

DETERMINANTS OF UTILIZATION OF ANTENATAL CARE OFFERED BY HEALTH PROFESSIONALS IN SUB-SAHARAN AFRICA. A CASE STUDY OF CENTRAL UGANDA

Abstract

The purpose of this study is to establish the determinants of antenatal care offered by Health Professionals in Sub-Saharan Africa taking a case study of central Uganda. A sample of 1583 women of reproductive age group of 15-49 was selected from the main dataset of 2006 Uganda Demographic and Health Survey from which all the analysis were derived from. Overall, the extent of maternal health care seeking behavior in central Uganda is low (antenatal care, assisted by doctors with higher level of education were only 21 percent) but with marked variations across women's demographic and socio-economic characteristics. Mother's age at birth, place of residence, education and wealth quintile, religion, marital status and employment status were used as predictor variables of utilization of antenatal care. Appropriate ante-natal care services promote safe-motherhood and delivery with improved maternal and neonatal outcome.

Bivariate analysis demonstrates the difference in the utilization of health care services and women's demographic and socio - economic characteristics. Except religion and marital status, all variables cross tabulated under the influence of Pearson chi-square test appeared to be acceptable at 5% level of significance. Socio-economic variables such as education, residence, wealth index and employment status were implicated most strongly in women's utilization of health care services, as seen in the strong positive relationship between utilization of health care services and women's education as well as employment status of women.

On the basis of the empirical findings, to improve the utilization of antenatal care services, it is suggested that comprehensive efforts have to be made through general sensitization of the masses especially spouses on the need to go for at least 4 visits. Putting up seminars increases awareness, Besides, this research calls for continued investment in female education and enforcing the empowerment of women especially through job creation would improve their income status, since lower wealth index was associated with low utilization of antenatal services which are indispensable for improving utilization of antenatal care services. Further coordinated efforts should be made on extending health facility to rural areas which would increase the utilization of antenatal service since most quality health centers are in urban areas.

Introduction

Antenatal care can be defined in various ways. WHO (1991) defines antenatal care as a dichotomous variable, having had one or more visits to a trained person during the pregnancy. It includes routine follow up provided to all pregnant women at primary care level from screening to intensive life support during pregnancy and up to delivery. The most common indicators of health and reproductive behavior include utilization rates of antenatal care, age when women give birth, pregnancy order and birth spacing. Health status is also influenced by distant factors; for example anemia can be due to lack of money to buy adequate and good quality food or to poor eating habits (health behavior). These factors can be modified if the services can be made accessible and affordable to women and their families.

The primary aim of antenatal care is to insure a healthy mother and healthy baby at the end of a pregnancy. Antenatal care coverage is one of the maternal and reproductive health indicators. It is the percentage of women who have attended antenatal care at least once during their pregnancy to be checked by skilled health personnel for reasons related to pregnancy.

According to United Nations (UN) (2007) “reproductive health is a crucial part of general health which considers antenatal care to be great factor in monitoring the rate of maternal death and the survival of the baby, a central feature of human developmental health and is of universal concern”. Being an important component of general health, UN labels it a “prerequisite for social, economic and human development”. Furthermore, the health outcome of the newborn is largely dependant upon the mother's health and nutrition status as well as her access to health care as an economic commodity.

Reproductive health is the outcome of consumption of both reproductive health care and other goods and services. The key components of reproductive health care include safe delivery services, prenatal and postnatal care, treatment of placental malaria, nutrient supplements during pregnancy and behaviours that promote fetal growth (Ajakaiye and Mwabu, 2007). Lule et al (2005) revealed that more than 40 percent of the pregnancies in developing countries result in complications, illness or permanent disability for the mother or the child, something attributed to miscarriages, induced abortion and other factors. Thus for each of the 515 000 maternal deaths that occur worldwide annually, an estimated 30 to 50 women suffer pregnancy related health problems. Lule et al (2005) further argued that the beneficial effects of reducing maternal mortality for society are equally clear. Thus investments in safe motherhood does not only improve a woman's health and the health of her family but also increase labor supply, productive capacity, and economic well-being of communities. The burden on women associated with

frequent or too-early pregnancies, poor maternal and reproductive health, pregnancy complications, and caring for sick children and the elderly drains women's productive energy, jeopardizes their income-earning capacity, and contributes to their poverty, hence the provision of reproductive health services are meant to reduce the severity of these problems.

