
Knowledge and Practice of Oral Health Care among Pregnant Women
in Etinan Local Government Area, Akwa Ibom State

BY

Grace Joe EKA
Department of Human Kinetics and Health Science
Faculty of Education
Nnamdi Azikiwe University
Awka – Anambra State, Nigeria

&

Hannatu C. EKONG
Department of Nursing Science
Faculty of Health Science and Technology
University of Nigeria, Enugu

ABSTRACT

This study examined the level of knowledge and practice of oral health care among pregnant women in Etinan Local Government Area, Akwa Ibom State. To guide the study five specific objectives and corresponding research questions were developed. Two research hypotheses were postulated and tested. The study was conducted using cross sectional survey design. Stratified random sampling technique was employed to draw a sample of 244 pregnant women during Antenatal clinic. The instrument for data collection tagged “Knowledge and Practice of Oral Health Care Among Pregnant Women Questionnaire” (KPOHCAPWQ) was validated by independent assessors from department of Educational Foundation, University of Uyo and College of Health Technology, Etinan. The reliability index for the instrument was determine using Cronbach’s Alpha Method and- a value of .82 was obtained. Research questions were answered using weighted mean scores, standard deviation and rank orders, while the null hypotheses were tested using Analysis of Variance (ANOVA) at .05 level of significance and at appropriate degree of freedom. The results from findings showed high level of knowledge and practice of oral health care among pregnant women in Etinan. Consequently, it was recommended among others that regular and free conduct of oral health care seminar for both educated and uneducated pregnant women be commenced. Additionally, oral health care maintenance should be reinforced by limiting sugary foods and drinks intake and use of fluoridated toothpaste twice a day for brushing of the mouth (teeth).

KEYWORDS: knowledge, practice, oral health care, pregnant women

Introduction

Oral health, according to American Dental Association Policy (2014) is defined as a functional, structural, aesthetic, physiological and psychological state of well-being which is essential to individuals’ general health and quality of life. Oral health is used interchangeably with dental health according to World Health Organization, (2016). It is increasingly being recognized as an important part of general health. In developing countries however, less priority is accorded to oral health care perhaps due to high level of ignorance. World Health Organization (2016) updated the definition and stated thus: Oral health is a state of being free from chronic mouth and facial pains, oral and throat cancer, oral sores and birth defects such

as, cleft lip and palate, periodontal (gum) diseases, tooth decay, tooth loss and other tooth diseases and disorders that affect the oral cavity.

Locker (2008) develop a conceptual model of oral health which defines health as not merely an absence of diseases but includes functional aspects, social and psychological wellbeing thereby focusing on optimal functional and social role. He further added that oral health is a comfortable and functional dentition that allows individual to continue their social role. oral health presently is not structured to suite health policy in Nigeria. In the Nigeria setting, oral health seen as a component of primary health care is yet to be integrated into the PHC services in the country. There has been evidence that poor oral health always has negative impacts on the general health and quality of life of pregnant women.

In humans, during growth and development, any physiological conditions especially among women can bring some reversible changes in oral health. Such conditions include puberty, pregnancy and menopause which have significant effect generally on the oral health of women (Ferris, 2003). Knowledge as defined by Gbepwi (2005) is a recall of factual information. It is a noun used to describe information and understanding that one has in the mind about something. It is an important factor to influence behavioural change and a prerequisite to appropriate behavior. Hornby (2016) opined that, it is the ability to directly know and perceive, to feel or be conscious of events, objects, thoughts, emotions or sensory patterns. It is the expertise skills acquired by a person through experience or education with the ability to use if for a particular purpose (Sharde & Shetty, 2016).

