

Demographic Variables as a Determinant of Health Promotion Practices among Postpartum Women Attending Primary Health Care Centers in Abia State

J. O. Okafor (Ph.D)¹, Ejimonu Ngozi Constance²,
Adimuko Prince Obieze³ and Ekwem Chibuikwe Emmanuel⁴

Department of Human Kinetics and Health Education, Nnamdi Azikiwe University, Nigeria¹
Awka and Abia State College of Health Sciences and Management Technology, Abia, Nigeria^{2,3,4}
jerry.okafor@unizik.edu.ng, ngoziejims@gmail.com, adimukoobieze@gmail.com, ekwem4boz@gmail.com

Abstract: Little is known about the engagement of health promotion practices of postpartum women in Abia State; and no empirical data was identified in Abia State hence the motivation to determine demographic Variables as a determinant of health promotion practices among postpartum women attending primary health care centers in Abia State. To achieve this purpose, 8 specific purposes, and 8 corresponding research questions and 8 hypotheses were raised. Descriptive survey design was adopted. Multi-stage sampling technique was used to draw 600 postpartum women attending primary health care centers at Abia State between September and October, 2021. Research instrument was a researcher-developed questionnaire tagged "Health Promotion Practices Questionnaire, (HPPQ)" which was divided into two clusters (breastfeeding and personal hygiene). Three experts validated the instrument. The HPPQ was subjected to reliability test using Kuder-Richardson (K-R 20) and the reliability coefficients 0.61 and 0.69 were obtained for breastfeeding and personal hygiene respectively. Analysis was done using 462 adequately completed copies of the instrument. Frequencies and percentages were used to answer the research questions, while chi-square statistics was used to test the hypotheses at .05 alpha levels. The findings showed that greater proportion of women below 23years of age engaged less in health promotion practices regarding personal hygiene and breastfeeding. Also, postpartum women of parity level of 1-3 engaged most in health promotion practices of breastfeeding and personal hygiene. Postpartum women who were either civil servants or business women engaged most in health promotion practices stipulated in this study while those postpartum women of educational group of primary education and no-formal education engaged less in health promotion practices of breastfeeding and personal hygiene. There were significant differences among postpartum women of different ages, parity levels, educational status and occupational levels in their engagement of health promotion practices. Based on the above findings, conclusions were drawn and recommendations among others were made: every postpartum woman should be adequately informed and sensitized on the importance of postpartum care and the essence of regular attendance to Primary Health care centers during postpartum period, particularly the younger ones, using appropriate channels and settings.

Keywords: Demographic Variables, Health Promotion Practices Postpartum

I. INTRODUCTION

The ideal health promoting practices of women during postpartum period should be to maintain personal hygiene, eat adequate healthy foods and live a healthy lifestyle which must include keeping their environment clean, having adequate rest and sleep everyday which will optimize their health. This is assumed to have been made possible through the teachings they receive during antenatal and postnatal care. Women attending antenatal as well as postnatal care are given targeted health education messages on the benefits of healthy living with the aim of developing the women's

knowledge and attitude on health promotion practices so that they can make healthy decisions affecting their health at postpartum and take responsibility (Fahey & Shenassa, 2013). Some of these targeted health messages are also relayed on radio and television as jingles, most times in their local dialects. Also, enlightenment campaigns and symposia are organized at the local communities to sensitize women generally on healthy life styles during postpartum period. The ideal health promotion practices specifically make women gain more benefits during pregnancy, delivery and postpartum. However, up till now, as Enzezab et al., (2012) noted, these practices are not yet at the desired levels of function among postpartum women in Abia State.

