

UNIVERSITY OF NAIROBI

DEPARTMENT OF SOCIOLOGY AND SOCIAL WORK

**AWARENESS OF FOOD AND NUTRITION SECURITY AMONG PREGNANT
WOMEN ATTENDING A LEVEL FIVE HOSPITAL: A CASE STUDY OF PUMWANI
MATERNITY HOSPITAL, NAIROBI, KENYA**

NANCY WANGARI MWAURA

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REQUIREMENT FOR THE AWARD OF MASTER OF ARTS DEGREE,
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DECLARATION

I declare that this research project is my original work. It has not been presented in another University/institution for consideration.

Signature:..... Date:.....

Student: **Nancy Wangari Mwaura**

C50/73140/2014

This research project has been submitted for examination with my approval as a University Supervisor at the Department of sociology; University of Nairobi

Signature:..... Date:.....

Supervisor: **MR. ALLAN KORONGOr. Allan Korongo**

DEDICATION

I dedicate this project to my family for the patience and understanding they have shown during my academic journey.

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LIST OF ACRONYMS/ABBREVIATIONS

ADB	Asian Development Bank
ASCU	Agricultural Sector Coordination Unit
ECOSOC	United Nations Economic and Social Council
FNSP	Food and Nutrition Security Policy
FAO	Food and Agriculture Organization of the United Nations
IUGR	Intra Uterine Growth Restriction
KEBS	Kenya Bureau of Standards
KHSSP	Kenya Health Sector Strategic and Investment Plan\
KNNAP	Kenya National Nutrition Action Plan
MDG	Millennium Development Goals
MOH	Ministry of health
NFNSP	National Food and Nutrition Security Policy
NHCWMP	National Health Care Waste Management Plan
PMH	Pumwani Maternity Hospital
SES	Supplemental Education Services
SPSS	Statistical Package for Social Science
TFC	Transnational Food Company
UN	United Nations
UNFP	United Nations Population Fund
UNICEF	United Nations International Children's Emergency Fund
WFP	World Food Program
WHO	World Health Organization

ABSTRACT

The purpose of this research was to have an assessment of food and nutrition security awareness programs among the pregnant women receiving services at the Pumwani Maternity Hospital in is situated Nairobi. The study had four main objectives which include: to find out, about the perceptions of pregnant women about food and nutrition , to establish whether there are efforts, facilitating awareness about food and nutrition during pregnancy in the clinics, to find out how the information on food and nutrition security is playing role in maternal dietary patterns of the pregnant women, and to investigate the issues and challenges facing pregnant women towards adhering to adequate food and nutrition as taught in the clinics. The study was based on feminism and coping theories. The research design was descriptive research analysis with the study sample constituting of 80 expectant women, sampled using non random sampling technique and 6 key informants, being the clinical officers sampled through purposive sampling technique. Qualitative together with quantitative data were collected using, a questioner and interview guide observation from respondents and key informants respectively. The study found that the Pumwani Maternity has done tremendous work pertaining maternal health by creating awareness programs on food and nutrition security; though not extortive and emphasizing that stronger, programs need to put in place. This would help combat hunger and also act as a voice to air challenges faced to be food secure. The study recommended that intervention activities contributing to this strategic objective should be put in place making it possible to have adequate future programs. This includes the necessity to invest on nutritional training, to the mid wives to be able to teach pregnant women during their antenatal visits.

CHAPTER ONE: INTRODUCTION

1.0 Background of the study

Women and girls are overrepresented globally, as being food-insecure. People are said to be food secure when they are in a position of physically and economically accessing adequate amounts of nutritious, safe, as well as culturally appropriate foods that are produced in an environmentally sustainable and socially just manner, in addition to people making informed decisions regarding their food choices. Choices they can only make due to their social and economic capabilities favorable to them (ADB & FAO, 2013).

Worldwide according to ECOSOC (2007) and WFP (2009), about 60% of undernourished people are girls or women. This cannot be accepted; hence, there is a need concerting effort against gender discrimination when it comes how food is being accessed in a way that it will have a global priority. Investing more in girls and women, especially during pregnancy will mean using an approach that can make them have some knowledge about the good dietary patterning. This will in turn help them enlarge their freedoms of making wise food and nutritional choices, where the gains eventually accrue to the general society.

For these multiple crises to be solved, we must be willing to act more effectively to come up with more lasting results by considering the specific situations that girls and women are undergoing (Asian Development Bank 2013). More often, the discrimination being faced by women is the result of social norms or customs, or there is a way in which it linked to some stereotypes regarding gender roles together with the status of women in the society. Women are faced with unequal access to productive resources, for instance, as land and economic gendered

division of labor, due to low levels of education resulting to indecent wage employment and general poverty. These same factors also make women marginalized with lesser opportunities to bargaining position within the households and from decision-making spheres at all levels of life (United Nations, 2014).

Pregnancy nutrition is a great concern because eating a healthy and balancing diet, makes mother and the baby go through the post and prenatal stages ensuring that they get, quality foods rather than quantity. The quantity may be demanded as the pregnancy progresses into the third trimester. A good diet is not only significant in the growth and development of the baby, but it serves as the basic determiner of what and how the baby will be fed in the future (Winnie 2014).

1.1 Statement of the problem

Globalization has caused change in the eating habits of people across the world and thus also contributed to diet-related diseases. On the rise in the developing countries the problem is further escalated by the lack of adequate nutritional education and information. Pregnant women need to be educated, about adequate maternal nutrition. Expectant women are always at a greater risk of poor nutrition and food insecurity which remains, a key factor for adverse pregnancy outcomes for both the mother and the baby as part of antenatal care.

There is however an ever growing concern regarding the knowledge and the population's perception regarding food and nutrition (UNICEF, 2009).In Kenya, food is seen as safe and suitable for use once it has been inspected and permitted by the Kenya Bureau of Standards (KEBS).There is concern over whether expectant women are adequately informed of the safety of the food, they eat and if they keenly adhere to it's the safety according to standards (Shanklin,

2000).The ideal situation would be a national population of pregnant women having enough knowledge and training on the nutritional habits they need to adopt throughout their pregnancy.

More so is because, genetics is determined, by maternal health and nutritional care (American Society for Nutrition 2013),counseling and education on food and nutrition security is a key factor when it comes to improving the overall health of both mothers and their unborn babies Bedah (2012).This study will analyze the knowledge that pregnant women have, about food and nutrition security and establish whether they are getting adequate information about it, as part of antenatal care in public hospitals. It would also be important to know whether the pregnant women are knowledgeable about appropriate eating habits. This study could also contribute, to help put up strategies combating ignorance on the same during antenatal visits in the clinics.

1.2 Purpose of the study

On the international agendas today, food security together with hunger eradication are among the top priorities in view of how agricultural productivity is affected by global economic crises, climate change and food price spikes. In relation to the vital role of women are, as smallholders in household, and community food and nutrition security, gender inequalities together with gender gap in agriculture are key concerns.

How women together with food security are treated is mutually supportive to the gender equality which remains, an elusive goal in several regions, and the need for transformation of traditional gender roles being prioritized. Such a transformation can only be enhanced if the information regarding the range of the inequalities as well as specific restraints facing women can be improved (ADB, 2013).

Maternal health has been given a lot of focus in Kenya, is outlined in Chapter 2 of the (Kenya Health Sector Strategic and Investment Plan I2013-2017), where there is need to address maternal and neonatal mortality, by at least half. In 2012, according to the Commission on Information and Accountability for Women and Children's Health 2013, more than 100,000 children died of preventable causes, with 65% dying before their first birthday, and the rest before their fifth birthday. Fifteen women die daily due to pregnancy related complications. The statistics have raised so much concern that strategies are necessary, to help improve the situation.

Good food and nutrition remains important for physical growth, survival, productivity, wellbeing, health, performance and mental development. Nutrition is also core in human life span and development (World Bank, 2006). However, nutritional requirements vary depending on gender, age and physiological changes, for instance, during pregnancy. In a woman's life, pregnancy is a very perilous stage is where optimal nutrients of high quality for the growth and development of the fetus is needed.

Women who live in the Sub-Saharan Africa are likely to die when they are giving birth while giving birth, unlike those who reside other parts of the world. To be specific, this is common among women aged 15 to 19 in Africa: they die while giving birth and according to UNFPA (2012), this leading cause of death. Likewise, in the whole world, up to about 20 million girls and women has been suffering from maternal morbidities, though they have been enduring chronic ill health. This shows that retrogressive cultures in developing countries influence the uptake and adoption of the practices that are of benefit to both the mother and the baby, with international organizations together with individual governments recognizing how the problem is

severe and have come up with measures that decrease the number of maternal deaths all over the world.

Quality diet of the pregnant Kenyan women, pointed out that SES factors such as employment and education are important predictors of quality diet and nutrient intake (Kamau, Elmadfa, 2007). During this phase, nearly all women eat more with expectant mothers considering pregnancy to be a very delightful experience. According to Villar, Merialdi, Gülmezoglu et al.(2003),inadequate nutrition in women during pregnancy, results into risks that may result into consequences such as low birth weight, Intra Uterine Growth Restriction, infant mortality, morbidity and preterm birth.

This means that women during pregnancy need food and good dietary knowledge. A simultaneous as well as integrated pursuit of this kind of information together with transformation is important for the gender equality policies together with food security strategists complementing each other in addition to maximizing their synergy. The measures are meant for only helping women to relieve their burdens in addition to recognizing equitable gender systems.

Malnutrition as a serious problem facing mothers and their children in Kenya especially, where undernourishment results, to health risks, and their children usually have been setting off on the weaker developmental path, which is both physically and mentally. Children who do not get appropriate nutrients have lower resistance to common childhood ailments and infection such as diarrhea, and respiratory infections and more likely to die. Those who survive are always in a malicious cycle of sickness recurrence and a stunted growth, and there are moments when they can suffer from irreversible damages to their social development and cognitive processes(Ouedraogo, Oyunga, Simon, Vulule et al. 2010).

