The International Journal of Engineering and Science (IJES)
|| Volume || 7 || Issue || 12 Ver.I || Pages || PP 25-32 || 2018 ||
ISSN (e): 2319 – 1813 ISSN (p): 23-19 – 1805

A Study on the Influence ofSocio-Economic Status and Quality of Life on Food Security and Its Adverse Effect on Child and Maternal Health.

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----------ABSTRACT----------

Child and maternal health have been one of the biggest challenges over decades in developing countries which override other health challenges associated with environmental factors as a result of the previous century aftermath where war's, flooding's, volcanic eruptions, urbanization, environmental pollution and environmental degradations were experienced. Both environmental and socio-economic factors greatly and adversely affect our health especially children and pregnant women's. Disease like kwashiorkor, marasmus, Anemia, birth related deformities and complications after delivery are all associated mostly with food insecurity, poor food preservation techniques, low socio-economic status, as well as challenges to do with political will with which in turn affect our health and thus influence our quality of life. Therefore, the focus of the paper is on those people who are victims of related health problems resulting from influence of food insecurity and low socio-economic status on child and maternal health in developing countries Nigeria in particular.

KEYWORDS: *child and maternal health, socio-economic status, quality of life, and disease.*

Date of Submission: 20-12-2018 Date of acceptance: 04-01-2019

I. INTRODUCTION

Child and Maternal Health Issues in Nigeria

Since independence, Nigeria has become one of the developing countries seeking for medical advancements due to its incredible medical education system and state-of-the-art private medical facilities. Focus of the government is on improving healthcare services and massive orientation and training of healthcare personnel to produce skilled and qualified medical and healthcare providers. Quality health care however remains inaccessible in many regions. For example, in rural communities it is estimated that only 18 hospital beds are available per 100,000 people. Even when medical treatment is available, public hospitals are frequently understaffed and undersupplied. The poor are forced to rely on overburdened, unsanitary facilities as their only source of health care.

Policies and lack of political will to focus on quality health in the country is one of the major health issues throughout the nation: over 1.5 million children die each year before their first birthday; and nearly 500 million lacking sufficient nutrition. The country is among the highest countries with higher number of people living with HIV/AIDS according WHO report released on statistics of countries with high prevalence. Growth of HIV/AIDS remain a significant point of concern since there is no proper facilities to measure the virus's spread and impact (epidemiological centers, laboratories, and good monitoring and evaluation system), especially in rural areas.

This lack of national healthcare infrastructure is having severe and lasting effects on the livelihoods of Nigerian citizens. In Jigawa state, about one-fourth under five children suffer from malnutrition, 49 percent of women are anemic, and about one-third of children are born with a low birth weight. Additionally, only 14 percent of children between 12 and 23 months receive the necessary vaccinations to prevent diseases such as small pox and polio. Public hospitals have insufficient funds to support their communities, and since only 15 percent of Nigerian citizens have health insurance, quality health care remains unattainable for millions in dire need.

Thousands of public health NGOs intervened to provide the necessary healthcare, support, and treatment. In Gumel LGA and Sule LGA, PHW collaborates with local organizations to interview the local community to identify weaknesses in rural health care and provide good healthcare and necessary supplies along with medical advice. Additionally, PHW supports programs that host educational workshops to promote the importance of hygiene and sanitation, and assists healthcare centers that provide immunizations to at-risk children. PHW partner organizations are working within the communities with the greatest need to ensure that all citizens are guaranteed their basic right to continued health and physical well-being.

Socioeconomic status (SES) according to APA (2014) is the social standing or class of an individual or groups. It's often measured as a combination of education, income, and occupation.SES is one of the most important variables in social science studies/researches. It plays a significant role in planning and execution of developmental programs. Socio-economic status of a family would mean the ranking of the family in the milieu to which the family belongs, in respect of defined variables *viz.*, physical assets, economic status, education, occupation, social position, social participation, caste, muscle power, political influence, *etc*. (S.C. Tiwari 2004). There are factors that determine the socioeconomic stability and well-being of individuals;

- Education
- Occupation
- Income level
- Wealth
- GDP

Broadly Quality of life QOL is known as the standard health, comfort, and happiness experienced by an individual or group. According to (W.J HARPS 2013), QOL is the general wellbeing of individuals and societies, outlining negative and positive features of life. It observes life satisfaction, including everything from physical health, family, education, employment, wealth, religious beliefs, finance and the environment. Quality of life is a broad dimension concept that usually includes subjective evaluation of both positive and negative aspects of life; it's the multidimensional construct that includes physical, mental, and social domains (CDC 2013).

