



INFLUENCE OF WOMEN'S EDUCATION STATUS ON UPTAKE OF ANTENATAL CARE SERVICES AMONG YOUTH AGED 15-24 YEARS IN KIBRA CONSTITUENCY NAIROBI COUNTY, KENYA

Owelle, E. A., & Sakwa, M.

INFLUENCE OF WOMEN’S EDUCATION STATUS ON UPTAKE OF ANTENATAL CARE SERVICES AMONG YOUTH AGED 15-24 YEARS IN KIBRA CONSTITUENCY NAIROBI COUNTY, KENYA

¹Owelle, E. A., & ²Sakwa, M.

¹Master of Science Candidate (Development Studies), Jomo Kenyatta University of Agriculture & Technology [JKUAT], Kenya

²Professor, Jomo Kenyatta University of Agriculture & Technology [JKUAT], Kenya

Accepted: March 12, 2022

ABSTRACT

The study investigated influence of women’s education status on uptake of Antenatal care services among youth aged 15-24 years in Kibra Constituency Nairobi County, Kenya. The study adopted a descriptive research design to answer the research question. The sample size for the study was 326 respondents which was derived from a target population of 1756 pregnant youth aged 15-24 years residing in Kibra Constituency Nairobi County, Kenya. The study used quantitative research through the use of questionnaires to collect data. Data was cleaned through checking for inconsistencies, missing data, duplicate respondents and errors. The data was analyzed using STATA to check for frequency distributions, summary statistics, and percentages. The study concluded that majority of Kibra residents between 15-24 years had secondary level education. Enhancement of maternal education targeting women in the reproductive age was recommended in this study.

Key Words: Youth’s Education, Parenting, Kibra Constituency

CITATION: Owelle, E. A., & Sakwa, M. (2022). Influence of women’s education status on uptake of Antenatal care services among youth aged 15-24 years in Kibra Constituency, Nairobi, Kenya. *The Strategic Journal of Business & Change Management*, 9 (1), 871 – 883.

INTRODUCTION

Maternal health is the health of women during pregnancy, childbirth and the postpartum period (WHO, 2016). It is one of the global challenges that affect millions of women of reproductive age. According to UNICEF, maternal mortality refers to deaths due to complications from pregnancy or childbirth. Hoj et al defines it as death of either a pregnant woman or death of a woman within 42 days of delivery, miscarriage, termination or ectopic pregnancy providing the death is associated with pregnancy or its treatment. (Hoj L et al, 2003). According to WHO, there was an estimated 289,000 maternal deaths globally in 2013 with sub-Saharan Africa accounting for 62% of these deaths. According to UNICEF, Sub-Saharan Africa (SSA) compared to other continents has the highest maternal mortality rate (MMR) at 546 per 100,000 live births compared to the global average of 216 maternal deaths per 100,000 live births. The Kenya Demographic and Health Survey (2014) shows that the maternal mortality in the period 2007-2014 is 362 deaths per 100,000 live births, with a confidence interval of 254-471. Kenya did not achieve the fifth millennium development target of reducing maternal deaths by three-quarters i.e to 147 per 100000 live births and reducing under-5 deaths by two-thirds i.e to 33 per 1000 live births. (KNBS, 2015).

Majority of women in Kenya almost millions encounter serious health problems which are related to their pregnancies. Bearing a child is in most cases associated with serious complications that may lead to an increase morbidities, mortalities and disabilities rates. World Health Organization (WHO, 2016) estimates that more than half a million women lose their lives in the process of reproduction worldwide every year, with approximately 99% of these cases have been in developing countries. Out of these, Sub-Saharan Africa total death cases is more than 50% and risk pregnancy related death cases is extremely high. In other words, for every 26 mothers in Sub-Saharan Africa, one dies as the result of pregnancy and

childbirth complications. In comparison to deaths in developed countries where 1 mother dies for every 7300 mothers this is almost 281 times more. According to WHO (2001), for every one maternal death an estimated 30 – 50 pregnant women suffer pregnancy related health problems such as, infertility, vesicovaginal fistulae and depression.

There has been a variety of factors that have resulted to challenges in the utilization of maternal health care services among the youth. Understanding socio-demographic factors that influence utilization of antenatal care services is important in providing insights that will help in designing interventions that will improve utilization of Antenatal services. Several past studies that have been conducted have shown that socio-demographic factors affect the utilisation of maternal health care services (Celic & Hotchkiss 2000; Mekonnen & Mekonnen 2003; Woldemicael & Tenkorang 2009).

