Abstract
The study examined demographic variables as determinants of women participation in child nutrition education in Osun State, with a view to establishing the level of nutrients children have in breast-feeding and how child nutrition education impacted women participation and psychosocial development of mothers and children. The descriptive survey research design was employed. The random sampling technique was used to select 525 respondents which comprised mothers who brought their children to the hospitals and clinics. t-test was used to analyse the data. There was significant difference in level of women participation with low and higher education in child nutrition awareness (t=1.96, df =525, p>0.5). There was no significant difference in the level of participation of unemployed and employed women in child nutrition awareness (t=0.567, df =525, p>0.5). Similarly, there was significant difference between the level of participation of single and married women in child nutrition awareness (t=1.815, df =525, p>0.5). Therefore, the study recommended that every woman, irrespective of age, level of education, level of employment, or marital status,
need to be educated and aware of the effects of nutrients children acquired in breast-feeding. Also, the government; non-governmental organizations, community workers and society at large should organize seminars and workshops on how to improve child nutrition practices.

Key words: Demographic, child nutrition, education, women participation, Osun State

Introduction
In early childhood, physical, mental and emotional needs are all important for healthy growth and development. For sometimes the importance of giving infants and children is good start in life with nutritious food had been on increase. Yet one in three children under five years of age is malnourished as judged by their weight for age. Though efforts have been made to educate maternal on proper nutrition and healthy living there efforts have had limited success (Musa, 2002). Maternal life styles, customs and beliefs are firmly entrenched, and it is difficult to effect change.

The declaration of the right of the child adopted by the general assembly of the United Nations described a child as being physically and mentally immature hence, need special safeguard and care in order to harmoniously develop his/her personality and to be prepared to live as a functional individual in the society (Unicef, 1995). For the achievement of this goal in the life of any child, a family environment full of happiness, love and understanding is one of the prerequisite (Azubike, 1980) Lahti (1982) reveal that those prerequisites elude many children, numerous of them have been reported to live in difficult conditions which have put their nutritional condition in pathetic states. This may result in disability, disorder that makes these children more susceptible to infection and diseases such as anemia.

Csete (1997) indicates that good nutrition helps children to achieve their potential. She summed it up emphasizing that to ensure continued good growth: children should be fed nutrient and energy-rich complementary foods. Thus nutrition is concerned with the quality and availability of the food to the body. Moronkola (2003) affirmed that good nutrition is essential for good health. It involves nutrient intake, which is adequate as quality the correct quantity and quality of food brings about a well-balanced individual physically, normally, socially and emotionally.

According to Egbuluh (2000) the nutritional practices of the mother has a significant role in child health, growth and development. Similarly, Briskley
(2004) referred to nutrition practice as protection, support and promotion of good caring practices through good nutrition. This implies that child nutrition is the act of providing adequate nourishment of body growth; care giving behaviour that is highly inevitable constitutes an indicator for child health as well as an important factor of concern for the advocacy of the United Nations Children Fund on child risk measurement (United Nations Sub-committee on Human Nutrition, 2000).

Munoz, et al (1997) reported that only one percent of all children have eating pattern that are consistent with dietary recommendation. They further explained that in America, 45% of school children eat less than one serving of fruit, 20% eat less than one serving of vegetables, while only 18% of girls aged 9-19 years meet their calcium requirement. Studies of under-five mortality in Nigeria showed 43% stunted and 36% underweight. (Federal Government of Nigeria and The World Bank 1997). Hence the Federal government of Nigeria and the United Nations Children’s Funds established a Nutrition Programme Plan 1997-2001 to ensure adequate nutrition for children and to tackle the problems of inadequate nutrition in the Nigerian society.

The concern for child health received much attention particularly because of the future of human society depends on children being able to achieve their optimal potentials. According to Weller and Duncombe (1999) the possibility of infants growing into healthy children can be actualized through a sensible pattern of feeding during the first few years of life.

More attention is given to the importance of quality care, nutritional attitudes and stimulation needed for young children growth and development both internationally and within Nigeria. Comprehensive efforts are however made in improving childhood care, both within the family home, and the wider community, daycare centres and pre-primary institution. In same development, conscious attention into the problem of nutrition is necessary by relating the need to emphasize knowledge, attitudes of maternal towards the most vulnerable, disadvantaged and children under difficult circumstances.

