



ISSN 2250-0774

Advance Research in Pharmaceuticals and Biologicals

(A Peer Reviewed International Journal for Pharmaceutical and Allied Research)



USA CODEN: ARPBGZ

UTILIZATION AND ASSOCIATED FACTORS OF POSTNATAL CARE IN ADWA TOWN, TIGRAY, ETHIOPIA- A CROSS SECTIONAL STUDY

* H. Berhe¹, W. Tilahun¹, A. Aregay¹, G. Bruh¹ and H. Gebremedhin²

¹Department of Nursing, College of Health sciences, Mekelle University

² Sheba University College, Mekelle

Received on 11/01/2013

Revised on 21/02/2013

Accepted on 23/02/2013

ABSTRACT:

Postnatal care refers to the assistance given to a mother and the baby for a period of six weeks from the time of delivery. The postnatal period is critical to the health and survival of a mother and her newborn. Lack of care in this time period may result in death or disability as well as missed opportunities to promote healthy behaviours, affecting women, newborns, and children. The objective of this study was to describe utilization of postnatal care and associated factors in Adwa town, Tigray, Ethiopia. The study was conducted in Adwa town, about 1000 kms north of Addis Ababa from May to December 2012. A community-based cross-sectional study design was conducted. The total sample size in this study was 337 mothers. Data was collected using a pre-tested structured questionnaire. Descriptive statistics was computed for the study variables; bivariate and multivariate analysis was applied as well. The study showed that 264 (78.3%) mothers had attended postnatal care service while 73 (21.7%) hadn't attended postnatal care. About 265 (78.6%) of the mothers attended ANC service. From those who had attended ANC service 50.7% had attended 4 times and above. Self employed mothers were 9.1 times more likely to have had postnatal care than women who hadn't any job. The utilization of postnatal services in Adwa town is good as compared to other developing countries. The gap in non users of postnatal care was lack of awareness about postnatal care service. It could be good if the ministry of health strengthen the situation and assess barriers other than informational barriers so that able to raise the utilization of the service.

Keywords: Postnatal care, Utilization, Mothers.

*Corresponding Author:

Hailemariam Berhe (MSc),
Department of Nursing, College of Health Sciences,
Mekelle University
Email: aidhbk@gmail.com

INTRODUCTION

Maternal and child health are the major concerns of public health organizations and researchers throughout the world. Health education for mothers is a strategy many countries have adopted to improve maternal and child health. Yearly over half a million women encounter complications due to childbirth and many die¹. WHO contends that the immediate cause of maternal deaths is the absence, inadequacy or underutilization of the health care system. Women should not die in childbirth because the vast majority of maternal deaths can be prevented or reduced if women had access to, or visited maternal health services during pregnancy, childbirth and the first month after delivery². Postnatal care refers to the assistance given to a mother and the baby for a period of six weeks from

the time of delivery. Postnatal services are primarily comprised of physiotherapy, physical examination, immunization, health education and family planning services³. Lack of care in this time period may result in death or disability as well as missed opportunities to promote healthy behaviours, affecting women, newborns, and children. The long-term maternal complications in the postnatal period include chronic pain, impaired mobility, damage to the reproductive system and infertility⁴. Some women suffer genital prolapses after bearing several children. This condition is extremely uncomfortable and can lead to other complications in future pregnancies if not properly addressed in the postnatal period⁵. These complications could be eliminated through preventive maternal

(RESEARCH ARTICLE)

healthcare services such as physiotherapy, family planning, health education, and screening⁶.

Postnatal care is regarded as one of the most important maternal healthcare services for the prevention of impairments and disabilities resulting from childbirth⁷. Many women do not receive these essential health care services, yet they need these services following delivery⁸. A woman living in Sub-Saharan Africa has high chances of dying in pregnancy, childbirth and after childbirth⁹. Different studies in developing countries showed the factors which affect the utilization of postnatal care are distance from health services; cost including direct fees and the cost of transportation, drugs and supplies; multiple demands on women's time; women's lack of power in decision-making within the family; and poor quality of services including poor handling by health providers¹⁰. Postnatal services are also among the strategies aimed at preventing the onset of physical and mental impairments among women who have delivered¹¹.