There have been several efforts by the Kenyan government in ensuring there is a reduction in maternal mortality in Kenya. Several interventions have been put in place to reduce maternal and infant mortality in Kenya. World Bank estimates that 74% of maternal deaths can be prevented if all pregnant women had access to specific interventions that address pregnancy complications and childbirth, especially during emergency obstetric care. Increasing number of women seeking maternal health services during childbirth and after child birth in health facilities is therefore important to ensure that quality of care provided is optimal. It is therefore vital to understand socio demographic factors that hinder utilization of maternal and child health services in Kenya. This will help in ensuring that effective interventions are designed with the aim of improving maternal health services among the youth.

Problem Statement

According to KDHS (2014), antenatal care coverage is higher in urban areas than in rural areas, among women with at least some primary education and

among 5 women in the higher wealth quintiles. Further, the majority of deliveries that occurred in the public health facilities took place in hospitals with only 41.7% occurring in dispensaries and health centres.

The 2009 National Reproductive Health Strategy for Kenya aims to reduce maternal mortality ratio to 147 deaths per 100,000 live births and to increase percentage of women using skilled care in delivery to 90 percent by 2015. However, this target is yet to be achieved when compared to the 2008 KDHS maternal mortality rate of 488 deaths per 100,000 live births.

The particular concern in the delivery care component of maternal health care in Kenya arises from a number of factors. First, despite almost universal professional antenatal care in Kenya, less than half of all deliveries in the country take place in a health facility (NCPD, CBS & MI, 1999). Secondly, KDHS data sets show that the significant improvement in antenatal care attendance over the years has not been matched with similar improvements in delivery care. The differences in utilization of antenatal and delivery services is probably as a result of accessibility of services, in combination with a range of cultural issues which influence acceptability of specific services. Service access relating to affordability is perhaps of greatest relevance to the slum communities. The introduction of cost-sharing for specific health services (excluding promotive and preventive services such as antenatal care) by the government of Kenya since 1989 is a clear deterrent for poor women seeking delivery care.

This study therefore explored the influence of women's education status on uptake of Antenatal care services among youth aged 15-24 years in Kibra Constituency, Nairobi using primary data collection. This study also did a comparison of uptake of ANC services among youth aged 15-24 years.

Objective of the Study

The main objective of this study was to determine the influence of women's education status on uptake of Antenatal care services among youth aged 15-24 years in Kibra Constituency, Nairobi, Kenya. This study answered the following research question;

- Does education level of the youth in Kibra affect their uptake of antenatal care services?

LITERATURE REVIEW

Theoretical framework

Capability approach

One of the distinguishing features of the human development and capability approach is its focus on the process of generating health. This stands in contrast to conventional approaches, which are mainly concerned with outputs we can measure and the commodities/resource inputs needed to achieve these outputs. Moreover, the capability approach recognizes that different people may have different values in terms of health and often weigh these against other dimensions in life. In acknowledging human diversity and agency, the capability approach suggests that people may require different kinds of resources to achieve the outcomes they value and have reason to value (i.e. functioning). It suggests that there are numerous factors influencing how different individuals convert resource inputs into valued functioning. These 'conversion factors' occur at the individual, social, institutional (formal or informal) and environmental level. Individual factors that determine how a given resource will be used include, for example, age, gender, metabolic rate, pregnancy, illness and knowledge.

The factors that can contribute to health achievements and failures go well beyond health care, and include many influences of very different kinds, varying from (genetic) propensities, individual incomes, food habits and lifestyles, on the one hand, to the epidemiological environment and work conditions. We have to go well beyond the delivery and distribution of health care to get an

adequate understanding of health achievement and capability. Before examining conversion factors in greater detail, let us consider what resource inputs are to be converted. Conventionally, the choice of inputs is determined by identified outputs. Children of educated mothers fare better in terms of health than those whose mothers have less education. For example, evidence from El Salvador indicates that, if mothers have no education, their babies have a one in ten chance of dying in the first year of their life. The infant death rate falls to a quarter of that if mothers have at least secondary education (World Bank, 2006).

A critique of this theory is that it has not being widely used to inform policies despite widely documented indices such as Human Development Index (HDI) and Multidimensional that have been informed by capability approach. These are focused mainly on international comparisons; with less known on its purpose or objectives across other fields and sectors. Given the underspecified nature of the capability approach (Gasper 2007), it would be informative to know how its objectives are interpreted for particular policy areas across different fields/sectors.

Capability approach has been used in this study to explore the implications of women’s social embeddedness on their well-being. Although the potential of women as contributors to development has subsequently been discovered with great enthusiasm by anti-poverty and efficiency approaches, the tendency has been to utilise women as a development resource, seeing them as objects of investment rather than recognising them as development subjects. Planners have continued to instrumentalise women in their mothering role, constructing women as “objects of reproduction” that require discipline as well as support in order to nurture children into productive citizen

Conceptual Framework

A conceptual framework is a network of associations between variables. It demonstrates the relationship between the independent and the dependent variables. The study employed a framework for analysing the impact of level of education on uptake of Antenatal care services among youth aged 15-24 years in Kibra Constituency, Nairobi, Kenya.

