### **Original Research Article**

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20205680

# Patient related factors that influence utilization of antenatal care at Saku sub-county, Kenya

David Murithi<sup>1\*</sup>, Sherry Oluchina<sup>2</sup>, Dainah Kariuki<sup>2</sup>

<sup>1</sup>College of Health Sciences, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya <sup>2</sup>School of Nursing, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya

Received: 21 September 2020 Revised: 01 December 2020 Accepted: 02 December 2020

### \*Correspondence: Dr. David Muriithi,

E-mail: davidmurithi@yahoo.com

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

#### **ABSTRACT**

**Background:** Antenatal care (ANC) is the continuous care that is accorded to women in the course of pregnancy. Notably, antenatal care is an efficient health intervention aimed at inhibiting maternal mortality and morbidity majorly in areas where women have poor health. This study therefore assessed the patient related factors that influence utilization of ANC at Saku sub-county, Kenya.

**Methods:** This research applied descriptive cross sectional study design. The study was carried out in Saku Sub County in the following randomly selected health facilities: Marsabit County Referral Hospital, Dakabaricha Dispensary and Jirime Dispensary. The study population comprised of post-natal mothers aged between 15-49 years seeking services at maternal and child health clinic (MCH) in Saku Sub County. The Cochran's Sample Size Formula was used to calculate a sample size of 154 respondents. The study employed a researcher- administered semi-structured questionnaire and use of focused group discusions. Descriptive statistics, chi-square tests and logistic regression were used in the analysis.

**Results:** Tertially/University education was significantly associated with utilization of ANC Services (OR=0.377, p-value=0.012, 0.177-0.806). There was a significant association between. The age between 15-19 years with the utilization of ANC services (OR =2.470, p-value=0.044, 1.024-5.955).

**Conclusions:** There was a significant association between utilization of Antenatal care and receiving support from family members (p-value=0.035). Mothers are likely to utilize ANC services more often if they receive family support. Therefore, family support exerts a positive impact on a pregnant woman's psychological well-being, as well as on the health of her newborn. Sensitizing men about antenatal services and their benefits health-care providers is important.

**Keywords:** Antenatal care, Patient related factors influencing utilization of antenatal care, Utilization of antenatal

#### INTRODUCTION

Antenatal care (ANC) is the continuous care that is accorded to women in the course of pregnancy. Notably, antenatal care is an efficient health intervention aimed at inhibiting maternal mortality and morbidity majorly in areas where women have poor health. The prenatal period

is a vital duration whereby health professionals help to determine any possible health threats during pregnancy. Moreover, obstetricians and midwives offer the pregnant mothers with guidance on proper nutrition, positive approach to birth and family planning. The care conferred to the pregnant women during this period is crucial for the survival and the overall health of both the expectant

mother and the unborn child. Prenatal care increases the likelihood of a skilled being present during delivery.<sup>2</sup>

Prenatal care should begin at the early stages of pregnancy since it ensures that women enjoy access to information pertaining to the availability of screening tests early enough. There has been a proposal that women with a normal pregnancy should visit a health care center for prenatal services not less than four times.<sup>2</sup> The first visit should be scheduled for as early as at 0 to 16 weeks gestation or in the first trimester after missing two periods, the second visit should take place during the 16 to 28 weeks gestation, the third visit should take place between 28 to 36 weeks and finally the fourth one should be scheduled after 36 weeks.<sup>2</sup> Currently, ANC Model recommendation that pregnant women have eight contacts with the health system during each pregnancy. The first contact scheduled to take place in the first trimester (up to 12 weeks of gestation), two contacts scheduled in the second trimester (at 20 and 26 weeks of gestation) and five contacts scheduled in the third trimester (at 30, 34, 36, 38 and 40 weeks). Depending on the country context, the definition of "contact" may include the more familiar model of clinic-based ANC visits, as well as Antenatal care and/or counseling sessions for pregnant women at the household and community levels.3 The processes of pregnancy and childbirth are meant to take place naturally. Nevertheless, a significant number of women are vulnerable to pregnancy and childbirth difficulties at instances when the mother does not use ANC services. Globally, nearly 600,000 women die from difficulties attributed to pregnancy annually. Over 90% of those deaths are experienced in Asia and Sub-Saharan Africa regions.4 The major cause of this high Maternal Mortality Rate (MMR) in Africa is due to insufficient use of antenatal services.<sup>5</sup> The problem of insufficient use of ANC services arises since pregnant mothers travel long distance to access this services and bad terrains. In addition, others are faced with poor health management system where access to ANC is affected by health care provider's continued industrial strikes. Thus the responsiveness and perceptions about prenatal care concerning maternal health care service can significantly impact the survival and general health of the mother and child.6