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 childbirth¹². In very poor countries and regions, such as those in the Sub-Saharan Africa only 5% of women receive postnatal care. In Ethiopia, factors associated to utilization of PNC services have been the major cause of maternal and infant deaths for majority of people, especially for those having low income. Therefore it is important to assess the factors that cause under-utilization of postnatal care services so that utilization of PNC services to be raised¹³.

METHODOLOGY

Setting

The study was conducted in Adwa town, about 1000 kilometers north of Addis Ababa, the capital of Ethiopia. According to the town administration, the population of the town was 60,748. There is 1 district hospital and two health centres. Postnatal care is virtually non-existent in Tigray region, with only 1% of the mothers reporting that they have received the care within 2 days after delivery from a health worker, 2% within 2-45 days. The study was conducted from May to December 2012. A community-based cross-sectional study design was employed and all mothers who had delivered in the last one year and who reside in Adwa town were the source population of this study.

Dependent variables

Utilization of postnatal care

Independent Variables

Demographic and socio-economic variables, reproductive health related to variables.

Utilization of services

It refers to use of postnatal services such as family planning, immunization and other services by women till 6 months after the delivery of their babies.

Postnatal Services

Services that consist of immunizations, family planning, and healthcare education on childcare, breast feeding, physiotherapy, physical examination, treatment and counseling services. The sample was proportionally distributed to each kebele of the town. Each participant was selected using systematic method. The data collection instrument was a pre tested structured questionnaire. Six health extension workers were recruited for data collection. Two diploma graduate nurses supervised the data collection. Training was given to both data collectors and supervisors for two consecutive days. Pre-test was done in 10% of the whole sample. The first draft of the English questionnaire was translated to Tigrigna language by independent translators then back to English language to check for consistency. Data was entered, cleaned and analyzed using SPSS version 16.0. Descriptive statistics was computed for the study variables. To determine factors associated with post natal care service, bivariate logistic regression and multivariate logistic regression were applied. The study proposal was approved by Institutional Review Board committee of Mekelle University, College of Health Sciences.

RESULT

Three hundred thirty seven women were interviewed in the study with a response rate of 100%. The mean age of the respondents was 28.39 years and the standard deviation was 5.58 years. Of the interviewed respondents, 290 (86.1%) were Orthodox and 47 (13.9%) were Muslims, 252 (74.8%) were married, 50 (14.8%) were single and the other 35 (10.4%) were widowed/divorced. Results have shown that 191 (56.7%) of the respondents had no job, 37 (11%) were self employed, While 33 (9.8%) were government employees and 76 (22.6%) private employees. One hundred five (41.5%) of the husbands were government employee and 114 (45.4%) were private employee. Thirty three (13.1%) of the husbands were self employed (worked in their own private job) (Table 1). According to the study, 264 (78.3%) mothers had attended postnatal care service while 73 (21.7%) hadn't attended the service. (Figure 1)

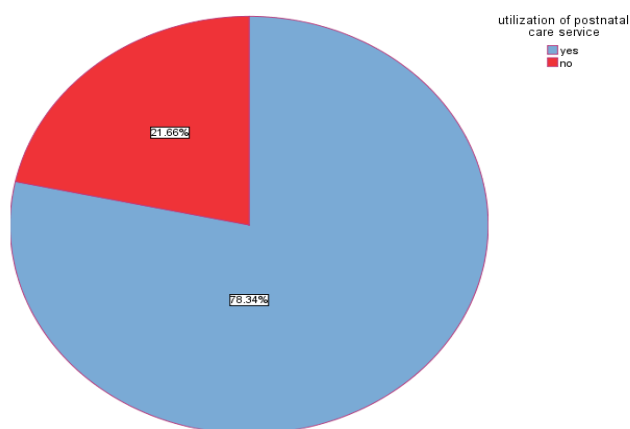


Fig. 1: Utilization of postnatal care by the mothers, northern Ethiopia, Tigray region, Adwa town, 2012