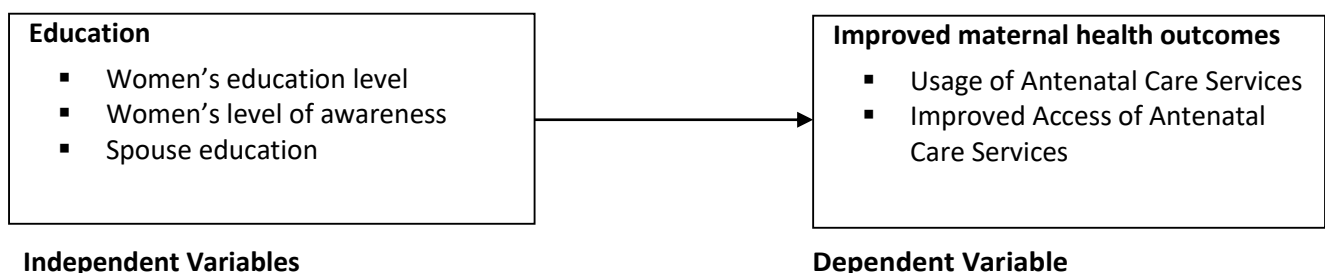


Figure 1: Conceptual Framework

Empirical Review

Antenatal cares services are very important in identifying and mitigating risk complications in pregnancy among mothers. Many mothers in developing countries do not receive these services during pregnancy. According to Abou-Zahr & Wardlaw (2003); Carroli, Rooney, & Villar, (2001), antenatal care is mostly important and more apparent for Sub-Saharan Africa since the region is

characterized by high maternal mortality and morbidity rates. Failure to receiving appropriate antenatal care services during pregnancy can lead to undesirable pregnancy outcomes such as maternal morbidity, low birth weight or even maternal and perinatal mortality. (Magadi et al, 2000). Antenatal care is useful in preventing life threatening obstetric complications in mothers during pregnancy. During antenatal period, women

and families are informed about any danger signs and symptoms that they may experience during delivery hence they are able to receive care from a skilled professional to prevent this occurrence.

Globally, according to World Health Organization an estimated 515,000 women die each year from pregnancy related causes with majority of these deaths occurring in developing countries, less than 1% of these deaths occur in developed countries which indicate that the deaths could be avoided if resources and services were available (WHO, 1994). An analysis of trends and differentials in antenatal care in developing countries, Abou-Zaht and Watdlaw (2003) found that women were, more likely to present themselves for antenatal care during the first trimester, with sub-Saharan Africa being an exception. They found that most women were more likely to wait until the second trimester to go for ANC services and a substantial proportion went in the third trimester.

In Kenya, the government has been promoting an integrated MCH/FP programme with the twin objective of enhancing the welfare of both mothers and children and reducing fertility thus checking rapid population growth (Ikamari, 2004). Focused Antenatal care as recommended by World Health Organization (WHO) recommends that a pregnant woman should have four comprehensive, personalized ANC visits that include a package of quality services 12 specifically tailored to the timing of each visit (MOH 2002; MOH-DOH/DOMC/JHPIEGO 2002). Understanding existing and past studies that have been conducted in looking at socio demographic factors that prevent utilization of Antenatal Care services is important to address utilization of these services.

Banke et al (2017), used Kenyan Demographic Health Survey 2014 to analyze the utilization of maternal health services by Kenyan adolescent mothers. They analyzed all the three maternal health services (MHSs) (antenatal care (ANC), skilled birth attendance (SBA) and postnatal care (PNC) of adolescent mothers aged 15-19 years. The study found that mother's education level was one of the

significant predictors for both ANC and SBA utilization among religion, ethnicity, and place of residence, wealth quintile, mass media exposure, and geographical region.

Another study was conducted by Banke et al (2016) to better understand the characteristics of adolescent mothers in Kenya and factors affecting their utilization of maternal health services. The study used Demographic Health Survey 2009 to perform both bivariate and multivariate analyses test statistical associations between selected predictor variables and MHS utilization. The study found that mothers with primary education were four (CI=1.68-9.64, $p < 0.001$) and two (CI=0.97-4.81, $p = 0.043$) times more likely to receive ANC and SBA, respectively, as compared to uneducated mothers.