According to UN/SC (2005) refuges, internally displaced population around Kakuna town in Kenya reveals a prevalence of malnutrition of 16.8% and high mortality rate. It was observed that children who were deprived would have psycho-social problems such as emotional and behavioural problem, learning and even nutritional problems. Death of the principal child-rearing
person that is mother or father, abject poverty, unemployment, constant absence from home by the parents, family size and parent marital status can affect child nutrition (Obimba, 1990).

Inappropriate feeding practices by caregivers, probably stemming from cultural practices, increased consumption of starchy food in place of high nutrient foods, thereby increasing incidence of protein-energy malnutrition, low levels of exclusive breastfeeding and high prevalence of micro-nutrient deficiencies in certain parts of the country.

In some regions, such as Sub-Saharan Africa and particularly Nigeria, it is commonly observed that there is stagnation of nutritional improvement. This has resulted in the increased number of malnourished children often to some socio-cultural problems, environmental, marital status, and economic factors addressing the overall growth, development and optimal functioning of the child. In addition, the presence of specific nutritional deficiencies, mortality and the most common cause of preventable mental and retardation diseases and disability(Aluko, 2004).

Musa (2002) observed that the nutritional problems prevailing in the nation are linked to inadequate household food security, often to poverty, poor knowledge and inadequate information on what constitute healthy living. Creating public awareness, initiating nutrition education programs to change nutrition behaviour at the individual and community level, have not totally improved the present nutritional status as a significant proportion are receiving less than the daily minimum nutrient requirement. However, this continues to be a tremendous challenge with the increasing unhealthy eating patterns, negative attitudes and erroneous beliefs due to the perception of norms and culture of the society governing the individual affects the overall health.

Ekoko (2005) says individual indulge in bad lifestyles and eating habits that can be detrimental to their health. He expressed that the present economic hardship in the country have led the low-income earners in urban cities to adopt lifestyle that are a threat to healthy feeding. Some indulge in over eating and become over weight or just take certain foods because they enjoy such foods regardless of the effects on their health. While others do not have proper mix of the different nutrients in their diet and suffer from nutritional problems.
According to UNICEF (1995) certain foods are deeply with symbolic meaning in every culture. For example, the belief that child should not be given eggs as this would encourage them to steal (Anazonwu, 1978). This belief is likely to determine what shall be eaten as well as become cherished traditions to children. In other words, the cultural backgrounds of care a giver embraces certain beliefs concerning some foods and consequently makes them eat or stay away from eating them.

Musa (2002) explains that come cultural practices in some geographical zone have an influence on food habits. He added that cultural plays a significant role in food taboos of the people despite its attendant nutritional and health implication on the health of the people. For example, in some parts of Africa, children are given just a little portion of meat because children who eat a lot of meat are believed to turn into robbers.

Okafor (2005) affirmed that food habits of people are usually determined among other factor, either by family meals and social customs, which are deeply rooted in belief and habits development over generations. Interestingly, food items not taken in a given culture are freely consumed in other cultures though not biological valuable foods.

Okafor (2005) stresses further that some nutritionally valuable foods are often excluded from the diet and the primary function of food to provide nourishment is distorted. Therefore, these nutrients do not automatically become food until they are so defined and are culturally accepted as fit for human consumption.

The World Health Organization (2001) posited that inappropriate feeding is still believed to account for at least one third of malnutrition and contribute significantly to morbidity and mortality, among children under five. As a result, exclusive breastfeeding become the major reason for a new global strategy for infant and young child feeding. Records also reveal that infants are gaining irreplaceable benefits of exclusive breastfeeding during their first four month of life and thereby leading to a corresponding mortality, decline in children.

According to Munoz, et al (1997), morbidity and mortality are lower in breastfed infants and their mothers, often resulting in better health and lower health care costs. Similarly, Aluko (2000) noted that the UNICEF report (1995) revealed that reversing the decline of breastfeeding in the developing world could save the lives of estimated 1.5million infants yearly.
Health Organization (2000) confirmed that malnutrition reduced work productivity, increases the risk of infection including HIV/AIDS, urine genital tract infection, in addition to reported clinical effects of blindness, anemia, death, goiter on the health and development of infant and young children. The risk of complication during pregnancy in women, impaired growth, hidden hunger and hindered cognitive and mental development on mention a few. Thus the effects of macro and micro nutrient malnutrition are just a tip of the iceberg.

