International Invention of Scientific Journal

Available Online at http://www.iisj.in

- eISSN: 2457-0958

Volume 03 | Issue 12 | December, 2019 |

UPTAKE OF POSTNATAL SERVICES AND DETERMINATE FACTORS AMONG WOMEN OF CHILD BEARING AGE IN ASSOSA DISTRICT, WEST ETHIOPIA

Correspondence Authors : Muluwas Amentie Zelka[1*], Mulualem Bulcha Debaba[2]

Affiliation/Institute

[1]Assosa University, College of Health Sciences, Department of Nursing, Assosa, Ethiopia, Email Address: muluwas12@gmail.com

[2]John Snow, Inc Research Institute, Benishangul Gumuz Region Branch Office, Assosa, Ethiopia, Email Address: m.bulcha@yahoo.com

Article Recieved 12-12-2019 , Accepted 25-12-2019 , Published 31-12-2019

ABSTRACT:

Background: Postnatal care is important for both the mother and the child to treat complications arising from the delivery and after the delivery. Half of all postnatal maternal deaths occur during the postnatal period. The major reason for maternal death is a failure to use postnatal care services in these countries. However, the evidence on magnitude, reason and influencing factors on the utilization of postnatal care are rare in the region. Thus, this study aimed to assess the uptake of postnatal care services and associated factors among women of childbearing age.

Methods: A cross-sectional study was conducted on randomly selected samples of 536 women who had at least one delivery in the five years prior to the study. A structured questionnaire, FGD, and in-depth interview guide were used to collect data. Data were analyzed using SPSS version 16. Logistic regression was used to determine the association between variables.

Result: The finding of the study is that 87(19.7%) of the women turned to the health facilities to check-up her health status within the postnatal period. Determinant factors for utilization of postnatal services were ANC follow up [AOR=4.91, 95%CI: 2.32, 10.4], being knowledgeable on postnatal services [AOR=4.04, 95%CI: 1.01, 23.32], having favorable attitude towards postnatal services [AOR= 2.18, 95% CI: 1.03 5.58], and having favorable attitude towards family planning services [AOR= 2.94, 95% CI: 1.53, 5.65].

Conclusion and Recommendation: Therefore, the study revealed that there is very low utilization of postnatal services those who came for the follow-up visit within the postnatal period. Providing IEC and house-hold level discussion on the importance of PNC service utilization in the district is recommended.

Key words: *postnatal care, uptake of maternal health, health service, maternal health, associate factors, Assosa*

Background

Postnatal care is important for both the mother and the child to treat complications arising from the delivery and after delivery as well as to provide the mother with important information on how to care for her health status and her child[1].

Postnatal services ensure that a woman are not experiencing complications following delivery and provides an important opportunity to assess the infant's development, the family's capability to cope and whether paediatric care and other services are being received by both the mother and the infant [2].

The World Health Organization estimates that, every minute of every day, somewhere in the world and most often in a developing country, a woman of reproductive age dies from complications related to postpartum period [3, 4].

Half of all postnatal maternal deaths occur during the first week after the baby is born, and the majority of these occur during the first 24 hours after childbirth[5]. The leading cause of maternal mortality in Africa: 34% of deaths occurred as a result of haemorrhage, the majority of which occurs in postnatal period. Sepsis and infection claim another 10% of maternal deaths, virtually all during the postnatal period [5].

Every year in Africa, at least 125,000 women and 870,000 newborn die in the first week after birth. The first day is the time of highest risk for both mother and baby. The fact that 18 million women in Africa currently do not give birth in a health facility poses challenges for planning and implementing postnatal care (PNC) for women and their new born. Regardless of place of birth, mothers and new born spend most of the postnatal period (the first six weeks after birth) at home. Postnatal care (PNC) programmes are among the weakest of all reproductive and child health programmes in Ethiopia particularly in the region[5].

In Ethiopia, the levels of maternal and infant mortality and morbidity are among the highest in the world. Studies have indicated that about 17,000 women of reproductive age die from complications associated with pregnancy and childbirth[1, 6, 7]. According to 2011 Ethiopian DHS the maternal mortality rate was 676 deaths per 100,000 live births, and neonatal mortality rate, post-neonatal, infant mortality rate, child mortality and under five mortality rate were 37, 22, 59, 31 and 88 deaths per 1000 live births respectively are of the magnitude observed in Europe about a century ago and they are at least fifty times higher than the present rates in developed countries[1, 6, 7, 8]. One explanation for poor health outcomes among women and children is the non-use of maternal health care services especially postnatal care services by a sizable proportion of women in Ethiopia.

