IOSR Journal of Nursing and Health Science (IOSR-JNHS)
e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 6, Issue 5 Ver. IV. (Sep. -Oct .2017), PP 65-72
www.iosrjournals.org

Factors Causing Lack of Attendance to Antenatal Clinics in Primiparas

Hamida Alam Eldin[1], Safaa H. Mohamed[2]
1.Assistant professor of Obstetrics & Gynecological Nursing, Faculty of Nursing, Assiut Universit
2.Letruture of Obstetrics & Gynecological Nursing, Faculty of Nursing, Assiut University, Egypt.

Abstract:
Background*; Prenatal care is a major strategy to reduce morbidity and mortality ratio of mothers and newborns because associated use of prenatal health care is linked with Improve the health outcomes of mothers and newborns.* ***Aim*** *of the study was to identify the causal factors for not attending prenatal clinics in primiparas.* ***Research design:*** *Cross sectional research design was used.* ***Setting****: It conducted in postpartum ward at Assiut Women Health Hospital.* ***Sample****: 516 primiparas were enrolled in the study.* ***Tool:*** *An Intervie questionnaire sheet includes factors causing lack of attendance at antenatal clinics in primiparas.* ***Results:*** *The majority of the study sample had 4 antenatal visits or more and only quarter of sample had 1-3 antenatal visits. Regarding the time of first antenatal visit, the majority of mothers started antenatal visits in the first trimester. Regarding causes of irregular attendance, the financial problem and lack of awareness about importance of antenatal care were the most common reasons for irregular attendance to atinatal clinic (ANC) visits. Regarding antenatal care and birth outcomes, there is a statistical significant difference between regular and irregular attendance with p-value (0.00*).* ***Conclusion:*** *lack of antenatal attendance is associated with higher pregnancy complications and adverse birth outcomes.* ***Recommendations:*** *Improve public awareness about importance of ANC through community campaign and mass media like local television channel, radio and local newspapers and emphasizing on the role of nurse to educate the pregnant woman about importance of ANC. Develop further researches on ANC as implementation of educational program about value of ANC.*
Keywords: *Antenatal care, Attendance, primiparas.*

Date of Submission: 11-09-2017 Date of acceptance: 29 -09-2017

I. Introduction

Antinatal care(ANC) is a pregnancy-related service, consisting of maternal health services necessary to identify complications, risk signs, screening, treatment, and education during pregnancy to improve pregnancy outcomes (Agus & Horioche, 2012). The World Health Organization defines prenatal care as "care befor birth" and includes education, counseling, testing and treatment to monitor and promote child well-being and pain (Arthur, 2012).

ANC also provides an opportunity to connect with and support women, families and communities at a critical time in the context of women's lives. These communication functions and support of the ANC essential, not only to save lives, also to improve life, take advantage of health care and quality care. The positive experiences and experiences of women during childbirth and the creation of healthy maternal health (WHO, 2016). Pregnancy is a very crucial moment for the mother and child here in developing, which calls for the best health interventions (Gele & Sundby, 2013).

Four visits include the provision of evidence-based interventions. One known as prenatal car focuses on basic ANC interventions identifying and managing birth complications such as preeclampsia, , intermittent preventive therapy for malaria during pregnancy and tetanus vaccination (intermittent preventive treatment) and syphilis, identification and management of infectious diseases including HIV, etc. Sexually transmitted diseases (WHO, 2016).

The three basic components of antenatal care are: (i) early and ongoing risk assessment, (ii) health promotion, and (iii) medical, psychological and social interventions and follow-up. Risk assessment includes full history, physical examination, laboratory testing, assessment of gestational age and well-being of the mother and her fetus. Health promotion consists of providing information about proposed care, promoting public knowledge of pregnancy and parenthood, and promoting and supporting health behaviors. Administrative interventions include any disease-based treatment, provision of social and financial resources, referral to and consultation with other specialist service providers (Hacker et al., 2016).

The objectives of prenatal care are to; screening of high-risk groups, ensuring continuous medical surveillance, prevention and mother awareness about pregnancy and childbirth physiology through

demonstrations, graphs and graphs, so that fear is removed and improved psychology, discuss with the couple about the place, time and delivery method, Neonatal and motivating couples for family planning (Elizabeth, 2014). Prenatal care is visited for a period of 4 weeks up to 28 weeks. In a period of 2 weeks to 36 weeks, there are weekly after the expected date of delivery. Ideally they should be flexible as needed, and comfort for the patient (Elizabeth, 2014).