Therefore this called for a rising global awareness for improving health conditions that has led national governments and international agencies like world Health Organization to re evaluate health services strategies and community based programs as the strategy to make health services accessible, affordable and socially acceptable.

Problem Statement

Women depend heavily on men for access to healthcare. Studies reveal that men are the key decision makers for women's choice of health care services even though they have limited knowledge (Murthy, et al., 2002). Research also indicates that differences in socio-cultural norms of acceptable sexual behavior for men and women may put women at greater risk of STIs because of their partners' sexual behaviors, especially during pregnancy when both the woman and fetus are exposed to the risk, and when there may be greater probability of male extra-marital sexual relations due to norms of abstinence during pregnancy (Saraswati and Leonard, 2000).

Information from the Uganda demographic Health Survey (UBOS and ORC Macro, 2007) shows that Uganda's population is generally well informed about contraception (96 percent), although actual use is below intended use especially among those who are illiterate. Twenty four percent of all currently married women aged 15-49 years use a family planning method, where eighteen percent use modern methods and six percent use traditional methods. According to United Nations (UN) (2007) reproductive health is a crucial part of general health which considers antenatal care to be great factor in monitoring the rate of maternal death and the survival of the baby.

The current state of reproductive health in central Uganda is still poor; given the fact that quality services are centered in central, but the picture do not measure up to the expected where those assisted by doctors are estimated to be only (16.3%) and this show that the provision of a full package of antenatal care is inadequate coupled with poor coverage of four antenatal care visits, this situation calls for concerted efforts to improve the attendance and quality of antenatal care. Problems associated with child bearing accounts for twenty percent of the total, some of the underlying causes of poor reproductive health status are due to low levels of contraceptive, high level of illiteracy level, poverty and poor access to quality services among women. On average a Ugandan woman produces seven children through her reproductive span, putting her at constant risk of anemia, ill

health and death and thirsty eight percent of deliveries are attended by trained health workers making it more likely that mothers will experience problems during child birth.MOFPED (2001). Therefore the study seeks to explain the determinants of utilization antenatal care in central Uganda.

Main purpose of the study

To examine the determinants of utilization of antenatal care offered by health professionals in Central Uganda.

Specific objective

- 1) To find out whether there is a relationship between social economic factors and utilization of antenatal services in Central Uganda.
- 2) To establish an association between demographic variables and utilization of antenatal services in Central Uganda.

Hypothesis

- 1) There is no relationship between mother's education level with utilization of antenatal services of professionals in Central Uganda.
- 2) Wealth index has no influence with utilization of antenatal services of professionals in Central Uganda.
- 3) There is no association between place of residence with utilization of antenatal services of professionals in Central Uganda.

METHODOLOGY

Source of Data

The research used of secondary data got from Uganda Demographic Health Surveys 2006 (UDHS). The UDHS Sample covered 8531 women aged 15 to 49 years old. According to the area of my study, which will be Central Region of Uganda, the sample will be 1583 women aged 15-49 years old. The survey obtained information on socio-economic and demographic aspect of those women.

Scope of the study

The research covered Central Uganda that is comprised of Kayunga, Kiboga, Luwero, Nakaseke, Mubende, Mityana, Mukono, Nakasongola, Kalangala, Masaka, Mpigi, Rakai, Lyantonde, Sembabule, Wakiso districts.

3.3 Data processing and analysis

Data was entered and analysed uni-variately and bi-variately using SPSS.

