



NUTRITIONAL COUNSELLING AND REST/ RECREATION COUNSELLING METHODS AMONG MOTHERS IN CROSS RIVER STATE, NIGERIA

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Cite this article:

O.M. Oyeyipo (2023),
Nutritional Counselling and
Rest/ Recreation Counselling
Methods Among Mothers In
Cross River State, Nigeria.
British Journal of
Contemporary Education 2(2),
58-71. DOI: 10.52589/BJCE-
FOZX1ZPL

Manuscript History

Received: 5 Oct 2022

Accepted: 22 Dec 2022

Published: 11 Jan 2023

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ABSTRACT: *This study was undertaken to investigate Nutritional counselling and family planning counselling methods among mothers in Cross River State, Nigeria. Two research questions and two null hypotheses were drawn to direct the variables under study, also relevant literature was reviewed in line with the research objectives with most of the reviewed study supporting the theoretical framework. Ex post facto design was adopted for the study. The selection was done through the sampling and purposive sampling techniques. The reliability estimate was established through sampling and the purposive sampling technique. The reliability estimate of the instrument was established through the Cronbach Alpha reliability method. One-way analysis of variance (ANOVA) was the statistic analysis technique adopted to test the hypotheses under study. All hypotheses were tested using a .05 level of significance. From the data analysis, the researcher investigated the research and offered in agreement with the study that nutritional and rest and recreational counselling afford mothers the opportunity to survive the precarious time of pregnancy and delivery. The researcher admitted in the study that motherhood is the reproductive period for women whose age ranges from 18 years to 49 years old. The researcher admitted that there is a vulnerable age for most mothers and reproductive-aged women. The researcher in consonance with Wilkinson (2010) that poor infant outcomes have been linked with poor maternal nutrition these include inadequate developmental trajectories, low birth weight, and an increased risk of developing chronic disease later in life. Gaston and Cramp (2011) as proffered by the researcher admitted that women who are unaccustomed to exercising prior to pregnancy would not likely engage in an active lifestyle or start exercising during pregnancy.*

KEYWORDS: Counselling, Recreation, Venerable, Pregnancy, Maternal, Reproductive Age



INTRODUCTION

Guaranteeing that ladies get gifted care at convenience is a fundamental piece of the protected parenthood programs (Khalid, 2006). Skilled care, however, can only be effective in the context of health systems that make obstetric care available to all women including surgical and technical interventions required for life-threatening conditions during pregnancy, delivery and after childbirth (Carmacho, 2006). Ante-natal counselling, among other services, can play a role in reducing the maternal mortality rate (WHO, 2000). World Health Organisation (2012) opines that a review of the Millenium Development Goals suggests that limited progress is being made to reduce maternal mortality, especially across developing nations including Nigeria. Hogan (2008) avers that developing countries account for about 99% of an estimated half a million maternal deaths that occur each year. Nigeria is Africa's most populous country with a population of over 140 million people (NPC, 2009). Abimbola (2012) states that within the country, there are about 31 million women of childbearing age. Regional variations abound in maternal mortality figures across Nigeria. Evidence suggests that maternal mortality rates (MMR) are significantly higher in the northern part of Nigeria compared to the Southern part of the country.

Motherhood is the reproductive period for women, whose ages range from 18 years to 49 years. The researcher observed that there is a vulnerable age for most mothers and reproductive-aged women. Fikirte (2014) opines that in a lifetime, an individual mother encounters the greatest risk of maternal mortality and morbidity. This is also high at birth and in the immediate postnatal period. Safe motherhood is practised to ensure that mothers are safe during the reproductive age which includes; ante-natal counselling, hygiene counselling, nutrition counselling, rest and recreation counselling, drug intake counselling and family planning counselling (WHO 2010). Therefore, unsafe motherhood practices include the use of untrained birth attendants, ignoring signs of complications, poor nutrition, poor hygiene practices, non-ante-natal visits, lack of rest and recreation, use of non-prescriptive drugs, lack of family planning methods and low educational standard of young rural women (WHO, 2012).

The World Health Organisation (2006) defines health as a state of complete physical, mental and social well-being of an individual and not merely the absence of disease or infirmity. Health counselling as defined by WHO (2012) is the procedure by which nurses, teachers, physicians, guidance and counselling personnel and other safe motherhood vendors explain to students and parents the nature of health problems and aid in formulating a plan of action to solve the problem. Health counselling provides supportive measures to help orientate the perception of women towards health counselling which influences the outcome of their pregnancy (WHO, 2005).

