Factors that influence pregnancy termination among older women in Uganda; analysis of the Uganda Demographic and Health Survey, 2016

Claire Ashaba[1], Christabellah Namugenyi[1]

[1] Makerere University, Uganda

Corresponding author: Claire Ashaba

Telephone: +256 775857963

Email: ashaba7587@gmail.com

Abstract

According to the Uganda Demographic and Health Survey 2016 report, the overall rate of pregnancy termination was 26% (N= 57,906 women). However, the rate of pregnancy termination varied across age groups with the highest rate (42%) among older women 40-49 years, followed by women aged 30-39 years (41%) and lastly women aged 15-29 years (17%). This is concerned because older women are thought to be at higher risk of consequences from pregnancy but most importantly at risk of consequences from pregnancy termination. This study aimed to find out the factors associated with pregnancy termination among older women in Uganda. pregnancy termination was more likely to occur among older women who listen to radio (OR=1.258, $p<0.001$), richer women (OR=1.315, $p<0.001$), women who use condoms as a contraceptive method (OR=1.581, $p<0.001$), women in rural areas (OR=1.122, $p<0.05$), women in non-domestic roles (OR=1.402, $p<0.001$). Pregnancy termination was less likely to occur among older women with secondary (OR=0.740, $p<0.001$) or higher education (OR=0.688, $p<0.01$), and those who watch television (OR=0.881, $p<0.05$). Therefore, pregnancy termination among older women is significantly influenced by the highest education level, frequency of media exposure, wealth status, contraceptive use, place of residence, and occupation.

Key words: Older women, Unintended pregnancy, Pregnancy termination

Background

Pregnancy termination due to unintended pregnancy is a significant public health challenge particularly in low and middle income countries due to its negative health and economic implications (Sohoo et al., 2019). It is defined as a pregnancy that is terminated by choice through interventions before the 28th week of the fetus development (Aria & Arora, 2009). Global estimates by the Guttamacher Institute and the United Nations Population Division, the global rate of unintended pregnancy declined from 79 per 1000 women aged 15 – 49 in 1990 – 1994 to 64 per 1,000 women in 2015 – 2019 (Guttmacher Institute, 2020). However, there were significant regional variation in trends of unintended pregnancies with the highest rate being found in Africa (101 per 1,000 women) (Bearak et al., 2020).

Prior to the improvement of medicine, the prevalence of unsafe abortions was high and this exerted a hefty burden on women's lives. Currently, the introduction of safe and efficient technologies and skills to perform induced abortion is geared in the direction of totally eliminating unsafe abortions and related deaths and providing universal access to these services. In almost all developed countries, there are legal laws that bind safe abortions upon request or under broad social and economic grounds and abortion services are generally accessible to most women. However, access to safe abortion in some developing countries is limited to a restricted number of narrow conditions. Unsafe pregnancy termination is a primary cause of maternal death and morbidity but it can be avoided. It can cause physical and mental health problems, as well as social and financial hardships for women, communities and health care systems (WHO, 3021; Atako et al., 2019; Gebremeddhin et al., 2018). Globally, each year, 4.7%, 13.2% of maternal deaths can be attributed to unsafe pregnancy termination. In developing regions, that number rises to 220 deaths per 100000 unsafe pregnancy terminations (Ganatra et al., 2017). According to estimates from 2012, 7 million women are treated in hospitals in developing countries for problems related to unsafe

abortions each year (Singh & Maddow, 2016). Africa has the greates rate of abortion related mortality in the world. In Africa, unsafe pregnancy terminations caused at least 9% of maternal deaths (or 16000 deaths) in 2014 (Sedgh, 2016). Previous studies revealed that maternal age , parity, occupation, age at first sex, marital status, place of residence, media exposure, wealth index, education status and region were significantly association factor with pregnancy termination (Tesema et al., 2020; Yaya et al., 2016; Sedgh, 2016 & Oyefabi et al., 2016).

According to the Uganda Demographic and Health Survey 2016 report, the overall rate of pregnancy termination was 26% (N= 57,906 women). However, the rate of pregnancy termination varied across age groups with the highest rate (42%) among older women 40-49 years, followed by women aged 30-39 years (41%) and lastly women aged 15-29 years (17%). This is a concern because older women are thought to be at higher risk of consequences from pregnancy but most importantly at risk of consequences from pregnancy termination. This study aimed to find out the factors associated with pregnancy termination among older women (40 – 49 years) in Uganda.