Factors leading to non-attendance at prenatal clinics Previous research has found the characteristics of women who begin antenatal care late or attend insufficient number of times involving demographic, situational, psychological and social factors. Demographic sites and women attending prenatal care tend to be younger (especially adolescents), high parity or pregnancy, no partner, low socio-economic status and low educational attainment. The devastating factors affecting the initiation or presence of prenatal care include lack of transport, as well as the employment situation, difficulties in organizing childcare and unfavorable clinic hours. Psychosocial factors: whether pregnancy is planned, the reaction of women to pregnancy, the diagnosis of delayed pregnancy, contemplation of abortion, and the availability of social support (Lo et al., 2010).The reviewed literatures reported that ,social and demographic variables such as mother's age, marital status, mother's education, occupation, race, religion, family income, residence, and accessibility of the service; Previous experience of service such as use of previous service, perceived service quality, and service cost. Care awareness and complications related to pregnancy. Other factors such as the effect of a desired pair or not found unwanted pregnancy, unrecognized symptoms of pregnancy, and fear of parents to be predicted either negatively or positively affect the timing of ANC booking (Tariko et al., 2011).

Factors of inadequate prenatal care that have been consistently identified include the young age of the mother, low educational attainment, high birth rate, non-marriage and inadequate income. Careful assessment of the use of prenatal care and associated impediments to access is the first critical step in the development of targeted public health programs to improve access to prenatal care in general (Hawley et al., 2014).

II. Methodology

This study aimed to Identify factors causing lack of attendance to antenatal clinics in primiparas.Across sectional research design wase used.The study was conducted at postpartum ward of Assiut Women Health Hospital. The study included a convenient sample of 516 primiparou, with eligibility criteria included women who agree to participate in the study,primiparas andwomen who delivered vaginally or by C.S with no chronic medical illness

Tool of the study:

Interviewing questionnaire sheet was designed by the researcher , reviewed by a jury of 5 expertise and consisted of many parts which incuded personal and medical data , pregnancy and labor data , factors causing lack of attendance and barriers of antenatal care.

Field work:

In this study, all the ethical issues including plagiarism cases, respondent confidentiality were considered by researchers. Research proposal was approved from Ethical Committee in the Faculty of Nursing. There was no risk for study subject during application of the research. The study was followed common ethical principles in clinical research. Oral consent was obtained from each patient or mentor who was willing to participate in the study. Confidentiality and anonymity was assured. patients privacy was considered during collection of data. After preparation of the questionnaire, it was pretested on 10 % of cases (52) postpartum women to test the clarity of the questions and to detect any further problems or difficulties that help in making the necessary modification. There wasn't any modification on the tool and the pilot sample was included in the total sample.

An official permission was obtained from the head of obstetrics and gynecology department at the Women's Health Hospital - Assiut University after explaining the purpose of the study. The study was conducted from October 2015 to May 2016. The researcher interviewed women face-to-face. Each interview lasted about 15-20 minutes with each woman. The interviewer interviewed the woman within 24 hours after the birth. At the beginning of each interview, the researcher received and presented herself to the woman, and then the researcher explained the nature of the study and its goal and then obtained verbal approval to participate in the study from each woman. She then asked the questions posed in the paper on the socio-demographic data, prenatal attendance data and prenatal care barriers to assess the attendance of prenatal care. Based on the number of antenatal care visits, women were divided into two comparison groups. Prenatal care has been defined as four or more prenatal care visits, inadequate prenatal care from 1-3 antenatal visits. Pregnancy complications such as PIH, gestational diabetes mellitus, preeclampsia, anemia, polyhydramnius, oleguhidramine, and antipartom haemorrhage were evaluated, delivery method and any complications during work such as PROM, long-term work, and disabled work to determine the effects of prenatal care. Neonatal

outcomes such as gestational age, early delivery, dead fetal delivery, postpartum, low birth weight, and SCBU were obtained for each group to determine the effects of prenatal care. Finally, each woman was given public health education on prenatal care and its importance.