Cambridge English Dictionary (2016) defines practice as habitual or customary performance which accompanies the act of rehearsing a behavior over and over for the purpose of improving or mastering it. It is a noun and verb which is used interchangeably to achieve or bring about effect or maintain a skill. Practice in an instructional setting may be effective only one to three times and this goes with an adage which says “practice makes perfect”. Sweet and Tiran (2010) defined pregnancy in relationship to this study as a period of having a developing embryo or fetus within the body from conception to delivery of the foetus. The normal duration are 280 days (40 weeks or 9 months) and 7 days counting from the first day of normal menstrual period. Wylie (2005) defined pregnancy as the first day of time during which one or more offspring develops inside a woman. It is a period of joy and anxiety in a woman’s life and is characterized by various physiological changes in her body brought about by the circulating female sex hormones. (Lee, McWilliams & Jancher, 2009). A number of oral changes are inevitable during pregnancy. Pregnancy is a unique time in a woman’s life and is characterized by complex physiological changes. These changes can adversely affect oral health. During pregnancy, hormones alter immune responsiveness and inflammatory mediators and this cause oral problems primarily gingivitis and periodontitis (Russell & Maybery, 2008). The changes though being a natural process increase susceptibility to oral infection which may affect the pregnancy outcome as well. (Kurie, Kattimani, Sriram & Rao, (2013).

According to Canadian Dental Association (2016) about 80% of Canadians visit their dentist at least once each year for a regular dental checkup. Many people have little or no idea what is actually happening in their mouth while they are in the dental chair. However, due to fear, majority fear to visit the dentist for regular teeth cleaning. This cleaning helps to remove by scrapping the built-up plaque and tartar that collect above and below the gum line before flossing between an around every tooth to remove any plaque or food particles that are clinging on. It is after this first visit, that appointment is given in 6 months’ time to ensure regular dental checkup.

In Etinan, the women are scary about the oral examination, hence few of them do not like going to hospital during pregnancy and tend to prefer going prayer houses and other traditional midwives who have no idea about complications of oral disease during pregnancy. The educational level of women contributed to their oral health status according to Gopaldas and Seshadri (2007). Inability to attend dental checkup/clinics according to Akpata (2004) was due to poverty and misconception. He stated that poor women could not pay for the oral care. On average, seeing a dentist twice a year works well for many people. People with very little risk of cavities or gum disease can see a dentist once a year. People with a high risk dental problem might need to visit every three, four or six months: these include smokers, pregnant women, diabetic people with current gum diseases, people with weak immune response to bacterial infection and people with cavities or build up plaque.

Statement of the problem

Oral health policy, though described as a road map towards effective treatment and management of oral ailment is lacking in Etinan Local Government Area of Akwa Ibom State. However, it is on observation that pregnant women and women of child bearing age in Etinan Local Government Area are facing challenges regarding their oral health. This because of daily high consumption of sugary foods and drinks (Confectionaries) which predispose them to dental caries and other oral diseases. In Etinan, about 30-45% of pregnant women have dental cavities and this constitute a major health problem. Despite, the fact that the Federal, State, Local Government and Voluntary Health Agencies have done their best to see that rural dwellers are educated on health issues which include oral health care and oral disease prevention methods through workshops, seminars, symposium, free dental check-ups and tooth brushing, some pregnant women do not go for dental checkup. A survey carried out for this case showed that oral health situation in the area of study calls for urgent and speedy attention to salvage the alarming oral diseases among pregnant women. Arising from this, the main focus of this study was to determine the level of knowledge and practice of oral health care among pregnant women in Etinan Local Government Area.

Purpose of the Study

The main purpose of the study was determining the oral health care among pregnant women and their level of knowledge form various sources and dental check-up/visits in Etinan Local Government Area of Akwa Ibom State.

Specifically, the objectives of the study were as follows:

- 1) To determine the difference in the level of knowledge of oral health care among pregnant women based on their level of knowledge from various sources.
- 2) To examine the difference in the level of knowledge of oral health care among pregnant women based on their level of knowledge from dental checkup/visits.

Research Questions

- 1) What is the level of knowledge of oral health care among pregnant women based on their level of knowledge from various sources?
- 2) What is the level of knowledge of oral care among pregnant women based on their level of knowledge from dental Checkup/visits?

Research Hypotheses

- 1) There is no significant influence in the level of Knowledge of oral health care among pregnant women based on their level of knowledge from different sources.
- 2) There is no significant influence in the level of knowledge of oral health care among pregnant women based on their level of knowledge from dental checkup/visits.