Federal and State government have made concerted efforts by instituting Postpartum Care Units in Primary health care centers with the primary responsibility of educating women on the required health promotion practices; through integration of technical knowledge and ability to receive and support women in this life cycle; to give preventive treatment and follow up on women. It also encourages women to take up a personal challenge of maintaining their health. Yet, there is still poor adherence towards health promotion practices among postpartum women in Abia State resulting to negative health outcome. Also, Brasil (2016) noted that Local and International bodies have also formulated health policies, established guidelines, actions and strategies for postpartum care especially in all Primary health care centers where women at this period imbibes health promotion practice for their comprehensive care. Yet, despite these initiatives and ongoing efforts provided, there is evidence that postpartum women do not engage in health promotion practices as required. Cram and Bray (2010) stated in their Studies that 25 percent of postpartum women in United States, 36 percent in Australia engage less in health promotion practice. While in Nigeria, 93 percent of postpartum women believed that engagement in mere postpartum practices made them stronger and helped them regain their physiologic state (Zibairu, Md.Hazzaz, Hadiza, Mutktar Isa.sadeeq and Hamisu, 2006). They appear to devote their time to household chores and care giving little time to health promotion practices in this period. Evidence exists that half a million women die each year as a result of complications from child birth and two-thirds of these deaths occur in the postpartum period. Expectedly, most of these deaths occur in sub-Saharan African (Ronsman and Graham, 2006). Women's health at this period seems to have remained neglected by them and they lacked competence and requisite knowledge on health promotion practices to navigate unhealthy practices. This can be attributed to poor health literacy skills among postpartum women and lack of adequate awareness on importance of health promotion practice for postpartum women. Several studies have done in the area of health promotion within and outside Nigeria with different subjects but none was done using postpartum women in Abia State. It is against this background that this study has been designed to determine, demographic variables as a determinant of health promotion practices among women attending primary health care centers in Abia state.

II. PURPOSE OF THE STUDY

The main purpose of this study was to determine the demographic variables as a determinant of health promotion practices among postpartum women attending Primary Health Care Centers in Abia State.

Specifically, this study determined the percentages of postpartum women engaged in health promotion practices regarding:

1. Breast feeding in relation to their ages
2. Breast feeding in relation to parity
3. Breast feeding in relation to their level of education
4. Breast feeding in relation to their occupation
5. Personal hygiene in relation to their age.
6. Personal hygiene in relation to parity
7. Personal hygiene in relation to their level of education
8. Personal hygiene in relation to their occupation

III. RESEARCH QUESTIONS

The following research questions guided the study

1. What percentage of postpartum women of different age ranges engaged in health promotion practices regarding personal hygiene

2. What percentage of postpartum women of different parity level engaged in the health promotion practices regarding personal hygiene
3. What percentage of postpartum women of different occupational level engaged in health promotion practices regarding personal hygiene?
4. What percentage of postpartum women of different educational level engaged in health promotion practices regarding personal hygiene
5. What percentage of postpartum women of different age ranges engaged in health promotion practices regarding breastfeeding
6. What percentage of postpartum women of different parity level engaged in the health promotion practices regarding breastfeeding
7. What percentage of postpartum women of different occupational level engaged in health promotion practices regarding breastfeeding
8. What percentage of postpartum women of different educational level engaged in health promotion practices regarding breastfeeding

3.1 Hypotheses

Specifically, the following null hypotheses guided the study and were tested at 0.05 levels of significance

1. There will be no significant difference in the percentages of number of postpartum women of different age ranges that engage in health promotion practice of personal hygiene
2. There will be no significant difference in the percentages of number of postpartum women of different parity that engage in health promotion practice of personal hygiene
3. There will be no significant difference in the percentages of number of postpartum women of different level of education that engage in health promotion practice of personal hygiene
4. There will be no significant difference in the percentages of number of postpartum women of different level of occupation that engage in health promotion practice of personal hygiene
5. There will be no significant difference in the percentages of number of postpartum women of different age ranges that engage in health promotion practice of breastfeeding
6. There will be no significant difference in the percentages of number of postpartum women of different parity that engages in health promotion practice of breastfeeding
7. There will be no significant difference in the percentages of number of postpartum women of different level of education that engages in health promotion practice of breastfeeding
8. There will be no significant difference in the percentages of number of postpartum women of different level of occupation that engage in health promotion practice of breastfeeding