#### **METHODS**

The study used the design of a descriptive cross-sectional study and was comprised of both quantitative and qualitative techniques of data collection. The study was carried out in Saku Sub County in the following randomly selected health facilities: Marsabit County Referral Hospital, Dakabaricha Dispensary and Jirime Dispensary. The study population comprised of post-natal mothers aged between 15-49 years seeking services at maternal and child health clinic (MCH) in Saku Sub County. The Cochran's Sample Size Formula (Cochran, W.G 1963)was used to calculate a sample size of 154

respondents. Simple random sampling method was used to recruit respondents in the study.

#### Inclusion criteria

The inclusion criteria of the study was post-natal mothers attending MCH services at Saku Sub county and post-natal mothers who consented to the study.

#### Exclusion criteria

Exclusion criteria of the study was post-natal mothers who were very sick or mentally incapable and those who did not consent for the study.

Research administered questionnaire was used to collect quantitative data. Focus Group Discussions guide was used to collect qualitative data from 3 focus discussion groups consisting of each with a minimum of eight and maximum of 12 participants with homogeneous characteristics.

The study period was from January 2019 to April 2019. Data was coded and entered into Statistical Package for Social Sciences (SPSS) version 25. Descriptive statistics, Chi-square test were used in analysis.

#### **RESULTS**

The study comprised a total of 154 post-natal mothers aged between 15-49 years seeking services at maternal and child health clinic (MCH) in Saku Sub County. This represents a 100% response rate. Majority of the respondents 62% (n=96) were Muslim while 38% (n=58) were Christians.

Table 1: Social demographic characteristics of the respondents.

Variable	Frequency n=154	Percentage (%)			
Religion					
Christians	58	38			
Muslims	96	62			
Age (in years)					
15-19	31	20.1			
20-24	64	41.6			
25-29	36	23.4			
30-34	19	12.3			
35-39	3	1.9			
40-44	1	0.6			
Level of educat	Level of education				
Primary	73	47.4			
Secondary	25	16.2			
Post-	3	1.9			
secondary		1.9			
University	6	3.9			
None	46	29.9			
Not applicable	1	0.6			

Table 2: Source of information on antenatal care (n=154).

Response	Frequency	Percentage
Television	6	3.9
Radio	10	6.5
Health worker	35	22.7
Chief	1	0.6
Neighbours	82	53.2
School	20	13.0
Total	154	100.00

Table 3: The person making decision on whether to attend antenatal care.

Response	Frequency	Percentage
Family Members		·
Participant	146	94.8
Father to child	1	0.6
Mother	2	1.3
Mother in law	1	0.6
Husband	4	2.6
Total	154	100

Majority of the respondents 41.6% (n=64) were between the age of 20-24 years while only one respondent (0.6%) was within the age of 40-44 years. About education, most 47.4% (n=73) of the respondents had primary education where minority 1.9 (n=3) had post-secondary education (Table 1).

## Patient related factors that influence utilization of antenatal care services

Respondents in the study were asked to name their source of information on Antenatal care. Slightly more than half of the respondents 53.2% (n=83) had acquired information on the antenatal care from neighbors while less than one percent (0.65) from the chief as indicated in Table 2.

On decision making on antenatal clinic attendance, majority 95% (n=146) of the mothers were decision makers on whether to attend or not to attend antenatal clinic. Respondents in the study were asked if there was support groups/organization that helped in seeking antenatal care services, as indicated in Table 4, majority of the respondents 97.4% (n=150) did not receive any support from group/organization to seek for antenatal care services. Respondents in the study were asked if they completed taking folic acid supplements, nearly one third of the respondents 27.3% (n=42) had completed taking the folic acid supplement that were administered during antenatal care as illustrated in the Table 5.

Table 4: Support groups/organization helped in seeking antenatal care services.

Response	Frequency	Percentage
Received support	4	2.59
Did not receive supprt	150	97.4
Total	154	100

Table 5: Completion of folic acid administered during antenatal care.

Response	Frequency	Percentage
Completed	42	27.3
Did not complete	112	72.7
Total	154	100

Table 6: Respondents monthly income (n=154).

Income	Frequency	Percentage		
Below 3000	4	2.6		
3000-5000	21	13.6		
5000-10000	58	37.7		
1000-20000	39	25.1		
Over 20000	32	20.8		
Total	154	100		

Table 7: Level of education of the respondent and its association with the utilization of antenatal care.