Bivariate level of analysis

At this level of analysis, contingency tables such as cross- tabulations were employed to investigate relationships or an association that exists between the dependent and the independent variables. These statistical tests were mainly used to show existence or non existence of relationships between the dependent and the independent variables under considerations.

$$X^2 = \sum_{i=1}^r \sum_{j=1}^c \frac{(o_{ij} - E_{ij})^2}{E_{ij}}$$

Where;

O_{ij} is the observed frequency

E_{ij} is the expected frequency of the independent variable.

PRESENTATION AND DISCUSSION OF THE FINDINGS

Background Characteristics of Respondents in central region of Uganda.

Age at first birth	Frequency N=1583	Percent
<17	583	48.6
17-22	535	44.6
23-28	74	6.2
29+	8	.7
Education status		
No education	178	11.2
Primary	929	58.7
Secondary	397	25.1
Higher	79	5.0
Wealth status		
Poorest	52	3.3
Poorer	160	10.1
Middle	294	18.6
Richer	425	26.8
Richest	652	41.2
Employment status		

Not working	474	29.9
Working	1107	69.9
Place of residence		
Urban	177	11.2
Rural	1406	88.8
Marital status		
Never married	405	25.6
Married	576	36.4
Living together	342	21.6
Widowed	75	4.7
Divorced	11	0.7
Not living together	174	11.0
Religion		
Catholics	617	39.0
Protestant	465	29.4
Muslim	281	17.8
Pentecostal	163	10.3
Others	57	3.6

The findings on the socio-demographic and economic characteristics of respondents are summarized in table 4.1. As regards age at first birth, over half of the respondents were less than 17 years with (48.6%). With regards education, over half (58.7%) had attained primary level. The majority of respondents could be categorized as rich (68%). The majority of the women interviewed were working accounting for (69.9%) and as expected (88.8%) were residing in rural areas. Over half of respondents are either married or living together (58.0). Concerning religion, the highest proportion of respondents were Catholics (39 percent), followed by Protestants with (29.4%).

4.2.1 Cross tabulation of Antenatal care by age at first birth

Age at first birth	Assisted by Doctor			Assisted by nurse/midwife			Frequency
	No	Yes	Total	No	Yes	Total	
<17	95.4%	4.6%	100.0%	50.1%	49.9%	100.0%	583
17-22	94.7%	5.3%	100.0%	46.8%	53.2%	100.0%	535
23-28	83.3%	16.7%	100.0%	33.3%	66.7%	100.0%	74
29+	83.3%	16.7%	100.0%	50.0%	50.0%	100.0%	8
$\chi^2 = 14.314, df=3, P=0.002,$ $\chi^2 = 5.574, df=3, P=0.134$							1583

Findings show that age at first birth had a significant relationship with antenatal care from health professionals. The use of antenatal varies alongside age. Those less than 17 years old, (4.6%) were less like to use antenatal services as opposed to those women in the age group of 23-28 with (16.7%), yet young women are more prone to risky and terrible complications during pregnancy. This can further be exhibited by the $P= 0.002$ which shows that there is a relationship between the dependent variable and independent variable. Being assisted by doctors' increases with age. (Assisted by doctors).

However considering those assisted by nurses/midwife, results did not exhibit any significant association with age at first birth and it was further supported by the P value of 0.134 which was greater than 0.05 and therefore no relationship found. According AbouZahr and Wardlaw,(2002), It is assumed that use of antenatal care should be lowest in the youngest age group, due to the fact that many of the younger pregnant women are unmarried and unable or unwilling to use maternal health services.