Statistical Design:
Data and statistical analysis were introduced using the Statistical Package for Social Sciences (SPSS), version 22). Quantitative variables were presented as number and ratio. Quantitative variables were introduced as mean + SD. The quantitative variables were compared using the Chi square test. Quantitative variables were compared using the t-test.

III. Results

Table (1): Distribution of the study sample according to their Socio-demographic Characteristics (n = 516).

Sociodemographic characteristics	N	%
1. **Age:**		
< 25yrs	320	62
25 - < 30 yrs	142	27.5
30 - < 35yrs	40	7.8
>35yrs	14	2.7
2. **Residence:**		
Urban	95	18.3
Rural	421	81.7
3. **Educational level:**		
Illiterate	105	20.3
Primary	132	25.6
Secondary	228	44.2
University	51	9.9
4. **Working status:**		
Worker	15	2.9
House wife	501	97.1
5. **Education:**		
Illiterate	99	19.2
Primary	95	18.4
Secondary	271	52.5
University	51	9.9

Table (1): Shows that nearly two thirds of women were less than 25 yrs old. The majority of women had primary education and from rural areas (80%and 81.7% respectively) and the vast majority were housewives (97.1%).

Table (2): Pattern of antenatal care utilization in the study sample (n = 516).

Variable	N	%
1. Number of antenatal visits		
1-3 times	130	25.2
4 times or more	386	74.8
2. Time of first antenatal visit:		
First trimester	434	84.1
Second trimester	38	7.4
Third trimester	44	8.5
3. Place of antenatal care:		
Governmental hospital	1	0.2
Maternal and Child Health center	86	16.7
Private clinic	30	5.8
Private clinic and Maternal and Child Health center	399	77.3
4. Reason for antenatal care		
Follow up	25	4.8
Treating medical problem of pregnancy	9	1.7
Tetanus toxoid immunization	24	4.7
Follow up and Tetanus toxoid immunization	452	87.6
Follow up, TTI & treating medical problem of pregnancy	6	1.2

Table (2): shows that nearly three quarters of the study sample (74.8%) had 4 antenatal visits or more. Regarding the time of first antenatal visit (84.1%) started antenatal visits in their first trimester. Most of women (77.3%) attended ANC at private clinic and Maternal and child health center. Regarding the reasons for antenatal care, the majority of sample (87.6%) stated that their reason was for follow up and receiving tetanus toxoid immunization.

Table (3): Distribution of the study sample according to their causes of irregular attendance during antenatal care visit.

Cause of irregular attendance	N. (130)	%
1. Inability to afford cost of antenatal care	58	44.6%
2. Refusal of family	8	6.2
3. Lack of awareness about importance of antenatal care	26	20
4. Lack of awareness about importance of antenatal care and Inability to afford cost of antenatal care	34	26.2
5. Distance and transportation problems	4	3.0

Table (3): shows that either financial problem (44.6%) or lack of awareness about importance of antenatal care (20%) are the most common reasons for irregular attendance of ANCvisits.

Table (4): Distribution of the sample by sociodeographic characteristics in relation to their attendance to ANC visits

Sociodemographic Characteristics	Attendance				P-Value
	Irregular		Regular		
	N=130	%	N=386	%	
1. **Age (years)**					
– < 25	92	70.8	228	78.3	0.077
– 25 -< 30	29	22.3	113	29.2	
– 30 -< 35	8	6.1	32	8.9	
– >35	1	0.76	13	3.4	
2. **Residence :**					
– Urban	15	12.3	79	20.5	0.023*
– Rural	115	88.4	307	79.5	
3. **Educational level:**					
– Illiterate	27	20.7	78	20.2	0.020*
– Primary	42	32.3	90	23.3	
– Secondary	57	34.8	171	44.3	
– University	4	3.1	47	12.1	
4. **Working status:**					
– Worker	0	0	15	3.9	0.023*
– House wife	130	100	371	96.11	
5. **Husband's education**					
– Illiterate	29	22.3	70	18.1	0.013*
– Primary	34	26.1	61	15.8	
– Secondary	61	46.9	210	54.4	
– University	6	4.6	45	11.6	

(*) statistically significant difference

Table (4): Shows that there are significant difference between sociodemographic characteristics and frequency of ANC in relation to residence, education working status with p-value(.023 , .020 , .023 respectively)

Table (5): Pregnancy's complications in the study sample in relation to their attendance.