IV. RESEARCH METHODS

A descriptive survey design was adopted for the study. . The area of study for this research was Abia state. Abia state is one of the 36 states of the Federal Republic of Nigeria. The sample size comprised 600 postpartum women attending postpartum care units of primary health care centers at the period of data collection. The sample size for the study was determined using multistage sampling procedure. The instrument for this study tagged "Health Promotion Practices Questionnaire (HPPQ)" was constructed by the researcher. The questionnaire was developed through review of related literature, observation and researcher's personal experiences. The instrument was validated by four experts, two from the Department of Human Kinetics and Health Education and one from the Department of Educational Foundations, all in Nnamdi Azikiwe University, Awka. The data collected from postpartum women were used to determine the reliability of the instruments the reliability indices of the four clusters of the study namely; adequate nutrition, rest and sleep, breast feeding and personal hygiene were determined using Kuder-Richardson (K-R 20) statistic to get the following values 0.61 and 0.69 respectively. The reliability coefficients were all considered adequate and were accepted for the study. The data were collated and coded using statistical package for social sciences (SPSS) Version 25). Percentages were used to answer the research questions and Chi- Square was used to test the hypotheses at 0.05 level of significance.



Research Question 1

What percentage of postpartum women of different age range engaged in health promotion practices regarding personal hygiene?

Hypothesis 1: There will be no significant difference in the percentage number of postpartum women of different age ranges that engaged in health promotion practice regarding personal hygiene

Table 1: Percentage of Postpartum Women Engaging in Health Promotion Practices Regarding Personal Hygiene by Age Range

Table with 8 columns: Health Promotion Practices Regarding Personal Hygiene, Age Range (18-22years, 23-27years, 28-32 years, 33-37 years, 38-42 years, 43-47 years), and Total. Rows include Engaged in practices, Do not Engaged in practices, and Total.

X^2 = 5.17, df, 5, p-Value = .396, Not significant

The result presented in 1, shows the highest percentage (18.4%) of postpartum women that engaged in health promotion practices regarding personal hygiene of the age ranges of 28-32 years, followed by 16.7 percent, 14.3 percent, 10.4 percent, 7.8 percent and 4.3 percent of the women of ages, 23-27 years, 33-37 years, 38-42 years, 18-22 years and 43-47 years respectively in this descending order of magnitude engaged accordingly in health promotion practices regarding personal hygiene.

The table also indicated that a total of 332 (71.9%) of the women engaged in health promotion practices regarding personal hygiene. The table also shows that 7.6 percent, 7.6 percent, 6.3 percent, 3.0 percent, 1.9 percent and 1.7 percent of the women ages 23-27, 28-32, 33-37, 18-22, 38-42 and 43-47 years respectively in their descending order of magnitude did not engaged in health promotion practices regarding personal hygiene. From the table, a total of 28.1 percent of the women did not engaged in health promotion practices regarding personal hygiene. The summary of the chi-square test presented in table 4.9 shows that there was no significant difference in the percentage of postpartum women of different age range that engaged in health promotion practices of personal hygiene, X^2 = 5.17, df= 5, p-Value = .396. The p-value of .396 was greater than 0.05, therefore, the null hypothesis was accepted.

Research Question 2

What percentage of postpartum women of different parity level engage in health promotion practices regarding personal hygiene?

Hypothesis 2: There will be no significant difference in the percentage number of postpartum women of different parity level that engaged in health promotion practice regarding personal hygiene.

Table 2: Percentage of Postpartum Women Engaging in Health Promotion Practices Regarding Personal Hygiene by Parity Level

Table with 5 columns: Health Promotion Practices Regarding Personal Hygiene, Parity Level (1-3 Children, 4-6 Children, 7 & Above), and Total. Rows include Engaged in practices, Do not Engaged in practices, and Total.

X^2 = 5.03, df= 2 p-value = .081, Not Significant.

The result displayed in Table 2, shows that 47.4 percent of the postpartum women with 1-3 children engaged most in health promotion practices regarding personal hygiene, followed by 22.5 percent of those women with 4-6 children and 1.9 percent of women with 7 and above children engaged in health promotion practices regarding personal hygiene as

shown by the percentage score. It was indicated in the table that a total number of 332(71.9%) of the women engaged in health promotion practices regarding personal hygiene. Also, 19.7 percent, 6.7 percent and 1.7 percent of postpartum women with parity levels of 1-3 children, 4-6 children and 7 and above children respectively did not engage in health promotion practices regarding personal hygiene. From the table, a total number of 130(28.1percent) of the postpartum women did not engage in health promotion practices regarding personal hygiene.