Emelumaduet *al* (2014). analyzed the pattern of maternal health (MH) services utilization and the socio-demographic factors influencing it in Anambra State, South East Nigeria. They sampled 310 women of reproductive who attended antenatal care (ANC) services in selected Primary Health Centers in Anambra State between 2007 and 2008. They explored the association between socio-demographic characteristics and pattern of utilization of ANC and delivery services using χ^2 -test. In addition, they performed regression analysis to identify factors associated with utilization of MH services. The study found that odds ratio for educational status of mothers to be statistically significant ($P < 0.001$). Women with higher educational status were more likely to have utilized hospitals for ANC services rather than not utilizing or utilization of informal health facility.

Education status was also found to significantly impact on the utilization of the ANC in a study conducted in Holeta town, central Ethiopia (Birmeta, Dibaba, & Woldeyohannes, 2013). The study found that women with little education were more than twice more likely to attend ANC (OR=2.645) as compared with those who had no education. The study also found that women with education were more than three times likely to give

birth at health institutions than uneducated women (OR= 3.861).

Tarekegn, Lieberman, & Giedraitis, (2014) used 2011 Ethiopian Demographic and Health Survey to establish determinants of maternal health utilization service in Ethiopia. They used three dependent variables; ANC, skilled delivery attendants and postnatal care (PNC services). On the other hand, the study adopted socio-cultural, perceived needs and accessibility related factors as independent variables. They found that women who completed higher education were more likely to use ANC (AOR = 3.8, 95% CI = 1.8-7.8).

Various studies that have conducted in Kenya have shown that low education level and low socio-economic status can lead to failure or late attendance in Antenatal Care services (Erci, 2003; van Eijk et al., 2006; Quelopana, 2009; Sunil, 2010; Sein, 2011). Maternal education is an important mediator in ensuring women adopt to maternal health care services (Addai, 2000; Addai, 2008; Leslie and Gupta, 2009). Women with higher educational attainment are more likely to seek antenatal care which is referred to as adequate. Education help women realize the importance of seeking antenatal care services for their sake and their unborn babies. Education also gives them vital information on signs to watch out for as well as the diet to observe in order to have successful births leading to higher survival chances for their infants. Evidence also suggests that well educated women are more responsive to new health-enhancing ideas and this strengthens the demand side of health (Ensor & Cooper, 2004). Their education status increases their capacity to recognize illness symptoms and the desire to seek appropriate health care, and a certain quality of health is demanded, although this may be determined by availability of health services.

According to (Aiga H et al, 2015) pregnant women's knowledge on the need for ANC visit increases healthcare uptake, resulting in improved birth outcomes. A study conducted in Malawi found that some women delayed their first Antenatal Care visit

due to limited knowledge of their reproductive cycle. This results to women realizing that they are pregnant in the third or fourth month and missing their Antenatal Care Visits (Kennedy M and Martin P, 2018).

Women with higher level of education tend to have a greater awareness of the existence of ANC services and the advantages of using such services (Efendi F et al, 2016). It is argued that educated women are more aware of their health problems, they know more about the availability of health care services, and utilize information more effectively than non-educated women. (Onasoga OA et al, 2012). Various studies that have been conducted have shown that women with lower education have less knowledge about ANC services and face more difficulties to get access to ANC services. (Tran TK, Gottvall K, Nguyen HD, et al, 2012). A study conducted in Ethiopia found that women with little education were more than two times more likely to attend ANC as compared with those who had no education. (Birmeta K et al, 2013) Similarly a study conducted in North Ethiopia, Nigeria and China found similar findings. (Onasoga OA et al, 2013, Zhao QZJH et al, 2012, and Worku AG et al, 2013)

A study conducted in Myanmar found that more husbands' involvement in maternal health care was higher among higher educated husbands compared to less educated husbands. (Akira S et al, 2015) Similarly, a study conducted in Bangladesh found that a husbands' education level was a significant factor for influencing 4 ANC services for their spouse. (Nausadi A et al, 2018). Previous studies that have been conducted have shown an effect on husband's education level on utilization of maternal health care services. A study conducted in India found out that an increase in husbands' education level increased the wives' utilization of antenatal (ANC) care services. (Suresh Jungar and Balram Paswan, 2018)

METHODOLOGY

This study adopted a descriptive survey in order to answer the research question. Descriptive survey involves collecting data that describe events, organizes, tabulates, depicts, and describes the data collected in the study (Glass & Hopkins, 1984). The target population of this study was women aged 15-24 years residing in Kibra. According to KDHS 2014 we had a total of 3511 youths aged 15-24 years in Kibra. 50% of the girls aged 15-24 years were pregnant in Kibra (P Onyango and Tostensen A, 2015) hence our target population in this study was 1756. From the population frame the required number of respondents was randomly selected in order to make the sample of pregnant women targeted. The study employed purposive sampling as a sampling method where we only focused on particular characteristics of a sample of interest. Only pregnant women that were 15-24 years were included in our sample. The study derived the sample of pregnant women from hospitals in Kibra in three of the seven administrative geographical sub-locations of namely: Gatwekera, Makina and Laini-Saba. The three sub-locations were randomly selected from the seven sub-locations in Kibra. This study used structured questionnaires to gather primary data. The data analysis involved both descriptive and causal analysis to answer the research questions. Descriptive analysis summarized data using measures of central tendency such as mean, median, mode, deviance from the mean, variation, percentage, and correlation between variables. It also involved visual presentation of the findings through use of graphs and charts to assist in understanding data distribution and the summary of results.