Literature review

One of the major reasons for the high fertility rates in most countries in Sub-Saharan Africa (SSA) is that a considerable number of women in SSA are not contraceptive users (Bongaarts & Casterline, 2020; Ahinkorah et al., 2020; Ahinkorah et al., 2021). Several obstacles to the use of contraception have been cited in a number of studies (Ahinkorah et al., 2020; Sedgh et al., 2016 & ahinkorah et al., 2021). These obstacles include inadequate knowledge on family planning methods and where they can be accessed, low quality and limited availability of family planning services and high cost of family planning methods, services, travel and time. Other obstacles Centre around fear of side effects, disapproval from partners and family members and concerns about moral and social acceptability (Ahinkorah, 2021). These obstacles are more prevalent in adolescent girls and

young women and contribute significantly to the high unmet need for contraception among this cohort of women. This may explain the approximately 80 million mistimed and unplanned pregnancies which occur in low and middle income countries and constitute 40% of all pregnancies. Majority of these mistimed and unplanned pregnancies end in burden of health and socio-economic challenges for many women and their families (Singh et al., 2012).

Previous studies showed that pregnancy termination not only harm the women but also adverse birth outcomes such as prematurity (preterm birth), low birth weight, placental complications and birth defects exist as a consequence of pregnancy termination (Chae, 2017; Bhattacharya et al., 2012). Rates of abortion related maternal deaths declining by 42% since 1990 – 2014 from 108 maternal deaths per 100,000 abortions with the highest rate in Africa, 141 per 100,000 abortions. About 9% of maternal deaths in Africa are due to unsafe abortion that resulted in the exclusive bleeding and infections (Starrs et al., 2018). In SSA, previous studies on pregnancy termination among women have identified socio-demographic factors such as age, ethnicity, parity, occupation, age at first sex, marital status, place of residence and region as factors associated with pregnancy termination among women of reproductive age. Despite evidence that women in countries with high fertility rates in SSA have high unmet need for contraception leading to high unintended pregnancies and abortions. Studies that have examined the determinants of pregnancy termination among older women (40 – 49 years) re scanty. This study therefore, aims to fill this gap by examining the socio-demographic determinants of pregnancy termination among older women. This study is important because it provides the needed information for designing sexual and reproductive health interventions to reduce unwanted pregnancies and unsafe abortions in Uganda.

Methods

Data from the most recent 2016 Uganda Demographic and Health Survey was used. The 2016 UDHS sampled 679 Enumeration Areas (EA) and 696 households per EA from fifteen regions and 112 districts of Uganda using census data and two-stage selection. The survey aimed to provide indicators for the country, urban and rural areas and regions. Of the 20,880 households planned, 10% did not respond. The survey interviewed 18,771 women averaging 1,200 per region. The data were weighted to include only older women who were 40 – 49 years. The dependent variable was pregnancy termination measured by whether a woman had ever terminated a pregnancy "1-yes" and "0-no". The independent variables were education level, relationship to household head, sex of household head, frequency of reading newspaper/magazine, frequency of watching television, frequency of listening to radio, wealth index, knowledge of later cycle, current contraceptive method, types/place of residence and respondents' occupation. Summary statistics, including frequencies and percentages were used to describe the subjects. Pearson chi-square test was used for testing association between the predictors and outcome variable pregnancy termination. All significant predictor variables ($P<0.05$) in the bivariate analysis were included in multivariate binary logistic regression analysis. A multivariable binary logistic regression model was used to determine the factors that influence pregnancy termination among older women at a 5% significance level.

Results

At the bivariate analysis the results showed that pregnancy termination had a significant relationship with education level, sex of household head, relationship to household head, frequency of listening to television, wealth index, knowledge of later cycle, current contraceptive method and respondents' occupation.

The model was a good fit for the data (p<0.01). Results from analysis show that pregnancy termination was more likely to occur among older women who listen to radio (OR=1.258, p<0.001), richer women (OR=1.315, p<0.001), women who use condoms as a contraceptive method (OR=1.581, p<0.001), women in rural areas (OR=1.122, p<0.05), women in non-domestic roles (OR=1.402, p<0.001). Pregnancy termination was less likely to occur among older women with secondary (OR=0.740, p<0.001) or higher education (OR=0.688, p<0.01), and those who watch television (OR=0.881, p<0.05).

Conclusion/Recommendation

Pregnancy termination among older women is significantly influenced by the highest education level, frequency of media exposure, wealth status, contraceptive use, place of residence, and occupation. The study recommends the need for integrated programs that are targeted at generating community responsiveness of effective contraception and prevention of unintended pregnancies among older women.