Changes in dietary patterns; also are occasioned by fluctuations in the food stuff's demand and supply. The rising demand for food is a result of increasing global populations, urbanization leading to the demand for processed foods, growing disposable incomes, and changing employment patterns (Lammi-Keefe, Couch, & Philipson,2008). The same factors handle the changing trends in food supply. Transnational Food Companies (TFCs) have been identified as the results of, and respondents to the globalization issue. However, it has been noted that the TFCs still need stronger policies to oversee their operations, with the rising number of TFCs, financial liberalization, commercialization of agriculture, and domestic agricultural liberalization. This has also been identified as presenting both risks and opportunities that are associated with nutrition. Nonetheless, further research is required to assist in determining the effects of each of them as they are still broadly classified without articulate evidence (UNICEF, 2009).

The fifth Millennium Development Goal gives clear outlines on the international obligation in the reduction of maternal mortality by the year 2015. At present, in as much as this can be an impractical target, but the maternal mortality ratio dropped only by about 5 per cent and this was between 1990 and 2005 where the African organizations (Maternal Health 2010) pledged, to work in a way that health will be achieved during pregnancy during antenatal visits, pregnant women are advised on adequate nutrition and diet, This is done by mitigating the risks in early pregnancy, by and adopting and implementing through education on the same (Birungi, Onyango, 2006 p 32). Adverse birth outcomes in Kenya have been based on maternity hospital statistics. Many studies including have indicated that there is a correlation between adverse birth outcomes and poor maternal nutritional status (Magadi, Madise, Diamond IAN, 2001). It is with this regard that, there is need for the Ministry of health to embark on a study to establish

weather, pregnant women have enough information about food and nutrition security and whether this information is of benefit to them.

1.3 The general objective

The study sought to investigate awareness of food and nutrition security among pregnant women, during antenatal care at Pumwani maternity Hospital, Nairobi, Kenya.

1.4 Research questions

The following questions guided the study;

- i. What are the perceptions of the pregnant women about food and nutrition?
- ii. Are expectant women aware of food and nutrition security programs in the clinics?
- iii. How is food and nutrition security information playing a role in helping change dietary patterning of expectant women?
- iv. What obstacles face expectant women in their effort to adhere to the nutritional information provided to them?

1.5 Specific Objectives

The objectives of this study were:

- i. To examine the perceptions of the pregnant women about food and nutrition.
- ii. To establish whether the expectant women are facilitated by the health experts to increase their awareness of food and nutrition security programs in the clinics.
- iii. To establish whether nutritional and information can change dietary patterning of expectant women.
- iv. To assess the food and nutrition challenges that expectant women face in adhering to appropriate dietary habits.

1.6 Significance and justification of the study

The study would affirm the importance of food and nutritional education, especially among expectant women. It should be noted that the quality and the quantity of food eaten by a pregnant woman has direct effects on the unborn child. It is important for the pregnant woman to receive adequate and accurate information from dieticians and clinical officers, about food and nutrition, during the prenatal stages.

The number of lifestyle diseases occasioned by changing feeding habits is on the rise. Newborn babies and children continue to suffer from the effects of poor feeding patterns that their mothers followed (UNICEF, 2009). Dieticians and clinical officers can play a significant role in educating expectant mothers on the most efficient feeding patterns that suit them and the unborn babies. It is the starting point of everyone's life that, what a pregnant woman eats remains, very essential to the unborn in its life. By adhering to proper food and nutrition practices, incidences of nutrition-related chronic diseases can be reduced significantly.

It is, thus necessary to establish whether Kenya is doing enough to educate expectant women on proper pregnancy food and nutrition (K'Okul & Nordiska, 1991). It is during the study that information would be gathered to establish, the various food and nutrition insecurity situations, pregnant women are in.

1.7 Scope and limitations of the study

At the completion of this study, the overall awareness of food and nutrition security among pregnant women attending level five hospital was to be established; namely Pumwani Maternity Hospital. For this study, limitation was limited to the sample size in a single level five hospital, generalizing the findings and its validity considered a limitation in the research.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews different literature from various sources. The chapter gives a clear understanding, required to address the research questions in the previous section. There is also a conceptual framework reflecting the relationship existing between the identified dependent, independent and intervening variables, about the study.

2.2 The nutritional and food security status of Pregnant Women

Universally, according to medical experts, adequate nutrition before and during pregnancy encourages a long term health of both mother and her unborn child. In other words, during the course of pregnancy, adequate nutrition is important (Singh *et al.*, 2009), meaning birth weight of neonate as outcome of pregnancy relates to nutritional status of pregnant women; especially in the third trimester.

This was established in a cross sectional study, which was designed with the intention of measuring the women's nutritional status in the pregnancy' third trimester and to relate the birth weight of neonate as outcome of pregnancy. Participants were 500 pregnant women in the age group 18-40 years. They represent 7.5% of population. A lot of emphasis ought to be put on the enough nutrients since a nutrition education component, in the maternal health programs. According to Khoushabi and Saraswathi (2010) and Black *et al.* (2008), the enlightenment to expectant women, about food and nutrition security, encourages a healthy pregnancy outcome.

According to Baer *et al* (2005), maternal intake of protein, carbohydrates, micronutrients and fatty acids, for instance, zinc, magnesium, iron, calcium, vitamin C and riboflavin have

significant effects on the fetus' growth and perinatal outcomes. To avoid depletion of maternal stores, the mother's diet ought to provide be able to provide adequate nutrients (Khoushabi and Saraswathi, 2010). Healthy eating is important for all stages of life and especially during pregnancy. It is a time of making decisions on what to eat and drink as a person, but the diet to have an effect on the wellbeing of the unborn child.

Choices of what to eat and drink during pregnancy affect the life and health of the unborn, in its lifetime. It is therefore important to maintain maternal health, by a woman's good plan. Of what they eat during pregnancy, a pregnant woman lays foundation to the health and nutritional status of the baby she will deliver (Queensland Dietitians, June 2013). Women planning for pregnancy need to understand that the first one thousand days from conception are the most important in a person's life.

Conversely, according to Sukchan *et al.* (2010), developing countries, for instance, Bangladesh, China, Nigeria and Sudan and in different developed countries, for instance, the United States reported the macronutrient inadequacy as well as micronutrient intake among pregnant women. On the other hand, the Government of Kenya has come up with measure on how hunger and malnutrition will be reduced. It is doing its best to build self-reliance that is effective in reducing chronic food insecurity. Also, it has come up with measures that can assist those who are in need during emergencies. Linking reliefs that have longer- term development measures offer assistance in mitigating the potential future emergencies' impact (FNISP, 2011).

Self-sufficiency through knowledge, about food and nutrition security, is a way to help replace dependency on drugs, during emergencies during pregnancy.

A steady state system will have inputs minimized, resources cycling rather than flowing through, and enough output to support inhabitants, humans or otherwise as a way of base to better survival strategies. Inputs at home are in the form of food. Awareness programs of food and nutrition security are a way of being self-sufficient, eliminating dependency, especially by establishing a life-support system, to help through being knowledgeable.

The new born babies do not have antibodies that can protect them against disease, which a mothers' milk, give the babies. Other animals, unlike humans do not have milk quality high in fats (which are needed for nerve development. Making the infant get, 'nothing but the best', a nursing mother ought to practice solid and sensible health principles (Emmaus, 1980).

Pregnant Women among other people in the world face food and nutritional insecurity. According to FAO's most recent estimate, globally, it is indicated that 842 million people, making 12% of the global population were could not to meet their dietary energy necessities between 2011 and 2013, down from 868 million. This was reported for the 2010 – 2012 period in the 2014 report. It is in this report that around an eighth of individuals in the whole world are likely to be victims of chronic hunger; this suggests that they did not have food for an active and healthy life.

According to FAO (2013), the majority of hungry individuals are about 827 million individuals. Such people live in developing regions; areas that suffer from prevalent undernourishment are now estimated at 14.3 percent in 2011–13. Developing countries though registering significant progress towards the MDG 1 where hunger is targeted at annual decline and requiring immediate and considerable efforts to beat the state that has been prevalent over the past 21 years.

2.3 Food and nutrition security emphasis during pregnancy by way of Kenyan policy

Improving the women's health of reproductive age is more important, against the worrying health trends' backdrop among women. Nationally, 25% of women aged 15-49 are obese or overweight. Obesity and overweight are largely associated with some non-communicable dietary diseases. In this context a mention, has been done of awareness of food knowledge in the (KNNAP 2012-2017).

Some nutritional conditions that are of great concern among women incorporate micronutrient deficiency. The intervention strategies contributing to this tactical objective incorporate; conducting nutrition education on the healthy foods consumption during pregnancy in addition to, in pregnant women, strengthening supplementation of iron and foliate. Consequently, these activities will bring about reduced mortality, anemia, low birth weight, micronutrient deficiency and obesity'.

According to FNSP (2011), this policy was purposefully developed with the intention of adding value in addition to creating synergy to existing the governmental sectorial and different initiatives and partners; on food and nutrition security. The need for multi-public and private sector involvement is recognized by it. Because of this, the hunger eradication and nutrition improvement has become a shared responsibility of all Kenyans, and this covers the multiple dimensions of food security and nutrition improvement.

It is policy according to (FNSP, 2011) that all Kenyans, throughout their life-cycle should enjoy safe food in sufficient quantity and quality, all the time, in order to satisfy their nutritional needs for optimal health. The broad FNSP's objectives are meant for achieving good nutrition that encourages optimum health of all Kenyans and increasing the quantity and quality of food available. Also, it makes sure that the accessibility and affordability of food for all Kenyans at all

times is improved in addition to protecting vulnerable populations using the innovative as well as economical safety nets, which is linked to long-term development. Clearly, the policy together with associated actions will always be dynamic when it comes to addressing contextual changes and the changing conditions over a period of time. This policy is framed in the context of basic human rights, women's rights and child rights, and this includes the universal 'Right to Food'.

The (FNNSP, 2011) addresses associated issues of chronic, malnutrition, and the acute food insecurity together with the malnutrition's perpetuity associated with frequent as well as recurring emergencies, together with the critical linkages thereof. As a result, these issues are as quoted namely; food safety and food availability access, Standards and quality control, , school nutrition and nutrition awareness, nutrition information, food security, early warning, emergency management, institutional together with the legal framework, financing and strategic approaches for policy implementation, monitoring and evaluation and nutrition improvement.