FINDINGS AND DISCUSSION

Socio-Demographic Factors affecting antenatal service uptake

The study sought to investigate socio demographic factors affecting antenatal care service uptake

focusing on young women aged between 15 and 24 years in Kibera informal settlement in Nairobi, Kenya. Four specific objectives were formulated to accomplish this mission. These included: to establish the extent to which women's education status influences uptake of Antenatal care services, to investigate the impact of gender relations on uptake of Antenatal care services, to assess the influence of employments status on uptake of Antenatal Care services, and to examine the impact of women's ANC experience on the uptake of Antenatal care services among youth aged 15-24 years in Kibera. This section presented findings as per the objectives. Descriptive, correlation and regression results are discussed.

The study began the analysis on the dependent variable by presenting summary statistics on the uptake of ANC services among women in Kibera. The respondents had been asked to give their level of agreement on various statements related to utilization of ANC services on the scale of 1-3 where 3 =Always, 2= Sometimes and 1=Not at all. Table 1 showed the findings.

Findings indicated that most women always visited health centre for ANC service when they confirmed that they were pregnant and when they received information from their service providers on what was going to happen during the ANC visits. These results implied that most women in Kibra begin to seek for ANC services upon their discovery of being pregnant. Nevertheless, fewer women received health talks, attended screening sessions, received immunization and received an ANC card during their first visit to remind them about the next visit. Though previous studies have not explored much in this line of thought, Banke et al (2017) demonstrated that high level of awareness among women in the reproduction age has a greater effect on their utilization of ANC services. It is therefore critical for more talks focusing on women reproduction health to enhance their uptake of conventional ANC services.

Table 1: Summary Statistics on Uptake of Antenatal Care Services (N=318)

Variable	(Not at all)	(Sometimes)	(Always)	Mean	S. D.
I visited the health centre for ANC service when I confirmed I was pregnant	27.67%	28.93%	43.40%	2.16	.83
I Attended screening sessions for abdomen examination and weighing	13.84%	33.33%	52.83%	2.37	.73
I attended screening of blood and urine sessions	7.55%	28.93%	63.52%	2.56	.63
I Receive immunization and routine drugs during antenatal visits	7.86 %	7.36%	64.78%	2.57	.64
I Receive vitamin supplements during ANC visit	11.64%	26.42%	61.95%	2.50	.69
I Receive health talk on nutrition and exclusive breast-feeding during ANC visit	10.38%	33.65%	55.97%	2.45	.68
I receive health talk on personal and environmental hygiene during ANC visit	8.81%	36.16%	55.03%	2.46	.65
I receive information from my provider on what was going to happen during my ANC visits	27.59%	27.59%	44.83%	2.17	.85
I receive information from my provider on when my next ANC visit is	3.74%	12.15%	84.11%	2.80	.48
I received an ANC card during my first visit that reminds me of when my next ANC visit is	6.90%	0.34%	82.76 %	2.76	.58

Key Mean: 1-1.6= Not at all, 1.7-2.3=Sometimes, 2.4-3.0=Always

Source: Author (2020)

With regard to access to ANC services, respondents were asked whether they attended the services regularly. Majority of the women (68%) mentioned that they attend ANC services regularly. This implied that most mothers attended the ANC services on a regular basis. Descriptive statistics for the components indicated means that the women always used ANC services and had access to improved ANC. With enhanced knowledge on reproductive health, many women get ANC services from health facilities. Kennedy and Martin (2018) opine that today's woman is more enlightened on the dangers of not seeking reproductive health services from conventional health facilities. After analysing the dependent variable, the next sub-section focuses on the first independent variable, education status.

Having analysed the dependent variable, the next sub-section analysed the independent variable which was women's education.

Women's education

The analysis begun by presenting descriptive statistics. First, respondents who were married were asked to indicate the level of education of their husbands. Summary findings indicate that majority of the husbands, 61.63% of the interviewed women had completed secondary level education followed by those with primary level certificate as their highest level of education at 22.09%. This implied that most of the spouses of the women incorporated in the study had basic education. It also indicated that majority of Kibera residents have secondary level certificate as their highest qualification.

