጋቸው ምክንያቶችን ለመረዳት ነው። እርስዎ ለዚህ ጥናት የተመረጡት ነብሰጡር እንደመሆንዎ መጠን ለጥናቱ የሚያስፈልገውን መረጃ መስጠት እንደሚችሉ በማመን ነው። ስለትብብርዎ በቅድሚያ አመሰግናለሁ።

ቃለ መጠይቅ የተካሄደበት ቀን-----

የጀመረበት ሰዓት -----

ያለቀበት ሰዓት -----

ክፍል 1

እድሜ -----

የእርግዝና ጊዜ ----- ሳምንት

ስንተኛ እርግዝናሽ ነው-----

ስንት ልጆች አሉሽ-----

የጋብቻ ሁኔታ

- 1. ያገባች
- 2. ያላገባች
- 3. የተፋታች
- 4. ባሏ የሞተባት

ሀይማኖት

- 1. ኦርቶዶክስ
- 2. ሙስሊም
- 3. ፕሮቴስታንት
- 4. ካቶሊክ
- 5. ሌላ

ተምረሻል

- 1. አዎ-----
- 2. አይ -----

የትምህርት ደረጃ

- 1. ማንበብና መጻፍ
- 2. የመጀመሪያ ደረጃ (1-8 ክፍል)
- 3. 2ኛ ደረጃ (9-10 ክፍል)
- 4. ቴክኒክና ሙያ
- 5. ከፍተኛ ትምህርት (ግለፅ)

የሥራ ሁኔታ

- 1. የመንግስት ሰራተኛ
- 2. የግል ሰራተኛ
- 3. ነጋዴ
- 4. የቀን ሰራተኛ
- 5. ገበሬ
- 6. የቤት እመቤት
- 7. ሌላ

ክፍል 2-- ነፍሰ ጡር ሴቶች ምግባቸውን በሚመርጡበት ጊዜ ተፅዕኖ የሚያሳድሩባቸው ነገሮች

1. ነፍሰጡር ከመሆንሽ በፊት ምን ምን ምግቦችን ነበር የምትመገቧው?

ክትትል- ነፍሰጡር ከሆንሽ በኋላስ ?

ክትትል- ለምንድን ነው አመጋገብሽን የቀየርሽው/ያልቀየርሽው?

ክትትል- ለምንድነው አሁን የምትመገቧውን ምግብ ብቻ የምትመገቧው?

2. አንቺ በእርግዝና ወቅት ምንምን ብመገብ ይጠቅመኛል ብለሽ ታስቢለሽ?

ክትትል- ለምንድነው እነዚህ ምግቦች የሚጠቅሙሽ?

ክትትል- እነዚህን ምግቦች እንድትጠቀሙ ያደረጉሽ ነገሮች ምንድናቸው?

3. በእርግዝናሽ ወቅት መመገብ የሌለብሽ ምግቦች ምንድናቸው?

ክትትል- ለምንድነው እነዚህን ምግቦች መመገብ የሌለብሽ?

ክትትል- ይህን መረጃ ከየት አመጣሽው?

ክትትል- ስትመገቧቸው የማይስማሙሽ ምግቦች አሉ? ምንድናቸው ?

ክትትል- አስፈላጊ ናቸው የምትያቸው ምግቦች ባይስማሙሽ ምን ታደርጊያለሽ?

ክትትል- የሚያምሩሽ ምግቦች አሉ? ምንድናቸው?

4. ከማን ጋር ነው የምትኖሪው?

ባለቤትሽ ነፍሰጡር ስትሆኑ ከሌላው ጊዜ የተለየ ምን እንክብካቤ ያረግልሻል?

የምግብ ምርጫን በተመለከተ ውሳኔ የሚያስተላልፈው ማነው?

ምርመራ- የሌሎች የቤተሰቡን አባላት እና የአንቺ የምግብ ምርጫ እንዴት ነው የምታቻቸው/የምታስማሙ/ ?ልታብራሪልኝ ትችያለሽ

5. የምግብ ምርጫሽን በተመለከተ ድጋፍ ወይም ምክር ሲያስፈልግሽ ወዴት ነው የምትሄጃው?