Health-related quality of life (HRQoL) is a multi-dimensional concept that includes domains related to physical, mental, emotional, and social functioning. It goes beyond direct measures of population health, life expectancy, and causes of death, and focuses on the impact health status has on quality of life. A related concept of HRQoL is well-being, which assesses the positive aspects of a person's life, such as positive emotions and life satisfaction (Burckhardt 2003)

8+1 dimensions of determinants of quality of life

A first set of indicators has been published and work is still on-going to fill in the gaps and possibly make recommendations for new indicators to be collected within this framework.

Based on academic research and several initiatives, the following 8+1 dimensions/domains have been defined as an overarching framework for the measurement of well-being. Ideally, they should be considered simultaneously, because of potential trade-offs between them:

- Material living conditions (income, consumption and material conditions)
- Productive or main activity
- Health
- Education
- Leisure and social interactions
- Economic and physical safety
- Governance and basic rights
- Natural and living environment
- Overall experience of life

The nutritional status of women is important both for the quality of their own lives and the survival and healthy development of their children (Obaid, 2004). Better nutrition means stronger immune systems, fewer incidences of illness and better health (WHO, 2004). However, recent evidence from developing countries indicates that malnourished women with a body mass index (BMI) below 18.5 show a progressive increase in mortality rates as well as an increased risk of illness (BWI, 2009). In India, increased prenatal and neonatal mortality, a higher risk of low birth weight babies, stillbirths, and miscarriage are some of the consequences of malnutrition among women. (Ramachandran, and Rotim, 1999)

In the larger context, the individual nutritional status is seen to depend on;

(a) Household food entitlements, deriving from both production and exchange,
(b) The distribution of food within the family, and
(c) The ability of individuals to convert food into nutritional achievements. Therefore, nutritionalstatus is prejudiced by the complex social, biological, environmental, and cultural factors which do not operate

through standard economic variables such as income, expenditure, or consumption that are highly interrelated and influence men and women differently.

The nutritional status of a woman, for instance, depends not only on (say) household income and its utilization, but also on the quality of the environment, the number of siblings, her vulnerability to gender discrimination, her educational level, her activity status and exposure to social stimulation, the decision-making power at the household and so on (Heaver, 1989; Radhakrishna, 1992). However, both in the context of excess and scarcity of food, women are more vulnerable to nutritional deficiency than men. In crisis situations where food is in short supply, women are more likely to reduce their food intake as a coping strategy in favor of other household members. Familial bonds and duties affect the social, political, economic and religious aspects of a woman's life, yet there is little empirical evidence to support this (Avan, 2006).

Since the beginning of the Safe Motherhood Initiative, Nigeria has accounted for at least a quarter of maternal deaths reported globally. Nigeria's goal is to lower maternal mortality to less than 100 per 100,000 live births but that is still far away despite its programmatic efforts and rapid economic progress over the past two decades. Geographical vastness and socio-cultural diversity mean that maternal mortality varies across the states, and uniform implementation of health-sector reforms is not possible. It also stresses the need for regulation of the private sector and encourages further public-private partnerships and policies, along with a strong political will and improved management capacity for improving maternal health.

Food security is the state of having reliable access to a sufficient quantity of affordable, nutritious food (USDA 2013). Pillars of food security includes

- Food accessibility,
- Availability,
- Utilization and
- Stability (UN 1948).

Food security, socio-economic status, and quality of life have been thought to have been affecting child and maternal health in developing countries. Mothers and children in community constitute vulnerable group or special risk group. But during this period, they are more vulnerable to disease and death. Nigeria contributes to 26% of the global burden of maternal deaths with nearly 1, 36,000 women dying annually due to causes related to pregnancy and childbirth (Rebeel et al 2013). Childbirth is universally celebrated event, an occasion for dancing, fireworks, flowers and gifts. Yet, for many thousands of women each day, childbirth is experienced not as the joyful event it as should be, but as a private hell that may end in death. Childbirth is a memorable event and death in childbirth even more (Avan, 2006). The major causes of maternal deaths are hemorrhage, puerperal sepsis, complications of abortion, obstructed labor, and hypertensive disorders associated with pregnancy. Many of these deaths could have been avoided if the pregnant women had sought full antenatal and timely delivery care. Most of the pregnant in this country lives where poverty, illiteracy, mal-nutrition, poor sanitation, gender bias, unequal feeding practices, religion taboo and lack of availability of medical facilities render to them prone for health hazards which are preventable (Revath et al 2013). Despite the national programs for improving Maternal and Child health in Nigeria, maternal mortality and morbidity continue to be high. One of the important reasons for this is non - utilization or under - utilization of maternal health care services which is due to lack of awareness or accessibility in rural population.