The summary of the chi-square test presented in table 4.10 shows that there was no significant difference in the percentage of postpartum women of different parity levels that engaged in health promotion practices of personal hygiene, $X^2 = 5.03$, $df = 2$, p -value = .081. The p -Value of .081 was greater than 0.05, therefore, the null hypothesis was not accepted.

Research Question 3

What percentage of postpartum women of different occupational level engaged in health promotion practices regarding personal hygiene?

Hypothesis 3: There will be no significant difference in the percentage of number of postpartum women of different occupational status that engaged in health promotion practice regarding personal hygiene.

Table 4.11 Percentage of Postpartum Women Engaging in Health Promotion Practices Regarding Personal Hygiene by Occupation

Health Promotion Practices Regarding Personal Hygiene	Civil Servant f (%)	Housewife f (%)	Business woman f (%)	Farming f (%)	Total f (%)
Engaged in practices	121(26.2)	63(13.6)	119(25.8)	29(6.8)	332(71.9)
Do not Engaged in practices	44(9.5)	27(6)	51(11.03)	8(1.7)	130(28.1)
Total	165(35.7)	90(19.6)	170(36.8)	37(8.0)	462(100)

$X^2 = 1.40$, df , 3, p -value = .706, Not Significant

As shown in table 3, the highest percentage of the postpartum women (26.2%) who were civil servants engaged most in health promotion practices regarding personal hygiene. This was followed by 25.8 percent of businesswomen, 13.6 percent in the category of house wives and 6.8 percent of the women who were farmers that engaged in health promotion practices relating to personal hygiene. From the table, a total number of 332 (71.9%) of the women engaged in health promotion practices regarding personal hygiene. The table also shows that 11.03, 9.5, 6 and 1.7 percent of the postpartum women of different occupational levels did not engaged in health promotion practices regarding personal hygiene. A total number of 130(28.1%) of them did not engaged in health promotion practices regarding personal hygiene.

The summary of the chi-square test presented in table 4.11 shows that there was no significant difference in the percentage of postpartum women of different occupational status on their health promotion practices for personal hygiene, $X^2 = 1.40$, $df = 3$, p -Value = .706. Since the p -value of .081 was greater than 0.05, the null hypothesis was accepted

Research Question 4 : What percentage of postpartum women of different educational level engaged in health promotion practices regarding personal hygiene?

Hypothesis 4: There will be no significant difference in the percentage number of postpartum women of different level of education that engaged in health promotion practice of personal hygiene.

Results displayed in table 4, shows that postpartum women 32.9 percent with post secondary education engaged most in health promotion practices regarding personal hygiene while those with secondary education were 32.7 percent. These were followed by 4.1 percent of the women with primary education and 2.2 percent of them with no formal education. From the table a total number of 332 (71.9%) the women engaged in health promotion practices regarding personal hygiene.

Table 4: Percentage of Postpartum Women Engaging in Health Promotion Practices Regarding Personal Hygiene by Educational Level

Health Promotion Practices Regarding Personal Hygiene	No formal Education f (%)	Primary Education f (%)	Secondary Education f (%)	Post-Secondary Education f (%)	Total f (%)
Engaged in practices	10(2.2)	19(4.1)	151(32.7)	152(32.9)	332(71.9)
Do not Engaged in practices	6(1.3)	9(1.9)	52(11.2)	63(13.6)	130(28.1)
Total	16(3.5)	28(6.0)	203(43.9)	215(46.5)	462(100)

$X^2 = 1.70$, $df = 3$, p -Value = .637, Not Significant

The table also shows that 13.6 percent, 11.2 percent, 1.9 percent and 1.3 percent of the postpartum women with different educational levels of post-secondary, secondary education, primary education and no formal education did not engaged in health promotion practices regarding personal hygiene. In all, 28.1 percent of them did not engaged in health promotion practices regarding personal hygiene. The summary of the chi-square test presented in table 4.12 shows that there was no significant difference in the percentage of postpartum women of different educational levels on their health promotion practices for personal hygiene, $X^2 = 1.70$, $df = 3$, p -Value = .637. Since the p -value was greater than 0.05, the null hypothesis was accepted.