Table 1: Demographic and socio economic information of respondents, northern Ethiopia, Tigray region, Adwa town, 2012

Variables	Frequency	Percent
Age group		
18-23	84	24.9
24-29	144	42.7
30-35	59	17.5
36-41	50	14.8
Religion		
Orthodox	290	86.1
Muslim	47	13.9
Marital status		
Married	252	74.8
Single	50	14.8
Widowed/divorced	35	10.4
Educational level		
No education	140	41.5
Primary education	170	50.4
Secondary and higher education	27	8.0
Occupational status		
No job	191	56.7
Self employed	37	11.0
Government employee	33	9.8
Private employee	76	22.6
Monthly income n=146		
< 500 Ethiopian birr	45	30.9
500-1500 Ethiopian birr	67	45.9
>1500 Ethiopian birr	34	23.2
Educational level of husband n= 252		
No education	32	12.7
Primary education	164	65.1
Secondary and higher education	56	22.2
Occupational status of husbands n=252		
Self employed	33	13.1
Government employee	105	41.5
Private employee	114	45.4

Of the interviewed women 265 (78.6%) had attended antenatal care service. From those who had attended the service, 94 (27.9%) had attended less than 4 times while 171 (50.7%) had attended 4 times and above

(Table 2). Three hundred three (89.9%) of the mothers had heard about postnatal care service. From those mothers who had heard about postnatal care, 121 (35.9%) of the mothers knew kinds of services such as family planning, immunization of baby, counselling service and physical examination (Table 3).

Table 2: Frequency distribution of respondents' information on reproductive health issue, northern Ethiopia, Tigray region, Adwa town, 2012

Variable	Frequency	Percent
Number of pregnancy		
1-3	257	76.3
4 and above 4	80	23.7
Total	337	100.0
Total number of live births		
1-3	268	79.5
4 and above 4	69	20.5
Total	337	100.0
Current total number of children		
1-3	277	76.3
4 and above 4	60	23.7
Total	337	100.0
Attendance of ANC during pregnancy of the last child		
Yes	265	78.6
No	72	21.4
Total	337	100.0
Number of ANC checkup in the pregnancy of last child n=265		
1-3 times	94	27.9
4 and above 4 times	171	50.7
Delivery place of last child		
Home	23	6.8
Public hospital	186	55.2
Health center	128	38.0
Mode of delivery of last child		
Normal vaginal delivery	196	58.2
Caesarian section	91	27.0
Instrumental delivery	50	14.8

Table 3: Frequency distribution of respondents' information on postnatal care service, northern Ethiopia, Tigray region, Adwa town, 2012

Variable	Frequency	Percent
Knowledge on the availability of postnatal care service		
Yes	303	89.9
No	34	10.1
Total	337	100.0
Source of information about postnatal care service n=303		
Health care providers	193	57.3
Television	53	15.7
Radio	57	16.9

The study revealed that mothers provided various reasons for attending postnatal services.

The results show that the majority of the mothers 99 (29.4%) attended for both immunization of babies and family planning service (Figure 2). Out of the 337 participants, 73 (21.7%) did not attend postnatal services and all of them gave reasons why they did not turn up for postnatal services after delivery (Figure 3).

(RESEARCH ARTICLE)

The occupation of women was associated with having received postnatal care. Self employed mothers were 9.1 times (OR=9.1; (95%) CI = 2.22, 37.28) more likely to have had postnatal care than women who hadn't any job.