Nutritional Counselling and Rest/ Recreation Counselling

Doer (2009) observed that pregnancy is one of the most critical and unique periods in a woman's life cycle. It is regarded as a "welcome event", the woman's body changes dramatically, hence there is a strong need to balance these changes with an adequate nutritional diet. However, in another study, Harding (2001) posited that dietary practices play a significant role in determining the long-term health status of both expectant mothers and the growing fetus.

Similarly, Ramakrishan (2004) observed that spontaneous abortion, impaired fetal growth, poor pregnancy weight gain, learning impairment and behavioural problems of the offspring



are caused by inadequate nutrition during pregnancy. Inadequate nutritional intake of pregnant women has apparently led to an increased rate of stillbirths. About 95 per cent of Low Birth Weight (LBW) birth or 20 out of 21 million per year occur in developing countries. As stated in Ramakrishan (2004), this problem is particularly important in Southern Asia where 20-30 per cent of newborn babies have a birth weight below 2500gms. Any setting with an LBW incidence above 7.8 per cent is at risk of a high mortality rate (Gary, 2006; Urah, 2009).

Onayade, Fatusi, Ojofeitimi, Esimal and Ijadunola (2009) evidenced in a study in the South Western part of Nigeria showed the impact of nutritional counselling on the nutritional status of under-five children in two rural communities of south-west Nigeria by Onayade, Fatusi, Ojofeitimi, Esimal and Ijadunola (2009) in a community intervention study in two semi-urban communities of south-west Nigeria, recruited 150 mothers of children aged 0-18 month independently from the intervention and control communities through a multi-stage sampling technique. They collected data with the aid of an interviewer-administered questionnaire at baseline and at six months after intervention from both communities to obtain information on feeding infants and young children. Heights and weights of recruited children were measured, and intervention involved group counselling of mothers and food demonstrations at designated health facilities. Data analysis for quantitative data was done using Epi-Info software, and for qualitative data, content analysis of major themes was used.

The results showed that before the intervention, recruited mothers and their children from the two communities were comparable in terms of all the parameters assessed ($P < 0.05$ in all cases). After six months of intervention, mothers who had nutritional education demonstrated better knowledge and perceptions of key infant and young children feeding recommendations. There were also limited improvements in feeding practices. Mothers from the intervention community exclusively breastfeed their infants longer with a mean age at introduction of complementary foods at 5.2 months compared to 4.5 months in the control community ($P < 0.05$), who breastfed their children longer ($P < 0.05$). However, there was no statistically significant improvement in the weight of their children.

The result also showed that nutritional counselling of mothers only had a positive impact on their level of knowledge attitude and practice of nutrition (KAP) on infant and young children feeding. Healthy children are the foundation of a healthy population for children to enjoy this good health, healthy practices and care should start during or before pregnancy, Pasinlioglu (2004) adjoins that the good nutrition of mothers during pregnancy is one of the most significant components of both the health of the mother and the health and development of the fetus.

Saravanan (2010) observed that poor quality diets during pregnancy have been found to be associated with maternal excess weight gain, pre-eclampsia, preterm birth or even miscarriage. Williamson 2006 in addition, added that excess weight gain and an imbalanced diet, particularly among obese women during pregnancy have been identified as risk factors for abnormal glucose tolerance (Tovar, 2009). To further buttress this assertion, Wilkinson (2010) opined that poor infant outcomes have also been linked with poor maternal nutrition these include inadequate development, low birth weight and an increased risk of developing chronic disease later in life. Wilkinson, 2010 stresses that some adult diseases which have a total original link with nutrition during pregnancy include cardiovascular diseases such as diabetes associated with bone formation.



According to Mcmillen (2008); Calkins (2011); Leach (2011); Yajinik (2011) in a more recent study, observed that pregnant women show an increased awareness of nutrition status during pregnancy. This has been attributed to their perception of the importance of nutrition as a change they can make in their everyday lives to protect the health of their babies.

