JHER Vol. 25, No. 2, December, 2018, pp. 20 - 30

Antenatal Health Care Services Utilization among Childbearing Mothers in Ebonyi State, Nigeria

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Abstract

Utilization of antenatal care by mothers is one of the surest ways of reducing maternal morbidity and mortality due to the fact that it leads to early detection and treatment of negative maternal outcomes. The study investigated utilization of antenatal health care (ANC) services among women of child-bearing age in Ebonyi State, Nigeria. Specifically it determined antenatal services utilized, and factors that influence the use of antenatal care. Population of the study Questionnaire was used for data collection on 400 mothers of childbearing age (15-49 years) who were selected using multi-stage sampling procedure. Data were analyzed using frequency and chi-square at 0.05 level of significance. The study was guided by one specific objective, one research question and two hypotheses. Findings show that mothers utilized antenatal services in varying proportions such as 86.8% health and nutrition education; 54.3% urine test; 73.0% HIV test; 88.5% physical examination; 27.0% ultrasound; 75.3% measuring of height; 91% measuring weight; 94% tetanus injection; 93.8% routine drugs; 96% blood pressure measurement, and 61.3% malaria preventive. Factors such as Location and education significantly influenced ANC utilization. It recommended that government should make effort to formulate policies that enhance the utilization of ultrasound aspect of antenatal care services and continuous public health enlightenment by stakeholders.

Keywords: Antenatal, Child-Bearing Mothers, Services, Location, Education

Introduction

Antenatal Care (ANC) is one of the components of maternal health, and is a key strategy for reducing maternal and neonatal morbidity and mortality rate worldwide .Antenatal care services and its utilization are associated with improved maternal and neonatal health outcomes. It also saves the lives of mothers and babies by promoting and establishing good health before childbirth and the early postnatal period Adeniyi and Erhabour (2015). It often presents the first contact opportunity for a pregnant woman to connect with health services, thus offering an entry point for integrated care, promoting health-seeking behaviour and linking women with pregnancy complication to a referral system, thus impacting positively on maternal and fetal health Adamu and Salihu (2002).

Africa has the highest burden in the world and sub-Saharan Africa is largely responsible for the dismal maternal deaths figure for that region, contributing approximately 98 percent of maternal deaths for the region. They also disclosed that, two countries reported one third of global maternal deaths in 2010; India (19%) and Nigeria (14%) WHO, UNICEF, and World Bank (2010).

Meanwhile, Nigeria has the highest burden of the global maternal and neo-natal mortalities ranking first and second country in the world for the highest number of deaths among mothers and neonates (UNICEF 2015). These poor indices may be linked with the low utilization of maternal health services in the country (NPC 2014, Adewuyi and Zhoa 2017). Also, ANC prevalence is (51%) which is far below the recommended target of 90% attendance compare to other developing countries like; Cameroon (62.9%), Ghana (87%) and Peru (94%) (Adewuyi, *et al* 2018).

However, many of these deaths could be prevented through reinforcing the importance of ensuring that all pregnant mothers receive adequate antenatal care. Chapman,2003). Antenatal is relatively a new concept, and pregnant women in most developed countries now receive an integrated package of antenatal, child birth and post-partum care. This contrast with the situation in developing countries, were antenatal care tends to be the first services to receive resources and is commonly widely implemented within maternal health programs. Most pregnant women in developing countries visit health facilities antenatal care at least once during each pregnancy (NDHS 2013; Chukwuma, Uche, Kelechi, Irene, Henry and Chima, 2014).

Over the last decade, the definition of prenatal care, also known as antenatal care, has been expanded to include other ancillary services occurring during antenatal period such as nutrition education, and psychosocial services). From an initial focus on preventing maternal mortality, the role of prenatal care has progressed to encompass detection, treatment, and prevention of adverse maternal, foetal, and infant outcomes and the amelioration of adverse health

behaviours and socio -economic conditions. It also provides an essential link between women and the health system and offers essential health care services in line with national policies (Dario and Owoyokun, 2010).