2.4 Challenges in food and nutrition security education as in set policies

Data for rural areas in the 22 low-income nations indicate how a high undernourishment level was used as a food insecurity proxy is correlated with a low literacy level (NFNSP, 2011). Awareness programs on food and nutrition security would, help furthered programs to combat hunger. The programs would also act, as voice to air challenges faced to be food secure. Furthermore, in nature, program strategies are vertical and lack nutrition is assumed to be an outcome indicator. In a way, this would also bring the idea off handouts programs especially for pregnant women, as a supplement program, in the maternities. The policy makers as well as programmers ought to be sensitized on the causal malnutrition factors in addition to influencing them to address the malnutrition in a broad manner and holistic approach. Coordination and collaboration of the various sectors ought to be organized in relation to the nutrition objectives. In addition, some pieces of legislations, nutrition-related strategies, policies and guidelines ought to be urgently reviewed for them to be aligned with the current Kenyan Constitution (KNNAP 2012-2017).

According to NFNSP (2011), there is low understanding of link between the national food security, water and sanitation strategies and basic education on one hand and nutrition, especially among pregnant women. The World Food Summit that was hosted in 1996, provided the following significant definition of food security as being; the situation where, at all times, all the people can physically and economically access safe, sufficient, nutritious food for active and healthy life. This paper focuses on rural people who national education and development policies have neglected; meaning they remain insecure due ignorance on the subject. According to, The State of Food Insecurity Report, 2004, according to FAO (2005, pp. 28-29), also clearly gives, the strong collation between food insecurity and illiteracy and lack of education.

2.5 The Influence of Health care Workers on the Nutritional Status of Pregnant women

The biggest challenge for the maternal and neonatal care is the shortage of the skilled health care workers. A study by World Health Organization in 2006 shows that Africa has only 3% of the health care workers in whole world in relation to the 24% of the global diseases burden that is found in the continent. In general the world faces a 4.3 million shortage of health care professionals (World Health Report, 2006).

The short fall can be attributed to the lack of adequate investment in the health sector to include training and recruitment. This leads to a shift of the few skilled workers from the developing countries to the more industrialized ones in search of better pay. Another challenge is that locally trained workers will qualify from urban schools. They are reluctant to work in the rural areas due to the more hardships, basic living standards and lack of entrainment that they get used to during training years (United Nations Children's Fund, 2009).

According to WHO Preconception care (2013) pre-conception and pregnancy are the basic areas that can be used to improve the health state of the next generation Lack of adequate knowledge

among the professionals on the training they get about maternal health, to be passed on, to the expectant women which becomes remains detrimental to maternal health. It is important to invest on making sure that the nutritional training includes lifestyle changes so that the midwives and nurses are able to educate, the expectant women when they attend the clinics.

Health care providers in the study reported that they understood the importance of nutrition and lifestyle changes during pregnancy. They also said that the health facilities lacked the essential reading materials that they can use to advise the mothers on the importance of being healthy. They also did not have sample reading materials that they can give to the pregnant women to take home so that they keep reminding themselves on what is expected of them during this period. The recommendation was that nutrition and lifestyle changes for the modern mothers be incorporated into the training system instead of having to take a separate course on the same (WHO Preconception care, 2013).

Increased awareness and value attached to nutrition by pregnant women is a responsibility of the health care workers. A study done in Australia on pregnant women, reported that books and magazines were their main source of information. Women when asked if they understood the importance of taking omega-3 in their diet did seem to know its value. Meaning the information during the visits to the antenatal clinics to the pregnant women, would be an added advantage to reduce their ignorance (Ministry of Health Wellington, New Zealand, 2006).

Pregnant women do not take the significance of the materials provided to them if the health care workers do not emphasis on the importance. The role of midwives in pregnancy is highly valued since most of the women are said, to have confidence and trust that the midwives have the expertise, as part of their role. The midwives have some of the knowledge gaps that the women

need. The pregnant women given adequate information on food and nutrition security becomes vital, when taught as part of the midwifery curriculum. They are forced to be further sensitized, on nutrition if the shortcomings are to be reduced. This is advantageous to women, who rely on them (Arrish, Yeatman and Williamson, 2014).

Health education has an impact on the way the pregnant women take up the dietary changes needed in pregnancy. The messages need to be made simple and easy to follow but have constant reinforcement of the expected. Study in India reported that mothers took seriously nutrition education that was given to individuals unlike group counseling. Health workers need to take their time when the mothers come in for the antenatal clinics and teach them the dietary habits that are of benefit during the pregnancy (Garg & Kashyap, 2006).

The malnutrition causes incorporate multi-sectorial in nature and so it requires a broad range of actors which include; 'Planning (human development), Industry and Trade (food availability), Economy (purchasing power), Agriculture (food security), Women and Children, Development (family empowerment), Manpower/Workforce (productivity), Education (knowledge and skill) as well as Socio-culture (nutritional behavior)' (KNNAP, 2012-2017).

2.6 Determinants of food and nutritional security practices towards pregnant women

According to Lopez (2008), culture is defined as the acceptable way of the community life of people is very diverse all over the world. In terms of values, norms and behavior by people and the changes that incorporate changes in lifestyle and diet brought long term changes (Mazur, Marquis and Jensen, 2003). Moreover, in different regions of the world, pregnant women are forced to refrain from the nutritious foods because of the traditional food habits and this is regardless of whether the foods are available in abundance. For instance, by Patil *et al.* carried

out a research in India in 2010 and 63.7 percent of the research population confirmed that certain vegetables or fruits ought to be avoided by pregnant women (Patil *et al.*, 2010).

In 2008, a study was done in Tanzania which indicated in as much as women have some knowledge about the kind of food they should take and their significance; because of cultural beliefs and norms, they are not allowed to consume certain foods. The study indicated women had some knowledge about Vitamin A-rich foods stated that they were not healthier. Also, unlike other women, they believed that pregnant women should not consume a greater variety of vegetables (Keding and Krawinkel, 2008).

In Kenya, some cultures do not encourage consumption and eating, of some specific foods; compromising food and nutrition security status. This then becomes a human rights violation and should be discouraged. This particularly in the case of pregnant women where consumption of certain foods remain a taboo according to culture and tradition of certain tribes in Kenya .e.g. eating certain parts of a chicken is only meant for men; which are usually the more nutritious parts which is usually a bad dietary patterning especially, for a pregnant woman. Under the Constitution of Kenya; the Government is responsible for eliminating gender disparities (National Food and Nutrition Security Policy, 2011), but still remains weak to see this happening on the ground.

2.7 Culture as a barrier of to limit food and nutrition security, towards pregnant women

Culture, traditional knowledge and religion are a big part of the communities and guide what people eat and drink. (Mazzocchi, 2006). Food has a valuable symbol attached to it by different societies. Most religions also take part in guidance of diet. The periods of fasting and several

food taboos that are available make it difficult for pregnant women, in most communities of the world to adhere to proper nutrient and food intake.

In Sub-Saharan countries it is believed that complications of childbirth are due to violation of taboos including those related to food. (Meyer-Rochow 2009) where pregnant women are brought up with myths they uphold and it making it easy to attach importance to them during pregnancy. For example in parts of India the consumption of pawpaw is associated with abortion. If pregnant women take it they lose their pregnancies and therefore they avoid it as much as it is a healthy fruit. A common belief in traditional culture is that of eating down. Women are advised to eat less so that they do not end up with big babies and have complicated deliveries. This practice is likely to lead to malnutrition in both the mother and baby (Alonso, 2015, p. 20).

2.8 Social economic factors of food and nutrition security affecting pregnant women

Marriages in developing countries also, begin earlier with most girls getting married at menarche. The earlier the woman gets the baby the more predisposed they are to work harder to maintain the family. Hard labor in pregnancy leads to delivery of babies who are of low birth weight, with small head and arm circumferences. The baby is prone to diseases hence difficulty in growth and development. This leads to a baby with stunted growth and that translates to slow intellectual development as well. A child with decreased potential to study and excel leads to a perpetual cycle of poverty and malnutrition.

If the child was female they end up in another early marriage with little knowledge on how to take care of themselves and the children they bear. A mother who has more children with a low income is at risk of not considering herself when budgeting for food hence she ends up eating what is available. Instances are that the expectant woman does not also have money to visit the

hospital or to buy any supplements that are prescribed by the doctor in case of deficiency. A pregnant woman's know, legibility, economic stability, brings forth to adapting to food and nutrition secure dietary patterning to herself and her unborn.

Pregnancy brings along some health conditions that influence the way the mother feeds when expectant. Some of the conditions are; morning sickness, which is associated with nausea and vomiting hence the mother, is unable to keep food down. This condition can lead to deprivation of electrolytes during the vomiting as well as imbalanced diet (Deppermann, 2012).

Gestational diabetes or women who had it, at pre-conception, always stand a chance, to be at risk of diet problems. Having the disease makes control of diet more difficult since some of the pregnant women; have to be on medication to manage it (Gaither, 2015). Some of the foods that are healthy and a necessity in pregnancy may be restricted in pregnancy like intake of fruits because of their sugar and starch. This can be well done through education on nutrition and food security; with awareness programs availed to her during pregnancy in the clinics.

Lifestyle is a problem in pregnancy that needs a lot of concern. Some of the issues that can face women include; exercise, most women worry about what activity to do and what not to do, whereas some are not active at all. Moderate aerobic exercise is recommended for the women to be active and to keep weight gain in control, during pregnancy. Alcohol and drug abuse is also a problem. Women who are addicted to these substances are not in a position to balance their diets and nutrients for the sake of the pregnancy.

Alcohol and some other drugs are able to cross the placental barrier hence the blood content of the drugs in the expectant woman, is the same in content for the fetus which is not healthy. The neurological and behavioral growth of the fetus is affected as early as intrauterine. The infants

are born with withdrawal symptoms, irritability, weak suckling, disturbed sleeping and poor absorption of nutrients which leads to poor health, growth and development (Ministry of Health of New Zealand, 2008).