Variable	Low	High	Total	OR	95% CI	P value
Level of education of the respondents	27	46	73	-	0.021-095	0.058
Primary level	9	16	25	1.043	0.406-2.684	0.930
Secondary level	2	1	3	0.293	0.025-3.391	0.326
Post-secondary	2	4	7	1.174	0.201-6.841	0.858
Tertially /university	29	18	45	0.377	0.177-0.806	0.012
None	69	85	154	0.000	0.000-	1.000

Respondents in the study were asked about their family monthly income and majority of the respondents 37.7% (n=58) had an income between five thousand and ten

thousand. There was a significant association between utilization of antenatal care services and level of education of the respondents (p.value=0.058). Those

mothers who received high education level had high level of ANC utilization (Table 7). Moreover, the attainment of Tertially/University education was significantly associated with utilization of ANC Services (OR=0.377, p-value=0.012, 0.177-0.806). The odds ratio shows that University education was 0.623 times less more likely to influence utilization of ANC services.

#### **DISCUSSION**

The study sought to assess the patient related factors that influence utilization of antenatal care at Saku sub-county, Kenya. According to the findings more than half of the respondents (53.2%) had acquired information on the antenatal care from neighbors while less than one percent (0.65) from the chief. This finding agrees with the study done in Boricha District, Southern Ethiopia where only (7.8%) received Antenatal care information from radio and 1% form TV.7 This might be due to lack of media's access to people living in rural area. This could be attributed to the use of local language by radio and television thus making them not to understand message that is transmitted. Also this finding is in agreement with study done in Boricha District, Southern Ethiopia where the basic source of information for Antenatal care utilization in this study area were relatives and/or friends, health care workers and health extension workers, which accounts 47%, 35.5% and 84%, respectively.8

There was a significant association between utilization of antenatal care and receiving support from family members (p-value=0.035). Those who received support from family members utilized antenatal care services more. This finding concur with study done in Southeastern Tanzania where the researchers established that women who had no support from their spouses or partners utilized antenatal care services almost three weeks later than those who were given support.9Similarly, the utilization of antenatal care was almost nine times more likely for women whose husbands approved antenatal care visits than women whose husbands did not approve Antenatal care service (OR=8.99).<sup>10</sup>

Majority (95%) of the mothers were decision maker on whether to attend or not to attend Antenatal care. This finding was not tandem with Thaddeus and Maine study where he found that women had low value in society limiting their autonomy in decision making thus limiting Antenatal care Utilization.<sup>11</sup> Findings of another study suggests that decision-making regarding access to and use of skilled maternal healthcare services is strongly influenced by the values and opinions of husbands, mothers-in-law, traditional birth attendants and other family and community members, more than those of individual childbearing women.<sup>12</sup>

Slightly higher than two fifth of the respondents (81.4%) were not accompanied by their husband during Antenatal health care. This finding is not in tandem with study done in Northern Uganda where (81.5%) of husbands

supported and escorted pregnant mothers to visit Antenatal care clinic.<sup>13</sup> Certain women too, do not like to be seen with their male partner attending the Antenatal care service. Of important is male participation increases spousal communication about sexual risk and behavior change.<sup>14</sup> Thus, time in income generating activities, distance, the cost of transport, clinic operation hours was perceived as a barrier to men participation in Antenatal care program.<sup>15</sup>

Majority of the respondents (37.7%) had an income between five thousand and ten thousand which was not significantly associated with antenatal care utilization. This finding is not in agreement with studies done which established a positive association between socioeconomic status and the utilization of antenatal care. <sup>16</sup> Financial difficulties have been considered as an important barrier to antenatal care for migrant women. <sup>17</sup> A study from Ethiopia identified that when women have higher incomes they tend to start antenatal care early and the likelihood of utilizing antenatal care decreased, as the family income gets lower. <sup>18</sup>

#### Limitations

The study was limited to Post-natal mothers attending MCH services at Saku Sub county. To mitigate this, the researcher used a large sample size to enhance generalizability of findings.

#### **CONCLUSION**

There was a significant association between utilization of Antenatal care and receiving support from family members (p-value=0.035). Mothers are likely to utilize Antenatal care services more often if they receive family support. Therefore, family support exerts a positive impact on a pregnant woman's psychological well-being, as well as on the health of her newborn.

Sensitizing men about antenatal services and their benefits health-care providers is important. Completing of folic acids and ferrous sulphate was a significant association between utilization of antenatal care. Deficiencies in iron and folic acid during pregnancy can potentially negatively impact on the health of the mother as well as fetal development.