In Nigeria other African countries, preschool age children have been observed to suffer from various types of malnutrition especially protein energy and its effect not only physical but also intellectual attainment which may be considerably reduced (Aluko, 2004). However, the worldwide prevalence of protein-energy malnutrition, which contributes to more than half the 10.9 million deaths each year among children in developing countries, is slowing decreasing. WHO (2001)

Apart from lack of knowledge or information, other causes are inadequate food intake, care and deprivation of basic emotional needs often to parental absence from home shaped by economic determinants (Livingstone, 1992). The negative impact of poor nutrition is worrisome especially in children and calls for immediate attention. The effect of vitamin A, iron and zinc deficiency is detrimental to the overall functioning of the child. This prompted the researcher to be interested in carrying out research work to identify the state of child’s nutrition and factors affecting nutrition (Munoz, et al 1997).

An adequate nutrient intake is needed to meet energy demands. The lack of balanced diet can reduce efficiency or competence of efforts. For instance lack of motivation to cook food by working mothers may result in giving their children left over or cold cooked food as they often find it difficult to cook before leaving home. In this situation, human behaviour is influenced by values and habits that distinguish a particular individual. In other words, a person is largely formed by the type of values, attitudes and habits imbibed. Ekoko (2005). The lack of financing resources to pay for health services, food and lack of knowledge about prevention contributes to ill health and has serious consequences for both mother and child.

Participation is an important means of enhancing development either at the local or national level. It has been argued that participation is requisite or arithmetic development because development cannot be possible unless it is
locally supported and the people actively participated through their own mechanism in taking major decisions.

The inauguration of the Association of Better life for rural women now known as women forum and other women organizations like Community women association of rural development (COWARD), WIN, young women Christian association (YWCA), and others have a right step in the right way at the right time. In all these association and organizations, women are highly encouraged to participate on improving the lives of other women, especially those in rural areas.

Participation is a means when it is used to achieve pre determined goal. Oakley et al, (1991) on the other hand, describes participation as an end, which helps to strengthen the capabilities of the people to be involved directly in development initiatives. As an end, participation allows active involvement of the women in decision makings and participation on issues, which can be solved through joint action.

A participatory approach to development implies an acceptance of people as the subject and main actors in a process leading to their greater control over their environment. Participation is the most essential determinant of locally initiated successful rural programmes. Women participation in child nutrition education promotes efficient feeding of children breast milk than animal milk. Participation also encourages the spirit of friendliness and cooperation among the family as a whole (Ekoko, 2005).

Children who are healthy, well nourished, happy and stimulated in the first few years of life are more likely to perform well in school and in later life. The manifestation of physical, cognitive and psychosocial development is evident in the physical growth of the child (in terms of height and weight), mastery of language and communication skill, social skill and pre literacy, numerical skill (Holfords, 2004). Healthful behaviours helps to increase an individual’s sense of well-being can act as a buffer against diseases. Such practices include eating a balanced diet, regular physical exercise, reducing stress, and avoiding abuse of alcohol and drugs as well as smoking tobacco because of their effects on nutritional status. ). Sound feeding practices are essential elements of good nutrition health to meet the physical, psychological, social and mental needs.

Children are the vulnerable group and suffer greatly from inadequate nutrition. It made more sense if negative attitudes of caregivers, level of
knowledge, inadequate food security causes poor nutritional status of these children or at least makes their health status worse, as the increasing investigation of research indicated, perhaps children’s nutritional status would be better off. Thus study therefore, examined demographic variables as determinant of women participation in child nutrition education in Nigeria.

The present study was conducted with the broad objective to ascertain the demographic variables as determinant of women participation in child nutrition education. The specific objectives includes: to examine whether education has effect on the level of women participation in child nutrition awareness; to assess whether level of employment has any effect on child nutrition education; to determine if marital status has any effect on the level of women participation in child nutrition education.