However, late booking for Antenatal care is a frequent occurrence among pregnant women in Nigeria on like the most developed countries (Nwanari, Ndubuisi, Okoronkwo, Ezike and Umebuani 2018). For best maternal outcome, eight ANC visits is recommended from the first contact in the 12th week gestation with subsequent contacts at 20, 26, 30, 34, 36, 38, and 40th week gestation. The first antenatal visit is the most in-depth and includes a complete health history and physical examination, including measuring of height, weight, and blood pressure. Expectant mothers are also tested for diseases that could harm their babies such as diabetes, hepatitis B, syphilis and HIV infection. During each visit, tests are carried out to check for high blood pressure and protein in the urine, which could indicate a problem with the pregnancy (WHO 2016).

Factors such as education and residence influence the utilization of antenatal care (Dansou, Adekunle and Arowojolu 2017) Disparities in care remain between rural and urban areas and more educated and wealthier women tend to receive more prenatal care (NDHS 2013), (Gazali, Falmata and Mohamoud, 2012). ,(Dairo and Owoyokun (2010) Ibnouf and Yussuf, (2009) and Thu Ha (2005). However, most mothers do not deliver at the health facility after going for antenatal. Report from Ebonyi State University Teaching Hospital from January 2004 through December 2007 revealed that out of 3,471 live births recorded; there were 35 maternal deaths for a maternal mortality rate of 1,008 per 100,000 live births (Ogbonna, Anuma, Umeora, and Obuna, 2009). Also, Ebonyi State Ministry of Health (2011) revealed that most pregnant women do not access health facility for antenatal care; only few do so voluntarily in the health centres. Out of 71, 671 new cases who register for antenatal care in 2011, less than 50 per cent of these delivered in the health facility despite the Mother and Child Care initiative (MCCI) law in Ebonyi State which makes it mandatory for all pregnant women to register for ANC and deliver in a health facility, 29.6% received two doses of IPT while 37.6% received Intermittent Preventive Treatment (IPT) State Malaria Control Programme (ESMCP, 2011).

Purpose of the Study

The main purpose of study was to investigate maternal health services utilization among childbearing mothers in Ebonyi State. Specifically, the study

(1) Determined the antenatal services utilized by child bearing mothers in Ebonyi State.

(2) Determined factors that influence use of antenatal care.

Research Questions

1. What are the prenatal services utilized by women in Ebonyi State?
2. What are the factors influencing the utilization of antenatal care services among women in Ebonyi State?

Research Hypotheses

Utilization of antenatal services by women of childbearing age in Ebonyi State is independent of their:

1. Level of educational status at 0.05 level of significance.
2. Place of residence (location) at 0.05 of significance.

Methodology

***Area of the study*:** The study was carried out in Ebonyi State. It has three senatorial zones and 13 Local Government Areas (LGA), every ward has at least one health center and every LGA has one general hospital.

***Design of study*:** The study adopted cross-sectional descriptive survey research design.

***Population for the Study*:** Population of the study comprised 548,969 mothers of child-bearing age. (15-49 years). This consisted of 179,069 mothers in Abakaliki zone, 162.278 mothers in Onueke, zone, and 207, 125 mothers in Afikpo zone (Ebonyi State Ministry of Health, 2011).

***Sample for the study*:** The study made use of proportionate sample of 400 mothers of childbearing age (15-49 years).

The multi-stage sampling procedure was used for the study and this involved five stages. The first stage involved the three zones namely: Abakaliki zone (4 LGAs), Afikpo zone (5 LGAs), and Onueke zone (4 LGAs). The second stage involved random selection of three Local Government Areas from each of the three zones identified in stage one. Through this method, nine LGAs were selected.

At the third stage, three communities were randomly selected from each of the nine selected LGAs which yielded a total of 27 communities.