ክትትል- አመጋገብሽን በተመለከተ ከሌሎች ምክር ተቀብለሻል? ከማን?

ክትትል- ምን አይነት ምግብ መመገብ እንዳለብሽ ለማወቅ የጤና ባለሙያ አማክረሻል ?

ያገኘሽው ምክር በአመጋገብ ምርጫሽ ላይ ለውጥ አምጥቷል? እንዴት? ለምን?

ክትትል- ሌሎች ላንቺ የሚመርጡልሽ ምግብ አንቺ ለራስሽ ከምትመርጧው ጋር ተለይቶ ያውቃል? ይህን ሁኔታ እንዴት ነው የምትፈቺው?

ምርመራ:- ልታብራሪልኝ ትችያለሽ

6. ያደግሽበት ባህል በምግብ ምርጫሽ ላይ ተፅዕኖ አለው?

ክትትል- በእርግዝና ጊዜ ስለሚከተሉ ባህላዊ የአመጋገብ ስርአቶች ምንት ያለሽ?

ክትትል- በባህልሽ በእርግዝና ጊዜ የማይወሰዱ ምግቦች ምንድናቸው?

ምርመራ- በባህልሽ በእርግዝና ጊዜ ጥሩ ምግቦች እና ጥሩ ያልሆኑ ምግቦች የሚባሉት ምንድናቸው?

ምርመራ- ምክንያቶቹን ልታብራሪልኝ ትችያለሽ?

7. የገቢ ሁኔታሽ በምግብ ምርጫሽ ላይ ምን አይነት አስተዋፅኦ አለው?

ገንዘብ ቢኖርሽ የትኞቹን ምግቦች ትገዢ ነበር?

ምርመራ:- መብላት ፈልገሽ አቅምሽ ባልመቻሉ ያጣሽው ምግብ ምንድንነው ?እስቲ ንገሪኝ

8. የእርሻ መሬት አላችሁ ?

ክትትል- መሬቱ የምፈልጉትን ሰብል በምትፈልጉት መጠን ለማምረት በቂ ነው?

ክትትል- የምታመርቱት ሰብል ባለችሁ የመሬት ወይም የገንዘብ መጠን ላይ ሊወሰን ይችላል ?እንዴት ?

9. የቤት እንስሳት ታረባላችሁ?

ክትትል-ምን አይነት የቤት እንስሳቶች ነው የምታረቡት?

ክትትል- ለምንድነው እነዚህን እንስሳቶች ለማርባት የመረጣችሁት?

ክትትል- እነዚህ እንስሳት ወይም የእንስሳት ተዋጽኦዎች ለቤት ውስጥ አገልግሎት ትጠቀማላችሁ? ለምን?

ምርመራ- የቤት እንስሳት መኖር በምግብ ምርጫሽ ላይ ሊኖር የሚችለውን አስተዋጽኦ ልታብራሪልኝ ትችያለሽ ?

ምርመራ- የቤት እንስሳቱ ባይኖሩ ኖሮ የተለየ የምግብ ምርጫ ሊኖርሽ ይችላል ?እንዴት ?

ምርመራ- እንስሳቱ ወይም ተዋጽኦቻቸውን ለመመገብ ወይም ለመሸጥ የምትወስኑት እንዴት ነው? ውሳኔያችሁ ምን ላይ የተመሰረተ ነው?

10. የምግብ ሸቀጦችን እንዴት እንደምታገኝ ንገሪኝ እስቲ?

ክትትል- ገበያ ላይ ምን አይነት ምግቦች ነው ያሉት? ፍራፍሬ አትክልት ጥራጥሬ የእንስሳት ተዋፅኦ?

ክትትል- እነዚህ ምግቦች ገበያ ላይ አመቱን ሙሉ ገበያ ሊገኙ ይችላሉ? ለምን?

ክትትል- ነፍሰ ጡር መሆንሽ በግብይት ላይ ተፅዕኖ አለው? እንዴት?

ምርመራ- ገበያ ሄዶ የምግብ እቃ መግዛትን አስቸጋሪ የሚያደርገብሽ ነገሮች ምንድናቸው?

11. የምግብ እህል ታመርታላችሁ ? የማታመርቱ ከሆነ ለምን?