Complications of pregnancy	Attendance				P-Value
	Irregular		Regular		
	N=130	%	N=386	%	
1. PIH	12	9.2	10	2.6	0.001*
2. Gestational diabetes	0	0	5	1.3	0.192
3. Preeclampsia	48	36.9	38	9.8	0.000*
4. Eclampsia	12	9.2	8	2.1	0.000*
5. Anemia	3	2.3	1	0.25	0.021*
6. Oligohydramnios	13	10	18	4.7	0.027*
7. placenta Previa	1	0.8	5	1.3	0.628
8. placenta abruption	1	0.8	3	0.8	0.993
9. None	40	30.8	298	77.2	0.000*

(*) statistically significant difference PIH (pregnancy induced hypertension)

Table (5) shows that there was highly statistical significant difference between regular and irregular attendants in preeclampsia and eclampsia with p-value (.000*).

Table (6): Mode of delivery and labor complications in the study sample in relation to their attendance

Mode of delivery	Attendance				P-Value
	Irregular		Regular		
	N=130	%	N=386	%	
– Normal labor	46	35.4	149	38.60	0.513
– CS	84	64.6	237	61.4	
Complication during lab or PROM	25	19.2	32	8.3	0.001*
– Obstructed labor	3	2.3	14	3.6	0.466
– Postpartum hemorrhage	0	00	2	0.5	0.411
– None	102	78.5	338	87.6	0.011*

(*) statistically significant difference, PROM (Premature Rupture of Membranes)
CS (Cesarean Section)

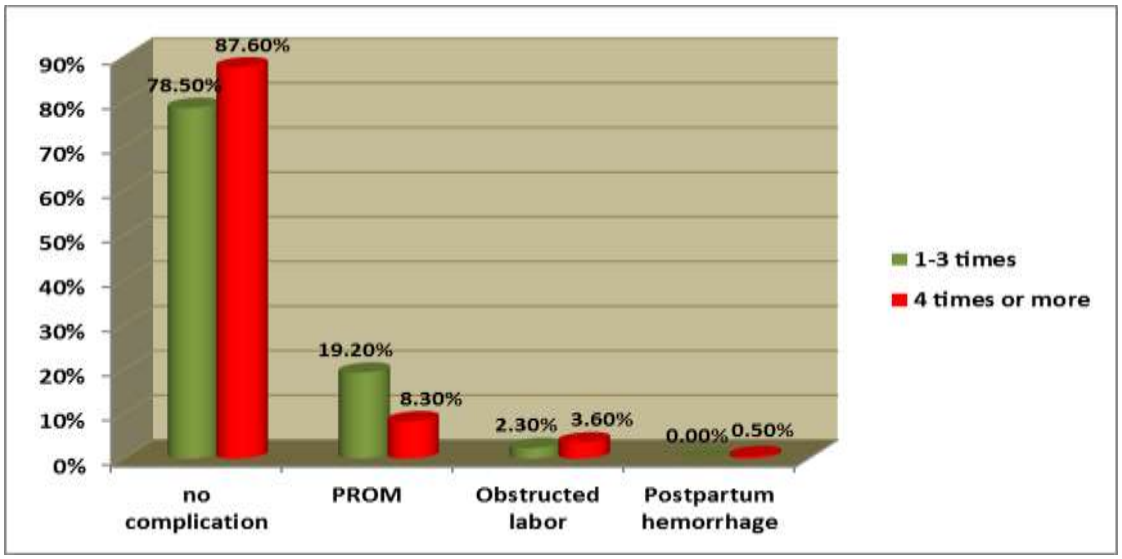

Fig (1): Labor complications in the study sample in relation to their attendance

Table (6) & Fig (1): shows that there was statistical significant difference between regular attendants and irregular attendants in PROM only with p-value= (.001).