Postnatal care in Ethiopia Demographic Health Survey 2005 report; post natal care coverage is 5.8%; only 4.6 % of mothers receive postnatal care within the critical first two days after delivery. Postnatal care in Benishangul Gumuz Regional state; 4.1% of women were receive postnatal care services[1, 9]. Hence, utilization of postnatal care services nationally and regionally are extremely low, the long term disability and poor development originate from childbirth and postpartum.

Postnatal care seeking behaviour in Addis Ababa is 56.9% but in Benishagul Gumuz Regional State is 3.8%[1, 8, 10]. In Benishangul Gumuz regional state as the figure indicates there was low utilization of postnatal care services. Even though, utilization of postnatal care services is affected by a multiple factors.

Therefore, an attempt was made in this study to assess the status of postnatal care service utilization and important determinate factors that affect women's utilization of postnatal care services.

Methods

Study area and period

The study was conducted in Assosa District, Assosa Zone, BenishangulGumuz Regional state, North-west Ethiopia. Assosa District is one of the twenty woredas found in BenishangulGumuz regional State. Assosa town is the capital city of Benishangul Gumuz Regional State and located in Assosa District, located 676 Kms from West of Addis Ababa. The District is bounded by Kurmuk,

Homosha and Menge woreda to the North, Oda woreda to the East, by Tongo special and Bambasi woreda to the South and by Sudan to the West.

Based on 2007 Census, Assosa Woreda has an estimated total population are 79,933 of whom 40,505 and 39,428 were males and females respectively while Assosa town has an estimated total population are 24,214 among those 12,463 and 11,751 were males and females respectively. The majority (89.5%) of the population live in rural area and economically dependent on farming. The total number of women in reproductive age group (15 -49) in urban and rural were 6,296 and 19,309 respectively; of those number of pregnant women and children under 1 years are 3431 and 3153 respectively. The total number of children under 5 years of age was in urban 2,424 of whom 1,222 and 1,202 were male and female respectively while in rural 10,313 among these 5,234 and 5,079 were male and female respectively. The health coverage of the district in the year 2004E.C was about 59%; ANC coverage, Institutional delivery, Postnatal Care and family planning service were 49.5%, 1.14%, 18.3% and 56.08%, respectively indicating low utilization of maternal health service in the district. This study was conducted from 17 May to 31 May, 2012G.C.

Study design

Community based cross sectional study was conducted employing both quantitative and qualitative methods of data collections.

Population

The source population were all women living in Assosa District and had at least one delivery in the five years period preceding the survey. The study subject for quantitative method was women selected from source population whereas for qualitative methods was the part of community members in the study area especially study kebeles site such as women in child bearing age group, community leaders, religious leader, husbands, health workers and health extension workers. Inclusion criteria for the study were women who had at least one delivery in five years preceding the survey and permanent residents of the kebeles were selected. However, the exclusion criteria were women who had hearing or other disabilities hindering communication and women who were in postnatal period even if they had at least one previous delivery

Study Variables

The dependent variable was Utilization of postnatal care service whereas independent variables were socio-demographic variables; knowledge and attitude of respondent; availability and accessibility of services; maternal and obstetric and women's decision making power

Sample size determination

For the cross sectional quantitative study, the sample size was calculated for each factors and magnitude of maternal health care services utilization and the optimum sample size was taken. The sample size was calculated using EPI table of EPI 6 computer software. This is the continuous of others research which was published on the other journal. Therefore, the sample sizes was **134** for urban and **402** for rural women to be selected considering a design effect of two for the variation due to clustering and non-response rate of 10%. The total calculated sample size was **536** women. For qualitative data, the sample size was purposively determined which result 29 key informative for in-depth interview and 10 FGD were selected to supplement the quantitative data.