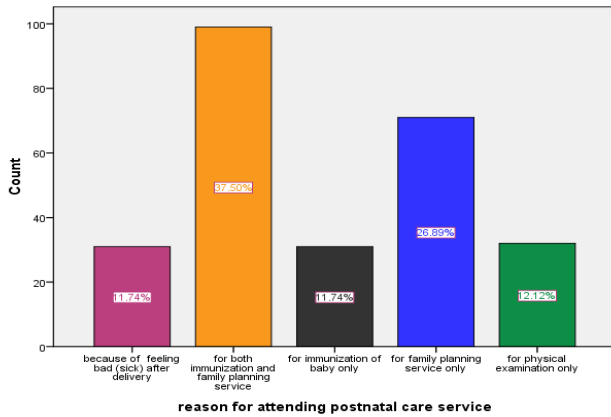


Fig. 2: The reason given by the mothers for attending postnatal care service, northern Ethiopia, Tigray region, Adwa town, 2012

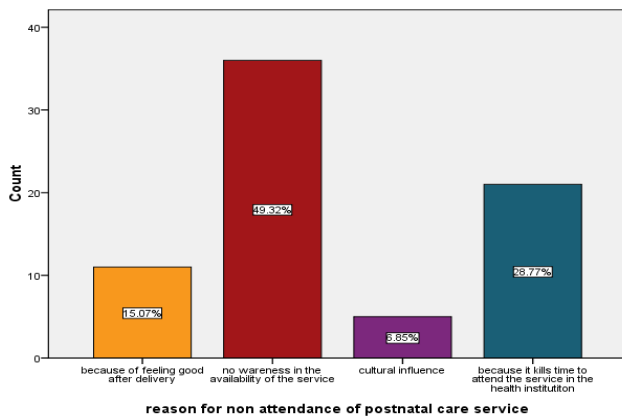


Fig. 3: Reasons given by mothers for non attendance of postnatal care, northern Ethiopia, Tigray region, Adwa town, 2012

DISCUSSION

People may invest less in health because of lack of information, low parental education, wide spread poverty and inequality, cultural influence, low public commitment to health education and general education¹⁴.

In this study 78.3% of the mothers had utilized postnatal care services. These results are lower than the findings of cross sectional study in Uganda in 2004 by Nankwanga A that showed 86% of the mothers utilized PNC service¹⁵.

According to this study the utilization of postnatal care service is higher than the cross sectional study in Sidama zone (southern Ethiopia) in 2008 by Regassa N (37.2% of utilization)¹⁶, cross sectional study in southern Tanzania in 2009 by Mwifadhi M, Brigit O,

Joanna A, Rachel A, Adiel K, Hassan M, Marcel T and David S (13% of utilization)¹⁷, and cross sectional study in Nigeria by Stella B and Adesegun F (41.2% of utilization)¹⁸. This could be due to time difference between these studies.

According to this study the utilization of the service is also higher than the cross sectional study in India in 2011 by Tej R, Nawi N. and Miguel S (37.4% of utilization)¹⁹, cross sectional study in Palestine in 2006 by Enas D, Rafael T, Annette E, and Alexander K (36.7% of utilization)²⁰ and cross sectional study in Nepal in 2006 by Sulochana D, Glyn N, Padam P, Edwin R, Jane S, and Amalraj E (34% of utilization)²¹. This could be due to time difference between these studies.

According to this study the utilization of the service is also higher than the cross sectional study in India in 2011 by Tej R, Nawi N. and Miguel S (37.4% of utilization)¹⁹, cross sectional study in Palestine in 2006 by Enas D, Rafael T, Annette E, and Alexander K (36.7% of utilization)²⁰ and cross sectional study in Nepal in 2006 by Sulochana D, Glyn N, Padam P, Edwin R, Jane S, and Amalraj E (34% of utilization)²¹. This could be due to socioeconomic, cultural, time and geographical difference.

This result showed that postnatal care utilization is lower as compared to the nearly 90% uptake of postnatal services reported in developed countries²¹. This could be due to the countries policy, living standard, socioeconomic status and time difference between the studies.

Different studies showed that factors affecting utilization of postnatal care services are educational level, occupational status, husbands' occupational status, awareness of postnatal care services, attendance of antenatal care service, delivery place and others. In this study, occupational level of the mother, occupational level of husband and source of information about postnatal care service showed statistical significance in the utilization of postnatal care services.