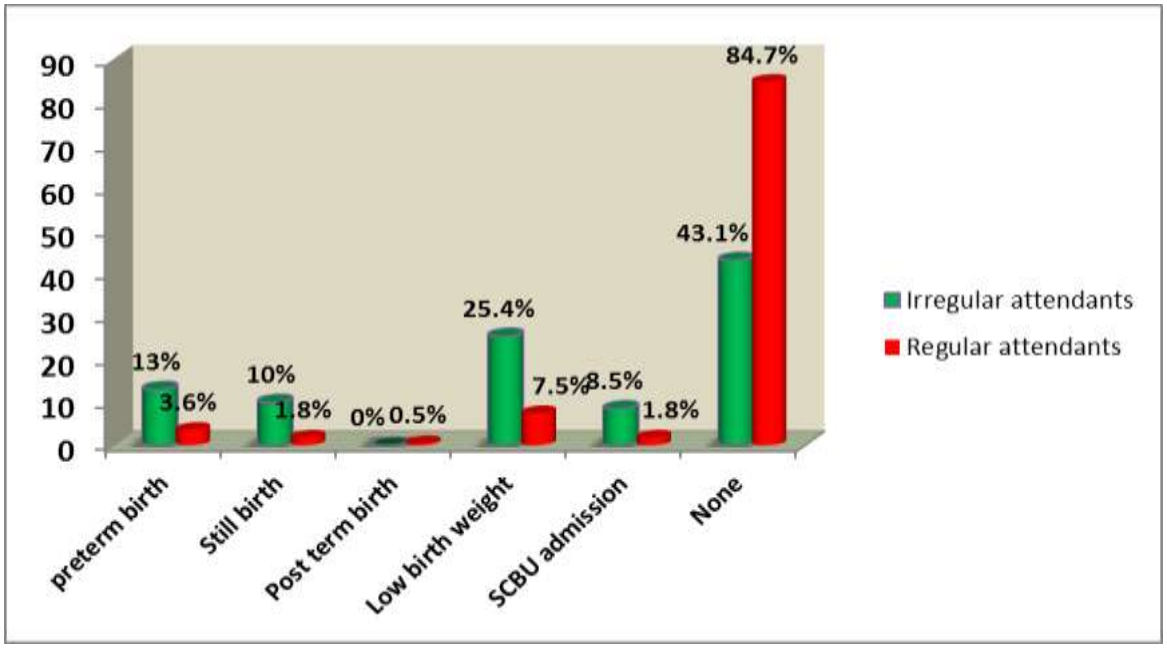

Fig (2): birth outcomes in study sample in relation to their attendance

Fig (2): shows that there was highly statistical significant difference between regular and irregular attendants in Preterm birth, Stillbirth, Low birth weight and SCBU admission with p-value = 0.000*.

IV. Disscussion

Regarding number of antenatal visits, the majority of the study sample had 4 antenatal visits or more and only quarter of sample had 1-3 antenatal visits. These results agree with that of **Pradhan et al., (2014)** who reported that the majority of the mothers had completed four ANC visits. On the contorary **Hawley et al., (2014)** and **Asundep et al., (2013)** reported that the highest number of respondents, had visited less than four times, whereas only more than one third had visited four times or more. the possible reason for the discrepancy could be that our study subjects were primiparas.

Based on the results of the present study , the majority of the study sample started antenatal visits in the first trimester followed by less than quarter started antenatal visits in the third trimester. these results agree with those of **Stephenson** & **Elfstrom (2012)** in Bangladesh and Egypt who reported that more than half of women in Egypt have the first antenatal care visit during the first trimester. These results disagree with **Asunde et al., (2013**), **Pradhan et al., (2013) and Tuladhar & Dhakal (2012)** who reported that majority of mothers had first ANC visit in the second trimester of pregnancy. Additionally **Kotb et al (2007)** in avillage in Abounb district of Assuit governorate reported that more than half of women started there antenatal visit in second trimester.

Regarding place of antenatal care more than two third of the sample attended ANC at private clinic and Maternal and child health center. These results agree with **Nisar & White (2008)** Who reported that the proportion of women seeking antenatal care from a private care facility sample was much higher as compared to government care facilities (14.5%).our results disagree with that of **Tuladhar & Dhakal (2012)** in Nepal who reported that most of the study participants had attended ANC at hospital followed by private clinic(20.4%).