Cross tabulation of Antenatal care by education level

Education level	Assisted by Doctor			Assisted by nurse/midwife			Frequency
	No	Yes	Total	No	Yes	Total	
No education	92.7%	7.3%	100.0%	61.8%	38.2%	100.0%	178
Primary	96.2%	3.8%	100.0%	52.8%	47.2%	100.0%	929
Secondary	91.7%	8.3%	100.0%	26.2%	73.8%	100.0%	397
Higher	78.8%	21.2%	100.0%	21.2%	78.8%	100.0%	79
$\chi^2 = 21.090, df=3, P=0.000$			$\chi^2 = 55.002, df=3, P=0.000$			1583	

There is evidence to show that education status was significantly associated with antenatal care. This can as well be explained by the p value of 0.000 which exhibited perfect association between education and antenatal care. Being assisted by health professionals increases with the level of education. (21.2%) were assisted by the trained doctor unlike that low education whose percentage was low as (11.1%). Education further leads to higher standards of living because of increased awareness about the consequences of not attending antenatal care.

Regarding those assisted by nurses/midwives, findings revealed that there was an association between two variables; it was also explained by the perfect P value of 0.000 which exhibited significant relationship. Being assisted by health professionals increases with education attainment. (78.8%) of the women were assisted by trained nurse or midwife as compared to those with no education with (38.2%)and The highest percentage

of women was attended to by nurse/midwife due to the fact that, they are the first health professional to approach and are easily accessible to community.

4.2.3 Cross tabulation of Antenatal care by wealth status

Wealth index	Assisted by Doctor		Total	Assisted by nurse/midwife		Total	Frequency
	No	Yes		No	Yes		
Poorest	100.0%	---	100.0%	60.5%	39.5%	100.0%	52
Poorer	96.0%	4.0%	100.0%	58.0%	42.0%	100.0%	160
Middle	97.8%	2.2%	100.0%	68.7%	31.3%	100.0%	294
Richer	95.3%	4.7%	100.0%	49.4%	50.6%	100.0%	425
Richest	89.8%	10.2%	100.0%	27.8%	72.2%	100.0%	652
							1583
$\chi^2 = 18.195, df=4, P=0.001$			$\chi^2 = 86.028, df=4, P=0.000$				

It was revealed that wealth index has significant association. This can be explained by the p value which was 0.001 and being assisted by health Professionals increase with wealth. As indicated by the richest, (10.2%), delivered under assistance of a doctor as opposed to their counterparts with none of them delivering under trained doctor. Wealthier mothers are especially more likely to receive antenatal care from a doctor or from a nurse than the poor women, this is true since they are in position to afford paying for the antenatal care bills. The same result was also found out for those assisted by nurses/midwives. It was however proved by the perfect P value of 0.000 which was less than 0.05 and therefore showed significant relationship. Being assisted by health professionals increases with health professionals. The richest had (46.8%) as opposed to the poorest with (3.3%).

Cross tabulation of Antenatal care (Doctors/nurse midwives) by employment status

Employment status	Assisted by Doctor		Total	Assisted by nurse/midwife		Total	Frequency
	No	Yes		No	Yes		
Not working	95.0%	5.0%	100.0%	50.8%	49.2%	100.0%	474
Working	85.0%	15.0%	100.0%	37.6%	62.4%	100.0%	1107
Total							
$\chi^2 = 101.341, df = 4, P=0.000$			$\chi^2 = 10.924, df=1, P=0.001$				

There is evidence to show that employment status has significant relationship with antenatal care. This finding can as well be asserted by the p value of 0.000 which also showed a significant relationship that existed between them. Being assisted by health professionals increase as women begin working. Results showed that 15 percent of the women working used more of antenatal care services unlike their counterparts (5 percent). This is true since working women are able to afford paying for the antenatal care bills. Those women who are not working may want to go for quality antenatal services but they are let down by funds to cater for their services.

The same findings were also significant for those assisted by nurses/midwives with significant P value of 0.001. Being assisted by health professionals increases as women begin working. (71.8%) were working as compared to their counterparts with (28.2%).