Szwajcer (2005), in a study conducted in Australia, found that pregnant women were interested in receiving nutrition counselling during their pregnancy, especially information about healthy eating, weight management, vegetarian diet, breastfeeding, morning sickness and heartburn. WHO (2009) added that fruits and vegetable consumption is one element of a healthy diet and that insufficient intake of fruits and vegetables is estimated to cause around 14% of gastrointestinal cancer deaths, about 11% of ischemic heart disease deaths and about 9% of stroke worldwide. Most of the benefits for mothers in consuming fruits and vegetables come from a reduction in cardiovascular disease, but fruits and vegetables also prevent cancer and maternal mortality. Szwajcer (2005), opined that the pregnancy period represents a life experience for women that can impact their current health and that of their fetus and can also generate nutrition awareness but may affect nutritional behaviour in the longer term. He further opines that pregnant women might not be receiving sufficient nutrition counselling from their health care professionals during pregnancy and posits that nutritional counselling during pregnancy is associated with positive pregnancy outcomes.

WHO (2010), observed that improved nutrition status can help to attain the millennium developmental goals now the Sustainable Development Goals. Nutritional counselling seeks to improve nutrition practices before and during pregnancy and reduce the risk of poor health outcomes in both mothers and their children.

Caplan (2006) opined that unsatisfactory maternal nutrition has been reported to have been attributed to ignorance and superstition. Poor knowledge of nutrition plays a vital role in the multi-sector factors involved in the development of malnutrition which is prevalent in developing countries (Gary, 2006; Urah, 2009). Inadequate food intake and unhygienic dietary practices are often related to poor knowledge of sound nutritional practices. Reasons for malnutrition is a decrease in food production, inadequate food intake, limited resources, deficiency in knowledge of sound budgeting, food purchasing and food preparation methods leading to poor nutrition and problem arising from that. WHO (2004), asserted that insufficient breast milk puts infants at an increased risk of disease and death, that breast milk is the healthiest source of nutrition, adjoined that breastfeeding reduces the risk of many perinatal infections such as acute lower respiratory infections and diarrhoea in infants below 23 months.

Measures of the three dietary behaviours were measured using food frequency questionnaires (FFQ) asking “how often do you consume the listed products in the past week” (ranging from not consumed to the past seven days). And on the day you took the listed product how much did you take on the average on that day you consumed the listed products how much did you consume on that day? (in pieces in bowls or in serving spoons). For fruit consumption, seven separate groups of fruits were listed reflecting the most common fruits in the Netherlands that are Citrus fruit (oranges, lemon, grapefruits and other citrus fruits), apples, pears, bananas, freshly squeezed or unsweetened fruit juice, tangerines, applesauce, and other fruits. Vegetable consumption was assessed with two separate questions for raw (for example lettuce, cucumber, tomato) and prepared vegetables). For fish, fish products and other seafood in the Netherlands; therefore readymade fish (example fish sticks, fried haddock fillets, cod parings), crustacean and shellfish (example shrimps, crabs, mussels) tinned fish (example tuna, salmon, sardines,



steamed, grilled, or baked fish with the main course (example cod, Pollack, plaice, sole, perch, including fresh fish as well as frozen fish), mackerel or eel, and herring.

The food frequency questionnaire used to assess fruit and vegetable consumption has been validated as compared to 7-day dietary records and biomarkers for fruits and vegetables consumption levels, and the FFQ for fish consumption has been validated against 3-day - 24-hour dietary records. Stages of change and changes in fruit, vegetables and fish intake were only weekly associated; decisional balance and self-efficacy were more strongly associated. Some presumed predictors of stage transitions were similar for fruit, vegetable and fish intake.

Brug, Oenema, and Ferreira (2005) stated that consumption levels of fruit, fish and vegetables are below recommended intake levels in many countries. These scholars further stated that to develop effective interventions to increase intake levels, determinants of fruits, vegetables and fish consumption should be identified. Health Council of the Netherlands recommended that the recommended amount of intake of fatty acid is set at 250 grams a day and vegetables at 200 grams each day. The amount of adequate intake for n-3 fatty acids is set at 0.2 grams per day, to achieve this intake fish is recommended once or twice a week in the Netherlands.