Methodology

A cross sectional survey design was used to collect data from the selected health facilities in Etinan Local Government Area of Akwa Ibom State.

Area of the study

Etinan is located on Latitude 0500'N and Longitude 07054'E. it is 26 kilometers South of Uyo, the Akwa Ibom State Capital and 24 kilometers North of Eket. It shares common boundaries with some L.G.A namely: Onna, Mkpatt Enin, Abak and Uyo Local Government Area.

Population for the study

The population for the study comprised 2640 pregnant women who registered in the Ante Natal Clinics in various health facilities selected for the study in the Local Government Area.

Sample and Sampling Technique

A stratified random sampling technique is the random composition of subjects based on clearly defined population strata or levels of population in health facilities (Ali, 2006). The stratified random sampling technique was used in selecting 244 health facilities in Etinan Local Government Area, Akwa Ibom State considering the fact that the facilities were divided into strata of hospitals, private clinics, and primary health care centers settings respectively.

Instrument for Data Collection

The instrument required for data collection was a 34 researcher-developed closed ended questionnaire titled "Knowledge and Practice of Oral Health Care Among Pregnant Women Questionnaire (KPOHCAPWQ)".

Validation of the Instrument

The instrument was given out to independent assessors in College of Health Technology and Department of Educational Foundation in the University of Uyo for Face and content validity.

Reliability of the Instrument

In determining the reliability of the instrument, the questionnaire was administered once on 20 pregnant women who were not part of the sample of the study. A Cronbach Alpha method was used to establish the reliability coefficient of the instrument which was .82. This value indicated the suitability of the instrument for the study.

Method of Data Collection

The method of data collection was by administering the questionnaire to the pregnant women as they attended the Ante Natal Clinic. Questionnaires were administered after every three pregnant women randomly selected during history taking and booking by the health worker.

Method of Data Analysis

Means and rank ordering was used to answer the research questions while Analysis of Variance (ANOVA) was used to test the hypotheses at .05 Level of Significance.

Result and Discussion

Research Question 1

What is the level of knowledge of oral health care among pregnant women based on their level of knowledge from various sources?

Table 1: Mean analysis of level of knowledge of oral health care among pregnant women based on their knowledge from various sources.

15 Source of knowledge	n	X	SD	Rank Oder
ANC Clinic	100	51.590	7.675	1
Village informant	42	46.214	6.937	5
Church	28	47.321	6.837	4
Radio/Television	34	48.559	8.151	3
Friends	40	40.350	6.620	2

Data analysis in Table 1 shows the level of knowledge of oral health care among pregnant women based on their level of knowledge from different sources. The result indicated that pregnant women that gained knowledge of oral health care from ANC clinic had a mean value of 51.590. the second rank was from friends with a mean value of 50.350, the thirdrank from radio/television with the mean value of 48.559. the fourth were those that obtained knowledge of oral health care from church with the mean value of 47.321 and lastly by those that gathered information from the village informant with the mean value of 46.214.

Research Question 2

What is the level of knowledge of oral health care among pregnant women based on their level of knowledge from dental checkup / visits?

Table 2: Mean Analysis of the level of knowledge of oral health care among pregnant women based on their level of knowledge from dental checkup/visit.

16 Dental Check-up / Visits	n	X	SD	Rank Oder
6-monthly	57	50.139	6.297	2
Once a year	55	49.512	6.434	3
During pregnancy	89	51.085	8.880	1
None	43	47.830	8.310	4

Data analysis in Table 2 revealed the mean value of 51.085 for the level of knowledge of oral health care among pregnant women who attended dental check-up clinic during pregnancy, followed by those who attended for a 6-monthly period with a mean value of 50.139. The

next group included pregnant women who attended once a year with the mean value of 49.512. Those with the least level of knowledge of oral health care were the pregnant women who had not attended dental check-up/clinic with the mean value of 47.830.

Research Hypothesis 1

There is no significant influence in the Level of Knowledge oral health care among pregnant women based on their level of knowledge from various sources.