***Instrument for data Collection*:** The instrument for data collection was a 14-item semi structured questionnaire. The questionnaire consists of two sections: Section A contains 2 question items which elicit responses on the socio-demographic characteristics of the respondents. Section B consists of 12 items that elicit information on antenatal/prenatal service.

Three experts from the Department of Human Kinetics and Health Education, Ebonyi State University, Abakaliki were used to establish the face and content validity of the instrument and corrections and suggestions made were incorporated in the final version of the instrument used to collect data.

A test-retest reliability evaluation was conducted on 30 mothers of childbearing age in two communities Okpuitimo and Ephuenyim that were not included in the study using the Guttman Split-Half measure of stability. A high reliability co-efficient of 0.934 was obtained hence, the instrument was considered reliable for use in this study.

***Data Collection Technique*:** Four hundred copies of the questionnaire were distributed by hand. The subjects' informed consent was duly obtained and the ethical approval of the Ethics committee of the Ebonyi State Ministry of Health was obtained before commencing the study. Explanations

were made in the local Igbo dialect for uneducated subjects. The nature, objectives and relevance of the study were explained to them by the researchers. The questionnaires were recovered immediately after completion by the respondents. All the 400 copies were returned representing 100% return rate.

***Data Analysis Technique*:** The returned copies of the questionnaires were cross-checked for completeness of responses. Chi square was used to test HOs level of significance was set at 0.05

Findings of the study

Table 1: Frequency, Percentage and Chi-square of Responses on Health Service Received during Antenatal in the Last Pregnancy by Level of Education (400)

Service Received	f & % response by level of education						
	f %	f %	f %	f %	f %	χ^2 cal.	Dec
Health and nutrition education	347(86.8)	62 (17.9)	114(32.9)	117(33.7)	54(15.6)	4.775	NS
Urine testing	292(54.3)	14(6.5)	56(25.8)	96(44.2)	51(23.5)	68.083	S
HIV Testing	217(73.0)	17(5.8)	94(32.2)	124(42.5)	57(19.5)	108.523	S
Ultrasound	108(27.0)	13(5.1)	75(29.6)	110(41.5)	55(21.7)	90.016	S
Physical examination	354(88.5)	52(14.7)	109(30.8)	134(37.9)	59(16.7)	20.453	S
Measuring of height	301(75.3)	21(7.0)	100(33.2)	127(42.2)	53(17.6)	93.793	S
Measuring of weight	364(91.0)	55(15.1)	116(31.9)	136(37.4)	57(15.7)	14.143	S
Tetanus injection	374(93.5)	61(16.3)	119(31.8)	137(36.6)	57(15.2)	4.204	NS
Routine drugs	375(93.8)	61(16.3)	112(29.9)	142(37.9)	60(16.0)	19.799	S
Blood pressure checked	374(93.5)	64(17.1)	115(30.7)	138(36.9)	57(15.2)	4.003	NS
Malaria preventing drugs given	245(61.3)	55(22.4)	54(22.0)	84(34.3)	52(21.2)	43.857	S
Antenatal Services						186.910	S

Dec = Decision, S = Significant, NS = Not significant df = 30 χ^2 tab = 7.815
NPE = No primary education, PE = Primary education, SE = Secondary Education, PSE = Post secondary education

Table 1 shows the prenatal services utilized by women of child bearing age. The prenatal service mentioned by respondents were health and nutrition education by 374 (86.8%); urine test 292 (54.3%); HIV test by 217 (73.0%); physical examination by 354 (88.5%); ultrasound by 108 (27.0%);measuring of height 301 (75.3%); measuring weight 364 (91%); tetanus injection by 374 (94%); received routine drugs by 375 (93.8%); blood pressure measurement by 374 (96%); and malaria preventive by 245 (61.3%).

Overall, the table shows that calculated chi-square value with regard to antenatal services (χ^2cal = 186.910 < 43.773) is greater than chi-square value. This is implies that there is a significant difference in the antenatal services utilized among pregnant women of different educational attainment.