**Research Hypotheses**

**Ho1:** *Level of education would not significantly affect women’s participation in child nutrition education*

**Ho2:** *Employment would not significantly influence the women’s participation in child nutrition education.*

**Ho3:** *Marital status would not significantly influence the women’s participation in child nutrition education*

**Materials and Methodology**

The descriptive survey research design was adopted for this study to elicit information on demographic variables as determinant of women participation in child nutrition education in Osun State, Nigeria. The multi-stage sampling procedure was used to select the sample from among the population. In doing this, Osun State was stratified along the axis of the existing three senatorial district of administration at the time of the study. From each of senatorial district, the proportionate sampling technique was used to select one hundred and seventy-five respondents from each district, thus five hundred and twenty-five respondents were selected for the study.

The main instrument used for data collection was a structured closed-ended questionnaire tagged “Demographic variables as determinant of women participation in child nutrition education” (DVDWPCNE) carefully designed for the participating communities and sample.

Prior to its being administered, the questions were scrutinized by some experts in community development, social work, rural and extension services.
Based on their comments, some items were reworded, while some were modified to ensure that there were no ambiguities. Cronbach Alpha and Kuder Richardson (KR21) were used to provide reliability estimate of the instrument. KR21 was used for items that were dichotomously scored, while Cronbach Alpha was used for 3, 4 and 5 point items scales. In order to achieve this, a pilot study was carried out with a sample of 120 subjects in Ejigbo Local Government Area, Osun State, Nigeria. The result of reliability coefficient was \( r = 0.89 \). This result indicates that the instrument used for data collection is reliable.

Inferential statistics of t-test was used to analyze the data to measure the relationship, using a 0.05 level of significance.

**Results and Discussions**

**Testing of hypotheses**

Table 1 shows that there was no significant difference in level of participation of women with low and higher education in child nutrition awareness. (\( t-cal = 1.542, \ t-crit = 1.96, \ df = 525, \ P > 0.05 \)) The null hypothesis is therefore accepted. In this table, all the items were significant at 0.05 level. This implies that there is a strong relationship between high and low level of education of women involved in child nutrition education. They should be encouraged to continue in that trend for overall development of the children.

This is supported by the findings of Musa (2000) that the nutritional problems prevailing in the nation are linked to inadequate household food security, often to poverty, poor knowledge and inadequate information on what constitute healthy living. Creating public awareness, initiating nutrition education programs to change nutrition behaviour at the individual and community level, have not totally improved the present nutritional status as a significant proportion are receiving less than the daily minimum nutrient requirement. However, this continues to be a tremendous challenge with the increasing unhealthy eating patterns, negative attitudes and erroneous beliefs due to the perception of norms and culture of the society governing the individual affects the overall health.

As shown in Table 2, responses to the research hypothesis show that there was no significant difference in level of employed and unemployed women participating in child nutrition education. (\( t-cal = .567, \ t-crit = 1.96, \ df = 525, \ P > .05 \)). The null hypothesis is therefore accepted.
This is in line with the findings of Obimba (1990), who sees death of the principal child-rearing person that is mother or father, abject poverty, unemployment, constant absence from home by the parents, family size and parent marital status can affect child nutrition. This result of this study contradicted the assertion of Ekoko, (2005) who confirms that lack of motivation to cook food by working mothers may result in giving their children left over or cold cooked food as they often find it difficult to cook before leaving home.

Table 3 indicated that there was no significant difference in level of women participating in child nutrition education. (t-cal = 1.815, t-crit =1.96, df = 525, P> 0.05). The null hypothesis is therefore accepted. On the issue of married to single, it was discovered that, the married were more participating on child nutrition education than the singles. The reason for this is essentially anchored on the homeliness and culture, which ascribed responsibilities to those married. The single participated but they don’t have the same zeal like the married women.

This is corroborated by the findings Aluko, (2004) who observed that, there is stagnation of nutritional improvement. This has resulted in the increased number of malnourished children often to some socio-cultural problems, environmental, marital status and economic factors addressing the overall growth, development and optimal functioning of the child. In addition, the presence of specific nutritional deficiencies, mortality and the most common cause of preventable mental and retardation diseases and disability.