Next, for women who were pregnant, the study sought to understand how many weeks they were in that position. Summary statistics showed the mean of 11.37 weeks with standard deviation of 7.82 and minimum of 0 weeks, a maximum of 28 weeks. This implied that some of the women

interviewed had just conceived while others were in mid stages of their pregnancy. In addition, majority of the women interviewed were between weeks 0 to 6 pregnant.

On the issue of the number of times the women had attended ANC services, summary findings showed that majority of the women had only attended ANC services three times. This could be attributed to the fact that most of the women interviewed were in their first week of their pregnancy (22.64%).

Next, the researcher wanted to know which week of pregnancy the women first attended their ANC service. Summary statistics results indicated that

simple majority of women attended ANC service between 0-4 weeks, this was followed by those who reported having attended their first ANC service between 20-24 weeks (21.38%).

These findings can be attributed to the low level of women awareness about antenatal services, and also given their low level of education. Finally, the women were asked to indicate the extent of their agreement on various statements related to awareness of women on importance of ANC services. These were rated on a scale of 1-5 where=Strongly Agree (SA), 4=Agree (A), 3=Neutral (N), 2=Disagree (D), 1= Strongly Disagree (SD). Summary results are presented in Table 2.

Table 2: Summary Statistics on Women Awareness about ANC services

Variable	SD	D	N	A	SA	Mean	S. D.
Antenatal check-up is necessary for me during pregnancy	0.00%	0.31%	0.63%	31.76%	7.30%	4.66	.51
I should receive immunization and routine drugs during antenatal visits	0.00%	0.00%	0.63%	39.31%	60.06%	4.594	.50
My blood pressure should be checked regularly during pregnancy	0.31%	0.00%	1.57%	35.22%	62.89%	4.60	.57
Antenatal care enables me to monitor my health and the health of my foetus	0.00%	0.00%	0.63%	38.05%	61.32%	4.61	.50
Iron and folic acid supplementation is good for me and my foetus	0.31%	0.6	3.77%	34.91%	60.38%	4.54	.63
Smoking is not harmful to my foetus	83.96 %	7.23%	0.94%	5.35%	2.52%	1.352	.93

Key: Mean Strongly Disagree=1-1.9, Disagree=2-2.9, Neutral=3, Agree=3.1-3.9, Strongly Agree=4.1-5
Source: Author (2020)

The mean response showed that respondents strongly agreed with the arguments that they should go for antenatal check-up during pregnancy, they should receive immunization and routine drugs during antenatal visit, their blood pressure should be checked regularly during pregnancy, antenatal care enables them to monitor their health and the health of my foetus and iron and folic acid supplementation is good for them and their foetus. Various studies support these findings. For instance, Efendi F et al., (2016) argues that educated women are more aware of their health problems, they

know more about the availability of health care services, and utilize information more effectively than non-educated women. In addition, Onasoga et al., (2012) reports that women with less knowledge about ANC services face more difficulties to get access to ANC services.

Next, the study conducted PCA on the education variables and the total variance. Statistics from implied that one factor was extracted from PCA process (component 1) given its eigenvalue of greater than 1. This factor alone explained 55.05%

of the total variance. According to the rotated component matrix, all the variables, variable are adequately loaded on the component which is associated with women’s awareness on antenatal care.

The mean response of the component showed that women agreed to the argument that they were aware of the ANC services. This is consistent with others authors who find that urban women have a higher level of awareness with regard to their reproductive health (Onasoga et al, 2013, Zhao et

al, 2012). Having presented descriptive and factor analysis, the next sub-section analyses correlation and regression findings on the extent to which women’s education status influences uptake of Antenatal care services among youth aged 15-24 years in Kibra.

Correlation Analysis

Table 3 presented correlation results between awareness and uptake of ANC services among youth aged 15-24 years in Kibra.

Table 3: Correlation between Women’s awareness and Uptake of ANC services

		Uptake of ANC services	Improved access to ANC	Women awareness on ANC services
Uptake of ANC services	Pearson Correlation	1	.482**	.409**
	Sig. (2-tailed)		.000	.000
	N	318	318	318
Improved access to ANC	Pearson Correlation	.482**	1	.289**
	Sig. (2-tailed)	.000		.001
	N	318	318	318
Women awareness on ANC services	Pearson Correlation	.409**	.289**	1
	Sig. (2-tailed)	.000	.001	
	N	318	318	318

Source: Author (2020)

Correlation results indicate existence of a positive correlation between women awareness and the uptake of ANC services. Similarly, women’s awareness is positively correlated with improved access to ANC services in Kibera. Generally, these results indicate that women’s awareness have a positive correlation with uptake of antenatal care services among women aged 15-24 years in Kibera. The next sub-section presents regression findings.