However there was no significant association between level of education of mothers and utilization of health and nutrition education, tetanus injection and checking of blood pressure.

Table 2: Frequency, Percentage and Chi-square of Responses on Health Service Received during Antenatal in the Last Pregnancy by Location of Residence (400)

	Location of Residence			
Service Received	**Urban**	**Rural**		
	f %	f %	**χ^2 cal.**	**Dec**
Health and nutrition education	115(33.1)	232(66.9)	7.032	S
Urine testing	84 (38.7)	133(61.3)	14.112	S
HIV Testing	100(34.2)	192(65.8)	6.209	S
Ultrasound	95(37.5	158(62.5)	14.090	S
Physical examination	111(31.4)	243(68.6)	0.531	NS
Measuring of height	99(32.9)	202(67.1)	2.616	NS
Measuring of weight	112(30.8)	252(69.2)	0.001	NS
Tetanus injection	117(31.3)	257(68.7)	0.769	NS
Routine drugs	119(31.1)	256(68.3)	2.725	NS
Blood pressure checked	116(31.0)	258(69.0)	0.191	NS
Malaria preventing drugs given	95(38.8)	150(612)	19.124	S
Antenatal Services			41.558	S

Df = 10 χ^2 tab = 3.841

Table 2 shows that each of the calculated chi-square with regard to location, health and nutrition education (χ^2 cal = 7.032 > 3.841), Urine testing (χ^2 cal = 14.112 > 3.841), HIV testing (χ^2 cal = 6.209 > 3.841), Ultrasound (χ^2 cal = 14.090 > 3.841), Physical examination (χ^2 cal = 0.531 < 3.841), Measurement of height (χ^2 cal = 2. 616 < 3.841), Measurement of weight (χ^2 cal = 0.001 < 3.841), Tetanus injection (χ^2 cal = 0.769 < 3.841), Routine drugs (χ^2 cal = 2.725 < 3.841), Blood pressure (χ^2 cal = 0.191 < 3.841), Malaria preventive drugs (χ^2 cal = 19.124 > 3.841). Overall, the table shows that calculated chi-square (χ^2 cal = 41.558 > 18.307). This implies that there is a significant difference in the influence of location on mother utilization of antennal services. However there was no significant association between level of education of mothers and utilization of physical examination, measurement of height and weight and tetanus injection, among others (Table 3).

Discussion

Results of the study showed that there was high level of utilization of antenatal care services (79.7%) among women of childbearing age in Ebonyi State. Some of the services utilized were health and nutrition education, urine testing, HIV

testing, ultrasound, physical examination, height and weight measurement, tetanus injection, routine drugs, checking of blood pressure and malaria preventive drugs (Tables 1). In fact, this high utilization of antenatal services has been expressed by previous studies (National Institute for Health and Clinical Excellence, 2003; Osugbade, Ogini & Lumide, 2008; Nisar & White, 2008). Fakede and Mariam (2007) also reported high level of ANC (76.7%), Iyaniwura and Yussuf (2009) stated that, (84.69%) of women in South West Nigeria received antenatal care during their last pregnancy. The findings, however, seem to be in line with those of Zoakah and Lawan (2004) who found that booking among the mothers was 24.9 weeks and up to 62% of the mothers had about 1-4 ANC visit during pregnancy.

The findings of the study were found to be inconsistent with the study conducted by NDHS Adamu & Salihu (2002) in Kano that (88%) of women did not utilize antenatal care; and also inconsistent with Chapman (2003) which stated that 83% pregnant Mozambique women don't use ANC instead they consult prophets, pastors and traditional healers who understand women's vulnerability. Ogunlesi (2005) asserts that women took no form of prenatal care and those who did, eventually deflected into churches and thus concluded that prenatal and delivery services were still poor in Nigeria.