Table 1: A Bivariate analysis of factors that determine pregnancy termination among older women

Variable	Ever had a terminated pregnancy		P-value for χ^2
	No	Yes	
Education level			
No education	3,546	1,689	0.000
Primary	7,597	4,187	
Secondary	1,089	470	
higher	367	173	
Relationship to household head			
Head			
Wife	4,461	2,261	
Daughter	7,520	4,006	
Daughter-in-law	315	107	
Mother	34	32	0.000
Sister	4	5	
Other relatives	32	23	
Adopted/fostered	55	34	

Not related	101 77	34 9	
Sex of household head			
Male	7,800	4,147	0.021
Female	4,799	2,372	
Frequency of reading newspaper or magazine	11,007	5,648	
Not at all	930	513	0.356
Less than once a week	662	358	
At least once a week			
Frequency of watching television			
Not at all	10,222	5,298	
Less than once a week	1,162	601	0.956
At least once a week	1,215	620	
Frequency of listening to radio			
Not at all	3,909	1,702	
Less than once a week	1,892	946	0.000
At least once a week	6,798	3,871	
Wealth index			
Poorest	2,892	1,342	
Poorer	2,736	1,420	
Middle	3,019	1,490	0.000
Richer	2,405	1,422	
Richest	1,547	845	
Knowledge of ovulatory cycle			
During her period	99	41	
After period ended	6,199	3,379	
Middle of the cycle	2,914	1,482	0.000
Before period begins	1,169	474	
At any time	1,101	523	
Other	86	63	
Don't know	1,031	557	
Current contraceptive method			
Not using	8,454	4,263	
Pill	158	75	
IUD	150	78	
Injections	1,325	681	
Male condoms	170	145	0.000
Female sterilization	1,096	547	
Male sterilization	11	0	
Periodic abstinence	133	179	
Withdrawal	236	172	
Other traditional	124	32	
Lactation	17	29	
Implants	661	308	
Standard days method	64	10	

Types of place of residence			
Urban	1,981	978	0.191
Rural	10,618	5541	
Respondent's occupation			
Not working	1380	613	
Professional/ teaching	670	389	
Clerical	26	25	
Sales	916	557	
Agricultural, self-employed	7,061	3,548	0.000
Household and domestic	84	14	
Services	360	190	
Skill manual	1,667	940	
Unskilled manual	435	237	

Table 2: A multivariable logistic regression analysis of factors that determine pregnancy termination among older women.

Independent variables	Odds Ratio	P > |Z|	95% Confidence intervals
Education level			
Primary	1.099	0.011	1.022 - 1.184
Secondary	0.740	0.000	0.642 - 0.854
Higher	0.688	0.003	0.540 - 0.877
Relationship to household head			
Wife	0.719	0.057	0.513 - 1.010
Daughter	0.401	0.000	0.295 - 0.544
Daughter-in-law	1.023	0.931	0.603 - 1.735
Granddaughter	1.493	0.556	0.392 - 5.674
Mother	1.393	0.314	0.730 - 2.656
Sister	0.974	0.916	0.595 - 1.593
Other relatives	0.549	0.006	0.360 - 0.839
Not related	0.179	0.000	0.085 - 0.375
Sex of household head			
Female	0.761	0.108	0.546 - 1.061
Frequency of reading newspaper/magazine			
Less than a week	1.061	0.361	0.934 - 1.203
At least once a week	1.062	0.448	0.909 - 1.239
Frequency of watching television			
Less than a week			
At least once a week	0.881	0.026	0.788 - 0.984
	0.870	0.052	0.756 - 1.001
Frequency of listening to radio			

Less than once a week	1.111	0.039	1.005 - 1.229
At least once a week	1.257	0.000	1.164 - 1.358
Wealth index			
Poorer	1.088	0.077	0.9908 - 1.196
Middle	0.984	0.734	0.895 - 1.081
Richer	1.187	0.001	1.073 - 1.314
Richest	1.315	0.000	1.135 - 1.522
Knowledge of later cycle			
After period ended	1.113	0.575	0.766 - 1.616
Middle of the cycle	1.031	0.873	0.707 - 1.503
Before period begins	0.818	0.331	0.555 - 1.205
At anytime	1.009	0.962	0.686 - 1.484
Others	1.346	0.245	0.815 - 2.223
I don't know	1.128	0.539	0.767 - 1.660
Current contraceptive method			
Pill			
IUD	0.959	0.775	0.721 - 1.276
Injections	0.978	0.878	0.737 - 1.297
Male condom	0.989	0.837	0.892 - 1.096
Female sterilization	1.581	0.000	1.257 - 1.989
Periodic abstinence	0.984	0.784	0.879 - 1.101
Withdrawal	2.643	0.000	2.096 - 3.332
Other traditional	1.311	0.009	1.068 - 1.607
Implants	0.489	0.000	0.330 - 0.725
Lactational amenorrhea	0.919	0.246	0.796 - 1.060
Standard days method	4.150	0.000	2.267 - 7.596
	0.253	0.000	0.128 - 0.497
Types/place of residence			
Rural	1.122	0.021	1.017 - 1.237
Respondents occupation			
Professional/ technical/ managerial	1.402	0.000	1.177 - 1.670
Clerical	2.816	0.001	1.566 - 5.061
Sales	1.321	0.000	1.140 - 1.530
Agricultural – self employed	1.084	0.133	0.975 - 1.21
Household and domestic	0.4153	0.004	0.230 - 0.749
Services	1.118	0.288	0.909 - 1.376
Skilled manual	1.242	0.001	1.093 - 1.411
Unskilled manual	1.178	0.091	0.974 - 1.424