The findings of this study showed that women's occupation was a significant factor in the utilization of postnatal care services. Self employed women were more likely to attend postnatal care than women who hadn't any job. These findings agree with the cross sectional study in Uganda in 2004 by Nankwanga A²² and cross sectional study in New York City by Kalmuss D. and Fennelly K²³ that showed women who were self employed have the ability to use postnatal care services than those women who were not employed.

According to this study there is no significant association between knowledge about postnatal care and utilization of postnatal care service.

(RESEARCH ARTICLE)**Table 4:** Association of variables with utilization of postnatal care service, northern Ethiopia, Tigray region, Adwa town,

Variable	Utilization of postnatal care service		COR[95%, CI]	AOR[95%, CI]
	Yes	No		
Age group				
18-23	59 (22.3%)	25 (34.2%)	1	1
24-29	113 (42.8%)	31 (42.5%)	0.647[0.350, 1.196]	0.23[0.04, 1.3]
30-35	51 (19.3%)	8 (11.0%)	0.370[0.154, 0.892]	0.36[0.08, 1.62]
36-41	41 (15.5%)	9 (12.3%)	0.518[0.219, 1.224]	0.27[0.06, 1.29]
Religion				
Orthodox	226 (85.6%)	64 (87.7%)	1	1
Muslim	38 (14.4%)	9 (12.3%)	0.492[0.19, 1.22]	0.542[0.06, 5.17]
Marital status				
Married	199 (75.4%)	53 (72.6%)	1	1
Single	40 (15.2%)	10 (13.7%)	0.436[0.09, 1.92]	0.41[0.07, 2.44]
Divorced	25 (9.5%)	10 (13.7%)	2.163[0.81, 5.78]	0.226[0.02, 2.99]
Occupation of husband				
Self employed	27 (10.2%)	17 (23.3%)	1	1
Government employee	109 (41.3%)	31 (42.5%)	0.452[0.219, 4.78]	0.12[0.03, 0.58] *
Private employee	128 (48.5%)	25 (34.2%)	0.310[0.148, 3.88]	0.199[0.05, 0.78] *
Total number of pregnancy				
1-3 times	208 (78.8%)	49 (67.1%)	1	1
3 and above 3 times	56 (21.2%)	24 (32.9%)	0.55[0.31, 0.97]	0.36[0.11, 1.16]
Total number of delivery				
1-3 times	217 (82.2%)	51 (69.9%)	1	1
3 and above 3 times	47 (17.8%)	22 (30.1%)	0.5[0.28, 0.91]	0.64[0.14, 2.89]
Current occupation				
No job	115 (43.6%)	20 (27.4%)	1	1
Self employed	23 (8.7%)	11 (15.1%)	0.769[0.25, 2.36]	9.10[2.22, 37.28] *
Government employee	64 (24.2%)	12 (16.4%)	0.797[0.23, 2.76]	0.751[0.16, 3.49]
Private employee	10 (3.8%)	6 (8.2%)	0.313[0.09, 1.02]	0.000[0.000, 2.93]
Source of information about postnatal care				
Health care provider	153 (63.5%)	40 (64.5%)	1	1
Television	40 (16.6%)	13 (21.0%)	1.332[0.457, 2.87]	3.71[1.12, 12.28] *
Radio	48 (19.9%)	9 (14.5%)	0.228[0.03, 3.52]	2.57[0.78, 8.40]

2012

* Indicates level of significance if p value is <0.05

These findings opposes to the cross sectional study in Sweden by Ladfors L, Erickson M, Mattson L, Kyleback K, Magnusson I and Milsom I²⁴, cross sectional study in Europe in 2003 by Collinson & Cowley²⁵ and cross sectional study in Uganda in 2004 by Nankwanga A²² which showed that for women to use postnatal care services, they must know about those services. Therefore knowledge is an important factor in the utilization of postnatal care services.