Moreover, location and educational level of childbearing mothers significantly influenced ANC utilization in the state and this consistent with NDHS (2013), Thu Ha (2005) opined that location and education level strongly affected use of ANC in Vietnam. On average, two-thirds of pregnant women in developing countries seek at least one ANC but disparities remain between rural and urban area (Pandey and Supendra (2014). This assertion, was collaborated by Emelumadu, Ukegbu, Ezeama, Kanu, Ifeadika and Onyeonovo 2015, Gazali, Murktar and Gana 2012; National HIV/AID and Reproductive Health Survey 2003; Dairo and Owoyokun 2010; Ibnouf, Bome and Maarse, 2007; Nwogu (2009). Dairo and Owoyokun (2010) also reported a high utilization of ANC services among urban dwellers when compared to rural women. For instance, Gazali, Murktar and Gana 2012 reported ANC urban utilization at 72% and 27% for rural in Borno state. Also National HIV/AID and Reproductive Health Survey 2003 in Nigeria stated that higher ANC attendance is more among urban 87% than rural 52%. Dairo and Owoyokun (2010) revealed a significant difference in residence, religion and age in relationship with antenatal care use in Ibadan and the women in the urban residence utilize antenatal care more than women in the rural residence. Moreover, Utilization of ANC was, 61.1% in urban and 22.4% in rural residence with N.W region having the highest prevalence of ANC poor utilization at 69.3%, 76.6% and 44% for the overall, rural and urban residence respectively (Adewuyi, Khamal,

Bamidele, Akuoka, Adelemi, Tapshak and Zhao (2018).

Timing of first antenatal care visit was strongly influenced by wealth and urban residence (Kuuire, Kalgmennaang, Atuoye, Antabe, Boamah, Vercillor (2017). Danson, Adekunle and Arowojolu (2017) reported that place of residence was next associated with ANC seeking while female education was the most important factor related to utilization of ANC.

The findings are at variance with those of Navaneetham and Dharmaling (2001) who reported that there was no significant difference in antenatal care utilization between urban and rural women due to the role played by the multi-purpose health workers posted in the rural areas to provide maternal health care services.

Conclusion

The findings of the study showed that 79.7% pregnant women utilized antenatal care services. In addition, location and education significantly influenced ANC utilization in the state. The study revealed that the utilization of services is significant in both location and education of mothers in prenatal service use.

Recommendation of the Study

- Government should formulate policies that enhance the use of ultrasound in all ANC clinics.
- Education of mothers through public enlightenment on importance of attending ANC and outreach services by health workers to remote areas.
- Primary health care should be well funded with personnel and material so that people at the grassroots can access it.

References

Adamu, Y .M., & Salihu, H .M. (2002). Barriers to the use of antenatal and obstetric care services in rural Kano, Nigeria. *Journal of Obstetrics and Gynecology, 22*(6), 600-603.

Adeniyi, F.F., & Erhabour, S (2015). Barriers to antenatal care in Nigeria: evidence from non-users and implication for maternal health programme. *BMC Pregnancy and Childbirth, 15*, 95.

Adewuyi E.. O., Auta, A., Khanal, V, Bamidele, O. D., Akuoko, C.P, Adefemi, K, Tapshak S.J., & Zhao Y (2018). Prevalence and factors associated with underutilization of antenatal care services in Nigeria: A comparative study of rural and urban residences based on the 2013 Nigeria demographic and health survey. *PLoS ONE 1*3(5): e0197324. https://doi.org/10.1371/journal.pone.0197324

Adewuyi E O, Zhao Y. Determinants of neonatal mortality in rural and urban Nigeria: evidence from a population-based national survey. Pediatrics International.2017;59(2):190-200. pmid:27378178.

Anwusi, V. O.,, Anyanwu, E.B., & Okeleke, V. (2008). *Determinants of antenatal care services in a rural village in Nigeria.* Retrieved January 3, 2010, from www.un.org/esa/socder/enable/diswpa01.htm

Chapman, L.R. (2003). Endangering safe motherhood in Mozambique: Prenatal

care as pregnancy risk. *Social Science and Medicine, 57*(2), 335-374.