Cross tabulation of Antenatal care (Doctors/nurse midwives) by place of residence

Place of residence	Assisted by Doctor		Total	Assisted by nurse/midwife		Total	
	No	Yes		No	Yes		
Urban	87.5%	12.5%	100.0%	20.0%	80.0%	100.0%	177
Rural	94.9%	5.1%	100.0%	50.4%	49.6%	100.0%	1406
$X^2 = 7.373, df=1, P=0.007$			$x^2 = 26.876, df=1, P=0.000$			N=1583	

Place of residence exhibited significant relationship with antenatal care. The above results can further be proved by the p value of 0.007 which showed significant relationship. Being assisted by health professionals increases as women move to urban areas. The results showed that those women assisted by trained doctor accounted for (12.5%) as opposed to (5.1%) in rural areas. This is true since most opportunities are all centered in urban areas than rural areas, women who stay in urban areas are much knowledge about proper antenatal care, and thus fewer risks faced during pregnancy. In rural areas, women deliver under the hands of un trained personnel thus leading to complication during pregnancy. The same was significant for those assisted by nurses/midwives with P value of 0.000 which exhibited perfect association. Being assisted by health professionals increases as women move to urban areas. The urban women assisted were 80 percent as opposed to rural women with (49.6%).

Cross tabulation of Antenatal care by marital status

Marital status	Assisted by Doctor			Assisted by nurse/midwife			Frequency
	No	Yes	Total	No	Yes	Total	
Never married	91.2%	8.8%	100.0%	29.8%	70.2%	100.0%	405
Married	93.8%	6.2%	100.0%	48.6%	51.4%	100.0%	576
Living together	94.4%	5.6%	100.0%	48.0%	52.0%	100.0%	342
Widowed	100.0%	---	100.0%	53.6%	46.4%	100.0%	75
Divorced	100.0%	---	100.0%	33.3%	66.7%	100.0%	11
Not living together	95.6%	4.4%	100.0%	51.6%	48.4%	100.0%	174
$\chi^2 = 3.505, df=5, P=0.623,$			$\chi^2 = 8.908, df=5, P=0.113$			N =1583	

Findings show that marital status did not show any significant relationship with those assisted by doctors since P value was found to be greater than 0.05 (P value=0.263) and the same results were similar to those assisted by nurses/midwives and further supported by the insignificant P value of 0.113 which was less than 0.05.

Cross tabulation of Antenatal care (Doctors/nurse midwives) by religion

Religion	Assisted by Doctor			Assisted by nurse/midwife			Frequency
	No	Yes	Total	No	Yes	Total	
Catholic	95.7%	4.3%	100.0%	45.2%	54.8%	100.0%	617
Protestant	93.8%	6.3%	100.0%	52.7%	47.3%	100.0%	465
Muslim	93.3%	6.7%	100.0%	42.0%	58.0%	100.0%	281
Pentecostal	95.2%	4.8%	100.0%	52.4%	47.6%	100.0%	163
SDA	85.7%	14.3%	100.0%	46.4%	53.6%	100.0%	54
Other	66.7%	33.3%	100.0%	33.3%	66.7%	100.0%	3
$\chi^2 = 9.766, df=5, P=0.082,$			$\chi^2 = 6.393, df=5, P=0.270$			N =1583	

There was no relationship between religion and antenatal care; the results do not show clearly the utilization of antenatal care services. This can be explained by the P value of 0.082 which is greater than 0.05 and therefore not statistically significant for the study (Assisted by doctor). Although (33.3%) were highest and came from category of others and (14.3%) from SDA. The same findings was also found out for those assisted by nurses/midwives where the P value was greater than 0.05 (0.270) which showed no significant association for the study in central Uganda. Though the highest percent, 68 percent were from others and 58 percent for Muslim.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Introduction

This chapter presents the summary, conclusions drawn from the findings and the policy recommendation that arise therefore;

Summaries of the Findings

The findings from the study suggest that the study population comprised mainly Catholics accounting for 39 percent, the majority of the women were married with (36.4%), their highest level of education was primary with (58.7%), and many of them were working as indicated by (69.9%), most of them were also living in rural areas (88.8%), younger age group (below 25 years of age) and less than 17 years had the highest percent of 49 percent. By wealth status, many of them were rich with 68 percent.