PURPOSE OF THE STUDY

To assess the effect of socio-economic status and quality of life on food security among children and women having maternal health related problems.

OBJECTIVES

- To analyze socio-economic status influence on maternal health among children and maternal women in Nigeria
- To analyze the level in which food security influence child and maternal health in Nigeria
- To determine the level of quality of life with regard to maternal health among children and maternal women in Nigeria

HYPOTHESIS

- There will be a differential result obtained on the assessment of the level of Socio-economic status effect on child and maternal health among Nigerian women.
- There will be a variation of results obtained on the assessment of level of Quality of life on maternal health among Nigerian women
- There will be a significant difference in results obtained on the level of Nutritional impact on child and maternal health among Nigerian women

RATIONALE OF THE STUDY

Recent researches mainly focused on biological and environmental factors affecting child and maternal health. There is need for further study on the fact that food security has adverse influence on child and maternal health.

Promoting women's health improves not only individual health but also the health of the family, community and the nation to plan measures to ensure food security.

Food security, socio-economic status, and quality of life have been thought to have been affecting maternal health in developing countries. Mother and child in a community constitute vulnerable group or special risk group. But during this period, they are more vulnerable to disease and death, with the findings of this study, child and maternal health prevalence can be reduced to a less significant burden.

Both communities, families, and individuals will benefit as all will come to know about their health through dieting, meal plan, and finding suitable means for food substitute to prevent their children and women against nutritional deficiencies related health issues which could lead to loss of lives, deformities, birth defects, and life-long disabilities.

II. REVIEW OF LITERATURE

The World Health Organization estimates that, of 536,000 maternal deaths occurring globally each year, with 136,000 reported casesfrom Nigeria. Estimates of the global burden of disease for 2015 also showed that India contributed 25% to disability-adjusted life-years lost due to maternal conditions alone. Unfortunately, there is little evidence that maternity has become significantly safer in Nigeria over the last 20 years despite the safe motherhood policies and programmatic initiatives at the national level.

Annually, in Nigeria it is estimated that 55,000 die due to preventable pregnancy-related causes. Nigeria, with a population of about 200 million and decadal growth of 21%, estimated its maternal mortality ratio (MMR) at 212 maternal deaths per 100,000 live births in 2012 and 178 per 100,000 live births, in2012 (UNICEF2015). The MMRs vary across the states, with the large Northern Nigerian states contributing a disproportionately-large proportion of mortality. Geographical vastness and socio-cultural diversity across the country contribute to this variation. The status of women is generally low in Nigeria, except in the southern and eastern states. Female literacy is at low rate especially in the northern part, and women lack the empowerment to take decisions, including decision to use reproductive health services. As health services are governed at the state level, much also depends on state leadership and management skills (UNICEF2015).

Nearly Five women in Nigeria die every hour from complications developed during childbirth, with heavy blood loss caused by hemorrhage being a major factor (WHO 2016). Nearly 45,000 mothers die due to causes related to childbirth every year which accounts for 17percent of such death globally (Global health body 2016). Based on World health statistics (WHS) 2016, the MMR of Nigeria is 174 per100,000 live birth and a birth cohort of around 26million per year, this works out to nearly 45,000 mothers dying due to causes related to childbirth every year(WHS 2016). Several observational studies have reported that maternal stressful life events are associated with increased risks of neural tube defects (NTD), orofacial clefts, and conotruncal heart defects (Suarez, 2003). Many studies have reported that these birth defects are associated with intake of folic acid and other nutrients (Botto, 2013). In addition, previous studies have reported that dietary quality, dieting that involves food restriction (Carmichael, 2003), and famine (Wynn, 1993) are associated with increased maternal health risk.