Chukwuma, B. D. Uche,R. O. Kelechi, Kelvin, C. D. Irene, A. M. Henry, N. O. & Chima, A.E. (2015). Antenatal Care Services Utilization among women of reproductive age in semi-urban communities in Orlu LGA, Imo State, Nigeria. *Orient Journal of Medicine, 27(*1-2).

Dairo, M. D., & Owoyokun, K .E. (2010). Factors affecting the utilization of antenatal care services in Ibadan, Nigeria. *Benin Journal of Postgraduate Medicine, 12*(1), 6-12.

Dansou J, Adekunle A O, Arowojolu A O 2017. Factors associated with antenatal care services utilization patterns amongst reproductive age women in Benin Republic: An analysis of 2011/2012 Benin republic's demographic and health survey data Vol. 24 Issue 2 pp. 67-74 DOI: 10.4103/npmj.npmj_16_17

Ebonyi State Government. (2006*). Ebonyi State Economic Empowerment and Development Strategies.* Abakaliki: Ebonyi State Government.

Ebonyi State Ministry of Health Report. (2011). *Malaria in pregnancy and children under five years situation analysis.* Abakaliki: Ebonyi State Ministry of Health.

Emelumadu, O. F. Ukegbu, A. U. Ezeama, N. N. Kanu, O. O. Ifeadike, E. O. & Onyeonoro, U. U. (2014). Social Demographic Determinants of Maternal Care Service Utilization among Rural Women in Anambra State, South East Nigeria. *Annals of Medical and Health Science Research 4*(3), 374-382.

Fakede, B .G., & Marian, A. (2007). Antenatal care services utilization and associated factors amng mothers in Jimma Town (South West Ethiopia). *Ethiopian Medical Journal,*

Gazali, W. A., Falmata, M., & Mahamoud, M. G. (2012). Barriers to Utilization of Maternal Health Care facilities among pregnant and non pregnant women of child bearing age in Maiduguri Metropolitan Council (MMC) and Jere LGAs of Borno State. *Continental Journal Tropical Medicine, 6*(1), 12-21, 2012 ISSN: 214-4167.

Ibnouf, A.H., Van Den Borne, H.W., & Maarse, J.A. (2007). Utilization of antenatal care services by Sudanese women in their reproductive age. *Saudi Medical Journal, 28* (5), 737-743.

Iyaniwura, C.A., & Yussuf, Q.. (2009). Utilization of antenatal care delivery services in Shagamu, South West Nigeria. *African Journal of Reproductive Health, 13*(3), 34-40.

Kripet, C. (2010). Expectant management versus surgical treatment for miscarriage. Retrieved from http://webarchieve.org/afp/2010/001/cochrane.htm//cz

Kuuire, Z.V., Kangmennaang, J., Atuoye, K N, Antabe, R., Boamah, S.A., & Vercillo, S. (2017)). Timing and utilization of antenatal care service in Nigeria and Malawi. *International Journal for Research, Policy and Practice, 12*(6), 711–727.

Magadi, M. A., Madise, N J., & Rodrigues, K .N. (2000). Frequency and timing of antenatal care in Kenya: Explaining the variations between women of different communities. *Social Science and Medicine, 51*(2), 551-561.

Maternal and Child Health Bureau. (2008). *A healthy start: Begin baby is born.*Retrieved from www.mchb.hrsa.gov/programs/womeninfants/prenata.htm.

National HIV/AIDS and Reproductive Health Survey (NARII) Nigeria. (2003). *Antenatal attendance among mothers of childbearing age.* Abuja: Federal Ministry of Health, Nigeria.

National Institute for Health and Clinical Excellence. (2003). *Antenatal care: Routine care for healthy pregnant women.* Abuja: Federal Ministry of Health, Nigeria.