Sampling procedure

Sampling procedure for the quantitative data, multi-stage sampling technique was employed. A total of 536 households were selected using simple random sampling techniques. For households that had more than one eligible woman, interview was done by selecting one of them using lottery method. Revisit of three times was made in case the eligible respondents were not available at the time of the survey before considering as non-respondent. For qualitative data, focus group discussions and in-depth were conducted after selecting FGD participant and key informative purposively. A total of ten FGDs and 29 key informants were conducted in the selected kebeles. In order to minimize bias, those who participated in FGDs and in-depth interviews were excluded from participating in quantitative study**.**

Data collection Process

Structured questionnaire was prepared in English and translated to Amharic language and then back translated to English by different people and used in the data collection process for quantitative survey. For the qualitative part, discussion guide was prepared in English and discussions were made in local languages. Tape record was used at the same time. Interview guide was prepared in English and used for in-depth interview of key informants and collected by principal investigator and experienced nurse.

Ten female data collectors, who were health extension workers and could speak local languages, were recruited. For the supervisors, four nurses having Diploma were selected from Assosa District Health Office and Health Center. Both the interviewers and supervisors were given two days training before the actual work about the study. Practical exercise was made through peer interviewer.

Pre-test was carried out on 5% of the sample size in two of the kebele in Assosa district which were outside of the selected kebeles that has similar socio-demographics characteristic with the people in both urban and rural kebeles. After completing pre-test, discussion was made with supervisors and data collectors, and care was taken not to include the kebele where the pre-test was made. Then, the data were collected using house-to-house interview questions.

During the actual data collection, supervisors were assigned for the data collectors. The supervisors checked the activities of each data collectors by walking with them in each kebele and sometimes-random spot-checking of the households were made to ensure reliability of the data collected. Each night the supervisors checked all the filled questionnaires for completion, clarity and proper identification of the respondents. Then, the principal investigator randomly checked 10% of the supervisors' work each day for completeness and relevance. For qualitative data, the principal investigator moderated the discussion of the male groups while the female groups were moderated by an experienced female nurse with diploma holder. Each discussion had a tape recorded and finally the conversation was transcribed verbatim after each session.

Data processing and analysis

For quantitative method: the collected data were coded, entered and cleaned and analyzed by using SPSS Window version 16.0. Descriptive statistics was calculated for all variables. In bi-variate analysis crude odds ratio and confidence interval were determined to select candidate variables for multivariate analysis at the significance level ($p<0.05$). Binary and multivariable logistic regressions were used to determine the adjusted odds ratio and corresponding 95% confidence interval. The strength of association was interpreted using the adjusted odds ratio and 95% CI. The criterion for statistical significance was set at $p < 0.05$. However, data of qualitative method were translated in to English, organized in narrative forms in congruent with the respondents' own words on the same day and analyzed by thematic frame work analysis.

Result

Utilization of Postnatal Care Service

Four hundred forty two (84.2%) women who had birth within five year preceding the data collection period were used PNC service in the last delivery [90(68.7%) for urban and 352(89.3%) for rural]. Of them, 13.3% of women were turn for the purpose of postal check-up or physical examination.

A 46 years old man health worker working in rural area; "ANC service were utilized in the good manner but women were not return for postnatal care to the health facility because of the health extension workers were provide the service at the home during home visiting time".

A 32 years community leader live in the urban area; "The women were not go outside the home because of cultural influence. In their culture women go outside the home she suffer or attack by "likifet" or "setan". For that purpose the women were not use PNC service after delivery at health facility".

Majority 110(84%) of respondents in urban and 360(91.4%) of respondents in the rural said that the health facility provide PNC services. Women who delivered their last pregnancy in urban returned to health facility for PNC services then

they received different type of PNC services: physical examination (check-up) 25(27.8%), attended for immunization of her baby 66(73.3%), utilized counseling services 28(31.1%), used family planning service 44(48.9%), acquired breast feeding education 14(15.6%). The types of PNC services received by rural women when they are returning to the facility include: Physical examination or checkup 34(9.7%), attended for immunization of her baby 323(91.8%), received counseling services 78(22.2%), used family planning service 124(35.2%), acquired breast feeding education 144 (40.9%) **(Table - 1)**

Table – 1: Postnatal service received by women in childbearing age in Assosa District, Assosa Zone, Benishangul Gumuz Region, West Ethiopia.