Table 3: Analysis of variance of in the level of oral health care practice based on various sources of knowledge

Source of Variance	SS	Df	MS	Fcal	Fcri
Between group	646.505	4	161.63	3.16	2.41
Within group	12220.303	239	51.13		
Total	12866.808	243			

*** Significant at .05 alpha level**

Data analysis in Table 3 indicated that the calculated F-value of 3.16 was greater than the critical F value of 2.41 at degree of freedom of 4 and 239 at .05 level of significance. Hence the null hypothesis was rejected. Therefore, there is a significant difference on the level of oral health care practice among pregnant women based on their level of knowledge from different sources.

Research Hypothesis 2

There is no significant difference in the level of knowledge of oral health care among pregnant women based on their level of knowledge from dental check-up/visits.

Table 4: analysis of variance of the difference in the level of knowledge of health care based on their level of knowledge from dental check-up/visit N=244

Source of Variance	SS	Df	MS	Fcal	Fcri
Between group	785.572	3	261.587	5.02	2.65
Within group	12529.049	240	52.204		
Total	13314.621	243			

*** Significant at .05 alpha level**

Data analysis in table 4 shows that the calculated F-value of 5.02 was greater than the critical F-value of 2.65 at degree of freedom of 3 and 240 at .05 level of significance. Therefore, the null hypothesis was rejected. Hence, there is a significant difference in the level of practice of oral health care among pregnant women on their level of knowledge based on dental check-up/visits.

Discussion of the Findings

The null hypothesis was therefore rejected as there was a significant difference on the level of knowledge of oral health care among pregnant women based on different source of knowledge. This implies that during pregnancy, positive health education and information

were given by the health workers during Ante natal clinic on how to keep the oral cavities clean by brushing the mouth daily first thing in the morning before breakfast and last thing in the evening before sleeping. This result agreed with Langha (2004) and Saadu, et al (2012) that regular brushing and good oral habits can maintain oral health and prevent oral diseases. The finding also agreed with Oguntola (2013) that about 80-90% of Nigerians including Akwa Ibom State use chewing stick for cleaning and strengthening the teeth. Langha (2004) further added that self-care habit and utilization of dental services such as dental check-up/visits and use of fluoridated products help to prevent dental caries and periodontal diseases. Some respondents got dental information from other source like churches, friends, radio/television and the village informant. This geared up the information and knowledge about oral health practice in Etinan community.

Further investigation into the level of knowledge of practice of oral health care among pregnant women based on the level of knowledge from dental check-up/visits in Table 2 showed the following positive mean value. This was confirmed with a mean value of 51.085 for the level of oral health care practice for women who attended dental check-up during pregnancy followed by those who did the check-up in six monthly periods with a mean value of 50.139. the next group was the women who went for dental check-up only once a year throughout their recent child bearing period with a mean value of 49.512. the least were the women who never attended the dental check-up/visits throughout the pregnancy with a mean value of 47.830.

Further analysis with ANOVA in table 4 revealed that the calculated F-Value of 5.02 was greater than the critical F-Value of 2.65 at degree of freedom of 3 and 240 and at .05 level of significance, therefore the null hypothesis was rejected as there was a significant difference in the level of practice of oral health care among pregnant women based on their knowledge of dental check-up/visits. This finding agreed with Langha (2004) who opined that self-care and utilization of dental services such as dental check-up/visit help to promote dental health and of course prevent oral diseases like dental caries and periodontal diseases. In addition to that, Canadian Dental Association confirmed the need for regular dental check-up at least once in a year for every woman of child bearing age. This will help in cleaning the teeth and removing the plaque and tartars in the gum line.

Implications of the Findings

The observed level of knowledge and practice of oral health care among pregnant women in Etinan Local Government Area required that pregnant women be educated on the importance of maintaining good oral hygiene, expected changes in the oral cavity and routine dental check-up/visits. Dental health professionals must be aware of the update of pregnancy conditions and their proper management without harming the patient and the fetus. Considering the best level of patients' care, referral and consultation to patients' physicians should be considered. During dental visits and check-up, female patients of child bearing age and expecting females should be screened for caries and other oral diseases for timely management. Oral health infections have a bi-directional relationship with other infections like cardiovascular diseases, diabetes melitus, and preterm and low birth weight in babies due to bacterial accumulation.