In this study mothers level of education is not significantly associated with utilization of postnatal care service. Unlikely according to the cross sectional study in southern Ethiopia by Regassa N²⁶, cross sectional study in Ethiopia by Yared M and Asnaketch M²⁷, cross sectional study in Madhya Pradesh state of India by Tej R., Nawi N. and Miguel S²⁸, cross sectional study in Philippines by Shanna R. and Virginia O.²⁹, and cross

sectional study in Uganda in 2004 by Nankwanga A²² there was significant relation between levels of education and utilization of postnatal care. Those women who had secondary and higher level of education had more chance of attending postnatal care than women who hadn't education.

The findings of this study showed that husband's occupation showed a significant association on postnatal care utilization. Women whose husbands were self employed utilized the postnatal services most. Similarly a cross sectional study in Bangladesh in 2002 by Chakraborty N., Ataharul I., Chowdhury I. and Wasimul B.³⁰ and cross sectional study in Uganda in 2004 by Nankwanga A²² showed that women whose husbands were self employed were high probability of utilizing postnatal care service. With adequate counselling and education during antenatal visits,

(RESEARCH ARTICLE)

mothers may become aware of possible postnatal complications and sources of quality health services for treatment of these complications. This study revealed that utilization of antenatal care service is not significantly associated with the utilization of postnatal care services. The findings of this study are not similar with the cross sectional study in Nepal in 2006 by Sulochana D., Glyn N., Padam P., Edwin R., Jane S and Amalraj E and cross sectional study in United State of America in 2002 by Echevarria and Frisbie that showed a significant relationship between attendance of antenatal care services and utilization of postnatal care services. Women who receive higher levels of antenatal care are more likely to turn up for postnatal services. In this study even though there is no association between antenatal care attendance and utilization of postnatal care services, it is important to educate the mothers about the postnatal care services when they attend the antenatal care service in order to increase their awareness of postnatal care services. Because different studies showed that contact with healthcare professionals during pregnancy leads to an increased likelihood of using postnatal care service³⁰.

Different studies showed that culture is one of the reasons for not getting postnatal care services. However, according to this study, very few women (6.8%) reported that culture is a reason for non-use of

postnatal care. This study agrees with cross sectional study in Palestine in 2006 by Enas D, Rafael T, Annette E, and Alexander K²⁹.

In this study 28.8% of the respondents reported that they hadn't attend postnatal care service because they were not sick after the delivery. This result agrees with cross sectional study in Palestine in 2006 by Enas D., Rafael T., Annette E., and Alexander K.²⁹ and cross sectional study in Uganda in 2004 by Nankwanga A²².

CONCLUSION

The utilization of postnatal services in Adwa town is good as compared to other developing countries. 78.3% of the mothers utilized postnatal care services and 89.9% mothers know about the availability service. From those mothers who know about the availability of the service almost all utilized the service. Therefore the gap in non users of postnatal care was lack of awareness of the service.

In order to increase the utilization of postnatal care, in addition to individual-level, there is a strong need to focus on community and district-level interventions. It would be good if future researchers conduct a qualitative research with the aid of focus group discussions so that to explore more of these factors that affect the utilization of postnatal care services.