Regression Results

To determine the effect of education on uptake of ANC services, the study regressed use of ANC and improved access to ANC services on women awareness using Ordinary Least Square (OLS) approach. Results are presented in Table 4.

Table 4: OLS Regression

Independent	Model 1				Model 2			
	B	Std. Error	T	Sig.	B	Std. Error	T	Sig.
(Constant)	1.0028	.66424	3.55	0.000	.71965	.432352	1.46	0.147
Women awareness	.3784826	.1341486	2.82	0.005	.2743	.1583	1.73	0.084
Dependent	Uptake of ANC services				Improved access to ANC			
R – squared	0.0525				0.0447			
F(3, 314) =	4.53				3.76			
Prob. > F	0.0020				0.0212			

Source: Author (2020)

From table 4, the study established a positive relationship between women's awareness and uptake of ANC services (.378). In addition, the coefficient is significant at 5% given the p-value of 0.005. Similarly, the coefficient of women awareness and improved access to ANC services is positive and significant at 10%. This means that women awareness about ANC services influences their uptake of improved ANC services. Similar findings have been reported by other studies. For instance, Efendi F et al, (2016) found that women with more awareness about the existence of ANC services and the advantages of using such services have more uptake of ANC services. In addition, Onasoga et al, (2012) demonstrates that women awareness on the availability of health care services enhances utilization.

Generally, these results implied that women who are more enlightened have a higher probability of utilizing ANC services in health facilities. In addition, women awareness about ANC services influences the use of such services. The results are consistent with various previous studies. For instance, Banke et al (2016)'s study observed that mothers with primary level of education were more likely to utilize ANC services than those with informal education. Similarly, Emelumaduet *al* (2014) reported odds ratio for educational status of mothers to be statistically significant as opposed to those of uneducated.

CONCLUSION AND RECOMMENDATION

The aim of the study was to determine the influence of women's education status on uptake of Antenatal care services among youth aged 15-24 years in Kibra Constituency, Nairobi, Kenya. Descriptive statistics showed that the highest level of education attained by women was secondary level. A similar situation was observed for husbands for the women who were married. In addition, most women agreed to the arguments that they were

REFERENCES

Addai, I. (2000). Determinants of use of maternal-child health services in rural Ghana. *Journal of Biosocial Science* 32(1):1-15

satisfied with services they receive as well as quality of care.

Concerning inferential analysis, the study has established a positive and statistically significant correlation between education awareness and uptake of ANC services. Similarly, the ordinary least square method showed that awareness among women has a positive influence on the uptake of ANC services in Kibra. This implied that women who are enlightened and educated have higher probability of attending ANC services than those who are not. People who are educated have the ability to evaluate issues and come up with the right decisions. For instance, well-educated can understand the risk factors of not attending ANC services and hence, make correct decisions.

From the findings it was concluded that women awareness on maternal issues is a very important determinant of uptake of antenatal care services. In addition, it can be concluded that majority of Kibra residents between 15-24 years have secondary level education.

From the findings and conclusions of the study, it was recommended that enhancement of maternal education targeting women in the reproductive age. This would go a long way in improving the health of the mother and the child and hence, reduced infant and maternal mortality.

Recommendations for Further Studies

The study recommended another research on various strategies that can be employed to create awareness among women to increase uptake of ANC services. Secondly, a comparative study in rural areas to compare findings of these results. Thirdly, the study should also interrogate why men do not accompany their spouses to ANC clinics. In addition, the study should delve deep into the reasons why women's previous experiences have no statistical significance to the uptake of ANC services.