Simkknada (2008) argued in one of his studies that inequality in the health and well-being of pre-natal mothers is a growing concern in developing countries. However, Dutta (2001) observed that the risk of maternal death in developing countries is estimated to be 1 in 61 and that poor weight gain in pregnancy due to inadequate feeding is often associated with a higher incidence of prematurity, mortality and morbidity. Healthy children are the foundation of a healthy population for children to enjoy this good health, healthy practices and care should start during or before pregnancy.

Mothers' Perception of Rest, Recreation Counselling and Safe Motherhood Practices

Studies carried out by Haakstad, Voldner and Bo (2007), Gaston and Cramp (2011) and Gjestland, Bo, Owe, and Eberhard-Gran (2013), showed that being sedentary before the onset of pregnancy is a risk factor of not starting to exercise when pregnant. Haakstad, Volder, and Bo (2007), Gaston and Cramp (2011) and Leijon, Bensten, Stahle, Ekberg, Festin and Nilsen (2010) averred that it is confirmed that women who are accustomed to exercising prior to pregnancy such women are more likely to maintain this habit more than those not physically active are not likely to start exercising during pregnancy. The studies further stated that to achieve higher rates of exercise during pregnancy, health promotion programmes should target the general female population during their childbearing years. This implies that taking part in regular physical activity is good for the mother and her baby and that women should be physically active during and after pregnancy.

The woman would need to be counselled to ask her doctor to provide a physical activity readiness medical examination (Parmed-X) for pregnancy to determine her readiness for physical activity. Regular physical activity during pregnancy can help a woman to strengthen the muscle needed for labour and delivery, control mood swings, improve circulation and body posture and also reduces some of the discomforts of pregnancy such as leg cramps, shortness of breath, backache, varicose veins, constipation, fatigue, Wikipedia (2014). To achieve healthy weight gain and decrease the risk of developing diabetes and heart complications during pregnancy. Rest is essential for a pregnant woman she needs more rest than she does when she is not pregnant



Mbada, Adebayo, Adeyemi, Arije, Dada, Akinwade Ayotidele and Alonge (2014) conducted a cross-sectional survey at the Obafemi Awolowo University Health centre (OAU), Teaching Hospitals complex and seventh Day Adventure Hospital in Ile-Ife, Osun state South-West Nigeria. One hundred and eighty-nine pregnant women were consecutively recruited into this cross-sectional survey. The correspondents were recruited from six selected hospitals, namely urban comprehensive health centre Aderemi, Obafemi Awolowo Umori (OAU) Teaching Hospitals, complex and Seventh Day Adventist Hospital in Ile-Ife, Osun state, South West Nigeria. The self-administered questionnaire sought information on socio-demographics, knowledge and attitude toward exercise during pregnancy. The summation of all the checked items was compared. The questionnaires are items that yielded an agreement percentage that ranged from 87.4 to 99.6%, the intra-class coefficient was 0.985 and the confidence interval ranged from 0.94 to 0.99%. Pregnant women who were not literate in either English or Yoruba were excluded from the study.

The result showed that one hundred and eighty-nine respondents participated in this study. The mean age of the respondents was 28.9 ± 4.63 years. The result shows that the respondents were preponderant of the Christian religion (76.7%) and were traders of businesswomen (54.5%). A majority of the respondents had tertiary education (69.4%) and were within the level of income of \$100 per month (27.0%).

The respondents had knowledge of pelvic floor exercise (37.0%) belly strengthening exercise (51.3%), back care exercise (51.3%) and relaxation and breathing exercise (59.8%), respectively as types of antenatal exercise. However, swimming (21.7%) and cycling (20.6%) were the least known types of exercises during pregnancy. Most of the respondents agreed that exercise during pregnancy would lead to a reduced risk of back pain (75.9%), prevention of excess weight gain (65.1%), and increased ability with labour and delivery (69.6). The summative perception score revealed that 47.6% of the respondents had below-average knowledge and 5.84% had average perception, while 46.6% had a good perception of antenatal exercises.

Muzigaba, Kolbe-Alexander and Wong (2012) carried out a qualitative exploratory research study, which was conducted during the first wave of facility-based implementation research, called the expectant parent project (EPP). The study was conducted in a maternal and obstetric Unit (MOU) at vanguard community health centre, located in the Western Cape Province in the study were pregnant women attending antenatal service at the MOU at Vanguard community health centre 35 pregnant women were invited to participate in the study and the 35 completed the interviews. The interviewer asked participants to indicate which types of physical activities they were involved in during pregnancy and the frequency with which the exercises, relaxation and rest were done. Based on their information, the interviewer subjectively estimated the intensity of physical activities as light, moderate or vigorous. The information on the intensity and frequency was recorded in the questionnaire.