Variables		**Place of residence**		**Total**
		Urban (n=131)	**Rural (394)**	**(N=525)**
		No (%)	**No (%)**	**No (%)**
Received PNC service	Yes	90(68.7%)	352(89.3%)	442(84.2%)
	No	41(31.3%)	42(10.7%)	83(15.8%
Type of postnatal services ($n_1 = 90$, $n_2 = 352$)	Physical Examination	25(27.8%)	34(9.7%)	59(13.3%)
	Immunization services	66(73.3%)	323(91.8%)	389(88.0%)
	Counselling services	28(31.1%)	78(22.2%)	106(24.0%)
	Family planning services	44(48.9%)	124(35.2%)	168(38%)
	Breast feeding education	14(15.6%)	144(40.9%)	158(35.7%)

The reasons for attending PNC services included: "because my baby needs immunization" 312 (88.6%) of the rural women and 62(68.9%) of urban women, "because of illness" 42(11.9%) of rural women and 11(12.2%) of the urban women, "because I wanted to start family planning method" 153(43.5%) of rural women and 45 (50.0%) of urban women, "because I wanted to make sure that she was back to normal status or to checkup her health status" (74(21%) of rural respondents and 13(14.4%) of the urban respondents). Only 17(15.4%) of urban respondents and 17(4.7%) of rural respondents reported that they were told by a health professionals/midwife to attend the service. **(Fig - 1)**

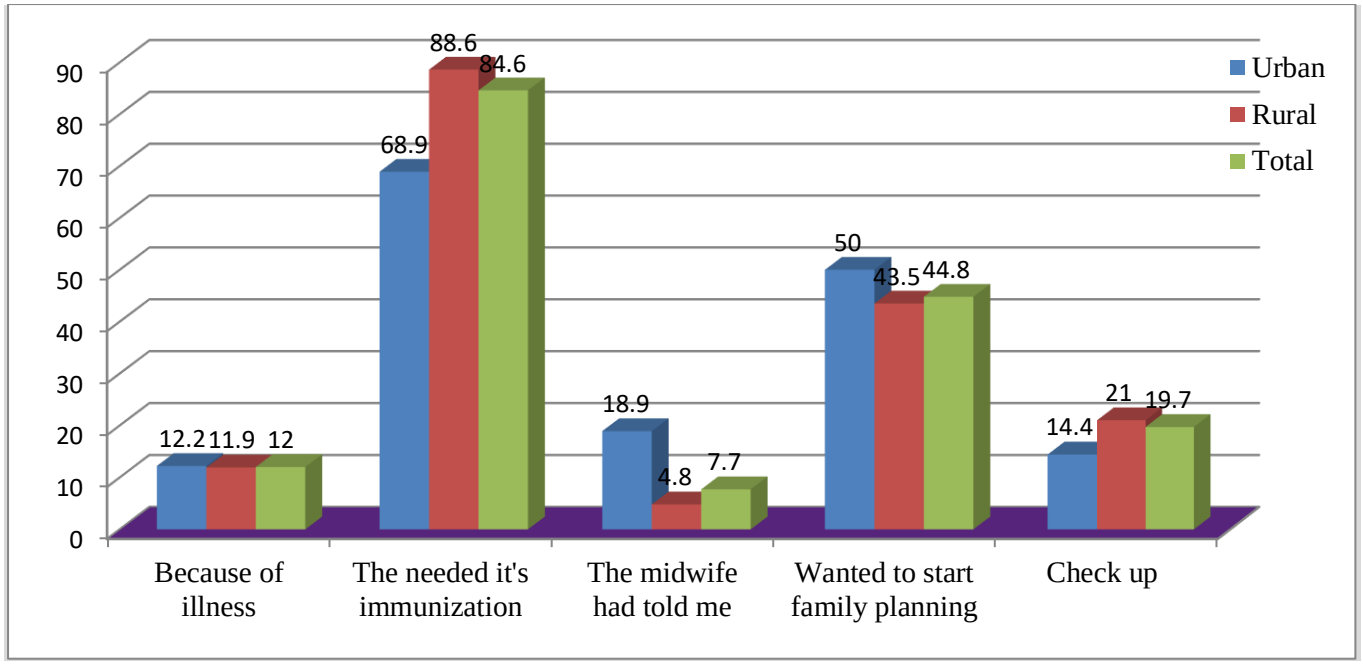

Figure – 1: The reason of the women for utilization of postnatal service in Assosa District, Benishangul Gumuz Region, West Ethiopia. **(n_1=90, n_2=352)**

