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PHYSICAL ACTIVITY AND PERCEIVED HEALTH OF PREGNANT WOMEN IN ODUKPANI LOCAL GOVERNMENT AREA OF CROSS RIVER STATE

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Abstract
The main purpose of this study was to investigate physical activity and perceived health of pregnant women in hard- to-reached areas communities in Odukpani Local Government Area of Cross River State, Nigeria. To achieve this purpose, two null hypotheses were formulated to guide the study. A detailed review of related literature was carried out based on the variables of the study. Survey research design was employed for the study. A sample of 342 was used for the study. Simple random sampling technique was adopted in selecting the twenty-two communities while systematic random sampling technique was adopted in selecting the three hundred and forty (342) respondents used for the study. Twenty items four-point scale questionnaire was the instrument used for data collection. The instrument was validated by relevant authority one expert in department of Health Education and Promotion and two others in Measurement and Evaluation. To test the hypotheses formulated for the study, Pearson product moment correlation statistical tool was used for data analysis. The findings obtained from analysis of data and testing of hypotheses in the study revealed that there was a significant relationship between swimming, walking, and perceived health of pregnant women in the study area. Based on these findings it was recommended that relevant authorities should ensure that more women are sensitized on the need to participate actively in walking activities in order to improve their health during pregnancy.

Keywords: Physical activity, Health, Pregnant women, swimming, walking

Introduction

The quality of health enjoyed by a pregnant woman is very vital to her well-being and that of her unborn baby. The period of pregnancy comes with a lot of physiological changes in the body of the pregnant woman. These changes include among others; weight gain, frequent urination, change in hormonal levels, changes in sexual desire and other aspects of the woman's body. Antennal services provide a platform for pregnant women to be sensitized on the changes that occurred in the body. This is to enable them cope and manage those changes in ways that are inimical to their health. Ibok (2022) asserted that the role of antenatal care services in helping pregnant women understand their body physiology during pregnancy is very essential in promoting the health of these women. Such services empower pregnant with the information they need to manage themselves and their unborn babies safely all through the period of the pregnancy and after delivery.

The health status of pregnant women during pregnancy is very important in determining the chances of the fetus's survival as well as the capacity of the woman to carry the pregnancy to its full cycle. These health requirements have become very essential in determining the experiences a woman goes through between the period of conception and delivery. The health status of pregnant women has most times been responsible for the increasing incidence of still births, miscarriages or child mortality. Hanson (2023) opines that the complications that arise from pregnancy accounts for the increasing rate of miscarriages, still births or even the dead of pregnant women. The inability of some women to access proper healthcare services during pregnancy has deprived them of the opportunity to access

useful information and care that would have improved their health conditions.

Health promotion refers to any activity that aims to achieve better health in a community or a country. It includes the health education of individuals to enable them to control and change their lifestyles so that their health is improved. Health promotion activities go far beyond this focus on individual behaviour, and include a wide range of social and environmental interventions that increase health and wellbeing in populations as well as individuals. Mark (2022) reported that health promotion also includes disease prevention, which are actions taken to prevent a disease from developing, and health screening; the routine testing of individuals to see if they are at risk of developing a health problem. The relationship between health promotion, health education, disease prevention and health screening has long been recognized as beneficial to the health of pregnant women.

Pregnancy is a critical period that requires attention to both physical and mental health. Physical activity during pregnancy has been shown to reduce the risk of gestational diabetes, hypertension, excessive weight gain and depression (WHO, 2020). Among the safest and most beneficial excessive are walking, swimming, pelvic floor, which are endorsed by health authorities worldwide for their minimal risk and wide ranging health benefits (Chave, 2024). A sedentary lifestyle during pregnancy is associated with the significant health risks of deep venous thrombosis, which threatens the lives of the infant and mother. A sedentary lifestyle can lead to obesity or at least significantly contribute to persistent obesity (WHO, 2020). Obesity during pregnancy carries elevated risk for major complications. Patients with obesity are also more likely to suffer spontaneous abortions. They also have a higher risk of neural tube defects, including cleft palate, spina bifida and hydrocephalus. Obesity also put these pregnant women at risk for gestational diabetes preeclampsia, sleep apnea, macrosomia, preterm birth and even still birth. The higher the women's body mass index (BMI) the greater the risk of stillbirth.