ክትትል- ምን አይነት ሰብሎችን ነው የምታመርቱት?

ክትትል- የምታመርቱትን የምትመርጡት እንዴት ነው?

ምርመራ- በዚህ አካባቢ በዋናነት የሚመረቱው ምንድነው? ለምን ?

ክትትል- የምታመርቱትን እህል ትመገቡታላችሁ ወይስ ትሸጡታላችሁ? ለምን?

የጋራ መወያያ ነጥቦች

1. በእርግዝና ወቅት መመገብ የአለባችሁ አስፈላጊ ምግቦች ምንድን ናቸው? ለምንድነው እነዚህ ምግቦች የሚጠቅሙት?
2. በእርግዝና ወቅት አንዲት ነፍሰ ጡር ሴት መመገብ የሌለባት ምግቦች ምንድናቸው? ለምንድነው እነዚህን ምግቦች መመገብ የሌለባት?

ይህን መረጃ ከየት አመጣችሁት?

3. አመጋገባችሁን በተመለከተ ምክር ሲያስፈልጋችሁ ማንን ነው የምታማክሩት?
4. የምትኖሩበት ባህል በምግብ ምርጫችሁ ላይ ምን አስተዋፅኦ አለው?

ስለባህላዊ የአመጋገብ ስርዓት ምን አስተያየት አላችሁ?

በባህላችሁ በእርግዝና ጊዜ መወገድ ያለባቸው ምግቦች ምንድን ናቸው? ለምን?

5. መመገብ የምትፈልጋቸው ምግቦች ማግኘት ምን ያህል ቀላል ነው? እንዴት?
6. የገቢ ሁኔታችሁ በምግብ ምርጫችሁ ላይ ያለው አስተዋፅኦ ምንድን ነው?

በዋጋቸው ምክንያት ልትገዙዎቸው የማትችሉአቸው ምግቦች አሉ?

7. ምግባችሁን እንዴት ነው የምታገኙት?

የወንዶች ቃለመጠይቅ

ነፍሰ ጡር ሴቶች ምግባቸውን በሚመርጡበት ጊዜ ተፅዕኖ የሚያሳድሩባቸው ነገሮች

6. ባለቤትህ ነፍሰጡር ከሆነች በኋላ ምን ምን ምግቦችን ነው የምትመገበው?

ይህ አመጋገብ ነፍሰጡር ከመሆኑዋ በፊት ከምትመገበው ጋር ተመሳሳይ ነው ወይስ ይለያል ?

ለምንድን ነው አመጋገብዋን የቀየረችው/ያልቀየረችው?

ለምንድነው አሁን የምትመገበውን ምግብ ብቻ የምትመገበው?

7. ባለቤትህ በእርግዝና ወቅት ምንምን ብትመገብ ይጠቅማታል ብለህ ታስባለህ?

ለምንድነው እነዚህ ምግቦች የሚጠቅሙአት?

እነዚህን ምግቦች እንዳትጠቀም ያደረጉአት ነገሮች ምንድናቸው?

8. ባለቤትህ በእርግዝና ወቅት መመገብ የሌለበት ምግቦች ምንድናቸው?

ለምንድነው እነዚህን ምግቦች መመገብ የሌለበት?

ይህን መረጃ ከየት አገኘው?

9. ባለቤትህ ነፍሰጡር ስትሆን አመጋገብዋን በተመለከተ ከሌላው ጊዜ የተለየ ምን እንክብካቤ ታደርግላታለህ?

የምግብ ምርጫን በተመለከተ ውሳኔ የሚያስተላልፈው ማነው?

10. የምትመገቡትን ምግብ እንዴት ነው የምታገኙት? አምርታችሁ ነው ሽምታችሁ?

የገቢ ሁኔታችሁ በምግብ ምርጫችሁ ላይ ምን አይንነት አስተዋፅኦ አለው?

ከዚህ የተሻለ ገንዘብ ቢኖራችሁ የትኞቹን ምግቦች ትመገቡ ነበር?

11. የምግብ ሽቀጦችን እንዴት እንደምታገኙ ንገረኝ እስቲ?

ገበያ ላይ ምን አይነት ምግቦች ነው ያሉት? ፍራፍሬ አትክልት ጥራጥሬ የእንስሳት ተዋፅኦ?