In contrast with above reason, there are different factors that hindered mothers from utilizing postnatal care services in the study area. Eighty three (15.8%) women did not attend PNC service [41(31%) for urban and 42(10.7%) for rural]. Both in rural and urban areas gave reasons why they did not turn up for PNC services after delivery. Among these more than half 44(53%) stated lack of knowledge [23(56.1%) for urban and 21(50%) for rural] whereas 13(15.7%) stated health workers did not come when called for the service [8(19.5% for urban and 5(11.9%) for rural] **(Fig – 2)**

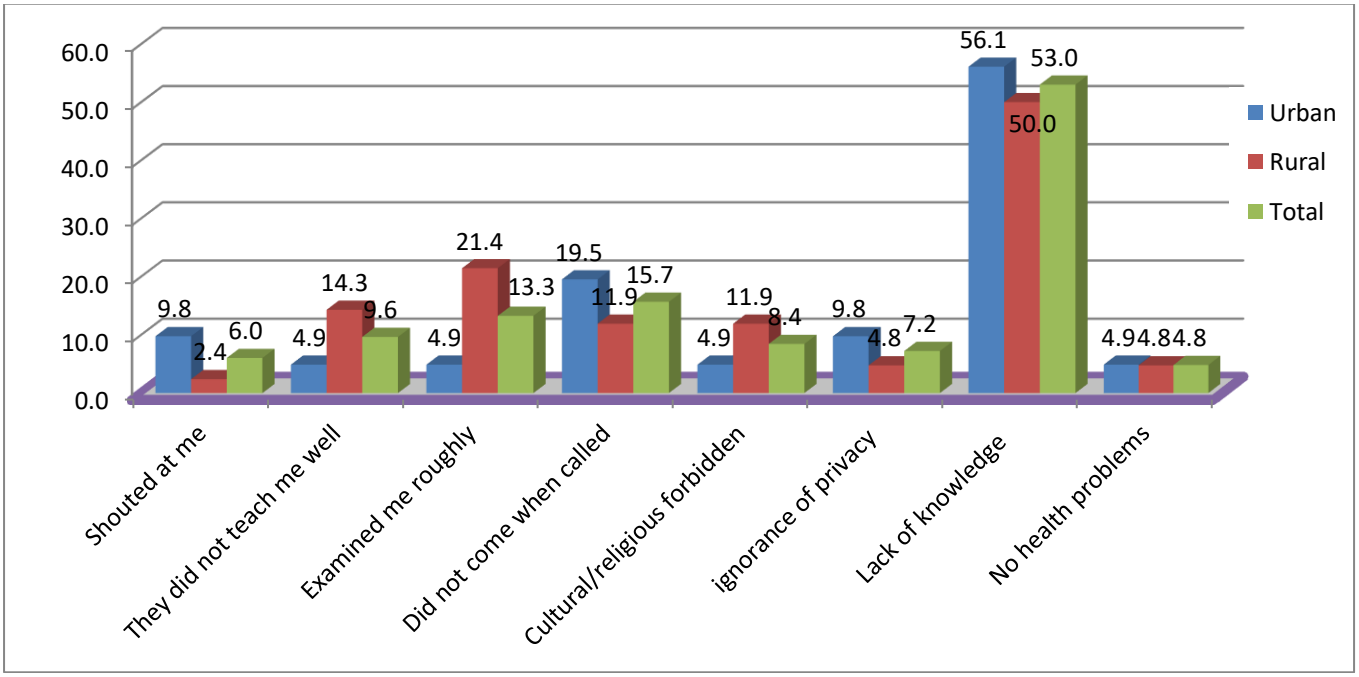

Figure – 2: The reason of the women for not attending postnatal service in Assosa District, Assosa Zone, Benishangul Gumuz Region, West Ethiopia**(n_1=41, n_2=42)**

Determinate Factors on uptake of PNC services

A bi-variate analysis involving all variables was performed to identify candidate variables for

multivariable analysis for the postnatal care service utilization. Consequently, place of residence, ethnicity, occupational status, ANC follow up, availability of HEW, availability of TTBA, knowledge on (ANC, delivery, PNC and maternal health services), attitude on (ANC, PNC and family planning), availability of health professional providing (ANC, PNC and family planning services) showed that significant association with utilization of PNC.

A multivariable analysis was performed for identified candidate variables on utilization of PNC service in bi-variate analysis which showed significant association. Accordingly ethnicity, ANC follows up, knowledge on PNC services, attitude towards PNC services and attitude towards family planning service showed significant association.