References

Ahinkorah, B. O. (2020). Predictors of unmet need for contraception among adolescent girls and young women in selected high fertility countries in sub-Saharan Africa: a multilevel mixed effects analysis. *PloS one*, *15*(8), e0236352.

Ahinkorah, B. O., Ameyaw, E. K., Seidu, A. A., Agbaglo, E., Budu, E., Mensah, F., ... & Yaya, S. (2020). Sexual violence and unmet need for contraception among married and cohabiting women in sub-Saharan Africa: Evidence from demographic and health surveys. *PLoS One*, *15*(11), e0240556.

Ahinkorah, B. O., Hagan Jr, J. E., Seidu, A. A., Sambah, F., Adoboi, F., Schack, T., & Budu, E. (2020). Female adolescents' reproductive health decision-making capacity and contraceptive use in sub-Saharan Africa: What does the future hold?. *PloS one*, *15*(7), e0235601.

Ahinkorah, B. O., Seidu, A. A., Hagan Jr, J. E., Archer, A. G., Budu, E., Adoboi, F., & Schack, T. (2021, June). Predictors of Pregnancy Termination among Young Women in Ghana: Empirical Evidence from the 2014 Demographic and Health Survey Data. In *Healthcare* (Vol. 9, No. 6, p. 705). MDPI.

Baruwa, O. J., Amoateng, A. Y., & Biney, E. (2022). Induced abortion in Ghana: prevalence and associated factors. *Journal of Biosocial Science*, *54*(2), 257-268.

Bearak, J. M., Popinchalk, A., Beavin, C., Ganatra, B., Moller, A. B., Tunçalp, Ö., & Alkema, L. (2022). Country-specific estimates of unintended pregnancy and abortion incidence: a global comparative analysis of levels in 2015–2019. *BMJ global health*, *7*(3), e007151.

Bhattacharya, S., Lowit, A., Bhattacharya, S., Raja, E. A., Lee, A. J., Mahmood, T., & Templeton, A. (2012). Reproductive outcomes following induced abortion: a national register-based cohort study in Scotland. *BMJ open*, *2*(4), e000911.

Bongaarts, J., & Casterline, J. (2013). Fertility transition: is sub-Saharan Africa different?. *Population and development review*, *38*(Suppl 1), 153.

Chae, S., Desai, S., Crowell, M., Sedgh, G., & Singh, S. (2017). Characteristics of women obtaining induced abortions in selected low-and middle-income countries. *PloS one*, *12*(3), e0172976.

Gilano, G., & Hailegebreal, S. (2021). Determinants of abortion among youth 15–24 in Ethiopia: A multilevel analysis based on EDHS 2016. *PloS one*, *16*(3), e0248228.

Guttmacher Institute. Unintended pregnancy and abortion worldwide. New York: Guttmacher Institute; 2020

Sahoo, H., Stillman, M., Frost, J., Acharya, R., & Hussain, R. (2020). Availability, practices and acceptance of postabortion contraceptive services in health facilities: a study in six states of India. *Contraception*, *101*(2), 106-111.

Say, L., Chou, D., Gemmill, A., Tunçalp, Ö., Moller, A. B., Daniels, J., ... & Alkema, L. (2014). Global causes of maternal death: a WHO systematic analysis. *The Lancet global health*, *2*(6), e323-e333.

Sedgh, G., Ashford, L. S., & Hussain, R. (2016). Unmet need for contraception in developing countries: examining women's reasons for not using a method.

Singh, S., & Darroch, J. E. (2012). Adding itup: Costs and benefits of contraceptive services. *Estimates for*, *2012*.

Singh, S., Darroch, J. E., & Ashford, L. S. (2014). Adding it up: the costs and benefits of investing in sexual and reproductive health 2014.

Starrs, A. M., Ezeh, A. C., Barker, G., Basu, A., Bertrand, J. T., Blum, R., ... & Ashford, L. S. (2018). Accelerate progress—sexual and reproductive health and rights for all: report of the Guttmacher–Lancet Commission. *The lancet*, *391*(10140), 2642-2692.