Regarding the age and number of antenatal visits, the present study showed that there was no significant difference between the ages and number of antenatal visits. These results agree with **Nisar & White (2008)**, who stated that no association was observed when age categories were compared between regular attendants and irregular attendance . According to **Abosse et al (2011)** reported that ANC service utilization is significantly influenced by maternal age. Mothers who were in the 25-29 age group were less likely to benefit from the ANC service than women aged 35 and over. Also, **Dairo & Owoyokun (2011)** reported that women who were 25 years or more were more likely to attend ANC clinic than women who were less than 25 years**.** The explanation for the discrepancy could be due to difference in the study subjects, our study subjects were primiparous women that regardless their ages attend antenatal care more than multiparous women according the results of most published studies.

With regard to residence and number of antenatal visits, this study revealed a significant difference between urban and rural population P 0.023, although urban women have prenatal care more than (4 times or more) for women living in rural areas. These results are consistent with those of Ajay and Osakinle (2013) in Nigeria that reported that more than four urban sample were four times or more compared to rural participants were about two-thirds. With regard to education and the number of prenatal visits, this study showed that there was a significant difference between education and the number of prenatal visits to be consistent with most published results. The vast majority of women with higher education had four or more prenatal visits. These results were agreed with Sohag et al. (2013) in Pakistan, who reported that the highest number of standard visits was increased by higher education. Asfao (2010) in Ethiopia reported that mothers with primary education were higher for primary health care than mothers, and mothers with secondary education were more likely to receive primary health care than illiteracy. These results from the researcher's opinion were due to that educated women have higher awareness about the importance of antenatal care. But these results disagree with **Nisar & White (2008**) who reported that no association was observed when educational status was compared between the two groups. And also these results disagree with **Ajayi & Damilola (2013)** who reported that those with no education at all had the recommended number of visits compared to those with tertiary education and secondary education .

As regard working status and number of antenatal visits, the present study revealed that there was a significant difference between occupation and number of antenatal visits with p-value = 0.023*. With all employed women have regular antenatal care. These results disagree with that of **Gupta et al., (2015)** in India who reported that ANC service utilization was found to be not significantly associated with the occupation of the mother**.** The possible explanation for the discrepancy could be that the majority of our study subjects were housewives that make it difficult to observe the difference.

As to the reasons for non-attendance of the ANC regularly, more than a third of mothers reportedly were unable to afford prenatal care, and less than a quarter of mothers cited ignorance of the importance of prenatal care (they appeared to be in good health during pregnancy) The reasons cited for not attending ANC regularly. These results are consistent with **Banda** (2013), who reported that more than half of them reported having been absent from the African National Congress (ANC) and had a financial problem followed by ignorance.

Also **Dairo & Owoyokun (2010)** reported that more than half gave the inability to afford cost of antenatal care as the reason for not obtaining antenatal care at all. The same in the study of **Mumbare & Rege (2011)** in India who reported that the main reasons for inadequate utilization of ANC services were financial,

unawareness about ANC services. On the contorary, **Abosse et al., (2010)** reported that more than two third of the mothers responded that they were apparently healthy during their last pregnancy. **Haider et al., (2010)** in Pakistan reported that more than one third of women did not receive antenatal care because the facility was far away from home, less than quarter of mothers said that the transport was not available.

With regard to the relationship between pregnancy complications and ANC, the current study revealed that more than two-thirds of mothers with irregular pregnancies suffer from pregnancy complications compared with less than a quarter of mothers who are regularly infected. The most common was pre-eclampsia among the irregular group more than one-third versus less than a quarter in the normal group, followed by olegodidramine among the irregular group versus 4.7% in normal. These findings are consistent with Ratkinen et al. (2007) who report that non-present and reduced antenatal care is often complicated by placental abruption or chorio-amnionitis.

Toladhar and Dacal (2012) also report that maternal complications such as anemia and pregnancy caused by high blood pressure occur more commonly in women without ANC. On the other level, Kihara et al., (2015) in rural Kenya reported that there was no significant difference in maternal or perinatal outcomes among those who received an complete and incomplete ANC package.

In terms of delivery and prenatal care, there was no significant difference between birth patterns in both groups. Do not agree with these findings with Toladar and Dacal (2012), who reported that the high caesarean delivery rate was present in women present at ANC because all elective cesarean sections were planned for these women only. Also, all induction work has been performed between them.