Conclusion

This study examined the level of knowledge and practice of oral health care among pregnant women in Etinan Local Government Area using source of information and dental check-

up/visits. From the findings, it is concluded that there is maximal level of knowledge and practice of oral health care during pregnancy which prompted effective pregnancy outcome with no complications to the patients and their fetuses. Communication by oral care and prenatal health care providers should address the myths and misconceptions many women had about oral health during pregnancy. Women's need on oral health awareness during pregnancy helps to reduce the higher risk of oral disease thus reducing child's downstream on oral health as she grows older. On conclusion, regular dental care is a key to good oral and general health of women throughout their lifespan including pregnancies.

Recommendations

Based on the findings, discussion and conclusion of the study, the following recommendations were made:

- 1) Discuss oral health with all patients including those who are pregnant and in post-partum period
- 2) Reinforce routine oral health maintenance such as limiting sugary foods and drinks, brushing of mouth twice a day with fluoridated toothpaste, flossing once daily and dental check-up/visits twice a year.

REFERENCES

- Akpata, E. S. (2004). Oral health in Nigeria. *International Dental Journey* 53(1): 361-365.
- Ali, A. S. (2006). Dental Preventive advice for pregnant women and nursing mothers: Social Implications. *International Dental Journal* 31 (1) 14-22.
- American Dental Association (ADA) (2014). Council on Dental Materials and devices. Pit and Fissure Sealants. *Journal of American Dental Association* 93 (1): 134.
- Ferris, G. M. (2003). Alteration in female sex hormones: Their effect on oral tissues and dental treatment. *Compendium* 14 (12): 1558-1564-1566.
- Gbefwi, N. A. (2005). *Health Education and Communication Strategies: A practical approach for community based health practitioners and rural health workers*. Lagos: West African Book Publisher.
- Kurien, S. Kuttirnaru, R. R. Sriram, S. K. & Rao, A. (2013). Management of pregnant patient in density. *International Journal of Oral Health*, 5, 88-97.
- Langha, Y. (2004). *Oral health knowledge, attitude and behaviour of College Students at a Mid-Western University*. University of Cincinnati, USA.
- Lee, A., McWilliams, M. & Janchar, T. (2009). Care of the Pregnant Patient in the Dental Office. *Dental clinic North America* 43(3) 485-495.
- Locker, D. (2008). Measuring oral Health: A conceptual Framework. *Community Dental Health* 5(1): 3-18
- Russel, S. L. & Mayberry, I. J. (2008). Pregnancy and Oral health: A review and recommendation to reduce gaps in practice and research. *Maternal and Child Nursing Journal*. 33(1)32-37.
- Sa'adu, L., Musa O. L. & Abu-Saeed, M. B. (2012). Knowledge and Practice of oral health among junior Secondary School Students in Illorin West Local Government Area of Nigeria. *E-journal of Dentistry* 2(2) 170-175.
- Sweet, B. & Train, D. (2009). *Baillieres' Midwives Dictionary*. (3rd ed). London; Bailliere's Tindal Ltd.
- WHO (2016) *Tooth Brushing and Dental Floss and Prevention of Dental Cariers*. WHO approach: WHO Bulletin News.
- Sharda, A. J., & Shetty, S. (2016). A Comparative Study of Oral Health Knowledge, attitude and behavior of first and final year dental students of Udaipur City, Rajasthan. *Journal of Oral Health Community Dentistry* 2(3), 46-54.
- Hornby, A. S. (2016). *Oxford Advanced Learners Dictionary*. New York: Oxford University press.
- Gopaldas, T. and Seshadri, S. (2007). Impact of iron supplementation on cognitive functions in preschool and school-aged children: the Indian experience. *Am J Clin Nutr*, 50(3 Suppl), 675-684.

Oguntola A. O. (2013). Improving low awareness and inadequate access to oral health care in Nigeria: the role of dentists, the government & non-governmental agencies. *Nigeria Medical Journal*, 51(3), 134-136.

Wylie A. H. (2005). Teachers' oral health knowledge, attitude and practices. *Saudi Med J*. 23(1):77-81.