In order to address these health issues, exercise is usually encouraged. Even the previously sedentary patient is encouraged to start an exercise programme early in pregnancy. It is also considered safe in some high-risk pregnancies such as those with chronic hypertension and gestational diabetes. Chan, Tam, Ho, Kwan, Li, Sea and Woo (2018) stated that exercise in pregnancy has been show to decrease macrosomia, gestational diabetes, preeclampsia, cesarean delivery, low back pain, pelvic girdle and urinary incontinence. Aeroloin exercise is considered the most beneficial. It is sometimes referred to as cardio exercise, which involves the heart pumping oxygenated blood to the working muscle. It uses large muscle groups (legs/arms) repetitively for a sustained amount of time. Ideally, 150 minutes per week is performed. This can be broken into smaller sessions for example, 30 minutes per day for five days each week. If one is beginning an exercise programme, one can begin with as little as 5 minutes a day and then add 5 to 10 minutes each week.

Common examples of cardiovascular exercise are walking, cycling, stair steppers, ellipticals, swimming, aerobic dance, pelvic floor. One should be exercising vigorously enough to elevate one's heart rate to approximately 110 to 120 beats per minute (this varies with age, but the average pregnant woman is between 18 to 35years of age). A practical way to monitor one's exercise intensity is the (talk test) if the individual can converse while exercising, she usually will not be over exertrincy (Ceprnja & Gupta, 2019). Overexertion can lead to complications in pregnancy and should be avoided. Walking is easy, requires no skill or cost and can be done indoors or outdoors. Pregnant women should pay close attention to adequate hydration and temperature control of the environment while pregnant, especially if the patient is new to exercise and just beginning to regimen.

Exercise contributes significantly to maternal and total well-being during pregnancy. Traditionally, women were advised to refrain from exercise during pregnancy, but newer evidence has shown this to be false (Smith, 2022). Theoretically, there were concerns about premature labour and the risks of delivery smaller infants to women who exercised during pregnancy. A recent meta-

analysis that included over 2000 women showed that aerobic exercise and moderate intensity strength/toning exercise performed 3 or 4 days per week throughout the pregnancy was not associated with an increased risk for preterm births or low birth weight infanta for normal-weight women with singleton, uncomplicated pregnancies. Despite recommendations from physicians to begin or maintain an exercise programme during pregnancy, only about (4) 40% of the women participate in exercise (WHO, 2020). A pregnant woman can be easily motivated to improve her health and the health of her unborn child through effective antenatal care services (Ibok, 2022).

Antenatal care provides a key entry point for a broad range of health promotion and disease prevention services. It is essential for healthcare providers and women to talk about important issues affecting the woman's health and her pregnancy. The aims of good antenatal are to ensure that pregnancy causes no harm to the mother and keep the fetus healthy during the antennal period. Akpam (2018) revealed that antenatal care is essential for protecting the health of women and their unborn children. Through this form of preventive healthcare, women can learn from skilled health personnel about healthy behaviours during pregnancy, better understanding and warning signs during pregnancy and childbirth. They also receive social, emotional, and psychological support at this critical time in their lives.

One of the support or advice a pregnant woman can receive during antennal services is the need to engage in physical exercises. Jacob (2019) revealed that swimming is another exercise that could promote the health of pregnant women during pregnancy. Swimming allows water to support the weight of the growing baby and moving against the water helps keep heart rate up. It is also easy on the joints and muscles. In the case of low back pain, swimming is recommended. The relevance of exercise to the health of pregnant women seems enormous. Smith (2022) asserted that walking helps to improve fitness and can be as good as a workout, if not better than running. Engaging in walking during pregnant can be very beneficial to the health of pregnant women because it does not require so much strength to carry it out.

The problem of this study is that the period of pregnancy poses a lot of challenges and complications to women, with regards to their health and well-being. During this period, women experience a significant change in their body system. While some are able to deal with these challenges posed by pregnancy successfully, others are exposed to conditions that pose a threat to their health and survival. There are several instances where some women are deformed, bed-ridden, incapacitated among others health risks. This has led to several incidences of maternal morbidity and mortality. Some of these complications that were not properly managed led to several miscarriages and stillbirths.

This incidence of maternal morbidity and in some cases mortality has become a source of concern to various stakeholders in health who have attributed this situation to poor or lack of adherence to antenatal services. During the period of pregnancy, women are usually provided with counselling services that would enable them overcome the challenges they may encounter. It has been observed that some of these women do not adhere to the advice given to them by health experts. This has often led to serious health issues. As part of efforts to reduce some of the health issues associated with pregnancy, physical exercise has often been recommended as a preventive measure for pregnancy related health conditions. This motivated the researcher to investigate how physical exercises relate health of pregnant women in Odukpani Local Government Area of Cross River State?