Research Question 5

What percentage of postpartum women of different age range engage in health promotion practices regarding breastfeeding?

Hypothesis 5: There will be no significant difference in the percentage number of postpartum women of different age ranges that engaged in health promotion practice of breast feeding.

Table 5: Percentage of Postpartum Women Engaging in Health Promotion Practices Regarding Breastfeeding by Age Range

Health Promotion Practices Regarding Breastfeeding	18-22years f (%)	23-27years f (%)	28-32 years f (%)	33-37 years f (%)	38-42 years f (%)	43-47 years f (%)	Total f (%)
Engaged in practices	36(7.8)	67(14.5)	70(15.1)	38(8.2)	33(7.1)	11(2.4)	255(55.2)
Do not Engaged in practices	14(3.0)	45(9.7)	50(10.8)	57(12.3)	24(5.1)	17(3.7)	207(44.8)
Total	50(10.8)	112(24.2)	120(26)	95(20.5)	57(12.3)	28(6.0)	462(100)

$X^2 = 19.06$, $df = 5$, p -Value = .002, Significant

The result presented in 5, shows that the highest percentage (15.1%) of the postpartum women that engaged in health promotion practices regarding breastfeeding was women between the age ranges of 28-32 years. This was followed by 14.5 percent, 8.2 percent, 7.8 percent, 7.1 and 2.4 of postpartum women ages 23-27 years, 33-37 years, 18-22 years, 38-42 years, and 43- 47 years respectively that engaged in health promotion practices regarding breastfeeding. A total number of 255(55.2%) of the women engaged in health promotion practices regarding breastfeeding.

The table also shows that 12.3 percent, 10.8 percent, 9.7 percent, 5.1 percent, 3.7 percent and 3.0 percent of the women ages 33-37 years, 28-32 years, 23-27 years, 38- 42 years, 43-47 years and 18-22years respectively did not engaged in health promotion practices regarding breastfeeding. From the table, a total number of 207(44.8%) of the women did not engage in health promotion practices regarding breastfeeding. The summary of the chi-square test presented in table 4.13 shows that there was significant difference in the percentage of postpartum women of different age ranges on their

health promotion practices of breastfeeding, $X^2 = 19.06$, $df = 5$, p -value = .002. Since the p -Value of 002 was less than 0.05, the null hypothesis was rejected.

Research Question 6 : What percentage of postpartum women of different parity level engaged in health promotion practices regarding breastfeeding?

Hypothesis 6 : There will be no significant difference in the percentage number of postpartum women of different parity that engaged in health promotion practice of breastfeeding.

Data answering research question four and hypothesis four are contained in table 4.14

Table 6: Percentage of Postpartum Women Engaging in Health Promotion Practices Regarding Breastfeeding by Parity Level

Health Promotion Practices Regarding Breast-feeding	1-3 Children f (%)	4-6 Children f (%)	7 & Above f (%)	Total f (%)
Engaged in practices	163(35.3)	85(18.4)	7(1.5)	255(55.2)
Do not Engaged in practices	147(31.8)	50(10.8)	10(2.2)	207(44.8)
Total	310(67.1)	135(29.2)	17(3.7)	462(100)

$X^2 = 5.50$, $df = 2$, p -Value = .064 Not significant

The result displayed in Table 6, shows that the highest percentage (35.3%) of postpartum women with parity level of 1-3 children engaged most in health promotion practices regarding breastfeeding. This was followed by 18.4 percent and 1.5 percent of the women of parity levels of 4-6 children and 7 and above children respectively engaged in health promotion practices regarding breastfeeding. As indicated in the table 4.14, a total of 255 (55.2%) of the women engaged in health promotion practices regarding breastfeeding.

Table also shows that 31.8 percent, 10.8 and 2.2 percent of postpartum women with parity level of 1-3 children , 4-6 children and 7 and above children respectively did not engaged in health promotion practices regarding breastfeeding. From the table, 44.8percent of the postpartum women did not engage in health promotion practices regarding breastfeeding. The summary of the chi-square test presented in table 4.14 shows that there was no significant difference in the percentage of postpartum women of different parity on their health promotion practices of breastfeeding, $X^2 = 5.50$, $df = 2$, p -Value = .064. Since the p -value was greater than 0.05, the null hypothesis was accepted.