Women who received ANC at least once were 4.91 times more likely to receive PNC services than women who did not receive ANC service [AOR=4.91, 95% CI=12.32, 10.4].Women who were knowledgeable on PNC service were 4.04 times more likely to receive PNC service than their counterparts [AOR=4.04, 95%CI=1.01, 23.32].

On the other hand, women who had favourable attitude towards PNC service were 2.18 times more likely to receive PNC service than their counterparts [AOR=2.18, 95%CI=1.03, 5.89]. Furthermore, women who had favourable attitude towards family planning service were 2.94 times more likely to receive PNC services than unfavourable attitude [AOR=2.94, 95%CI=1.53, 5.65].**(Table – 2)**

Table - 2: Factors influencing utilization of PNC service in Assosa District, Assosa Zone, Benishangul Gumuz Region, West Ethiopia.

Variables		**PNC service utilization**		**Crude**	**Adjusted**
		No	**Yes**	**OR (95%CI)**	**OR(95%CI) ***
Place of residence	Urban	41(31.3%)	90(68.7%)	1	
	Rural	42(10.7%)	352(89.3%)	**3.82(2.34-6.22)**	2.03(0.52-7.98)
Ethnicity	Berta	52(17.2%)	251(82.8%)	1	
	Amhara	16(10.1%)	142(89.9%)	**1.84(1.01-3.34)**	**3.33(1.45-7.64)**
	Oromo	12(30.8%)	27(69.2%)	**0.46(0.22-0.98)**	2.14(0.71-6.47)
	Others	3(12%)	22(88%)	1.52(0.44-5.26)	**9.02(2.02-40.18)**
Occupational status	House wife	64(14.2%)	387(85.8%)	1	
	Others	19(25.7%)	55(74.3%)	**0.47(0.27-0.86)**	0.96(0.41-2.23)
ANC follow up	No	26(27.4%)	69(72.6%)	1	
	Yes	57(13.3%)	373(86.7%)	**2.46(1.45-4.19)**	**4.91(2.32-10.4)**
Availability of HEW	No	34(30.9%)	76(69.1%)	1	
	Yes	49(12.7%)	336(87.3%)	**3.34(2.02-5.52)**	1.59(0.51-4.99)
Availability of TTBA	No	48(27.9%)	124(72.1%)	1	
	Yes	35(9.9%)	318(90.1%)	**3.52(2.17-5.69)**	1.7(0.79-3.69)
Knowledge on ANC service	Not-Knowledgeable	57(20.9%)	216(79.1%)	1	
	Knowledgeable	26(10.3%)	226(89.7%)	**2.29(1.39-3.38)**	0.94(0.47-1.88)
Knowledge on delivery service	Not-Knowledgeable	47(22.4%)	163(77.6%)	1	
	Knowledgeable	36(11.4%)	279(88.6%)	**2.24(1.39-3.59**	1.16(0.57-2.32)
Knowledge on PNC service	Not-Knowledgeable	80(918.2%)	360(81.8%)	1	
	Knowledgeable	3(3.9%)	74(96.1%)	**5.36(1.65-17.44)**	**4.04(1.01-23.32)**

Knowledge on maternal health	Not-Knowledgeable	80(18.2%)	359(81.8%)	1	
	Knowledgeable	3(3.5%)	83(96.5%)	**6.16(1.9-20.0)**	2.03(0.36-11.53)
Attitude towards ANC service	Unfavourable attitude	15(29.4%)	36(70.6%)	1	
	Favourable attitude	68(14.3%)	406(85.7%)	**2.48(1.29-4.78)**	0.99(0.35-2.84)
Attitude towards PNC service	Unfavourable attitude	24(26.4%)	67(73.6%)	1	
	Favourable attitude	59(13.6%)	375(86.4%)	**2.28(1.33-3.91)**	**2.18(1.03-5.88)**
Attitude towards family planning service	Unfavourable attitude	49(26.6%)	135(73.4%)	1	
	Favourable attitude	34(10%)	307(90%)	**3.28(2.02-5.31)**	**2.94(1.53-5.65)**
Health professional providing F/P	No	77(17.3%)	369(82.7%)	1	
	Yes	6(7.6%)	73(92.4%)	**2.54(1.06-6.05)**	1.53(0.45-5.24)
Health professional providing PNC	No	54(20.4%)	211(79.6%)	1	
	Yes	29(11.2%)	231(88.8%)	**2.04(1.25-3.32)**	0.61(0.22-1.73)
Health professional providing ANC	No	71(17.7%)	331(82.3%)	1	
	Yes	12(9.8%)	111(90.2%)	**1.98(1.04-3.79)**	0.91(0.31-2.70)