The mean ages of participants were 25.6 years ($SD \pm 5.2$) and the ages ranged from 17 years old to 36 years old. Participants in the study presented a made range of demographic and maternal characteristics approximately, 60% and 39% of them were of black and of mixed ancestry respectively. Very few participants were in their first trimester (17%) and about half were in their second trimesters. About 44% reported that they were not currently physically active of the 56% who reported doing some physical activities, 44% reported participating in light physical activities and 12% moderate physical activities about 88% reported that they were not



diagnosed with diabetes, hypertension, asthma depression and musculoskeletal pain. This participant in this study presented a multifaceted behavioural context whose impact is on their control over physical activity during pregnancy.

Haakstad, Voldner and Bo (2013) carried out an empirical study in the department of Sports Medicine, Norwegian School of Sports Sciences, Norway, the Transtheoretical model was used as a part of a larger prospective study of determinants of macrosomic infants in Norway, the research question were conducted using a self-administered questionnaire (PAPQ). Healthy pregnant women were allocated to the study form for birth at the Oslo University hospital between 2002 and 2005. Inclusion criteria were enrolment to the project before week 14 -16 of gestation, having a singleton fetus, and ability to answer the participation in physical activities during pregnancy questionnaire (PAPQ) in gestation week 32 – 36. The exclusion criterion was pre-gestational diabetics or other serious diseases due to the primary aim of the study. Of the 2145 women invited to participate, 678 accepted the invitation, 90 withdrew, and 14 women were excluded after a routine ultrasound at gestation week 17 -18 weeks due to congenital disorders (n=8) and twin births (n=6). The further exclusion was recorded in two stillbirths, eleven relocations, and births at another hospital and eight participants chose to withdraw. Consequently, 553 women were invited to participate in the present study, of these 467 (84.4%) filled with the PAPQ at home and returned the surveys at the last consultations with the midwives (NV) at the mean pregnancy week 36.4% (SD=1.7). Not all the participants who answered every question had varying response rates.

Maternal pre-pregnancy weight was self-reported in the study. Maternal weight gain was calculated as the difference between self-reported pre-pregnancy weight and the weight measured at the last clinical visit prior to delivery (pregnancy week 40.2, SD 1.3). All statistical analyses were conducted with SPSS statistical software. The responsible midwife used the digital beam scale to measure the participant's body weight (kg). Classification of body weight gain and pre-pregnancy body mass index (BMI) was according to the recommendation from the IOM: 12.7 – 18.2kg weight gain for the underweight women (prepregnancy BMI<18.5%), 11.4 – 15.9kg weight gain for normal weight women (prepregnancy of 18.5-24.9).

6.8 -11.4kg weight gain for overweight women (prepregnancy of 25.0-29.9) and 5.0-9.1 kg weight gain for obese women (prepregnant BMI>30). These women were classified as normal weight or overweight and corresponding weight gain recommendations were used in the statistical analysis. It was presumed that more women in the pre-contemplation, contemplation and preparatory groups would have less favourable weight gain compared to the action and maintenance groups.

The results revealed that the mean age of the participant was 31.6 years (range 20-49), mean prepregnancy BMI 23.6 (SD 3.7), and mean parity 1.3 (SD 0.5). Then women were generally well educated and 83% had education from college or university >4 years. Conclusion: receiving counsel from health professionals to exercise during pregnancy increased the likeliness of being in the action and maintenance stages. Higher age, multiparity, pregravid, overweight, pelvic girdle pain and urinary incontinence were more prevalent with lower readiness to change exercise habits. There is a need for more research to evaluate whether a TTM-based intervention is useful in promoting physical activity during pregnancy.