Research Question 7

What percentage of postpartum women of different occupational level engages in health promotion practices regarding breast feeding?

Hypothesis 7 : There will be no significant difference in the percentage number of postpartum women of different occupational status that engaged in health promotion practices of breast feeding.

Table 7: Percentage of Postpartum Women Engaging in Health Promotion Practices Regarding Breastfeeding by Occupation status

Health Promotion Practices Regarding Breast Feeding	Civil Servant f (%)	Housewife f (%)	Businesswoman f (%)	Farming f (%)	Total f (%)
Engaged in practices	81(17.5)	52(11.3)	101(21.9)	21(4.5)	255(55.2)
Do not Engaged in practices	84(18.1)	38(8.2)	69(14.9)	16(3.5)	207(44.8)
Total	165(35.6)	90(19.5)	170(36.8)	37(8.0)	462(100)

$X^2 = 3.99$, $df = 3$ p -value = .263, Not Significant

The results in Table 7 show the highest percentage of postpartum women (21.9%) in business engaged most in health promotion practices regarding breastfeeding; followed by 17.5 percent, 11.3 percent and 4.5 percent of the women in the categories of civil servants, house wife and farmers respectively that engaged in health promotion practices

regarding breastfeeding. A total of 255 (55.2%) of the women engaged in health promotion practices regarding breastfeeding.

The table also shows that 18.1 percent, 14.9 percent, 8.2 percent and 3.5 percent of postpartum women of different occupational statuses of civil servants, businesswomen, house wives and farming respectively did not engaged in health promotion practices regarding breastfeeding. A total number of 207(44.8%) postpartum women did not engage in health promotion practices regarding breastfeeding. The summary of the chi-square test presented in table 4.15 shows that there was no significant difference in the percentage of postpartum women of different occupational status on their health promotion practices of breastfeeding, $X^2 = 3.99$, $df = 3$, p -Value = .263. Since the p -value was greater than 0.05, the null hypothesis was accepted.

Research Question 8

What percentage of postpartum women of different educational level engages in health promotion practices regarding breast feeding?

Hypothesis 8: There will be no significant difference in the percentage of number of postpartum women of different level of education that engaged in health promotion practice regarding breast feeding.

Table 8: Percentage of Postpartum Women Engaging in Health Promotion Practices Regarding Breastfeeding by Educational Level

Health Promotion Practices Regarding Breast Feeding	No formal Education f (%)	Primary Education f (%)	Secondary Education f (%)	Post-Secondary Education f (%)	Total f (%)
Engaged in practices	4(0.9)	17(3.7)	120(26)	114(24.7)	255(55.2)
Do not Engaged in practices	12(2.6)	11(2.4)	83(18)	101(21.9)	207(44.8)
Total	16(3.5)	28(6.1)	203(44)	215(46.5)	462(100)

$X^2 = 7.91$, $df = 3$, p -value = .048 Not Significant

Results displayed in table 8 shows that postpartum women with secondary education showed the highest percentage (26.0 percent) of engagement in health promotion practices regarding breastfeeding. This was followed by those women with post-secondary education with 24.7 percent, and 3.7 percent of them with primary education. While 0.9 of them with no formal education engaged in health promotion practices regarding breastfeeding. From the table, a total number of 255 (55.2%) of the women engaged in health promotion practices regarding breastfeeding.

The table also shows that 21.9 percent, 18 percent, 2.6 percent and 2.4 percent of postpartum women of different educational levels Post-secondary education, secondary education, non -formal education and primary education respectively did not engaged in health promotion practices regarding breastfeeding. A total of 207 (44.8%) of postpartum women did not engage in health promotion practices regarding breastfeeding. The summary of the chi-square test presented in table 4.16 shows there was no significant difference in the percentage of postpartum women of different educational levels on their health promotion practices of breastfeeding, $X^2 = 7.91$, $df = 3$, p -Value = .048. Since the p -value was greater than 0.05, the null hypothesis was accepted.