Literature review

According to Uwanse and Effiom (2019), swimming is widely recognized as a safe and effective form of low-impact exercise for pregnant women joint and back relief. The buoyancy of water supports body weight, easing pressure on hips knees and spine – ideal relief especially in inter pregnancy. It also improved circulation and reduced swelling, water movement helps reduce edema

and enhance blood and oxygen flow, which benefits both mother and baby. It help in better sleep and mood, regular swimming can boost mental well-being, lowering anxiety and postpartum mood disorder risk, while improving sleep quality. Preparation for labour, it maintaining endurance and muscle tone through swimming may ease labour and reduce the chance of cesarean delivery.

EtimOjong (2021) reported that swimming reduces weight bearing stress on joints, alleviates edema and supports mental wellness. Also according to Chave (2024), swimming is linked with improved fetal outcomes, including increased birth length and fewer maternal discomforts, with no adverse fetal effects. However in rural communities in Odukpani, lack of safe swimming facilities and cultural myths (e.g swimming may cause miscarriage) limit its adoption (Effiong & Otu, 2020). In Odukpani Local Government Area of Cross River State is rich in water bodies, yet structured swimming remains rare. In a study by Nkoro and Effiom (2022), 78% of antenatal women reported walking regularly but 9% engaged in swimming. Reason include lack of training, poor access to clean pools, and absence of health education promotion aquatic exercises.

Swimming although proven to offer unique health benefits remains underutilized due to infrastructure gaps and misconception. The absence of structured antenatal physical activity grogram limits the adoption of evidence based practices integrating such programme like swimming hub existence maternal health service could dramatically improve pregnancy expericnes and outcome in hard-to-reach area of Odukpani and similar communities (Adegoke & Essien (2018) (Cross River State Ministry of Health, 2023).

Okechukwu and Akpan (2019) asserted that walking is the most commonly chosen type of physical activity (PA) during pregnancy and provides several health benefits to both another provides several health benefits to both mother and child. National initiative have promoted the important of walking in general but little emphasis is directed toward pregnant women. Walking is a unique in that it appears resistant to a number 7 there barriers that limit other types of physical activity. Participation and it can be meaningfully integrated into some transportation and occupational activities when leisure time options are unavailable. Walking is generally considered safe form of exercise during pregnancy, but its always best to listen to your body and stop if you experience any pain or discomfort. Walking can help improve your mood, sleep and overall fitness, which can be beneficial as you approach your due date.

Walking might help to encourage those contraction to become more regular and stronger. It may help draw the baby down into your pelvic (Nsa 2021). Walking helps to maintain healthy weight gain, strengthen the heart, lungs and blood vessels and preserves fitness during pregnancy. Help baby position optimally in the uterus during the third trimester (Federal Ministry of Health, 2019). According to Adegoke and Essien (2018) walking during pregnancy improve circulation, posture, weight control and reduces the risk of preeclampsia and lower back pain. In Nigeria especially Odukpani settings walking is often not intentional exercises but a necessity due to poor transportation, infrastructure, especially in rural communities like Odukpani walking is an activity prevalence 85% of pregnant women report walking daily it improved sleep, reduced fatigue and shorter labour. It is a culturally accepted and widely practices (Bassey, 2018).

Purpose of the study

The purpose of the study is to investigate physical activity and health of pregnant women in Odukpani Local Government Area of Cross River State. Specifically, the study sought to;

1. investigate the relationship between regular swimming and perceived health statusof pregnant women
2. examine how walking relates to perceived health of pregnant women

Methodology

Correlational research design was considered as the most appropriate for the study. This design assesses the relationship that exists between variables used in the study. The population of the study consisted of all pregnant women in Odukpani Local Government Area of Cross River State. The sample for this study consisted of 342 pregnant women that were randomly selected from fourteen communities using simple random and systematic sampling techniques respectively. A structured twenty item four point rating scale questionnaire titled Physical Activity and Health of Pregnant Women Questionnaire (PAHPWQ) was the instrument used for data collection. The instrument was duly validated by experts in Health Education as well as Measurement and Evaluation. Cronbach alpha method was utilized to establish the reliability of the instrument. The cronbach coefficient ranged between .73 to .79, which showed high reliability of the research instrument. 342 copies of the questionnaire were administered and retrieved in seven day.

Results

There is no significant relationship between swimming and perceived health of pregnant women. The independent variable in this hypothesis is swimming while the dependent variable is perceived health of pregnant women. Pearson product moment correlation statistical tool was used for data analysis. The result of this analysis is presented in Table 1.