#### **ACKNOWLEDGEMENTS**

The authors would like to appreciate the respondents who voluntarily accepted to take part in this study and for their vital information. The authors are also grateful to the administration of the selected hospitals for granting authority to collect data in their facilities.

Funding: No funding sources Conflict of interest: None declared

Ethical approval: The study was approved by the

Institutional Ethics Committee

#### **REFERENCES**

- 1. Zahr A, Wardlaw D. Based on World Bank analysis of DHS surveys in 41 developing countries.
- African Institute for Development Policy (AFIDEP). (2016). Adolescent sexual and Reproductive health in Kilifi County: Fact Sheet. Ministry of Health, Print.
- 3. Alexandre PK, Jean SG, Crandall L, Fevrin E. Prenatal care utilization in rural areas and urban areas of haiti. Rev Panam Salud Publica. 2005;18(2):84-92.
- 4. Bilenko N, Hammel R, Belmaker I. Utilization of antenatal care services by a semi-nomadic Bedouin Arab population: evaluation of the impact of a local maternal and child health clinic. Matern Child Health J. 2007;11(5):425-30.
- Bosch GB, Nsowah NN, Boom GJ. Determinants of antenatal care use in Ghana. Oxford J African Economies. 2002;13(2):277-301.
- 6. Carroli G, Villar J, Piaggio G, Neelofur DK. WHO review of randomised controlled trials of routine antenatal care. Lancet. 2001;357:1565-70.
- 7. Catling CJ, Medley N, Foureur M, Ryan C, Leap N, Teate A, et al. Group versus conventional antenatal care for women. Cochrane Database Syst Rev. 2015;2015(2).
- Chakrabarti A, Chaudhuri K. Antenatal and maternal health care utilization: evidence from Northeastern States of India. Appl Econ. 2007;39(4-6):683-95.
- 9. Cochran, W. G. 1963. Sampling Techniques, 2<sup>nd</sup> edition. New York: John Wiley and Sons, Inc. 1965;7(3).
- Delva W, Yard E, Luchters S, Chersich MF, Muigai E, Oyier V. A safe motherhood project in Kenya: assessment of antenatal attendance, service provision and implications for PMTCT. Trop Med Int Health. 2010;15(5):584-91.
- 11. Gertler P, Rahman O, Feifer C, Ashley D. Determinants of pregnancy outcomes and targeting of maternal health services in Jamaica. Soc Sci Med. 1993;37:199-211.
- 12. Griffiths P, Stephenson R. Understanding users perspectives of barriers to maternal health care use in Maharashtra, India. Jour Biosoc Sci. 2001;33:339-59.

- 13. Matsuoka S, Aiga H, Rasmey LC. Perceived barriers to utilization of maternal health services in rural Cambodia. Health Policy. 2010;95:255-63.
- 14. Matua AG. Determinants of maternal choices for place of delivery in Ayivu country, Uganda. African Journal of Nursing and Midwifery. 2004;6(1):33-8.
- 15. Overbosch GB, Nuamah NNN, Boom GJM, Damnyag L. Determinants of antenatal care use in Ghana. J Afr Econ. 2004;13(2):277-301.
- 16. Rosalia AM, Muhammad JJ. Knowledge, attitude and practices on antenatal care among orangasli women in Repel, Nigeria Sembelian, Malaysian. J Public Health Med. 2011;11(2):13-21.
- 17. Simkhada B, Teijlingen ER, Porter M. Factors affecting the utilization of antenatal care in developing countries: systematic review of the literature. J Adv Nurs. 2008;61(3):244-60.
- WHO (2003). Adolescent health and development in the Africa region: WHO Regional Office for Africa, Brazzaville. Available at Adolescent health and development in the Africa region: WHO Regional Office for Africa, Brazzaville. Accessed on 10 July 2020.
- WHO, (2006) Provision of Focused Antenatal Care for Pregnant Women, Geneva. Available at WHO, (2006) Provision of Focused Antenatal Care for Pregnant Women, Geneva. Accessed on 10 July 2020.
- Wildman K, Blondel B, Nijhuis J, Defoort P, Bakoula C. European indicators of health care during pregnancy, delivery and the postpartum period. European J Obst Gynecol Reproductive Biol. 2003;111(1):53-65.
- 21. World Health Organization (2005) World Health Report. Make every mother and child count, WHO Geneva, Swizland. Available at World Health Organization (2005) World Health Report. Make every mother and child count, WHO Geneva, Swizland. Accessed on 10 July 2020.

Cite this article as: Murithi D, Oluchina S, Kariuki D. Patient related factors that influence utilization of Antenatal care at Saku sub-county, Kenya. Int J Community Med Public Health 2021;8:85-9.