The present study showed that there were statistically significant differences between birth outcomes in regular attendees and non-regular attendees with a value of P = (0.000 *). With more than half of the irregular attendants, mothers had complications compared with less than a quarter of mothers who were regularly infected. The highest proportion of complications were LBW between the irregular group versus in the normal group, followed by the stillbirth of the dead fetus more than normal. These results are going along with Ahmed et al. (2012) in Pakistan, which reported that women have more than four prenatal visits six times more likely to give birth to normal weight. Also, these results are consistent with Ratkkinen et al. (2007) who reported that there is a significantly lower birth weight in children who are underweight and non-fetus, and fetal death is more than newborns.

These findings are also consistent with the results of Stacy et al. (2012), which indicated that inadequate prenatal care was associated with delayed neonatal risk. It was also agreed with Toladar and Dacal (2012) who reported that low birth weight and preterm birth were higher in women who had insufficient or no disease. The Child Care Unit (SCBU) also had a special admission higher for various reasons such as neonatal sepsis, obstetric obstruction, and jaundice.

V. Conclusion

Impaired attendance of prenatal care associated with high complications of pregnancy and childbirth and negative outcomes.

Recommendations

1. Improve public awareness about the importance of ANC through mass media like local television channel, radio and local newspapers through Clear and consistent messaging regarding the possibility of complications during all pregnancies, not just the first and encouraging women of grand multiparas to attend ANC clinic. Furthermore education about malaria, HIV and other diseases that causes morbidity and mortality among pregnant women and infants.
2. Promotion of the outreach home visiting programs for detecting and /or promoting the pregnant women's awareness about antenatal care services and motivate them to utilize maternal care services which are freely available in all the government health setups
3. Emphasizing on the role of nurse to educate the pregnant woman about importance of ANC.
4. Develop further researches on ANC as implementation of educational program about value of ANC.

Referances

[1]. **Abosse Z, Woldie M & Ololo S, (2011):** Factors Influencing Antenatal Care Service Utilization in Hadiya Zone. Ethiop J Health Sci. 20(2).

[2]. **Agus Y & Horiuchi S, (2012):** Factors influencing the use of antenatal care in rural West Sumatra, Indonesia. BMC Pregnancy Childbirth. 12(1). PP. 9.

[3]. **Ahmed Z, Khoja S &Tirmizi SS. (2012):** Antenatal care and the occurrence of low birth weight delivery among women in remote mountainous region of chitral, Pakistan. Pak J Med sci. 28(5):Pp. 800-805.

[4]. **Ajayi IO & Osakinle DC, (2013):** Socio Demographic Factors Determining the Adequacy of Antenatal Care among Pregnant Women Visiting Ekiti State Primary Health Centers. Online J Health Allied Scs.12(2):4. Available at URL: http://www.pps.org.pk/PJP/9-1/Ajazii.pdf

[5]. **Arthur E. (2012):** Wealth and antenatal care use: implications for maternal health care utilisation in Ghana. Health Econ Rev. 2(1). PP. 14.

[6]. **Assfaw Y T, (2010):** Determinants of Antenatal Care, Institutional Delivery and Skilled Birth Attendant Utilization in Samre Saharti District, Tigray, Ethiopia (Master's thesis).

[7]. **Asundep N N, Jolly P E, Carson A, Turpin C A, Zhang K & Tameru, B. (2013):** Antenatal Care Attendance, a Surrogate for Pregnancy Outcome? The Case of Kumasi, Ghana. Matern. Child Health J. 18(5): Pp. 1085-1094.

[8]. **Banda C. (2013):** Factors associated with lack of antenatal care utilization BMC Public Health. 7(1): Pp. 233.

[9]. **Dairo M D & Owoyokun K, (2011):**Factors affecting the utilization of antenatal care services in Ibadan, Nigeria. bjpm, 12(1).

[10]. **Elizabeth M. (2014):**Midwifery for nurses ,2nd ed ,CBS publishers& distributors pvt, prenatal care. p.p 241-244.

[11]. **Gele AA & Sundby J, (2013)**: Attitudes toward female circumcision among people in the Hargeisa district.Oslo and Akershus University College of Applied Science [Accessed April 17, 2013].

[12]. **Gupta R, Shora T, Verma A& Jan R, (2015):** Knowledge regarding antenatal care services, its utilization, and delivery practices in mothers (aged 15-49 years) in a rural area of North India. Trop J Med. Res. 18(2): Pp. 89.