TABLE 1
Pearson Product Moment Correlation analysis of the relationship between swimming and perceived health of pregnant women in Odukpani Local Government Area of Cross River State (N = 342)

Variables	$\overline{X}$	SD	Cal.r	P.value
Swimming	13.309	1.369		
			.162*	.000
Perceived health of pregnant women	24.421	2.054		

*Significant at .05; df = 340

The result of analysis of data presented in Table 1 shows that the calculated r-value of .162 indicates a positive correlation between swimming and perceived health of pregnant women. However, the p.value of 0.000 is less than the 0.05 level of significance indicating that the correlation is statistically significant. This shows that there is a significant positive relationship between swimming and perceived health of pregnant women in Odukpani Local Government Area of Cross River State.

Hypothesis two

Walking does not significantly relate to perceived health of pregnant women. The independent variable in this hypothesis is walking while the dependent variable is perceived health of pregnant women. Pearson product moment correlation statistical tool was employed for analysis of data. The result obtained from the abnalysis is presented in Table 2.

TABLE 2
Pearson Product Moment Correlation analysis of the relationship between walking and perceived health of pregnant women in Odukpani Local Government Area of Cross River State (N = 342)

Variables	$\overline{X}$	SD	Cal.r	P.value
Walking	14.422	1.125		
			.460*	.000
Perceived health of pregnant women	24.421	2.054		

*Significant at .05; df = 340

The result of analysis of data presented in Table 2 shows that the calculated r-value of .460 indicates a positive correlation between walking and perceived health of pregnant women. However,

the p.value of 0.000 is less than the 0.05 level of significance indicating that the correlation is statistically significant. This shows that there is a significant positive relationship between walking and perceived health of pregnant women in Odukpani Local Government Area of Cross River State.

Discussion of findings

The finding obtained from analysis of data and testing of hypothesis one in the study revealed that the null hypothesis was rejected. The implication of this finding is that there was a significant relationship between swimming and perceived health of pregnant women in Odukpani Local Government Area of Cross River State. The reason for this finding could be that most women in the study area are used to bathing in streams even when not pregnant. The practice of swimming continues among these women when they are pregnant. This activity has been found to be very beneficial to the health of pregnant women and others who engage in it. The involvement of pregnant women in the study area in swimming activities has been sustained over the years and the health implications have been quite positive, which has enabled the activity to be sustained.

The finding of this study is in agreement with that of Uwanse and Effiom (2019) who reported that swimming is widely recognized as a safe and effective form of low-impact exercise for pregnant women joint and back relief. The buoyancy of water supports body weight, easing pressure on hips knees and spine – ideal relief especially in inter pregnancy. It also improved circulation and reduced swelling, water movement helps reduce edema and enhance blood and oxygen flow, which benefits both mother and baby. It help in better sleep and mood, regular swimming can boost mental well-being, lowering anxiety and postpartum mood disorder risk, while improving sleep quality. Preparation for labour, it maintaining endurance and muscle tone through swimming may ease labour and reduce the chance of cesarean delivery.

The finding of this study alsosupported that of EtimOjong (2021) who asserted that swimming reduces weight bearing stress on joints, alleviates edema and supports mental wellness. Also according to Chaves (2024), swimming is linked with improved fetal outcomes, including increased birth length and fewer maternal discomforts, with no adverse fetal effects. However in rural communities in Odukpani, lack of safe swimming facilities and cultural myths (e.g swimming may cause miscarriage) limit its adoption (Effiong & Otu, 2020). In Odukpani Local Government Area of Cross River State is rich in water bodies, yet structured swimming remains rare. In a study by Nkoro and Effiom (2022), 78% of antenatal women reported walking regularly but 9% engaged in swimming. Reason include lack of training, poor access to clean pools, and absence of health education promotion aquatic exercises.

The finding obtained from analysis of data and testing of hypotheses two in the study revealed that the null hypothesis was rejected. This implied that there was a significant relationship between walking and perceived health of pregnant women in Odukpani Local Government Area of Cross River State. The reason for this finding could be that walking is the commonest exercise among people including pregnant women in the study area. This is because the daily activities of people require moving from one location to the other. This has enables pregnant women who are not having medical restriction to regularly exercise their body and stay healthy all through the period of their pregnancy.

The finding of this study agrees with that of Okechukwu and Akpan (2019) who asserted that walking is the most commonly chosen type of physical activity (PA) during pregnancy and provides several health benefits to both another provides several health benefits to both mother and child. National initiative has promoted the important of walking in general but little emphasis is directed toward pregnant women. Walking is a unique in that it appears resistant to a number 7 there barriers that limit other types of physical auntery. Participation and it can be meaningfully integrated into some transportation and occupational activities when leisure time options are unavailable.