V. CONCLUSION

Based on the findings of the study, the following conclusions were made:

Health promotion practices are not practices for prevention of diseases or practices that bring discomfort rather; they are practices aimed to improve general health and optimal well-being of people. Therefore, based on the findings of this study conclusions reached were that postpartum women health promotion practices regardless of their age and educational status were found to be at moderate level. Demographic variables such as age, level of education, parity level and occupation status of these postpartum women significantly determined their engagement in health promotion practices. However, greater proportion of women below 23years of age engaged the less in the required health promotion practices so also do women of educational group of Primary education and no-formal education. While

women of higher educational level and higher parity levels engaged more in health promotion practices. The result of the study also showed a direct influence of demographic variables on the postpartum women's level of engagement in Abia State. There is need for concerted efforts of all health workers in creating awareness on health promotion practices for postpartum women in all categories.

REFERENCES

- [1]. Abdolkarimy, M., Zareipour, M., Mahmoodi, H., Dashti, S., Faryabi, R., & Movahed, E. (2017). Health promoting behaviors and their relationship with self-efficacy of health workers. *Iran Journal Nurs.* 30(105), 68–79. [Http//doi: 10.29252/ijn.30.105.68](http://doi: 10.29252/ijn.30.105.68).
- [2]. Abia State history, (2012). Abia –union .org. Archived from the original.
- [3]. Abia State –Wide Rapid Health Facility Assessment, (2013). Elimination of Mother-to-child Transmission of HIV. FHI .<https://www.researchgate.net/publication/264896549>.
- [4]. Achalu, E.I (2008). Communication Skills in health education and public health. Port-Harcourt: Pam Unique.
- [5]. Achalu, E.I. (2019). Health Education and communication in public health: principles methods and media strategies. University of Port-Harcourt.
- [6]. Awusi, V., Anyanwu, E. & Okeleke, V. (2009). Determinants of antenatal care services utilization in Emevor Village, Nigeria. *Benin Journal of Postgraduate Medicine* 11:21-26 .[www.ajol info/index.php/bjpm/article/view file/48847/35197](http://www.ajol.info/index.php/bjpm/article/view/file/48847/35197)
- [7]. Ayanore, M.A., Pavlova, M., & Groot, W.(2016). Focused maternity care in Ghana: results of a cluster analysis. *BMC Health Services Resources.* 16(1), 395.
- [8]. Babalola, S., & Fatusi, A. (2009). Determinants of use of maternal health services in Nigeria: Looking beyond individual and household factors. *BMC Pregnancy and Childbirth*, 9(1), 43.<https://www.doi.org/10.1186/1471-2393-9-43>
- [9]. Carter, S.M., Crubb, A., & Allegrante, J.P. (2009). How to think about Health promotion ethics. *Public Health review* 34 (1), 1914-09142.
- [10]. Celik, Y. & Hotchkiss, D.R. (2000). The Socioeconomic determinants of maternal health care utilization in Turkey. *Social Science & Medicine*, 50(12), 1797-806
- [11]. Centers for Disease Control and Prevention, (2006). Recommendations to prevent and control iron deficiency in the United States. *MMWR*47 (RR-3); 1-26. Accessed 16 May
- [12]. Centers for Disease Control and Prevention, (2006). The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General. US Department of Health and Human Services, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health;
- [13]. Cram, C., & Stouffer, D., (2004). *Fit Pregnancy For Dummies*. NJ: Wiley Publishing Inc.
- [14]. Dawidowicz, A., Krajewska, K., & Krajewska-Kulak, E. (2014). Women's knowledge of health behaviors in the puerperium. *Wiad Lek* 57: 70
- [15]. Dehman, M., Khan, N., & Abbas, M. (2000). Availability and utilization of primary health care services in the rural areas of district Peshawar-a case study. *Saliad Journal of Agriculture*, 23 (4),1217-1223.
- [16]. Demirel, G., Egri, G., Yesildag, B. & Doganer, A. (2018). Effects of Traditional Practices in the Postpartum Period on Postpartum Depression. *Health Care Women International*, 39, 65-78. <https://doi.org/10.1080/07399332.2017.1370469>
- [17]. Dennis, C.L., Fung, K., Grigoriadis, S., Robinson, G.E., Romans, S. & Ross, L. (2007). Traditional Postpartum Practices and Rituals: A Qualitative Systematic Review. *Women's Health*, 3, 487-502. <https://doi.org/10.2217/17455057.3.4.487>
- [18]. Dennis, C.L., Fungi, K., Girgoriadus, S., Robinson, G.E., Romans, S., & Ross, L. (2007). Traditional postpartum practice and rituals: a qualitative systematic review. *Women health London.* 3 (4) 487-502 .[doi:10:2217/17455057. 34487](https://doi.org/10.2217/17455057.34487)
- [19]. Deri, C. (2005). Social networks and health service utilization. *Journal of Health Economics*, 24(5),1076-1107