**** Adjusted for*** *socio-demographic variable, obstetric characteristic, available of HEW, available of TTBA, knowledge, attitude and availability of other health professional providing (ANC, PNC and F/P Service).*

Bold *indicates Statistical significant at p value = 0.05.*

Discussion

Postnatal care is important for both the mother and the child to treat complications arising from the delivery, as well as to provide the mother with important information on how to care for herself and her child[1].

In this study, 84.2% of the respondents had visited health facility for PNC services for their last delivery and 13.3% of the respondents had visit postnatal services for the physical examination or check-up of her health status. This result is higher than the results of EDHS 2005(5.8%), EDHS 2005 in Benishangul Gumuz region 4.1% and Kenya study 12% were receive postnatal care service within six day of birth[1, 11]. This might be due to gaining information on PNC services from health extension worker and health extension workers provide the service at home during home visiting times.

Furthermore, postnatal care service were used by rural area (89.3%) higher than as compared to urban area (68.7%). This is because of presence of health extension worker in rural area that provide health education for the community and giving postnatal care service for women after delivery at home that increase utilization of postnatal care service. In addition, there were no urban health extension workers that provide maternal health care service in the urban study area.

Women who were knowledgeable on postnatal care service were more than four times more likely to receive postnatal care service than mothers who were not knowledgeable on PNC service. This result in line with study done in India revealed that knowledge and experience of women on maternal health care service were more likely to utilize maternal health care service during their first pregnancy (12). This could be due to gaining better information and having knowledge about importance of postnatal care services during ANC visit and advice on problems occurred during postnatal period.

On the other hand, mothers who had favourable attitude on PNC service were two times more likely to receive postnatal care services than mother who had unfavourable attitude towards PNC service. Furthermore, mother who had favourable attitude towards family planning service were around three times more likely to receive PNC service than mother who had unfavourable attitude on family planning service. The result was consistent with study in developing country including Ethiopia [13, 14]. In addition to, acceptors of contraceptives are more likely to use

maternal and child health services like prenatal care, delivery care by trained health personnel and postnatal care service [15].

Limitation of the study

Since data collectors were health extension workers working in the study area, social desirability bias was expected to occur. The study considered events occurred in the past five years, recall bias might occur. Since its cross-sectional nature, the study may not show temporal relation.

Conclusion and Recommendation

Conclusion: this study revealed that utilization of postnatal care services in the study area are better however it was still low as compared to national health HSDP IV target. In addition, there was low utilization of very essential part of postnatal services that is physical examination or check-up for women for her health status or child health status during postnatal period. Women were not attending postnatal services because of their own reasons: lack of knowledge, cultural forbidden, health workers shouted at me, health workers did not teach me well, they examine be roughly, health workers did not came when called, ignorance of privacy and no health problems. ANC follow up, knowledge on postnatal care services, attitude towards postnatal services and attitude towards family planning services were determinate factors of utilization of postnatal care services.

Recommendation: based on finding of this study, the following recommendations were made:

Ministry of health, regional health bureau and their partners should expand postnatal care service and fulfil the material or equipment in the health facility in the study area. They should improve training and/or refreshment of TTBAs, with the new role they should play in handling pregnancy and childbirth and integrate with in the formal health care system in the study area. Also they should provide strong supportive supervision and monitoring of provision and progress of maternal health care service at different level

Government should increase women's autonomy within the family, enhancing their ability to earn and control over the utilization of postnatal care services and decide on their own health.

Regional health bureau and different partners should providing adequate Information, Education and communication (IEC) on PNC services in order to bring good knowledge as well as behavioural change communication to the community.

Since pregnancy related complications are the main reasons for not utilizing health facilities during postnatal in the study area, regional health bureau and their partners should provide community awareness program must focus on the danger signs surrounding postnatal period.

Regional health bureau should trained urban health extension to improve postnatal care service in the urban area.