The finding of this study also supported that of Nsa (2021) who opined that walking helps to maintain healthy weight gain, strengthen the heart, lungs and blood vessels and preserves fitness during pregnancy. Help baby position optimally in the uterus during the third trimester (Federal Ministry of Health, 2019). According to Adegoke and Essien (2018) walking during pregnancy improve circulation, posture, weight control and reduces the risk of preeclampsia and lower back pain. In Nigeria especially Odukpani settings walking is often not intentional exercises but a necessity due

to poor transportation, infrastructure, especially in rural communities like Odukpani walking is an activity prevalence 85% of pregnant women report walking daily it improved sleep, reduced fatigue and shorter labour. It is a culturally accepted and widely practices (Bassey, 2018).

Conclusion

The study aimed to investigate and present results on physical activity and perceived health of pregnant women in Odukpani Local Government Area of Cross River State. The finding obtained from analysis if data and testing of hypotheses in the study revealed that there wa s a significant relationship between swimming, walking and perceived health of pregnant women in the study area. It can be concluded that physical activity contributes positively to the health of pregnant women in Odukpani Local Government Area of Cross River State.

Recommendations

The researcher made the following recommendations based on the findings obtained in the study;

i. Health personnel should continue to encourage pregnant women to engage actively in swimming in order to enable them maximize the benefits associated with the exercise

ii. Relevant authorities should ensure that more women are sensitized on the need to participate actively in walking activities in order to improve their health during pregnancy.

REFERENCES

Adegoke, A. A., & Essien, M. I. (2018). Physical activity and maternal outcomes in Calabar. *NJHP*. *10(2),* 123-133.

Akpam, G. O. (2018). Social and cultural conflict in sports and games in developing countries. *International Review of Sports Sociology, 6*, 14-24

Bassey, E. D. (2018). Cultural Beliefs and Physical Activity in Rural Nigeria. *African Journal of Public Health,* 12(3), 77-86

Ceprnja, D. N., & Gupta, K. E. (2019). *Exercise during pregnancy: Issues and prospects*. University of Lagos Press

Chan, E.,Tam, W., Ho, W., Kwan, D., Li, K., Sea, L., & Woo, J. (2018). Exercise in pregnancy and the postpartum period. *Journal of Obstetrics Gynecology, 25(6),* 522–31.

Chaves, E. M. (2024). Aquatic physical activity and perinatal outcomes. *BMC Pregnancy and Child Birth*, *24(15),* 302-315

Cross River State Ministry of Health, (2023). Exercise during pregnancy: Safe and beneficial for most women. Ministry of Health

Effiong, B, U., & Otu, M. B. (2020). Barriers to aquatic exercise. *UMCH*, *8(3),* 193-201 .

EtimOjong, E. N. (2021). Changes in leisure time physical activity during pregnancy compared to the prior year. *Journal of Maternal and Child Health, 17*, 632-638.

Federal Ministry of Health Nigeria, (2019). *National guidelines for antenatal care*. Federal Ministry of Health, Abuja

Hanson, V. A. (2023). Harnessing effective participation in sports. Sule Enterprise, Kaduna.

Ibok, K. O. (2022). Exercise during pregnancy improves maternal glucose screen at 24-28 weeks: a randomized controlled trial. *British Journal of Sports Medicine, 46*, 656-661.

Jacob, G. M. (2018). Physical activity for cognitive and mental health in pregnant women: A systematic review of mechanisms. *Pediatrics*, *138(3),* 177-184

Mark, G. A. (2022).). Swimming as antenatal care in Obudu: Perceptions and outcomes. *Cross River Medical Journal*, *5(2),* 28-37.

Nkoro, F. E., & Effiom, W. O. (2022). Antenatal exercise knowledge and practice among pregnant women in Calabar. *International Journal of Clinical Studies and Social Science*, *9(3),* 17-25

Nsa, J. E. (2021). Relaxation Exercises and stress reduction in pregnancy. *Nigerian Journal of Maternal Health, 13(4),* 78-86

Okechukwu, 1. A., & Akpan, J. O. (2019). Effects of walking on mental health of pregnant women. *Nigerian Journal of Clinical Health*, *7(1),* 45-53.

Smith, L. M. (2022). Antenatal exercise trends in Cross River State: A comparative study of walking and swimming activities. *Nigerian Journal of Community Health*, *14(2),* 77-88.

Uwanse, E. B., & Effiom, E. C. (2019). Perceivedbenefits and barriers to antenatal exercise among pregnant women in Calabar. *African Journal of Reproductive Health*, *23(4).* 52-60.

WHO. (2020). *Guidelines on physical activity and sedentary behaviour*. Geneva: World Health Organization.