2.8.1 Financial status of pregnant women

Low income women comprehend the significance of a good diet, especially during pregnancy, but the lack of the finances and social problems hinder them from achieving it. The access of good food that is affordable is more important than the education about nutrition that the mothers receive (Mustapha, Ademulegun and Ogundahunsi, 2010).

Most pregnant women, do not place importance in balancing the diet but in ensuring they have something to eat at the end of the day. Lack of income means that there are days that the meals are not available and that predisposes that mother and the unborn child to malnutrition. The age of the pregnant woman also affects her ability to make money. A woman that gives birth at an early age has lower chances of getting well-paying jobs hence low income, making her have less bargaining power for essential commodities.

2.9 Theoretical Framework

Several theories used to explain food and nutrition security awareness among pregnant women. Structural functionalist theory and feminist theory (feminism) are the major contemporary sociological theories, used in this study, to analyze the status of women and men in society; to influence their awareness of food and nutrition security.

2.9.1 Feminist Theory (Feminism)

Feminism refers to recognition as well as critique of male supremacy combined with strategies to change it. Feminist theory was first developed back in the 1970s. It was as a result of thoughtful changes in experiences of women and situations that brought about a political movement, which challenged the dominant explanations of subordinate positions of women in the society (Always, 1995) which is basic of all feminism theories. Feminist theory is also known as core feminist theory.

Judith Grant's *Fundamental Feminism* (1993) as a contribution to the feminist theory's clarification and politics states that double standards makes; male domination is a disservice. Also, she has several significant and insightful things to say, in relation to her critique of what other people thought of about feminism and also in her suggestions of how the problems ought to be rectified without the opposition's central organizing principle to the male supremacy's social relations, as an account is best ineffective.

At worst, it is a feminist politics' distortion in the name of 'feminism.' Her main responsibility is to provide a critique of what she perceives as 'the core feminism concepts.' She characterized this as: '(1) "Woman", (2) personal politics' Grant, 1993, and (3) experience: 4). In as much as she does not openly say so, the way she has used the term 'Woman' (rather than 'women') is seemingly intended to denote that the early radical feminist insistence on 'the oppression of women as women' was a homogenizing construct that did not focus on the differences between and among women.

This theory is not in a position of subscribing to the differences between men and women and at the same time the similarities between men and women, (Acker, 2006). Also, it neither refers to excluding men nor only furthering causes of women. Women's causes may be like implementation and prioritizing on funding, food and nutrition of awareness programs; for pregnant women in the clinics. When emphasis is put to set up awareness programs of this nature, maternal health education stands to become beneficial for the, pregnant woman and vice versa.

Feminist sociologists, for instance, Smith (1926), discussed the "relations of ruling," "generalized, anonymous, impersonal texts," as well as "local actualities of lived experiences." Smith managed to examine women's experiences as it built its analysis of day-to-day life and relations of the ruling from the perspective of women. Smith pay much attention to the actual people's activities, the experiences they have, and the comprehension of people about the social world which they live. Smith considers herself not to be an ethno methodologist or integrationist; her concerns together with methods are similar to some writers using these approaches. So it is with this ground that food and nutrition security knowledge becomes vital, during pregnancy but remains and can only be done through awareness programs (Smith, Dorothy 1990).

Feminism is the micro-social order, which seeks to expand Karl Marx's theory of capitalism. It seeks to analysis economic production, generally to the social production, which include the household, religion, the state together with the sexuality. This comes from both its unfinished nature together with shifting points of emphasis of Marx across his lifetime. What is more, the work of Marx, nevertheless, was unquestionably on the historical inequality basis, as well as

precisely inequality under capitalism. The capitalist system of critiques according to Marx - its tendency towards crises in addition to emphasizing the need for inequality, which is relevant today.

A major topic of great concern for such theorists is the gender ideology's production as well as reproduction. The feminist sociologists who have managed to research about the micro-social order pay much attention to the role of gender in day-to-day interactions in addition to the different meanings that men and women have regarding specific situations. Similarly, according to Ransdell (1991), main significance to feminist theory is not just focus not on the issues of women, but also how the theory has been dealing with these issues in a way that challenges, counteracts, or changes a societal that does value women. It is in this context, the food together with the nutrition security knowledge has become vital for pregnant women, though this is hampered because of lack of its inaccessibility and funding.

2.9.2 Individualist, or Libertarian Feminism

Individualist feminism relies on individualism or libertarian philosophies. The individuality's view has been trying to comprehend how people are not allowed to achieve the liberal society's promises given the society's structural constraints (Eisenstein, 1986). The primary focus is the individual autonomy, liberty, rights, diversity and independence. Also, individualist Feminism is likely to widely encompass men in addition to focusing on the barriers, which that both men and women have been facing because of their gender. All this is meant for explaining the roles of women in the society affecting food and nutrition security. Their bargaining power to have policy and funding to help put adequate programs for them during pregnancy is also affected due to aspect of double standards.

For instance, throughout the developing world beliefs regarding biological unsuitability of a woman for other than domestic roles have brought about restrictions in terms of opportunities for education in addition to achieving literacy. Such restrictions consider men to be the guardians of

what has been written, disseminated, as well as interpreted about gender and the men and women placement in the society. Until recently, from the androcentric point of view, the history has been recorded that ignored the other half of humanity (John Stuart Mill, 1869). In this regard policy and allocating funds for awareness; programs on food and nutrition security would be minimal, due to women's placement in society.

2.9.3 Ecofeminism

Ecofeminism refers to a theory, and it works based the basic principles in which patriarchal philosophies are assumed to be dangerous to women, children, as well as other living things. The Ecofeminism, which is also known as ecological feminism, is a branch of feminism that is responsible for examining the connections between women and the nature. The name of this theory was coined by French feminist Françoise d'Eaubonne in 1974. This correlates to cultural practices that prohibit the eating of certain foods; especially for African women. Parallels are drawn between how the society treats the environment, resources and animals and how it treats women. Eco-feminists, in the resisting patriarchal culture, believe they are resisting plundering and destroying of the Earth.

Ecofeminism refers to patriarchal society as a structure that has developed over last 5,000 years, as it considers matriarchal societies (a society where females are known to be the center of the societal roles and structures) to be the main hierarchy. This theory being relevant explaining the status of women, in our society and the role they play in their choice of food and nutrition especially during pregnancy.

2.9.4 Structural functionalism theory

All societies have been structured around fairly stable patterns. The patterns have brought about how the social interaction ought to be conducted (Lindsey, 2011). The single greatest contributor, together with practitioner, of the structural functionalism was Talcott Parsons (1902-1979). The heart of Parsons' theory relies on the four functional imperatives, which are referred to the AGIL system: The Adaptive function, in which a system will definitely adapts to its environment, the Goal-attainment function, for instance, how the system defines in addition to achieving its goals, the Integrative function, or the components' regulation of the system and latency, or pattern maintenance function, for instance, how motivation together with the dimensions of culture have been creating and sustaining motivation are being stimulated.

For this to be complemented, there are *four action systems* that are of great significant. Each system serves as a functional imperative: the *behavioral organism*, which is responsible for performing the adaptive function; the *personality system* that has been performing goal attainment; the *social system* which is responsible for performing the integrative function; and the *cultural system*, which is responsible for performing the pattern maintenance. Parsons saw these action systems, which was acting at different analysis levels, starting with the behavioral organism as well as building to the cultural system. Moreover, hierarchically, he saw these levels each actions system had lower levels for providing the impetus for the higher levels. On the other hand, the higher levels were controlling the lower levels.

Among the most significant social structures that have been responsible for organizing the social interaction is status a category or position a person occupies that is an important determinant of how she or he ought to be defined and treated. Statuses are acquired by our achievement, through

our own efforts, or even by ascription, being born into them or obtaining them involuntarily at different other point in the life cycle. A number of statuses are simultaneously occupied by us, and this refers to a status set, such as mother, attorney, daughter, patient, passenger and employee.

Compared to the achieve statuses that occur later in life, ascribed statuses are assumed to be those that immediately impact virtually all aspect of our lives. These statuses are food and nutrition awareness programs' implementation for the pregnant women and prioritizing on their funding. The most significant ascribed statuses incorporate gender, social class and race. Though statuses are simply a position in the social system, it ought not to be confused with prestige or rank. There are several high-prestige statuses and low-prestige statuses. For example, in the United States of America, physicians have been occupying the status ranked higher in the prestige, unlike secretaries. All societies classify members based on their statuses. Then, the statuses are ranked in some fashion; hence, creating a social stratification system.

2.9.5 Summary of theoretical framework

Pregnant women need awareness about food and nutrition security, especially during and after conception. Knowledge about food and nutrition security will only help enlighten them about their dietary patterning. Nutrition in pregnancy is a great concern because; it is during pregnancy, that it is significant to eat healthy, with the diet, which that provides adequate balance of vitamins and nutrients for the mother and the baby. Making smart food choices are paramount to ensure the mother gets quality foods rather than quantity. A good diet is not only significant in the growth and development of the baby, but it serves as the basic determiner of what and how the baby will be, in its life (Winnie 2014).