One study calculated percentage of women having conditions related to nutritional deficiency and revealed that the rate of morbidity among the women living in rural areas has been gastrointestinal infections with (14.75%), fever (12.75%), dysmenorrhea (12%), cough (9.5%), white discharge (7.75%), dental problems (28.5%), pediculous capitis (8.2%), scabies (3%) and cardiovascular diseases (1%). Prevalence of anemia was 75%. Majority of them had mild anemia (49.75%) followed by moderate (20.75%) and severe (4.5%) anemia. However, prevalence of severe anemia was the highest (Baliga 2012)

III. METHODOLOGY

The study will describe the effect and impact of socioeconomic factors and the level of quality of life of the women in maternal bracket and how these factors bring about food insecurity which may lead to many child and maternal health issues among Nigerian women.The methodology in this study involves description and exploration of both primary and secondary data sources using scales like socioeconomic status scale developed by (Kuppuswamy's 2012), quality of life scale by WHO (WHO 2004), Mini Nutritional assessment scale by (guigoz et al 1994), and MUAC method (UNICEF 1986), as well as Dietary analysis/diversity method for children nutritional assessment were used to generate primary data, likewise secondary data was directly obtained through newspapers, magazines, articles, journals, and periodic reports.

Sample size

125 women are randomly selected where by 63 will be selected from rural areas and another 62 from urban areas respectively. QOL, SES, and Nutritional assessment Questionnaires will be distributed to generate data. Random sampling and purposive sampling techniques were used in this study to generate reliable and less bias data. 100 Children under 5years of age were assessed so as to generate nutritional deficiency and health related problems among them.

Inclusion criteria

- Women between Age group of 20-30 years
- Children under five to below
- Subject were only selected on the basis of maternal age
- Informed consent technique was used during data collection

Exclusion criteria

- Subjects not in maternal age were excluded
- Subjects not willing to participate were excluded
- Subjects with or having any other disorder or disease were excluded

Tools of measurement

- Quality of life scale (WHO 2004)
- Socio economic status scale (Kuppuswamy's 2012)
- Mini Nutritional Assessment cale (guigoz et al 1994)
- MUAC (UNICEF 1986)
- Dietary analysis/diversity.

PROCEDURE

Procedure of data collection and analysis was based on the procedures stated in the manuals of the scales and interpretation of MUAC and dietary analysis/diversity

STATISTICAL ANALYSIS

Relevant statistical tools as mean, SD, frequency, percentage, etc. were applied on the data to obtain the desired result.

IV. RESULT AND DISCUSSION

Socioeconomic status, quality of life, and nutritional balance were measured to establish their relationship with food security and related health issues concerning child and maternal health.To measure food insecurity, we used 5 of 6 questions about experiences and behaviors associated with having difficulty meeting basic food needs from a shortened, validated scale. The exact questions were:

During the 2 months, before, and through the 2 months after the woman became pregnant:

1) Did your food ever run out before you could afford to buy more?
2) Could you ever not afford to eat balanced meals?
3) Did you ever cut the size of your meals or skip meals because there wasn't enough money for food?
4) How often did this happen? (Considered affirmative if the response was ~1 time per month or more frequent); and
5) Were you ever hungry but didn't eat because you couldn't afford enough food?
6) Did you ever eat less than you felt you should have because there wasn't enough money for food?

food insecurity score was calculated by summing the number of affirmative responses to the 5 questions.

Distribution of respondents on the basis of demographic characteristics

Variables	frequencies	%
Age Groups		
20-24	57	45.6
25-29	46	36.8
30-34	22	17.6
Age at marriage		
6-8	46	36.8
9-11	61	48.8
12-14	18	14.4
Educational respondents		
Illiterate	34	27.2
Primary	24	19.2

Middle	21	16.8
High school	16	12.8
Graduate	18	14.4
Post graduate	12	9.6
Work status		
Working	28	22.4
Nonworking	97	77.6

Source; field study

Above table shown the distribution of data on demographic factors; age group between 20-24 has the highest participants of 57 out of 125, while according to the number of years at marriage some spent about 9-11 years

at marriage which constitute about 61 participants out of 125 with total of 48%. While in the level of literacy about 27% of the subjects are illiterates. Likewise, about 97 of the 125 subjects are unemployed.