Acronyms or Abbreviations

ANC Antenatal Care

AOR Adjusted Odd Ratio

DHS Demographic Health Survey

EDHS Ethiopia Demographic Health Survey

FGD Focused Group Discussion

HEW Health Extension Worker

IDIs In-Depth Interviews

PNC Postnatal Care

SPSS Statistical Package for Social Sciences

TTBA Traditional Trained Birth Attendant

Declarations

Ethics approval and consent to participate

The study was conducted after approval of the proposal by ethical review committee of Jimma University. The survey was commenced after written consent obtained from Benishangul Gumuz Regional State Health Bureau to the

respective offices. In turn the Assosa woreda Office and Assosa Town Administrative Office wrote a letter to study kebeles to get permission and collaboration. Oral consent and written consent were obtained from each interviewee for their agreement to participate in the study.

Consent to publish

Not Applicable

Availability of data and materials

The dataset generated and analyze are not publicly available. However, the SPSS dataset is available at the hand of corresponding authors for the reasonable request.

Competing interests

The authors declare that they have no competing interests.

Funding

Benishangul Gumuz Regioanal Health Bureau was partially funded this works.

Authors' contributions

MA formulates the idea and designs the study proposal. Then after, data was collect, analysis, interpreted and wrote the whole document whereas *MB* critically comment the whole document and genuinely guide the principal investigator. All authors read and approved the final manuscripts.

Acknowledgment

I would also like to thank Benishangul Gumuz Regional Health Bureau for their financial support and cooperation that facilitated the study process.

My thanks also go to my sister Ayantu Beyene and my wife Abebech Tefera for their appreciable moral support and advice.

I would also thank all supervisors and data collectors for their genuine gathering consistent and reliable information that helps for analysis and report of this study.

Reference

1. Central Statistical Agency (Ethiopia) and ORC Macro. Ethiopia Demographic and Health Survey 2005. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistics Agency and ORC Macro.2006.
2. Nankwanga Annet. Factors Influencing Utilisation of Postnatal Services in Mulago and Mengo Hospitals Kampala, Uganda. 2004.
3. Harish Srivastava, Arindam Das: Factors Governing Maternal Health Care Utilization in India: A Cross Cultural Comparison.
   *Website:*www.safemotherhoodinitiative.org.
4. World Health Organization (WHO), Estimates of maternal mortality: A new approach by World Health Organization, Geneva, 1996.
5. Charlotte Warren, Pat Daly, Lalla Toure, Pyande Mongi. Postnatal care within two days of birth in facilities (assuming all facility births receive postnatal care) or at home in Africa, Demographic and Health Survey (DHS) data in 12 countries (2003-2005).
6. Family care International. Women deliver for development, London. 18-20 Oct 2007.
7. Central Statistical Authority Ethiopia) and ORC Macro. Ethiopia Demographic and Health Survey 2000. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistics Authority and ORC Macro.2001.
8. Central Statistical Agency (Ethiopia) and ORC Macro: Ethiopia Demographic and Health Survey 2011. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistics Agency and ORC Macro,2011.
9. FelekeWorku, Samuel Gebresilassie. Lecture Note on Reproductive Health for Health science students; Gonder University. 2008.
10. UNFPA. Maternal Health Care Seeking Behaviour in Ethiopia: In-depth Analysis of the Ethiopian Demographic and Health Survey 2005. Ethiopian Society of Population Studies. Addis Ababa, October 2008
11. Central Bureau of Statistics. Kenya Demographic and Health Survey 2003 Calverton, Maryland: CBS, MOH and ORC Macro.2003.
12. Deki, Utilization of Maternal Health Care Services in Sikkim, India, International

Institute for Population Sciences, April,2005.(Unpublished Student's Seminar Paper).
13. Lubbock LA, Stephenson RB. Utilization of maternal health care services in the department of Matagalpa, Nicaragua. Rev Panam Salud Publica. 2008; 24 (2):75–84.
14. Mekonen Y. and Mekonen A. Factors influencing the use of maternal health care services in Afar region. Ethiopia. J. health population and Nutrition, 2003, 21(4): 374-384.
15. Warren, C.W.; R.S. Monteith; J.T. Johnson et al. Use of Maternal-Child Health Services and Contraception in Guatemal
16. a and Panama. Journal of Biosocial Science.1987; 19: pp. 229-243.