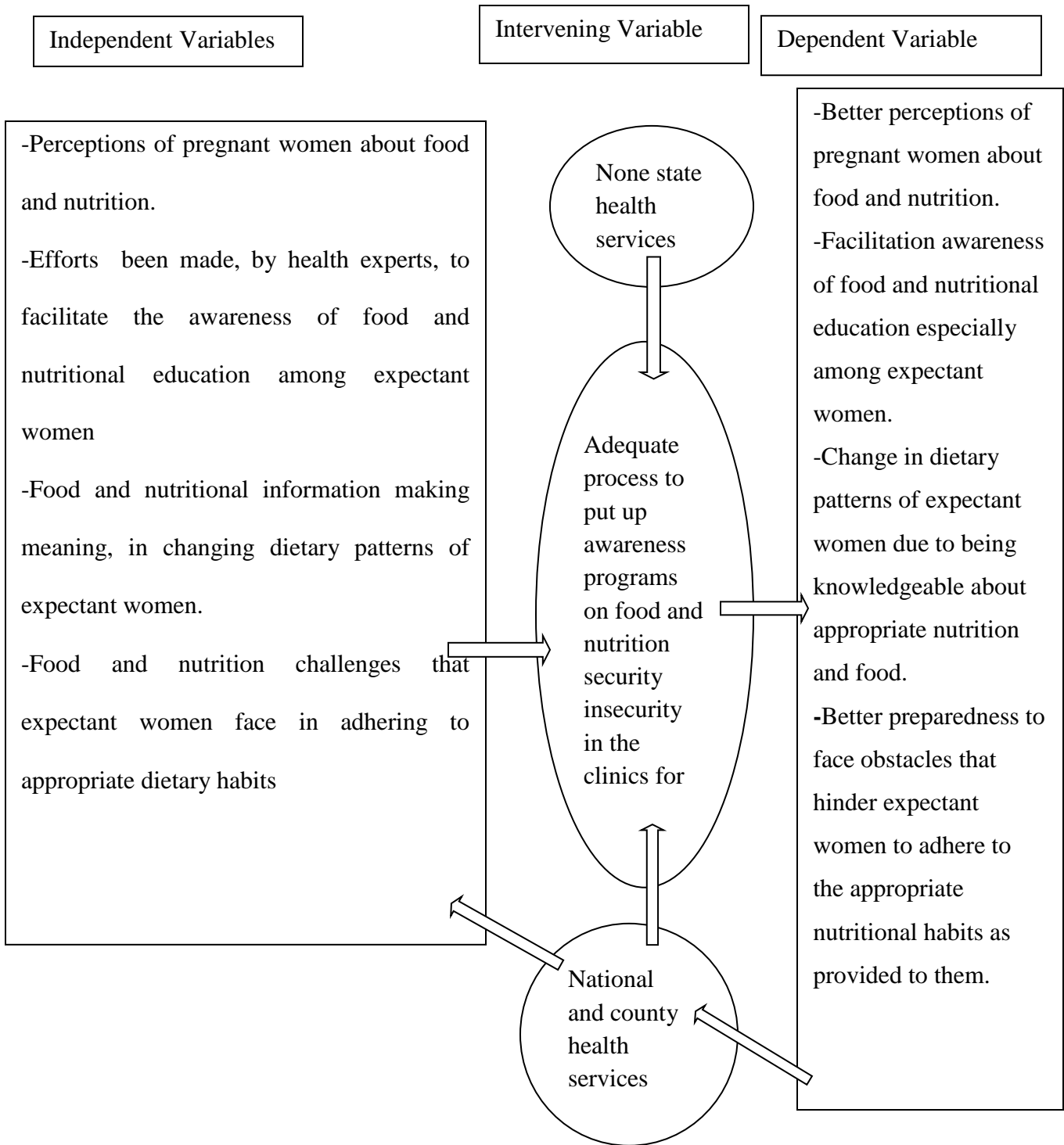
Knowledge on the different classifications of food is vital in contributing to ensuring, pre and post neonatal health. Nutritional education and counseling remains very key to an improvement in the overall health of both mothers and their unborn babies, as well as the future health status of the baby. (Bedah, 2012). There is concern over whether expectant women are adequately informed of the safety of the food and nutrition, and if they keenly adhere to the safety standards, that should be followed as set during programs in the clinics (Shanklin, 2000).

In the context of this study, the theories, namely functionalist theory and feminist theory which is a contemporary sociological theory explain the attitudes, behavioral intentions and subjective norms in influencing pregnant women, make particular food and nutrition choices, according to their perceptions and knowledge available to them. Policy making and their bargaining power in a society structured, to cater for their needs is what the theories help explain.

2.10 Conceptual Framework

The conceptual framework presented in figure 1 illustrates the relationship between the independent variables being, the perceptions of pregnant women about food and nutrition, efforts been made by health experts to facilitate the awareness of food and nutritional education among expectant women food and nutritional information is making meaning, in changing dietary patterns of expectant women and food and nutrition challenges that expectant women face in adhering to appropriate dietary habits. The dependent variables as the outcomes of independent variables, intervened by proper policy put in place to increase programs for pregnant women, about the same.

Figure 2.1 Conceptual Framework



CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The following chapter pays much attention to procedures that were followed during data collection. This included site selection and description, research design, unit of observation and its analysis, target population, sampling design method, and delivery.

3.1 Site selection and description

This study was carried out at Pumwani Maternity Hospital (PMH). The exact location of this hospital is Nairobi and it is a county Maternity General Hospital (NHCWMP2008-2012). According to the (Ministry of Health) 5.1.3.5. Pumwani Maternity Hospital is a Level Five provider of clinical health services in the Province. The hospital is a 15 minutes' drive from city centre Nairobi. It is situated in Eastleigh Area. This hospital is a major referral center for obstetric cases, located on the east of the Kenyan Capital. The Hospital was founded in 1926 by a Charitable Organization called Lady Griggs Welfare League and was named Lady Grigg Maternity. In 1928 the first permanent building was put up at the Hospital and later some extensions were made that allowed the Hospital to have a bed capacity of 27. Today, it is an Obstetric and referral hospital that caters mainly to the women's needs from lower socio-economic status in Nairobi, and adjoining districts. It has 354 Obstetric beds, 2 Theatres and 144 baby cots. Caesarean Sections are 10 – 15 and Daily normal deliveries are 50 – 100 (Save the Cradle 2013).

3.2 Research Design

The use of descriptive research design was adopted in this study, which determines and reports the way things are and existing in relationship to variables or conditions in a situation (Mugenda & Mugenda 2003). According to Robson (2002), the descriptive research shows an accurate individual profile, events, or situations. Creswell (2003) observes that a descriptive

research design is used when data are collected to describe persons and organizations. It describes awareness of food and nutrition security among pregnant women, in Nairobi Pumwani Maternity. The researcher considers this design as appropriate since it facilitates gathering of reliable and accurate information.

3.3 Unit of analysis

According to Schutt (1996), a study's unit of analysis is the level of the social life that the research questions focus. The unit of analysis is the entity under study and this can include people, social roles or positions and relations (Singleton,1998). In this study, unit of analysis was; the awareness regarding food and nutrition security among pregnant women at Nairobi Pumwani Maternity Hospital, a level five hospital

3.4 Unit of observation

For this study; the unit of observation were the pregnant women at, Nairobi Pumwani Maternity Hospital (Mugenda and Mugenda, 2003) describes the unit of observation as the subject, or entity for which a researcher measures its characteristics or obtains data as required.

3.5 Target Population

The study total population was the pregnant women attending Nairobi Pumwani maternity hospital remaining at infinite. The total population remained unknown, because of the recent merger of devolved medical practitioners, from the Ministry of health, to the state county hospitals. This has also accommodated for the expansion of the wards to carter for more patients in the county clinics. According to (Mugenda and Mugenda 2003), target population is the population or objects that the researcher is interested about, in this study is the pregnant women

in and which the sample will be selected from. The target population is also used to generalize the study and forms part of the total population (Joan Castillo, 2009).

3.6 Sampling

3.6.1 Pregnant Women

A sample was established as being all pregnant women at the exit points, after receiving their treatment in the facility, at the time of the study. These are women conveniently selected, as they left, during their visits in the hospital. It assumed they are psychologically and physically stable, to answer questions on food and nutrition security, with the study adopting purposive sampling and random sampling technique to get the sample size. At the hospital, the actual data collection took 10 days and it at the same period that the researcher met the respondents. This was estimated at approximately 80 pregnant women in the hospital. The sample selection of respondents by the researcher was based on characteristic that match this research (Patton, 1990).

3.6.2 Key Informants

Non random sampling used was purposive sampling for the key informants during the data collection.

3.7 Tools for data collection

This section elaborates the various tools that were used in data collection. These were namely quantitative and qualitative tools for data analysis used as primary data for both respondents and key informants respectively. According to Bryman (2008), data collection is used represents the most important points of the research project. Data collection incorporates, from the sample, gathering data to assist in answering the research questions, and this is based on dependent and independent variables. This helped give a general view on food and nutrition security awareness programs among pregnant women at Pumwani Maternity Hospital.

3.7.1 Respondents

Data collection entailed the use of questionnaires for the respondents who were the pregnant women at the exit points using purposive sampling of expectant women. An investigation that is face to face contact to the persons in question, with the help of a field assistant and another person to help translate the collection data tool. This was taking into consideration that most women would not understand most of the hard terms in the questioner like “food security “because majority of the women who delivering at Pumwani Maternity Hospital come from low S.E.S. The field assistant was specifically hired to help the smooth flowing of the data collection.

3.7.2 Key Informants Interviews

6 Key informants supplemented the data collection, with the use of a comprehensive interview guide. The key informants that have been used in this study were health workers, who work at the Pumwani Maternity hospital. These were namely 1 clinical officer, 4 nurses and 1 midwife. They were purposively selected in relation to their academic as well as professional experience and an interview guide was most appropriate.

3.7.3 Secondary sources

Secondary data means data are already available for this research. This referred to the data that have already been collected as well as analyzed by another person. According to Kothari (2004), the Secondary data are either published data or unpublished data.

3.8 Methods of Data Analysis

The data collected was analyzed with the help of quantitative and qualitative methods. Also, the data from questionnaires and interview guides were subjected to computation of simple statistics such as frequencies, totals and percentages which were presented in tables .The SPSS (Statistical

Package for Social Science (version 19) program was most appropriate for the analysis of this research.

3.9 Ethical Considerations

This researcher observed ethical issues as far as data collection was concerned. The researcher sought authorization from the University of Nairobi, Kenya National Hospital ethics research committee, in carry out the research. Consent from the respondents was to be sought in advance and high privacy, confidentiality and dignity being maintained during data collection. Cultural and religious considerations, affecting those in involved, was upheld throughout the research.