እነዚህ ምግቦች ገበያ ላይ አመቱን ሙሉ ሊገኙ ይችላሉ? ለምን?

ባለቤትህ ነፍሰ ጡር በመሆንዎ በግብይት ላይ ተፅዕኖ አለው? እንዴት?

ሌላ ጊዜ ከምትገዙት ምግብ የተለየ ተገዛላችሁ? ለምን?

12. የእርሻ መሬት አላችሁ ?

የምግብ እህል ታመርታላችሁ ? የማታመርቱ ከሆነ ለምን?

ምን አይነት ሰብሎችን ነው የምታመርቱት?

የምታመርቱትን የምትመርጡት እንዴት ነው?

የባለቤትህ ነፍሰ ጡር መሆን የምታመርቱትን ምግብ በመምረጡ ውሳኔ ላይ ምን አስተዋፅኦ አለው?

በዚህ አካባቢ በዋናነት የሚመረተው ምንድነው? ለምን ?

የምታመርቱትን እህል ትመገቡታላችሁ ወይስ ትሸጡታላችሁ? ለምን?

13. የቤት እንስሳት ታረባላችሁ?

ምን አይነት የቤት እንስሳቶች ነው የምታረቡት?

ለምንድነው እነዚህን እንስሳቶች ለማርባት የመረጣችሁት?

እነዚህ እንስሳት ወይም የእንስሳት ተዋጽኦዎች ለቤት ውስጥ አገልግሎት ትጠቀማላችሁ? ለምን?

የቤት እንስሳት መኖር በምግብ ምርጫችሁ ላይ ሊኖር የሚችለውን አስተዋጽኦ ልታብራራልኝ ትችላለህ ?

እንስሳቱ ወይም ተዋጽኦዎቹውን ለመመገብ ወይም ለመሸጥ የምትወስኑት እንዴት ነው? ውሳኔያችሁ ምን ላይ የተመሰረተ ነው?

የወንዶች የጋራ መወያያ ነጥቦች

1. በእርግዝና ወቅት ነፍሰጡር ሴቶች መመገብ ያለባቸው አስፈላጊ ምግቦች ምንድን ናቸው? ለምንድነው እነዚህ ምግቦች የሚጠቅሙት?
2. በእርግዝና ወቅት አንዲት ነፍሰ ጡር ሴት መመገብ የሌለባት ምግቦች ምንድናቸው? ለምንድነው እነዚህን ምግቦች መመገብ የሌለባት?

ይህን መረጃ ከየት አመጣችሁት?

3. አንዲተ ሴት ነፍሰጡር ስትሆን አመጋገብዎን በተመለከተ ወንዶች ከሌላው ጊዜ የተለየ ምን እንክብካቤ ያደርጋሉ?
4. የምትመገቡትን ምግብ እንዴት ነው የምታገኙት? አምርታችሁ ነው ሽምታችሁ? የገቢ ሁኔታችሁ በምግብ ምርጫችሁ ላይ ምን አይነት አስተዋፅኦ አለው?

ነፍሰ ጡር ሴት በቤት ዉስጥ መኖርዎ በግብይት ላይ ተፅዕኖ አለው? ሌላ ጊዜ ከምትገዙት ምግብ የተለየ ተገዛላችሁ? ለምን?

5. ምን አይነት ሰብሎችን ነው የምታመርቱት? የምታመርቱትን የምትመርጡት እንዴት ነው?

የነፍሰ ጡር ሴት በቤት ዉስጥ መኖር የምታመርቱትን ምግብ በመምረጡ ውሳኔ ላይ ምን አስተዋፅኦ አለው?

የምታመርቱትን እህል ትመገቡታላችሁ ወይስ ትሸጡታላችሁ? ለምን?

Declaration

I the undersigned, declare that this thesis entitled what drives pregnant women to choose their food? A qualitative study in Butajira rural health program is my original work, has never been presented in this or any other university, and that all the resources and materials used for the thesis development, have been acknowledged as complete references.

Name: Seble Shiferaw

Signature: _____

Date of submission: _____

this thesis work has been submitted for examination with my approval as University primary advisor.

Name: _____

Signature: _____

Date: _____