**Discussions**

The result in research hypothesis one indicates that there was no significant difference in level of participation of women with low and higher education in child nutrition awareness. This implies that there is a strong relationship between high and low level of education of women involved in child nutrition education. They should be encouraged to continue in that trend for overall development of the children. This is supported by the findings of Musa (2000) that the nutritional problems prevailing in the nation are linked to inadequate household food security, often to poverty, poor knowledge and inadequate information on what constitute healthy living. Creating public awareness, initiating nutrition education programs to change nutrition behaviour at the individual and community level, have not totally improved the present nutritional status as a significant proportion are receiving less than the daily minimum nutrient requirement. However, this continues to be a
tremendous challenge with the increasing unhealthy eating patterns, negative
atitudes and erroneous beliefs due to the perception of norms and culture of
the society governing the individual affects the overall health.

It was also discovered in research hypothesis two that that there was no
significant difference in level of employed and unemployed women
participating in child nutrition education. This is in line with the findings of
Obimba (1990), who sees death of the principal child-rearing person that is
mother or father, abject poverty, unemployment, constant absence from home
by the parents, family size and parent marital status can affect child nutrition.
This result of this study contradicted the assertion of Ekoko, (2005) who
confirms that lack of motivation to cook food by working mothers may result
in giving their children left over or cold cooked food as they often find it
difficult to cook before leaving home.

Research question three revealed that there was no significant difference in
level of women participating in child nutrition education. On the issue of
married to single, it was discovered that, the married were more participating
on child nutrition education than the singles. The reason for this is essentially
anchored on the homeliness and culture, which ascribed responsibilities to
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socio-cultural problems, environmental, marital status and economic factors
addressing the overall growth, development and optimal functioning of the
child. In addition, the presence of specific nutritional deficiencies, mortality
and the most common cause of preventable mental and retardation diseases
and disability.

Implications of Findings
This linkage has various implications for national development. Firstly,
women have a great role to play in the overall development of their children
and there is the need to give greater support, attention and encouragement by
the government and male counterpart coupled with an effective education
system and better society, to women in their efforts at participating in child
nutrition education. The findings of this study also have implications for
community development planners, policy makers, non-governmental
agencies, and other stakeholders participating in development planning and
design, and service delivery system. It ensures that the communities develop
the ability to evolve many lines of action, such as creating public awareness, initiating nutrition education programs to change nutrition behaviour at the individual.

**Conclusion and Recommendations**

The study has established that government at all levels, ministry of women affairs, women organizations and other non-governmental agencies (NGOs) should organize enlighten programmes to eradicate food taboos and myths in their society. The study has also had established that community social workers should be involved in identifying problems that affect child’s development generally. The study has equally established that partnership among agencies, mass media to improve maternal awareness level on balance diet and good food habits through educational programmes, health talks and publications.

Table 1: t-test showing the difference in level participation of women with low and higher education in child nutrition awareness

<table>
<thead>
<tr>
<th>Women’s participation in child nutrition education</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev</th>
<th>t-cal</th>
<th>t-crit</th>
<th>df</th>
<th>P</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Education</td>
<td>294</td>
<td>41.0034</td>
<td>4.6988</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher Education</td>
<td>233</td>
<td>41.6094</td>
<td>4.1913</td>
<td>1.542</td>
<td>1.96</td>
<td>525</td>
<td>.05</td>
<td>significant</td>
</tr>
</tbody>
</table>

Table 2: t-test showing the difference in level participation of employed and unemployed women in child nutrition education

<table>
<thead>
<tr>
<th>Women’s participation in child nutrition education</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev</th>
<th>t-cal</th>
<th>t-crit</th>
<th>df</th>
<th>P</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>465</td>
<td>41.3118</td>
<td>4.4726</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>62</td>
<td>40.9677</td>
<td>4.6234</td>
<td>.567</td>
<td>1.96</td>
<td>525</td>
<td>.05</td>
<td>significant</td>
</tr>
</tbody>
</table>
Table 3: t-test showing the difference in level participation of single and married women in child nutrition education

<table>
<thead>
<tr>
<th>Women’s participation in child nutrition education</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev</th>
<th>t-cal</th>
<th>t-crit</th>
<th>df</th>
<th>P</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>195</td>
<td>41.7333</td>
<td>4.9825</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>332</td>
<td>41.0000</td>
<td>4.1534</td>
<td>1.815</td>
<td>1.96</td>
<td>525</td>
<td>.05</td>
<td>significant</td>
</tr>
</tbody>
</table>

Reference


W.H.O (2001) the Optimal Duration of Exclusive Breastfeeding Results of a *WHO Systematic Review*. Note for the Press No. 7, April 2nd