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

The broad objective of the study was to investigate the awareness of food and nutrition security among pregnant women, during antenatal care at Pumwani Maternity Hospital, Nairobi, Kenya. To achieve this objective, four specific objectives were set; to examine the pregnant women's perception about food and nutrition, to establish whether efforts are been made, by health experts to facilitate the awareness of food and nutritional education among expectant women, to establish whether food and nutritional information is helping change dietary patterning of expectant women and to assess the food and nutrition challenges that expectant women face in adhering to appropriate dietary habits.

This chapter thus contains the results, discussions and presentation of the findings of the study. The study targeted the pregnant women at the exiting after receiving their treatment, at Pumwani Maternity Hospital. Questionnaires were administered to the pregnant women and an interview guide to the key informants who are clinical staff that attended the women. In order to simplify the discussions, tables were provided by researcher, which summarized the collective response's reactions from the pregnant women together with key informants.

4.2 Response rate

Detailed questionnaire were designed to establish answers to the research questions. To make the analysis more comprehensive a total of 80 questionnaires were distributed administered to the pregnant women and 6 interview guides to the key informants. 52 for pregnant women due to the low turnout during the strike period because of unpaid salaries by health experts making systems

go slow and 6 for key informants filled and returned and this was a response rate of 65% and 100% respectively considered satisfactory for the study. The results are shown in Table 4.1

Table 4.1 Response rate

Categories	Questionnaires distributed	Questionnaires filled and returned(n)	Percent (%) return rate per category
Pregnant Women	80	52	65
Key informants	6	6	100
Total	86	58	165

This response rate was good as well as representative and conforms to the Mugenda and Mugenda (2003) stipulation that the response rate of 50% is significant and adequate for analysis and reporting; a rate of 60% is good while 70% and above excellent. The questionnaires that were not returned were due to reasons like, the respondents not being in a position of filling them in or were not willing at that time. With persistence follow-ups, they did not have positive responses. The response rate shows the respondents' willingness to participate in the study. The response rate was therefore adequate for the study to make generalization.

4.3 Demographic and social information of respondents

The study sought to establish the respondents' demographic information, which included their age, religion, highest formal education level and marital status. Information on their age was crucial as it presents their maturity and ability to make decisions on antenatal care and pregnancy requirements, religion was important since it shows the religious beliefs associated with pregnancy and eating habits, level of education was necessary as it gives the really information on how to understand how pregnancy should be maintained through proper observance on food and nutrition, number of children showed the experience in child bearing and employment status showing the affordability of the required food

and nutrition with their usual nature of work affecting the antenatal care. The results are as presented in Table 4.2.

Table 4.2 Social Demographic of respondents

Variable	Demographic information	Freq (n)	Percentage(%)
Age	Below25yrs	41	78.8
	26-31yrs	10	19.2
	32-37yrs	1	2.0
	TOTAL	52	100
Religion	Christian	45	86.5
	Muslim	5	9.6
	African traditional	2	3.9
	TOTAL	52	100
Formal education level	Primary education	20	38.5
	Secondary education	18	34.6
	College level education	14	26.9
	TOTAL	52	100
Marital Status	Single	7	13.5
	Married	45	86.5
	TOTAL	52	100
Number of children out birth	1-3children	43	82.7
	4-5 children	9	17.3
	TOTAL	52	100
Employment Status	Employed	5	9.6
	Self-employed	15	28.8
	Unemployed	32	61.6
	TOTAL	52	100
Household Size(Number of family members)	1-3people	11	21.2
	4-5people	37	71.2
	6-7people	4	7.6
	TOTAL	52	100

The results of the findings depicted in table 4.2 show that 41(78.8%) of the respondents were of age bracket below 25years and available during clinic hours.This hospital was taken as a sample of the whole of kenya hospitals, therefore on average women below 25 years are most vulnerable to be expecting a child. The finding from the research further showed that 45 (86.5%) of pumwani pregnant women are christians. Moreover,these being 20 (38.5%) having primary level as their highest formal education level which shows that most of the pregnant women in Pumwani hospital had high leveled education. Results from the study also show that the pregnant women in Pumwani hospital who responded were married.i.e 45 (86.5%) and that they mother 1-3 children 43 (82.7%). Results from the findings also indicated that a number of these women are unemployed and can therefore conclude that most of the pregnant women at Pumwani hospital are housewives.Further, the pregnant women responded that their family size consisted of 4-5 people 37 (71.2%) and therefore suggests that average family size in kenya consist of 4-5 members.

According to the findings, a large number of pregnant women pursue the christian faith and this could be explained due to the fact that Christianity is most wide spread religion in Kenya. Low levels of education of pregnant women potrayed in the results of the study indicate high illetracy levels which can be attributed to their low living status, unequal access to opportunities and therefore access to education is a major challenge for these women. All these factors explain the high levels of unemployment among these women. According to United Nations, (2014), women do not face equal access to the productive resources, for instance land, economic gendered division of labor attributed to low levels of education resulting to indecent wage employment and general poverty.

4.4 What the perceptions the pregnant women have about a well-balanced diet during pregnancy

The study's first objective was to establish perception of pregnant women on food and security. The key elements highlighted included their perceptions about maternal balanced diet, culture and religious dictates on food to affect maternal feeding, perception on quantity of food intake during pregnancy, perception on relevance of food reserves during pregnancy and household size effects on quality and quantity as need during pregnancy. The respondents were expected to answer with no or yes to the questions presented. The results are shown as in Table 4.3

Table 4.3 what the perceptions the pregnant women have about a well-balanced diet during pregnancy

Statement	Yes		No		TOTAL	
	Freq(n)	Pert%	Freq(n)	Per(%)	Freq(n)	Per(%)
Felt a well-balanced diet especially for pregnant women was vital for the unborn	40	76.9	12	23.1	52	100
Weather culture dictates on what she should eat during pregnancy.	7	15.4	45	84.6	52	100
Perception of weather high quantity of food intake, matters during pregnancy.	35	67.3	17	32.7	52	100
Perception of weather a pregnant woman should have enough food reserves, to keep her going.	40	76.9	12	23.1	52	100
Perception of weather household size affects or plays part in quality and quantity of food on the table available for the pregnant woman.	30	57.7	22	42.3	52	100
Perception of weather a pregnant woman has a budget for food set aside.	10	23.8	42	76.2	52	100
Perception of weather education about food and nutrition security in the clinics can help change dietary patterning, during pregnancy.	40	76.9	12	23.1	52	100

Based on the findings, pregnant women felt that a well-balanced diet especially for them was vital for the unborn with 40 (76.9%) responding positively. Moreover, 35 (67.3%) of the women stated that high quantity of food intake matters during pregnancy, 40 (76.9%) said it is necessary for them should have enough food reserves, to keep them going during this period, and 30

(57.7%) of them stated that household size affects or plays part in quality and quantity of food on the table available for the pregnant woman. 40(76.9%) responding that nutrition security and that this education offered in clinics can help change dietary patterning especially during pregnancy.

These findings are supported by Queensland Dietitians, June (2013) work that choices of what to eat and drink during pregnancy affects the life and health of the unborn, in its lifetime and that a pregnant woman lays foundation to the health and nutritional status of the baby she will deliver and therefore it is crucial to have a well-balanced diet. Further, the study indicated that the pregnant women at Pumwani hospital considered that high quantity of food intake, matters during pregnancy and that they need to have enough food reserves to keep them going.

However, minority of pregnant mothers at Pumwani Hospital 8 (15.4%) only considered having a budget for food set aside during pregnancy as a key element since mothers who have more children with low income are at risk of not considering themselves when budgeting for food hence ends up eating what is just available. Moreover, the findings depicted in the study revealed that culture and religion had less influence on what pregnant women ate with only 10(23.8%) responding that it dictated on what they ate. This is due to the fact that majority of the women who attend clinic checkups in the hospital reside in the city and therefore culture has less influence on what they decide to eat as opposed to those who live in rural areas.

4.5 Views of how often awareness programs on food and nutrition security should be availed in the clinics

/This study sought to establish food and nutritional information as a contributory factor to help in changing dietary patterning of expectant women. These entailed the response of the expectant

women; on availability of awareness programs on food and nutrition security in the clinic, hygiene in food consumed during pregnancy, availability of food, checking of food expiry and consumption of food with mark of quality (KEBS). The respondents were expected to answer with a no or yes to the questions presented. The results are presented as in Table 4.4.

Table 4.4 Views of how often awareness programs on food and nutrition security should be availed in the clinics

Statement	Yes		No		TOTAL	
	Frequency	Per%	Frequency	Per%	Frequency	Per %
Response whether food and nutrition Security Information was available in the media	40	76.9	12	23.1	52	100
Response of whether hygiene in food you eat during pregnancy is a key factor	42	80.8	10	19.2	52	100
Response of whether there is always enough food to eat especially during pregnancy	20	38.5	32	61.5	52	100
Response of whether checking of food expiry is important especially during pregnancy	20	38.5	32	61.5	52	100

The study results indicated that majority of the pregnant women stated that food and nutrition Security Information available in the media and that hygiene in food they consume was a key element with 40 (76.9%) and 42 (80.8%) responding positively respectively. However, 32 (61.5%) of them stated that there was always not enough food to eat. Results from the findings further indicate that 32 (61.5%) of pregnant women in Pumwani Hospital neglected duality of food as majority of them did not consider consuming food with a mark of quality from KEBS

vital and also 42 (80.8%) of them said they were not keen on checking expiry date of food products.

Inability to check food expiry is brought about by negligence and high illiteracy levels causing them to care less on the quality of food they consume. The challenge of inadequate food is majorly influenced by their low living standards as most of the pregnant women who attend clinic at Pumwani Hospital live from hand to mouth and hardly have enough to feed their families and themselves as well.

4.6 Food and nutrition security challenges that expectant women face in adhering to appropriate dietary habits

Another objective was to come up with food and nutrition security challenges that expectant women face in adhering to appropriate dietary habits. These entailed perception of accessibility of food, whether religion dictates on food and nutrition, accessibility of food market with variety to suit pocket friendly needs especially during pregnancy. In this, the respondents were expected to answer with a no or yes to the questions presented. The results are presented as in Table 4.5.

Table 4.5 Food and nutrition security challenges that expectant women face in adhering to appropriate dietary habits.