- [20]. Fahey, J.O., & Shenassa, E. (2013). Understanding and meeting the needs of women in the postpartum period: the perinatal maternal health promotion model. *Journal Midwifery & Women's Health*, 58(6), 613-621.
- [21]. Family Education (2020). The Importance of Sleep for New Moms <https://www.familyeducation.com/pregnancy/lack-sleep/importance-sleep-new-moms>
- [22]. Gunderson, E.P., Stianta, R.H., Xian-Ning, M.S., Joan, G.L., Yvonne, C, Dand, W., Kathryn, G.D., Robert, A.A., Stephen, Y., Gary, F., Cathie, E., Nora, S., Michael, L., Barbara, S., & Charles (2015). Study of women infant feeding and type 2 diabetes mellitus after GDM. *Pregnancy investigator. A prospective cohort study*.
- [23]. Institute of Medicine, (2001). Dietary Reference intakes for vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Molybdenum, Nickel, Silicon, Vanadium and Zinc. Food and Nutrition Board. Washington, DC: National Academy Press.
- [24]. Irvine, L., Elliot, L. Wallace, H., & Crombie, I.K. (2008). A renew of major influence on current public health policy in developed countries in the second half of the 20th century. *Journal of the Royal Society for the promotion of health* 126, 73-78.
- [25]. Jarrah, S., & Bond, A. E. (2007). Jordanian women's postpartum beliefs: an exploratory study. *International Journal Nursing Practice*; 13: 289-95
- [26]. Kabir, B. A. (2020). *Socio-Demographic Statures: Theory, Methods, and Applications*
- [27]. Kabiru, M., Iliyasu, Z., Abubaka, I., & Saru, A. (2003). Determinants of utilization of antenatal care service in Kumbotso village. Northern Nigeria. *Tropical doctor*, 35 (2), 110-120.
- [28]. Larson-Meyer, D.E. (2002). "Effect of postpartum exercise on mothers and their offspring: are view of the literature," *Obesity Research*, 10, (8), 841-853,
- [29]. Leahy-Warren, P., & Mc-Carthy, G. (2011). Maternal parental self-efficacy in the postpartum period. *Midwifery*; 27:802-810.3.
- [30]. Liu, N., Mao, L., & Sun, X. (2006). Postpartum practices of puerperal women and their influencing factors in three regions of Hubei. *China BMC Public Health*, 6: 274-81.
- [31]. Lucas, A.O., & Gilles, H.M. (2003). *Short textbook of public health medicine for the tropics*. 4th edition award London, 159.
- [32]. Lyon, D. (2008). *Postpartum Care Glow Global*. Library women's medicals. DOI, 10.3843/glown 10143
- [33]. Mahmoud, A.A., Ismail, N.A. & El-habashy (2007). Dietary practices among postpartum women. *Bulletin of High Institute of Public Health* vol. 37 (3).
- [34]. Rahman, K. (2011). Impact of Mother's Time Allocation on Child health. [Http://dx.doi.org/10.2139/ssrn.2830083](http://dx.doi.org/10.2139/ssrn.2830083).
- [35]. Rahman, M.M., Haque, S.E., & Zahan, M.S. (2011). Factors affecting the utilization of postpartum care among young mothers in Bangladesh. *Health Soc Care Community*. Mar; 19(2), 138-47. Pmid: 20880103
- [36]. Ronsmans, C., & Graham, W. (2006). Maternal Mortality: Who, When, Where, and Why. *The Lancet*. 368(9542), 1189-200. [Http//Doi: 10.1016/S0140-6736\(06\) 69380-X](http://doi: 10.1016/S0140-6736(06) 69380-X).