Distribution of maternal health by quality of life

QOL	Total		anemia		birth defects		other disease		no disease	
	No	%	no	%	No	%	no	%	No	%
High	14	11.2	4	28.57	2	14.29	5	35.71	3	21.43
Moderate	28	22.4	8	28.57	5	17.86	10	35.71	5	17.86
Low	83	66.4	42	50.60	36	43.38	4	4.82	1	1.20

Source; field survey

The distribution according to the QOL variable shown that subjects with low QOL has the highest percentage of about 66.4%, and out of which 42 are anemic, 36 has birth defects, 4 has other disease, and 1 has no disease at present time. Subjects with high QOL are 11.2% out which 4 are anemic, 2 has birth defects, 5 have some other disease, and 3 are free from any disease. Likewise, the moderate class with 22.4% that are 28 in number, 8 of them are anemic, 5 has birth defects, 10 has other disease, and 5 has no disease at all.

Distribution table showing individuals distribution on level of socioeconomic status and percentages of women with health issues and disease.

SES	Total		anemia		birth defects		other disease		no disease	
	no	%	No	%	No	%	no	%	No	%
Below poverty line	47	37.6	20	42.55	7	14.89	13	27.66	7	14.89
Poor	40	32.0	18	45.0	4	10.0	15	37.5	3	7.5
Lower middle	24	19.2	8	33.33	7	29.16	5	20.83	4	16.66
Upper middle	10	8.0	2	20	0	0.00	8	80	0	0.00
High	3	2.4	2	66.66	0	0.00	1	33.33	0	0.00
Upper high	1	0.8	0	0.00	0	0.00	1	100	0	0.00

Source; field survey

The distribution according to the SES have shown that subjects that falls below poverty line has the highest number of 47 out of 125 with 37.6%, and out of which 20 are anemic, 7 have birth defects, 13 have other disease and 7 have no disease at all. Subjects that falls in poverty line are 40 out of which 45% of them are anemic, 10% has birth defects, 37.5% has some other disease and 7.5% of them are free from any disease. With the high class having the lowest number of participants of only 1 subject which has some other disease.

Distribution of food insecurity effect on maternal health

Variables	anemia		Birth complication		Other disease	
Food security	no	%	No	%	no	%
Accessibility	21	16.8	10	8.0	6	4.8
Affordability	18	14.4	13	10.4	7	5.6
Availability	10	8.0	12	9.6	3	2.4
Utilization	12	9.6	8	6.4	5	4.0

Source; field survey

The distribution according to the effect of food security on the development of disease has shown

significant evidence that child and maternal women are affected adversely. Table has shown that 16.8% of the subjects are anemic, 8.0% has birth defects, and 4.8 has other disease due to lack of accessibility of food. While 14.4 are anemic due to affordability, 8.0 due to availability, and 9.6 due to utilization method.

Distribution of maternal health associated with nutrition

variables	LBW		HBW		Other health problems	
Age	No	%	no	%	no	%
20-24	24	19.2	12	9.6	7	5.6
25-29	22	17.6	20	16.0	9	7.2
30-34	12	9.6	14	11.2	5	4.0

Source; field source

The above table shows the distribution of the data base on the association of nutritional status and LBW HBW and other health problems. Subjects that falls between 20-24, 19.2% of them has LBW babies during delivery, 9.6% HBW, and 5.6% other health problems. Subjects between 25-29 has 17.6% of

LBW durin birth, 16.0 HBW, and 7.2 other health problems. 30-34 age group 9.6% of them has LBW during birth, 11.2% of them has HBW, and 4.0% of them has some other health issues.

V. SUMMARY AND CONCLUSION

Conclusively the results in the tables above shown a significant influence of socioeconomic status on child and maternal health were the result had shown that subjects fall below poverty line has the highest percentage of subjects with anemic and those that fall within poverty line has shown significant cases of birth defects, anemia and other disease. Likewise, the case QOL has also shown a significant influence on child and maternal health where subjects that fall under those with poor quality of life has shown a significant result of anemia cases, birth defects, and other health conditions compared to those with good or better quality of life and basic amenities. In the case of nutritional deficiencies, case of anemia has the highest percentage compared to the other areas of birth defects, and other health conditions, considering the lack of food accessibility having 16.8% of anemia case, affordability 14.4% and utilization with lowest percentage of 9.6%. While in the case of birth defects affordability has the highest percentage of 10.4%.

The overall result has shown a significant relationship between the three variables socioeconomic status, quality of life, and impact of food security influence on child and maternal health.

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Mr. Aminu Aliyu. "A Study on the Influence of Socio-Economic Status and Quality of Life on Food Security and Its Adverse Effect on Child and Maternal Health."The International Journal of Engineering and Science (IJES), 7.12 (2018): 25-32