National Population Commission (NPC), Nigeria and ICF International (2014). *Nigeria demographic and health survey 2013*. Abuja, Nigeria and Rockville, Maryland, USA: NPC and ICF International.

National Population Commission (NPC), Nigeria and ORC Macro. (2009). *Maternal health.* Abuja: NPC and ORC Macro.

Naveenthan, K., & Dhamaligan, A. (2000). Utilization of maternal health care services in South India .*Pan American Journal of Public Health, 16*(1), 12-18.

Nigeria Reproductive Health Resources and Services Survey. (2003). *Maternal health services in Nigeria.* Abuja: Federal Ministry of Health, Nigeria.

Nisar, N., & White, F. (2008). *Factors affecting utilization of antenatal care among reproductive age group women (15-49 years) in an urban squatter settlement of Karachi.* Department of Community Health Sciences, the Aga Khan University
Karachi. Retrieved, from http://pma.org.pk/viewarticle/viewarticleaspx?article/D=835/2/2008

Nwaneri A C, Ndubuisi I, Okoronkwo I L, Ezike O and Umebuani N 2018. Determinants of late booking for antenatal care among pregnant women in selected hospitals in South East Nigeria. International Journal of Nursing and Midwifery Vol.10(7), pp. 74-80 DOI: 10.5897/IJNM.0308 ISSN: 2141-2456.

Nwogu, E .C. (2009). Utilization of maternity care in Nigeria. *Global Journal of Pure and Applied Sciences, 15*(3), 439-437.

Ochiawunma, I. (2002). *Child survival in Nigeria: Situations, response and prospects.* Abuja: Policy Project, Nigeria. *The Internet journal of Epidemiology* Vol 2, No 2

Ogbonna, N., Anuma, T .I., Umeora, O. U. J., Obuna, P. (2009). Trends and factors associated with maternal mortality in Ebonyi State University Teaching Hospital (EBSUTH), Abakaliki. *Tropical Obstetrics and Gynecology, 26*(2), 89-178.

Ogunlesi, T.(2005). The pattern of utilization of prenatal and delivery services in Ilesa, Nigeria.

Osugbade, K., Oginni, S., & Olumide, A. (2008). Content of antenatal care services in secondary health care facilities in Nigeria: Implications for quality of maternal health care. *International Journal for Quality Health Care, 20*(5), 346-351.

Pandey, K. & Supendra (2014). Maternal satisfaction studies and their limitations: what is must still be best. Birth *30*, 75-82.

Parmet, S.(2004). Prenatal care. *The Journal of the American Medical Association, 291*(1), 148-152 .

Thu Ha, N. (2005). *Factors influencing utilization of maternal health care services in Northern Vietnam*.(Unpublished s Master of Arts Thesis,) Mahidol University, Vietnam.

Toan, T .K. (2012). Antenatal and Delivery Care Utilization in Urban and Rural Contexts in Vietnam: A study in two health and demographic surveillance sites, thesis at the Nordic School of Public Health NHV Gothenburg, Sweden

UNICEF. (2015). Committing to child survival: A promise renewed, Progress Report 2014. 2014. New York, USA: UNICEF. 2015.

WHO, (2016). Sexual and reproductive heath. New guidelines on antenatal care

for a positive pregnancy experience. http: www.who.int/areproductivehealth/news/antental-care/en/ Retrieved 10 September 2017 10:54 pm.

WHO, UNICEF & UNFPA (2007). Advocacy Brief: In Family Planning/Child Birth Spacing for Health and National Development Action Points for Policymaker. Produced by the Federal Ministry of Health with support from ENHANCE projeact/USAID

WHO/UNICEF & World Bank. (2010).Trends in maternal mortality 1990 -2010 .Washington D .C: World Bank.

Zoakan, A .I., & Lawan, U. M. (2004). Utilization of antenatal care services in comprehensive health center (CHC) Gindri. *Medical Research Journal, 2*(1), 64-69.

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