REFERENCES

1. D. Maine. Family Planning: Its Impact on the Health of Women and Children. New York, Columbia University, Centre for Population and Family Health, 1981.
2. J. H. Abramson. Survey methods in community medicine: epidemiological studies program evaluation clinical trials, 4th ed. Edinburgh, Churchill, 1990.
3. L. Ashford. Hidden Suffering: disabilities from pregnancy and childbirth in less developed countries, Population Reference Bureau, 2004, 123 (12): 420-423.
4. Ministry of Health Nepal, New ERA, ORC Macro Nepal Demographic and Health Survey 2001, Calverton, Maryland, Family Health Division, Ministry of Health; New ERA, ORC Macro, 2002, 76(23): 159-166.
5. WHO: World Health Organization Antenatal care: report of a Technical Working Group, Geneva, 1994, 56(23): 119-126.
6. UNICEF: State of the World's children. New York. United Nations Children's Fund, 2006, 34(16): 119-126.
7. WHO: Postpartum care of the mother and newborn: a practical guide WHO/RHT/MSM/983.
8. C. Stanton, N. Abderrahim, K. Hill. An Assessment of DHS Maternal Mortality Indicators. Studies, 2010, 67(23): 65-66.
9. N. Chakraborty, M. A. Islam, R. S. Chowdhary, W. Bari. Utilization of postnatal care in Bangladesh, 87(19): 98-103 (2005).
10. F. Cunningham, E. D. Garry. Williams Obstetric, 21, New York, McGraw Hill, 2002, 67(13): 89-96.
11. Ministry of Health (MOH), Federal Democratic Republic of Ethiopia (2006), National Reproductive Health Strategy, 2006 - 2015.
12. K. Hill, Shams-El-Arifeen, R. C. Hafizur, R. Saifur. Adult Female Mortality in Bangladesh: Levels and Causes, Leng H.C. 67(13): 89-96 (2000).
13. S. Yanagisawa, S. Oum, S. Wakai. Determinants of skilled birth attendance in rural Cambodia.
14. C. AbouZahr, T. Wardlaw. Maternal mortality at the end of a decade: signs of progress? Bulletin of the World Health Organization, 79: 561-568 (2001).
15. Tanzania Demographic and Health Survey (TDHS) report, 2004-5.

(RESEARCH ARTICLE)

16. M. Mwifadhi, O. Brigit, A. Joanna, A. Rachel, K. Adiel, M. Hassan, T. Marcel and S. David. The use of antenatal and postnatal care: perspectives and experiences of women and health care providers in rural southern Tanzania, 123 (12): 420-423 (2008).
17. WHO: Postpartum care of the mother and newborn: a practical guide WHO/RHT/MSM/983.
18. M. Yared and M. Asnaketch. Utilization of Maternal Health Care Services in Ethiopia, 51: 312-315 (2002).
19. Safe Motherhood: a matter of human rights and social justice. Retrieved from www.safemotherood.org.htm on 11/08/2003.
20. Ministry of Health (MOH), Federal Democratic Republic of Ethiopia, National Reproductive Health Strategy, 2006 - 2015. Addis Ababa, 2006.
21. S. Aboubakary, S. Seraphin, B. Kouyaté, D. Marylène, G. Janice, B. Gilles. Assessment of factors associated with complete immunization coverage in children aged 12-23 months: a cross-sectional study in Nouna district, Burkina Faso (2010).
22. D. Enas, T. Rafael, E. Annette and K. Alexander. Factors associated with lack of postnatal care among Palestinian women: A cross-sectional study of three clinics in the West Bank, 145(24): 332-336 (2006).
23. N. Regassa. Antenatal and postnatal care service utilization in southern Ethiopia: a population-based study, 321 (45): 321-323 (2011).
24. WHO: Postpartum care of the mother and newborn: a practical guide WHO/RHT/MSM/983.
25. WHO: Postpartum care of the mother and newborn: a practical guide WHO/RHT/MSM/983.
26. N. Regassa. Antenatal and postnatal care service utilization in southern Ethiopia: a population-based study, 321 (45): 321-323 (2011).
27. N. Regassa. Antenatal and postnatal care service utilization in southern Ethiopia: a population-based study, 321 (45): 321-323 (2011).
28. WHO. A call for action: Promoting health in developing countries. Health Education Quarterly, 18(1): 5-15 (1991).
29. Safe Motherhood. Safe Motherhood: a matter of human rights and social justice. Retrieved from www.safemotherood.org.htm on 11/08/2003.
30. D. Sulochana, N. Glyn, P. Padam, R. Edwin, S. Jane and E. Amalraj. Utilization of postnatal care among rural women in Nepal, 75(8): 23-29 (2006).