The study found out that the relationships between antenatal care (assisted by doctor) and independent variables say, age at first birth, education, wealth index, employment status and place of residence greatly influence utilization of antenatal care in central Uganda as indicated by significant Pearson chi-square values, 0.002, 0.000, 0.001, 0.000 and 0.007 respectively. However, religion and marital status did not show significant relationship with antenatal care. The study further revealed that as the level of education increases large proportion of women tend to utilize antenatal care services as indicated by (21.2%) verses (11.1%).

The research also found out that the association between antenatal care (assisted by nurse/midwives) and independent variables, employment status, wealth index, education, and place of residence highly impact on utilization of antenatal care in central Uganda as indicated by significant P-values, 0.001, 0.000, 0.000 and 0.000 respectively. On the other hand, religion and marital status did not show significant relationship with antenatal care.

Generally the research finding stipulates that more expectant mothers were assisted by nurse/midwives as compared to those assisted by doctors as indicated by say education level, 21 percent assisted by doctors as opposed to (78.8%), assisted by nurse/midwives. There were also urban-rural differentials where fewer women were utilizing antenatal care services as opposed to urban women as shown by 5 percent verses 13 percent respectively.

Conclusions

From the finding of the study, it was revealed that education status highly influences utilization of antenatal care since educated women are knowledgeable, aware of the dangers of giving birth at home under the hands of untrained personnel. Utilization of antenatal care increases with the level of education status. Say from 11 percent to 21 percent (assisted by doctor), 38 percent to 79 percent (assisted by nurse/midwives).

It was also found out that employment status and wealth index were very much significant for the study since working women are able to access and utilize quality antenatal care services since they can afford to pay for the bills.

The majority of the women were assisted by nurse/midwives due to the fact that they are easily accessed and immediate health professional to approach thus a large number of them delivering under trained professionals.

Marital status and religion were not significant for the study. Place of residence, age at first birth were statistically significant for the study.

Recommendations

1. All pregnancies should be seen as potentially high risk from the perspective of the fetus. Until reliable screening tests for growth restriction are available, surveillance of the fetus requires frequent visits for adequate assessment. This should be centred on the community based antenatal clinic. Results of routine and special investigations say blood tests; scans should be returned to the clinic that is to say the community carers, via the patient held record.
2. The study recommends general sensitization of the masses especially spouses on the need to go for at least 4 visits this is crucial for woman's life. Putting up seminars increases awareness, not only that but also knowing dangers of not attending antenatal care would increase utilization of the services.
3. As anticipated basing on available literature, the study found out that utilization of antenatal improves with age. There fore it is important that teenage pregnancies be vigilantly discouraged by boosting girl education as a way of solving early unplanned pregnancies and improving overall ANC utilization since higher levels of education attainment significantly impacts on utilization of ANC.
4. Enforcing the empowerment of women especially through job creation would improve their income status, since lower wealth index was associated with low

utilization of antenatal services. Through job creation, income increases and therefore many women in position to afford quality antenatal care services.

5. Extending health facility to rural areas would increase the utilization of antenatal service since most quality health centers are in urban areas, therefore through construction of many health centers in rural areas would highly increase its utilization through in the long run reduce the maternal death in rural areas

REFERENCE

Acharya, L.B. and J. Cleland (2000), ‘Maternal and child health services in rural Nepal: does access or quality matter more?’ Health Policy and Planning Nepal Demographic and Health Survey. 2001. Ministry of Health, New Era, ORC Macro.

Ajakaiye, O. and Mwabu, G. (2007), The Demand for Reproductive Health Services: An Application of Control Function Approach” AERC Working Paper Series.

Bell J, Sian L. Curtis A, Siliva A (2003). Trends in Delivery Care in Six Countries. DHS Analytical Studies NO. 7. ORC Macro, Calverton, Maryland USA.