- Addai I. (2008). Demographic and sociocultural factors influencing use of maternal health services in Ghana. *African Journal of Reproductive Health* 2(1):73-80.
- Banke-Thomas, A., Banke-Thomas, O., Kivuvani, M., & Ameh, C. A. (2017). Maternal health services utilisation by Kenyan adolescent mothers: Analysis of the Demographic Health Survey 2014. *Sexual & Reproductive Healthcare: Official Journal of the Swedish Association of Midwives*, 12, 37–46. <https://doi.org/10.1016/j.srhc.2017.02.004>
- Banke-Thomas, O., Banke-Thomas, A., & Ameh, C. A. (2016). Utilisation of maternal health services by adolescent mothers in Kenya: analysis of the demographic health survey 2008-2009. *International Journal of Adolescent Medicine and Health*, 30(2). <https://doi.org/10.1515/ijamh-2016-0042>
- Birmeta, K., Dibaba, Y., & Woldeyohannes, D. (2013). Determinants of maternal health care utilization in Holeta town, central Ethiopia. *BMC Health Services Research*, 13(1), 256. <https://doi.org/10.1186/1472-6963-13-256>
- Byamugisha, R., Tumwine, J.K., Semiyaga, N., et al. Determinants of male involvement in the prevention of mother-to-child transmission of HIV programme in Eastern Uganda: a cross-sectional survey. (2010) *Reprod Health* 7: 12.
- Chattopadhyay A. Men in maternal care: evidence from India. *J Biosoc Sci.* 2012;44:129e153. doi: 10.1017/S0021932011000502.
- Cohen, S.I. Partnering: A new approach to sexual and reproductive health. (2000) 3: 196.
- Erci B.(2003).Barriers to utilization of prenatal care services in Turkey. *Journal of Nursing Scholarship*, 35(3): 269-73.
- Emelumadu, O., Ukegbu, A., Ezeama, N., Kanu, O., Ifeadike, C., & Onyeonoro, U. (2014). Socio-demographic determinants of maternal health-care service utilization among rural women in anambra state, South East Nigeria. *Annals of medical and health sciences research*, 4(3), 374-82.
- Fawole, O. I., & Adeoye, I. A. (2015). Women's status within the household as a determinant of maternal health care use in Nigeria. *African Health Sciences*, 15(1), 217–225. <https://doi.org/10.4314/ahs.v15i1.28>
- Hoj L, da Silva D, Hedegaard K, Sandstrom A, Aaby P. Maternal mortality: only 42 days?BJOG: An International Journal of Obstetrics and Gynaecology 110(11): 995–1000. 2003.
- Lesko, N. (2014). Keywords in Youth Studies. *Keywords in Youth Studies*. <https://doi.org/10.4324/9780203805909>
- Leslie, J., and G.R. Gupta. (2009). Utilization of formal services for maternal nutrition and health care. Washington, D.C.: *International Center for Research on Women*.
- Magadi, M. A., Agwanda, A. O., & Obare, F. O. (2007). A comparative analysis of the use of maternal health services between teenagers and older mothers in sub-Saharan Africa: Evidence from Demographic and Health Surveys (DHS). *Social Science and Medicine*, 64(6), 1311–1325. <https://doi.org/10.1016/j.socscimed.2006.11.004>
- Men's role in emergency obstetric care in Osun State of Nigeria. *Odimegwu C, Adewuyi A, Odebiyi T, Aina B Adesina Y, Olatubara O, Eniola Afr J Reprod Health. 2005 Dec; 9(3):59-*

- Mohlala, B.K., Gregson, S., Boily, M.C. Barriers to involvement of men in ANC and VCT in Khayelitsha, South Africa (2012) *AIDS Care* 24(8): 972–977.
- Nzioki, J. M., Onyango, R. O., & Ombaka, J. H. (2015). Socio-Demographic Factors Influencing Maternal and Child Health Service Utilization in Mwingi; A Rural Semi-Arid District in Kenya. *American Journal of Public Health Research*, 3(1), 21–30. <https://doi.org/10.12691/ajphr-3-1-4>
- Nugent, R. (2006). Youth in a global world. Population Reference Bureau: Washington DC, USA of Farmer Field Schools on Agricultural Productivity and Poverty in Uganda” IFPRI Discussion Paper 00992
- Ouma P. O., van Eijk A. M., Hamel M. J., Sikuku E. S., Odhiambo F. O., Munguti K. M., (2010). Antenatal and delivery care in rural western Kenya: the effect of training health care workers to provide "focused antenatal care". *Reproductive Health*. 29; 7(1):1.
- Quelopana A. M., Champion J. D., Salazar B. C.(2009). Factors predicting the initiation of prenatal care in Mexican women. *Midwifery*, 25(3):277-85. Epub 2007 Oct 24.
- Rai, R. K., Singh, P. K., Kumar, C., & Singh, L. (2013). Factors Associated With the Utilization of Maternal Health Care Services Among Adolescent Women in Malawi. *Home Health Care Services Quarterly*, 32(2), 106–125. <https://doi.org/10.1080/01621424.2013.779354>
- Rai, R. K., Singh, P. K., Singh, L., & Kumar, C. (2014). Individual Characteristics and Use of Maternal and Child Health Services by Adolescent Mothers in Niger. *Maternal and Child Health Journal*, 18(3), 592–603. <https://doi.org/10.1007/s10995-013-1276-z>
- Sein K. K. (2011). Maternal Health Care Utilization Among Ever Married Youths in Kyimyindaing Township, Myanmar. *Maternal Child Health J*, [Epub ahead of print]
- Tarekegn, S. M., Lieberman, L. S., & Giedraitis, V. (2014). Determinants of maternal health service utilization in Ethiopia: analysis of the 2011 Ethiopian Demographic and Health Survey. *BMC Pregnancy and Childbirth*, 14, 161. <https://doi.org/10.1186/1471-2393-14-16>
- UNESCO, www.unesco.org – 21-5-13