American Council of Gynecologists (ACGO) (2002); Barakat (2011); Wang and Apgar Robeiro (2011) in various scientific studies indicate that empirical data on the impact of



exercise on the mother, the fetus and the course of pregnancy are still limited and the results of the few studies in humans are often equivocal or contradictory. However, the ACOG (2002), recommends that pregnant women can exercise moderately for 30 minutes on most days of the week as shown in figure 7. In accordance with these recommendations, irrespective of the pregnant women's physical fitness level, exercise should be low-impact, moderate-intensity and regular (Roberto, 2011). WHO (2004), stated that physical activity reduces the risk of cardiovascular disease, some cancers and type 2 diabetics, furthermore, it can also improve musculoskeletal health, control body weight and symptoms of depression. Physical inactivity is estimated to cause around 21-25% of breast and colon cancers burden, 27% of diabetics and about 30% of ischaemic heart disease burden.

Research Question

1. What is the influence of mothers' perception of nutritional counselling on safe motherhood practices?
2. To what extent do mothers' perceptions of rest and recreation influence safe motherhood practices?

Hypotheses

1. A mother's perception of nutritional counselling does not significantly influence safe motherhood practices.
2. Mothers' perception of rest and recreation counselling does not significantly influence safe motherhood practices.

DATA PRESENTATION AND ANALYSIS

TABLE 1: Summary of Independent t-test for the Influence of Mothers' Perception of Nutritional Counselling on safe Motherhood Practices

S/No	Safe Motherhood Practice	Perception of Nutritional Counselling	N	X	SD	T	P
1	Drug Intake Habit	Positive	26	16.00	0.00	3.99*	.000
		Negative	279	13.77	2.84		
2	Food Consumption Pattern	Positive	26	8.88	2.60	2.49*	.013
		Negative	279	9.93	1.98		
3	Rest Pattern	Positive	26	9.88	3.46	2.15*	.033
		Negative	279	10.91	2.20		
4	Exercise Routine	Positive	26	11.12	3.09	2.58*	.010
		Negative	279	12.21	1.96		
5.	Overall Safe motherhood practice	Positive	26	45.88	7.12	0.91	.361
		Negative	279	46.82	4.78		

P<.05 level of significance; df = 309; critical t = 1.96



Results of data analysis in Table 1 showed that the calculated t-values for mothers' perception of nutritional counselling and safe motherhood practices in terms of drug intake habit (3.99), food consumption pattern (2.49), rest pattern (2.15), exercise routine (2.58) were each greater than the critical t-value of 1.96 at .05 level of significance using 309 degrees of freedom. These results mean that mothers' perception of nutritional counselling significantly influences safe motherhood practices in terms of the sub-variables. The results, however, showed that the comparison between mothers' perception of nutritional counselling and overall safe motherhood practice yielded no significant influence. Based on this overall result, the null hypothesis is accepted.

TABLE 2: Summary of Independent t-test for the Influence of Mothers' Perception of Rest and Recreation Counselling on Safe Motherhood Practices

S/No	Safe Motherhood Practice	Perception of Rest & Recreation Counselling	N	X	SD	T	P
1	Drug Intake Habit	Negative	44	13.19	2.09	0.24	.529
		Positive	267	14.02	2.88		
2	Food Consumption Pattern	Negative	44	9.07	2.02	2.59	.001
		Positive	267	9.93	2.04	*	
3	Rest Pattern	Negative	44	9.84	2.71	2.85	.043
		Positive	267	10.92	2.61	*	
4	Exercise Routine	Negative	44	9.91	2.07	7.34	.000
		Positive	267	12.37	2.01	*	
5.	Overall Safe motherhood practice	Negative	44	42.73	5.78	5.73	.000
		Positive	267	47.23	4.66	*	

P<.05 level of significance; df = 309; critical t = 1.96.

Results of data analysis showed that the calculated t-values for mothers' perception of rest and recreation counselling and safe motherhood practices in terms of food consumption pattern (2.59), rest pattern (2.85), exercise routine (7.34), and in terms of overall safe motherhood practices (5.73) were each greater than the critical t-value of 1.96 at .05 level of significance using 309 degrees of freedom. These results mean that mothers' perception of drug intake counselling significantly influences safe motherhood practices in terms of the sub-variables and in terms of overall practices. Results of mean values revealed that it was mothers with positive perceptions toward rest and recreational counselling (\bar{X} =47.23) that exhibited better safe motherhood practices than their counterparts with negative perceptions (\bar{X} =42.73). The results, however, showed that the comparison between mothers' perception of rest and recreation counselling and drug intake habits yielded no significant influence. Since the result on overall safe motherhood practice was significant, the null hypothesis is rejected.