Blunch, N. (2004): Maternal Literacy and Numeracy Skills and Child Health in Ghana A paper presented at the Northeast Universities Development Consortium Conference, HEC Montreal, October, 2004.

Boutayeb A (2006): Social Inequalities and health Equity in Morocco. International Journal for Equity in Health 2006.

Carl Haub, Mary the 2008 World population data-sheet of population reference bureau (PRB) demographer, Washington Dc 2009.

Celik, Y., and D.R. Hotchkiss. 2000. The socioeconomic determinants of maternal health care utilization in Turkey. Social Science & Medicine.

Central Statistical Agency (Ethiopia) and ORC Macro (2006). Ethiopia Demographic and Health Survey 2005. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistics Agency and ORC Macro.

Central Statistical Authority (CSA). 1993. The 1990 National Family and Fertility Survey. Addis Ababa, Ethiopia: Central Statistical Authority.

Elo, I. (1992):Utilization of Maternal Health-care Services in Peru; The Role of Women’s Education Health Transition Review.

Lule E, Ramana G,N.V, Ooman N., Epp J, Huntington D & Rosen J, E (2005). Achieving the Millennium Development Goal of Improving Maternal Health: Determinants, Interventions and Challenges, The World Bank.

McCaw-Binns, A., J. La Grenade and D. Ashley (1995), 'Under-users of antenatal care: a comparison of non-attenders and late attenders for antenatal care, with early attenders'. Social Science and Medicine.

Mekonnen Y, Asnaketch M (2002). Utilisation of Maternal Health Care Services in Ethiopia. Calverton, Maryland, USA: ORC Macro.

Ministry of Finance, planning and Economic Development (2001): Population, Reproductive Health and Development, November 2001.

Murthy, Nirmala, Lakshmi Ramchander, Pertti Pelto and Akhila Vasani, 2002. Dismantling India's contraceptive target system. In Nicole Haberland and Diana Measham (eds.). Responding to Cairo: Case studies of changing practice in reproductive health and family planning. Population Council, New York.

National Institute for Health and Clinical Excellence Public Health Guidance (2008). Smoking cessation services in primary care, pharmacies, local authorities and workplaces, particularly for manual working groups, pregnant women and hard to reach communities.

NBS [Tanzania] & ORC Macro(2005): Tanzania Demographic and Health Survey Key Findings. Calverton, Maryland, USA: NBS-Tanzania and ORC Macro.; 2005.

Ojwang SBO, Maggwa ABN(1991): Adolescent sexuality in Kenya. East African Med J

Population Reference Bureau. Population & Economic Development 2007 data Sheet. Accessed 2/10/2008 at:www.prb.org.

Raghupathy, S. (1996): Education and the use of maternal health care in Thailand'. Social Science and Medicine.

Raju, Saraswati and Ann Leonard. 2000. "Men as Supportive Partners in Reproductive Health- Moving from Rhetoric to Reality". Population Council, New Delh.

Safe Motherhood (2002). Safe Motherhood: a matter of human rights and social justice. Retrieved from www.safemotherood.org.htm on 8/09/2003.

Ssengooba, F.; Neema, S.; Mbonye, A.; Sentubwe, O.; and Onama, V. (2003). Maternal Health Review, Health Systems Development Programme, Makerere University Institute of Public Health, Uganda Working Paper.

Uganda Bureau of Statistics (UBOS) and Macro International Inc. 2007. Uganda Demographic and Health Survey 2006. Calverton, Maryland, USA: UBOS and Macro International.

Uganda Bureau of Statistics (UBOS). The 2002 Uganda Population and Housing Census- Main report, March 2005, Kampala, Uganda.

World Bank. (1999), "Safe Motherhood and the World Bank: Lessons from 10 years of Experience", Washington, DC: The World Bank.

World Health Organization(1991). Essential elements of obstetric care at first referral level. Geneva: WHO 1991.