Statement	Yes		No		TOTAL	
	Freq(n)	Per(%)	Freq(n)	Per(%)	Freq(n)	Per(%)
Response of whether food is easily assessable during pregnancy	15	28.8	37	71.2	52	100
Response of whether religion dictates food and nutrition during pregnancy.	10	19.2	42	80.8	52	100
Response of whether food market is easily accessible with variety to suit pocket and needs, especially during pregnancy.	9	17.3	43	82.7	52	100
Response of whether food supply is stable and pocket friendly.	5	9.6	47	90.4	52	100

Table 4.4 above gives results on food and security challenges that expectant mothers face in adhering to appropriate dietary habits. 37 (71.2%) of the pregnant women point out that food was not accessible, in addition, 43(82.4%) stated that food market did not give food variety that suit pocket and needs and 47(90.4%) indicated that the food supply was not stable as well as pocket friendly.

This study therefore indicated that these were the major challenges faced by pregnant women as they try to access food. Pregnant women that attend clinic services at Pumwani Hospital are from S.ES. With a majority of them living below the poverty line; thus finding it hard to put food on the table with three main meals in a day. This is emphasized by Mustapha, Ademulegun and Ogundahunsi, (2010), in their research stated that low income women are in a good position of

comprehending the significance of a good diet during pregnancy, but the lack of the finances and social problems hinder them from achieving it. The access of good food that is affordable is more important than the education about nutrition that the mothers receive.

4.7 Responses of how often awareness programs about food and nutrition security are made available in the clinics

To determine the availability of awareness programs about food and nutrition security in the clinics, the respondents were requested to show the frequency of awareness programs they received on food and nutrition security in clinics as either once during the pregnancy visit, often during pregnancy visit or never given during pregnancy visit. With the responses given by the women forming a base as to whether; they had already experienced indicators of food insecurity. Food and nutrition security education is vital for both mother and child and it is known for establishing a life-support system, to help through being knowledgeable.

The results indicated that 90.4% of the pregnant women indicated that awareness programs on food and nutrition security should be often during pregnancy visit and 9.6% recommending that a one off program was vital This indicates that pregnant women know the significance of having some knowledge about food and nutrition security and that this is a key element that should be offered in clinics. Awareness programs of food and nutrition security are a way of being self-sufficient, eliminating dependency, especially by establishing a life-support system, to help through being knowledgeable.

Nutrition awareness programs are significant considerations when it comes to optimizing women's health of reproductive age and the pregnancy outcomes. These programs are of great significant as they target at improving subjects' dietary intakes by encouraging behavioral

changes food choice and cooking ability, goal-setting, motivation, and support the efforts for a change. Pregnant women ought to be exposed to the health topics in addition to being encouraged to take part in the health promotion programs since this will promote healthy eating habits; hence, achieving optimal nutritional status (Shihundu, 2012).

4.8 Response of benefits of awareness programs on food and nutrition security for the expectant women during their antenatal visits by the Key informants

The qualitative data from the key informant interview was used to corroborate the quantitative data from the respondents. According to the Key Informants who responded to the interview guide of the study, on awareness programs on food and nutrition in the clinics as made available in the clinics; a clinical officer then said:

“They played part in the general improvement in dietary patterning, for women since they became more knowledgeable about food security”.

According to this nurse, there was a need for formulating solutions to different crises that women are facing, nurses were going to act more effectively in addition to achieving a long lasting result by considering specific situations that affect girls and women (Asian Development Bank, 2013).

“Some women were faced challenges adhering to the education on food and nutrition security due to financial constraints”.

Marriages in developing countries; with Kenya in contest begin mostly, earlier with most girls getting married at menarche. The earlier the woman gets the baby the more predisposed they are to work harder to maintain the family. She sacrifices for the family to the extent of not having money to visit the hospital or to buy any supplements that are prescribed by the doctor in case of deficiency. A woman’s economic instability leads to skipping of antenatal visits and therefore

that insecure dietary patterning to her (Smith, 1990). According to what some two nurses statements:

“Pregnant women were not keen, in playing the role of general improvement in dietary patterning during their pregnancy; due to insufficient knowledge and awareness of the need to handle pregnancy nutrition with care”.

This implies that clinics have administered awareness programs on food and nutrition security to the pregnant women and probably they are not effective as soon in their lives, due to obstacle they faced in their pregnancy. Furthermore, these program strategies, in nature, are vertical and as an outcome indicator, they lack nutrition. According to another nurse’s statements:

”The programs are sometimes not adequate enough and unfunded and so sometimes scanty and not exhaustive with sometimes women just given a small talk that is done on individual basis as they attend clinics.”

In a way, this would also bring the idea off handouts programs especially for pregnant women, as a supplement program, in the maternities. There was also a feeling by a midwife that

“Pregnant women do not take the significance of the materials provided to them during the availed awareness programs on food and nutrition security.”

Meaning the health care workers do not emphasis on the importance of significant materials during given during the awareness programs (Rush, 2000);for the general good of the fetus. The programs also acting, as voice to air challenges faced to be food secure, especially for the unborn as they help combat hunger.

4.9 Suggestions to help improve the status of future awareness programs on food and nutrition security

With a number of challenges presented in maintaining food and nutrition security for pregnant women, key informants were asked to suggest way forward to further awareness. In response the Key informants four of the nurses felt that

“there should be more financing for startup programs as opposed to financing the existing programs since it would be cheaper and easier than for startup programs, as addressed to those involved”..

Another key informant a clinical officer also suggesting

“Significant materials being put in place, interpretation easy for the expectant women during the educative sessions by the clinical officers and those in charge in administering the programs in the clinic.”

This being due to the fact that most women attending clinic in Pumwani maternity are mostly illiterate or semi illiterate and thus making the learning process simpler

“With the programs developed in such a way that they are simple and easily understood by those women laying emphasis in the simplicity of hand out materials for demonstration purposes to them” Which was as suggested by one key informant a midwife.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the findings' summary in section 5.2, conclusion of the study in section 5.3, recommendations for policy and practice in section 5.4, and suggestions for further research in section 5.5.

5.2 Summary of Findings

This study sought to examine the perceptions of pregnant women about food and nutrition, whether efforts are been made by health experts to facilitate the awareness of food and nutritional education among expectant women, food and nutritional information is helping change dietary patterning of expectant women and also to assess the food and nutrition challenges that expectant women face in adhering to appropriate dietary habits. According to the findings

1. The first finding according to the study's first objectives showed that pregnant women felt that a well-balanced diet especially for pregnant women was vital for the unborn. This is supported by Queensland Dietitians, June (2013) work that choices of what to eat and drink during pregnancy affects the life and health of the unborn, in its lifetime and that a pregnant woman lays foundation to the health and nutritional status of the baby she will deliver.
2. According to the study's second objective it was established that enough is been done to educate the pregnant woman about food and nutrition security. Education about food and nutrition security in the clinics can help change dietary patterning, especially during pregnancy. Education in the clinics have been effective as pregnant women are aware they should keep enough food reserves to keep them going and high food intake matters during pregnancy. Key

Informants advocated that awareness programs on food and nutrition security need to be made often during pregnant woman's visit. They further suggested that more funding to be allocated on startup awareness programs that will be effective in educating the pregnant women for healthy lifestyles.

3. However, the third objective of the study found that it is still a challenge for women setting budget for food aside during pregnancy and this could be due to their low standards of living. It was also established that culture and religion had minimal implications in the lifestyle of pregnant mothers at Pumwani hospital. This is so since pregnant women who attend clinic at the hospital live in the urban areas therefore culture has less influence. However, one shortcoming encountered was that women did not pay close attention to the education they received during their antenatal visit to contribute to general improvement in dietary patterning.

In the study of how often awareness programs about food and nutrition security are made available in clinics, it was established that the information has been made available in the media and therefore changing perception of pregnant women to consider hygiene in food a key factor. However, food quality is still a challenge to the pregnant women as they are not keen in checking food expiry dates and KEBS mark of quality in the food products they purchase.

4. According to the fourth objective it was found that food and nutrition security challenges that expectant women face in adhering to dietary habits, was established as being due to their low living status. The pregnant women attending clinic services at Pumwani Hospital falling in lower class and majority of them living in slums. This posing challenges of putting food on the table and thus being unable to get all the three main meals in a day. Bearing this, the pregnant women stated that food supply in the market was pocket unfriendly and unstable. Low income women

comprehend the significance of a good diet during pregnancy, but the lack of the finances and social problems hinder them from achieving it. The access of good food that is affordable is more important than the education about nutrition that the mothers receive (Mustapha, Ademulegun and Ogundahunsi, 2010).

Nutrition in pregnancy is a great concern because; it is during pregnancy, that it is of great significance to eat a healthy, with a diet that provides adequate balance of vitamins and nutrients for the mother and the baby. Making smart food choices are paramount to ensure the mother gets quality foods rather than quantity. A good diet is not only significant in the growth and development of the baby, but it serves as the basic determiner of what and how the baby will be fed in the future (Winnie 2014).

5.3 Conclusions

The study's purpose was to establish perceptions of pregnant women about food and nutrition, whether efforts are been made by health experts to facilitate the awareness of food and nutritional education among expectant women, food and nutritional information is helping change dietary patterning of expectant women and also to assess the food and nutrition challenges that expectant women face in adhering to appropriate dietary habits. The following are the major conclusions based on the findings and discussions.

Kenyan Government has done tremendous work pertaining maternal health. It has further created awareness programs on food and nutrition security would, help furthered programs to combat hunger. The programs also act, as voice to air challenges faced to be food secure. Furthermore, these program strategies, in nature, are vertical and as an outcome indicator, lack nutrition. In a

way, this would also bring the idea off handouts programs especially for pregnant women, as a supplement program, in the maternities.