[13]. **Hacker N F, Moore J G, Gambone J C, Hobel C J & Elsevier (Amsterdam). (2016):** Hacker & Moore's essentials of obstetrics & gynecology. Philadelphia: Elsevier .

[14]. **Haider A, Mohan U& Bissell R, (2010):** Factors affecting antenatal care utilization .JPMA. 22(4): Pp. 395-406.

[15]. **Hawley N, Brown C, Nu'usolia O, Ah-Ching J, Howard B & McGarvey S T. (2014):** Barriers to Adequate Prenatal Care Utilization in American Samoa. Matern Child Health J. 18(10):Pp. 2284-2292.

[16]. **Kihara A, Harries A D, Bissell K, Kizito W, Van Den Berg R, Mueke S, Gichangi P. (2015):** Antenatal care and pregnancy outcomes in a safe motherhood health voucher system in rural Kenya, 2007–2013. Public Health J. 5(1): Pp. 23-29.

[17]. **Kotb S A, Ahmed N H& Adly S L.(2007):** Determinants of maternal and child health services utilization in avillage in Abnoub,Assuit . AAMJ. 5(1)

[18]. **Low P, Paterson J, Wouldes T, Carter S& Williams M. (2010):** Factors affecting antenatal care attendance by mothers of Pacific infants living in New Zealand. NZMJ, Vol 118 No 1216 ISSN 1175 8716. Retrieved from http://www.nzma.org.nz/journal/118-1216/1489/ © NZMA

[19]. **Mumbare S & Rege R. (2011):** Ante natal care services utilization, delivery practices and factors affecting them in tribal area of North Maharashtra. Indian J Community Med. 36(4): Pp. 287-289.

[20]. **Nisar N, & White E, (2008):** Factors affecting utilization of Antenatal Care among reproductive age group Women (15-49 years) in an urban squatter settlement of Karachi .JPMA. 53(2): Pp. 395-406.

[21]. **Pradhan P, Bhattarai S, Paudel I S, Gaurav K & Pokharel P. (2014):** Factors Contributing to Antenatal Care and Delivery Practices in Village Development Committees of Ilam District, Nepal. Kathmandu Uni. Med. J. 41(1). Pp. 60-65.

[22]. **Raatikainen K, Heiskanen N & Heinonen S, (2007):** Under-attending free antenatal care is associated with adverse pregnancy outcomes. BMC Public Health. 7(1).

[23]. **Rosa C Q, Silveira D S& Costa J S. (2014):** Factors associated with lack of prenatal care in a large municipality. Rev Saúde Pública. 48(6): Pp. 977-984.

[24]. **Sohag A , Memon S, Bhatti M & Abdul Azeem M, (2013):** factors affecting utilization of antenatal care. Pak J Physiol.9 (1). Available at URL: http://www.ojhas.org/issue46/20132-4.html

[25]. **Stacey T, Thompson J M, Mitchell E A, Zuccollo J M, Ekeroma AJ & Mccowan L M. (2012):** Antenatal care, identification of suboptimal fetal growth and risk of late stillbirth: Findings from the Auckland Stillbirth Study. Aust N Z J Obstet Gynaecol. 52(3): Pp. 242-247.

[26]. **Stephenson, R., & Elfstrom, M, (2012):** Community Influences on Antenatal and Delivery Care in Bangladesh, Egypt, and Rwanda. Public Health Rep. 127(1): Pp. 96–106.

[27]. **Tariku A, Melkamu Y & Kebede Z. (2011):**Previous utilization of service does not improve timely booking in antenatal care: Cross sectional study on timing of antenatal care booking at public health facilities in Addis Ababa. Ethiopian J Health Dev. 24(3). Pp68 -74.

[28]. **Tuladhar H & Dhakal N. (2012):** Impact of Antenatal Care on Maternal and Perinatal utcome: A Study at Nepal Medical College Teaching Hospital. NJOG. 6(2). Pp. 3:200-215.

[29]. **World Health Organization (WHO), (2016):** WHO recommendations on antenatal care for a positive pregnancy experience. PP. 2- 5.

[30]. **World Health Organization. (2002):** Essential Antenatal, Perinatal and Postpartum care Retrieved from https://www.euro.who.int.