DISCUSSION OF FINDINGS

Mother's Perception of Nutritional Counselling Significantly Influences their Safe Motherhood Practices

Findings of this segment of the study showed that mothers' perceptions of nutrition counselling significantly influence safe motherhood practices, in terms of drug intake habits (3.99), routine exercise pattern (2.58), food consumption pattern (2.49), rest and recreation pattern (2.15), drug intake habit (5.39) greater than the critical value of (1.96) at a 0.05 level of significance using 3.09 degrees of freedom.

In support of this result Onayade, Fatusi, Ojofieitimi, Esimal and Ijadunola (2009) found that mothers showed a positive perception of nutritional counselling, these mothers demonstrated better knowledge and perception of key infants and young children's feeding. Mothers who received nutritional counselling from their health care professionals during pregnancy were associated with better pregnancy outcomes. Mothers who breastfed longer and were counselled on which foods and what qualities they need to consume in order to achieve optimal dietary intake, while mothers with negative impact showed limited improvement in feeding practice, they also breastfed shorter.

Also in agreement with this result Famoush, Ahmad, Alli, Youssef and Mahdi (2013), stated that maternal nutritional health before and during pregnancy influences the health status of herself and her developing fetus. In a cross quasi-experimental intervention undertaken on a random sample of a representative group of pregnant women (n =100) in Western Iran, attending urban health centres in Ilam city, (western Iran) during the year 2011 for prenatal care. A nutritional counselling programme containing two to four sessions was undertaken for small groups of six to ten women. The nutritional perception was assessed before intervention (pretest) and followed by two posttests within three-week intervals. The awareness level of pregnant women about healthy nutrition was significantly increased from 31% after the nutritional awareness intervention ($p < 0.001$). This significant difference was independent of maternal characteristics of age and levels of literacy and in obese mothers in particular. The result shows that nutrition education intervention will have a positive effect on the nutritional awareness of pregnant women.

To further buttress this finding, mothers with positive perception had a nutritional impact, and pregnant women with positive perception also breastfed longer after delivery. However, mothers with poor perception of nutritional counselling showed limited improvement in feeding practice, they also breastfed for a shorter period as well as increased risk of developing chronic diseases later on in life. Good nutrition during pregnancy is one of the most significant components which addresses both the mother and child's health needs.

Mother's Perception of Rest and Recreation Counselling Significantly Influence their Safe Motherhood Practice

The result in respect of hypothesis four showed that mothers; perception of rest and recreational counselling significantly influence safe motherhood practices, in terms of food consumption pattern (2.59), exercise routine pattern (7.34), rest and recreation pattern (2.85) and overall safe motherhood practices (5.73) each were greater than the critical value of (1.96) at a 0.05 level of significance using 3.09 degrees of freedom.



Furthermore, Hedderson (2010) further supported, that physical activities during pregnancy may reduce the risk of pre-natal complications and prevent excessive weight gain. However, mothers with negative perceptions of rest and recreation activities were reported to have been diagnosed with diabetes, hypertension, asthma, depression and musculoskeletal pain. Women with positive perceptions did not exceed pre-pregnancy weight gain, and overweight and obsessed women had better weight control and heart rate.

The Guidance counsellor counselled that the rest mothers take also known as nap should be a continuous exercise throughout pregnancy. Rest as recommended by the World Health Organisation means complete rest or abstinence from tasks both physical and mental during the day and also time should be given to recreational activities such as card games, puzzle play and several other stimulating activities good for mothers.

The researcher noted that mothers who engaged in rest and recreational activities are happier, refreshed and are better able to make the right decisions when necessary. They also responded better to counsellors and also to their spouses. The counsellor also adduced from the findings that mothers who engage in recreational activities are stronger and have better psychological readiness at the time of delivery.

Educational Implication:

The implication to education cannot be underpinned however, maternal safe motherhood ensures that all children have an equal start in early education and cognitive ability, nutrition and rest also influence the health status of the mother and the mental and emotional wellbeing of their children.

CONCLUSION

Maternal health vendors, researchers and educational institutions should ensure that pregnant mothers are enlightened on nutrition and rest and the implication of not being adequately and properly fed during pregnancy.

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