The study concludes that pregnant women felt that a well-balanced diet especially for pregnant women was vital for the unborn and it is therefore important to maintain maternal health, by a woman's good plan. However, major challenge faced by pregnant women in maintaining healthy lifestyle was their low living standards. The pregnant women to attend clinic services at Pumwani Hospital are from low class and majority of them live in slums therefore getting to put food on the table is a challenge and may not be able to get all the three main meals in a day. Bearing this, the pregnant women stated that food supply in the market was pocket unfriendly and unstable. Low income women understand the significant of the good diet during pregnancy, but the lack of the finances and social problems hinder them from achieving it. The access of good food that is affordable is more important than the education about nutrition that the mothers receive.

Key informants stated that awareness programs by the government were already put in place although they required more funding on startup programs to effectively educate pregnant women on food and nutrition security. Pregnant women were found to be negligent of their health status and this is attributed by their low living status as well as limited education. These awareness programs should therefore be developed in such a way that they are simple and easily understood by these women.

5.4 Policy recommendations

Self-sufficiency through knowledge, about food and nutrition security, is a way to help replace dependency on drugs, during emergencies as better survival strategies. Therefore the government

should implement awareness programs of food and nutrition security are a way of being self-sufficient, eliminating dependency, especially by establishing a life-support system, to help through being knowledgeable.

Intervention activities contributing to this strategic objective should be enacted. These include carrying out nutrition education regarding consumption of healthy foods during pregnancy in addition to strengthening supplementation of iron and foliate in pregnant women. It is also necessary to invest on making sure that the nutritional training includes lifestyle changes so that the midwives are able to teach the pregnant women during their antenatal visits..

Pregnant mothers do not take the significance of the materials provided to them if the health care workers do not emphasis on the importance in spite of health education having an impact on the way the pregnant women take up the dietary changes needed in pregnancy. Meaning the messages need to be made simple and easy to follow with a constant reinforcement of the expected by way of reminder during their antenatal visits.

5.5 Recommendations for Further Research

This study majorly looked into food and nutrition status of pregnant mothers. Apart from the challenges faced by pregnant women in food and nutrition security, their living status can be a major road block towards maintaining healthy lifestyle and maternal care. Therefore further studies on other challenges faced by pregnant women need to be executed other than food and nutrition despite their role in contributing towards their well-being.

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APPENDICES

Appendix 1: Consent Form

THE EXIT INTERVIEWEES (WOMEN AT PUMWANI MATERNITY HOSPITAL, NAIROBI).Title of study: **Awareness of food and nutrition security among pregnant women; a case study of Pumwani maternity hospital, Nairobi, Kenya.**

My name is Nancy Wangari Mwaura, a Masters student at the University of Nairobi.

Purpose of the study; I am conducting a research study to explore, the awareness of food and nutrition security among pregnant women at Pumwani maternity hospital.

Methodology: This study will be conducted at the exit points in the hospital, to any women at Pumwani maternity hospital as they leave.

Assistance: The assistance of a field research person will be used to explain the contents of the study; and explaining in it.

Benefits: This study would help assess the availability of awareness programs on food and nutrition security among pregnant women at Pumwani maternity hospital.

Risks and Discomforts: There no hidden risks taking part in the study, though the intervention of the researcher/nurse in charge would be handy, where the participant finds it difficult to understand terms like ‘nutrition security’.

Confidentiality: The information collected will be treated with high confidentiality.

Information on researcher: In case of any quires on the study contact

Researcher: Nancy WangariMwaura on 0703505701.

Supervisor: Mr. Allan Korongo, Dept. of Sociology, UON or Secretary, KNH/UON-ERC (Contact telephone 2726300 ext.44102 email uonknh-erc@uonbi.ac.ke.)

I consent to participate in the above research

Signature of exit interviewee.....

Signature of Researcher.....

Signature of Field assistance.....

Appendix 11: Questionnaire for the exit interviews on awareness about food and nutrition security

INSTRUCTIONS

- 1) Please do not write your names anywhere in this questionnaire.
- 2) Place a tick where appropriate []
- 3) Ask for assistance where need be.

SECTION A: BIOGRAPHICAL INFORMATION

1. How old are you in (yrs.)?

- a) Below 25yrs. []
- b) 26-31yrs. []
- c) 32-37yrs []
- d) 38yrs and above []

2. What is your religion?

- a) Christian []
- b) Muslim []
- c) African traditional []
- d) Hindu []
- e) Other [].

3. What is the highest formal education you have completed?

- a) Primary education []
- b) Secondary education []
- c) College level education []

4. What is your marital status?

a) Single []

b) Married []

5. Number of children out of birth?

a) 1-3 children []

b) 4-5 []

c) 6 and above children. []

6. What is your employment status?

a) Employed []

b) Self-employed []

c) Unemployed []

7. What is your household size (Number of family members)?

a) 1-3 people []

b) 4-5 people []

c) 6-7 people []

d) Over 8 people []

SECTION B: PERCEPTIONS OF PREGNANT WOMEN ABOUT FOOD AND NUTRITION SECURITY

8. Do you feel a well-balanced diet especially for a pregnant woman, is vital for her unborn?

a) Yes []

b) No []

9. Do you think culture should dictate what a pregnant woman eats?

a) Yes []

b) No []

10. Do you think high quantity of food intake, matters during pregnancy?

a) Yes []

b) No []

11. Do you feel that a pregnant woman should have enough food reserved, to keep her going?

a) Yes []

b) No []

12, Do you think household size affects or plays part, in the quality and quantity of food on the table adequate enough as nutrition especially for the expectant woman?

a) Yes []

b) No []

13. Do you think a pregnant woman should pre-budget for food at all the times?

a) Yes []

b) No []

14. How often should awareness programs about food and nutrition security be made available in the clinics?

a) Once during the pregnant woman's visit []

b) Often during the pregnant woman's visit []

c) Never during the pregnant woman's visit []

15. Do you think education about food and nutrition security in the clinics can help change dietary patterning, especially during pregnancy?

a) Yes []

b) No []

SECTION C: FOOD AND NUTRITIONAL INFORMATION AS A CONTRIBUTARY FACTOR TO HELP IN CHANGING DIETARY PATTERNING OF EXPECTANT WOMEN.

16. Is food and nutrition Security Information available in the media?

a) Yes []

b) No []

17. Is the food you eat clean and is hygiene a key factor to you?

a) Yes []

b) No []

18. If yes; is adhering to hygiene in handling food especially during pregnancy important?

a) Yes []

b) No []

19. Do you always have enough food to eat especially during pregnancy?

a) Yes []

b) No []

20. Do you check that, the food you eat is not expired?

a) Yes []

b) No []

21. Do you think consuming food with the mark of quality KEBS (Kenya Bureau of Standards) is vital?

a) Yes []

b) No []

SECTION D: FOOD AND NUTRITION SECURITY CHALLENGES THAT EXPECTANT WOMEN FACE IN ADHERING TO APPROPRIATE DIETARY HABITS.

22. Is the food you need available and easily assessable during pregnancy?

a) Yes []

b) No []

23. Do you think religion dictates food and nutrition during pregnancy?

a) Yes []

b) No []

24. Is the food market easily accessible with variety to suit your pocket and needs especially during pregnancy?

a) Yes []

b) No []

25. Is food supply according to you; stable and pocket friendly?

a) Yes []

b) No []

THANK YOU FOR YOUR COOPERATION

Appendix 111: Consent Form the Key Informants

Title of study: Awareness of food and nutrition security among pregnant women; a case study of Pumwani maternity hospital, Nairobi, Kenya. My name is Nancy Wangari Mwaura, a Masters student at the University of Nairobi.

Purpose of the study; I am conducting a research study to explore, the awareness of food and nutrition security among pregnant women at Pumwani maternity hospital.

Methodology: This study will be conducted at the hospital, to key informants who will help give a clearer picture of the study in question. .

Benefits: This study would help assess the availability of awareness programs on food and nutrition security among pregnant women at Pumwani maternity hospital.

Risks and Discomforts: There no hidden risks taking part in the study, though the intervention of the researcher/nurse in charge would be handy, where the participant finds it difficult to understand terms like ‘nutrition security’.

Confidentiality: The information collected will be treated with high confidentiality.

Information on researcher: In case of any quires on the study contact

Researcher: Nancy Wangari Mwaura on 0703505701.

Supervisor: Mr. Allan Korongo, Dept. of Sociology, UON or Secretary, KNH/UON-ERC
(Contact telephone 2726300 ext.44102 email uonknh-erc@uonbi.ac.ke).

I consent to participate in the above research

Signature of key informant.....

Signature of Researcher.....

Appendix IV: Interview Guide for Key Informants
INSTRUCTIONS

1) Do not write your name anywhere on this Interview Guide

2) Answer to the best of your knowledge

1. What is your view on awareness programs on food and nutrition security for the expectant mothers during their antenatal visits?.....

.....
.....

2. What suggestions do think would help improve the status of future awareness programs on food and nutrition security?

.....
.....

THANK YOU FOR YOUR COOPERATION

Appendix IV: Research Work plan

DATE	ACTIVITY	PLACE	OUTCOME
JULY 2016	Presentation of proposal	Uonbi	Approval of proposal by the sociology department
OCTOBER2016	Submission at KNH-UON offices for approval	Nbi	Approval
FEBRUARY2017	Data collection	Pumwani Maternity Hospital	Completion of data collection
APRIL2017	Data analysis/compiling	Nbi	Completion of data analysis/compiling
OCTOBER2017	Defense of research work to the panel	Uonbi	Completion of defense
NOVEMBER2017	Completion of research work	Nbi	Completion of research work

Appendix V : Work Budget AMOUNTS (KSHS)

	PER DAY	5DAYS
REMUNERATION 1, Field assistance.....	500	2500
2. Miscellaneous services (assistance to get the interviewees take direction to accept to take part) in the research	200	1000
STATIONARY	60	300
1. Writing biros		
2. Ream of papers (the data collection)		
.....		600
TRANSPORT1.Fare to and from the hospital for the 5days for the field assistance researchers.....	200	1000
TRAINING 1.For those to help conduct it in order to help in understanding and thus eased its smooth running (for the field assistant and any other person on the subject of food security) e.g. relevant literature.....		500
CHARGES AT THE HOSPITAL1.Govermental charges at the hospital		3000
SUBT0TAL		
GRAND TOTAL	960	9400