Influence of health message sources on attitude towards abortion among women in Nakuru County, Kenya

Agnes Mercy Muthoni Wahome*, Hellen Mberia, PhD*, Geoffrey Sikolia, PhD* *

College of College of Human Resource Development, Jomo Kenyatta University of Agriculture and Technology, Kenya.

Abstract-This study sought to examine how the source of health message influenced attitude towards abortion among women aged between18 to 49 years in Nakuru County, Kenya. The study adopted a mixed method research approach, specifically using the convergent parallel designs. The target population of the study was women who had experiences an induced abortion in the age bracket of 18-45 years in Nakuru County. A sample size of 340 women was purposively selected from patients seeking services at four health facilities in Nakuru. Primary data was utilized in this study. Quantitative data was collected using a semi structured questionnaire comprising of both closed and open-ended questions. This sample was randomly selected on real time basis from clients seeking Post Abortion Care (PAC) services. Qualitative data was collected where 10 In-depth interviews were carried out on PAC clients. STATA Version 15 was used to analyse quantitative data while qualitative data was analysed based on various thematic areas. The data was later merged and interpreted identifying areas of similarities and convergence as well as contradictions. The study concluded that the source of health message is significant in influencing attitude on abortion in women of reproductive age in Nakuru County.

Index Terms- source of health message, Post Abortion Care, attitude, induced abortion.

I. Introduction

In recent decades, reproductive health matters have taken a global centre stage with the promotion of human rights of women to include their right to have control over and decide freely and responsibly on matters related to sexuality and reproductive health. However, little is known on the communication dynamics that take place when one finds themselves in a pregnancy crisis and how they arrive at the decision to either keep the pregnancy or procure an abortion. Rehnström, Lindgren and Faxelid (2018) note that gaps exist in knowledge regarding women's decision-making processes in relation to induced abortions in Kenya. Studies done in Kenya on abortion have mainly focused on biomedical perspective, effects of unsafe abortion and psychological effects of abortion. Some studies have shown that abortion is due to lack of access of knowledge (Kamala and Aboud, 2006). However, according to the theory of planned behaviour, people's evaluations of, or attitudes toward behaviour are determined by their accessible beliefs about the behaviour, where a belief is defined as the subjective probability that the behaviour will produce a certain outcome. Specifically, the evaluation of each outcome contributes to the attitude in direct proportion to the person's subjective possibility that the behaviour produces the outcome in question (Ajzen, 1975), in this case abortion. This study therefore sought to explore how the source of health message influenced attitude towards abortion among women aged between18-49 years in Nakuru County. The findings from this study would contribute in filling both policy and program gaps in strategic communication in reducing maternal mortality.

II. Material and Methods

2.1. Study design

The study design was a cross-sectional survey where data on sources of health message was collected from women who had procured an abortion. Specifically, the study employed a Convergent Parallel research method which is one of the mixed method approaches. Mixed Methods Research is a method that focuses on collecting, analysing, and mixing both quantitative and qualitative approaches in a single study or series of studies (Tashakkori and Teddlie, 2010).
In this study, the quantitative research approach utilised the closed ended questions asked to the post abortion care clients.
Later, the results were mixed during the overall interpretation with the aim of trying to look for convergence, divergence, contradictions, or relationships of the two sources of data. The use of Convergent Parallel research design aided the researcher in

arriving at an integrated summary of the predictors (quantitative research), and views and personal experiences (qualitative research) on decision making on abortion.

2.2. Study area and population

The site of study was Nakuru County, which is located in the south eastern part of the Rift Valley and is divided into eleven sub counties namely; Nakuru Town East, Nakuru Town West, Bahati, Naivasha, Gilgil, Subukia, Kuresoi North, Kuresoi South, Molo, Rongai and Njoro. Data from Ministry of Health (2012) showed that Rift Valley recorded the most abortion cases in the country. 153,976 abortions out of the total 464,690 abortions were procured in Rift valley in 2012 among women of reproductive age (15 to 49 years). Rift Valley therefore accounted for 33% of all abortions recorded in the country. The researcher therefore selected Nakuru County as the study site.

The main study population was women of reproductive age (18-49 years) from Nakuru who were seeking post abortion care after an induced abortion. The study sought to examine how sources of health message correlated with attitude on abortion in this study population. This population was important in providing personal experiences in this study.

2.3 Sample size determination

To determine the study population, this research considered data collected in Kenya using the Abortion Incidence Complications Methodology (AICM) and the Prospective Morbidity Survey (PMS). The data indicated that an estimated that 38,567 of the 119,502 (32%) induced abortion complications treated in Kenya in 2012 were from the Rift Valley. (Mohamed, Izugbara, Moore, Mutua, Kimani-Murage, Ziraba, Bankole, Singh, & Egesa. 2015). To determine the sample size for a large population which is assumed to be normally distributed at a confidence interval of 95% or significance interval of 5%.

A sample size of 367 was arrived at for quantitative and 10 key in depth interviewees all comprising of Post Abortion Care clients. According to Guest, Bunce, & Johnson (2006) a sample of 6 interviews may be sufficient to enable development of meaningful themes and useful interpretations.

2.4 Sampling technique

This study employed a purposive (judgemental) non probability sampling technique to obtain only the hospital clients who were seeking post abortion care (PAC) after having an induced abortion. According to Patton (1990) it is important to select "information-rich cases for in depth study. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research, thus the term purposive sampling" (p. 169).

Health providers were guided in identifying the patients who had induced abortion after they had received treatment. The number of patients attended with abortion complications could not be determined beforehand therefore the researcher and assistants were stationed at the faculties and recruited respondents on a continuous basis until the sample size of 340 out of the expected 367 respondents was achieved. This took a total of 8 months. In this study, 10 in-depth interviews were conducted with PAC clients. However, respondents under the age of 18years and those not willing to participate were excluded from the study.

2.5 Data collection Tools and procedure

The quantitative data collected from the post abortion care clients was done using a semi structured questionnaire. The tool was self-administered whereby women of reproductive age accessing post abortion care at the health facilities filled out the questionnaires by themselves. According to Campbell et al., (1999) use of self-administered questionnaires is particularly useful in collection of data on sensitive topics such as sexual behaviour**.** .

In addition qualitative data collected from selected PAC clients was done using an in-depth interview guide that comprised of open ended questions to capture a more detailed perspective of the subject.

2.6 Data Processing and Analysis

The outcome variable i.e. attitude towards abortion was summarised as either positive or negative while the independent variable i.e source of health message was coded. Independent and dependent variables were tested at a 95% confidence interval and interpretation done using the test statistic and the p-value for validity.

Since the outcome variables were binary, this study employed the binary logistic regression method to conduct multivariate analysis. The regression was conducted at 95% confidence interval and interpretation done using odds ratios, confidence intervals and p-values. The assumptions for using the logistic regression model were verified so as to avoid biases in interpretation of results.

Qualitative data from 10 in-depth interviews with PAC clients were summarized according to thematic areas.

Merged data analysis strategies were used whereby side-by-side comparison in discussion section and summary table was done, thereafter, the results were mixed during the overall interpretation as the researcher tried to look for convergence, divergence,

contradictions, or relationships of the two sources of data in order to get important insights into the issues of sources of health message and attitude towards abortion in decision making.

2.7 Ethical Consideration

Given that this study involved patients, it was a requirement to seek ethical approval ethical approval. This was sought from Kenyatta National Hospital Ethics and Research Committee. The researcher also sought a research permit from The National Commission for Science, Technology and Innovation and additional clearance by the County Commissioner, County Director of Education, County Director of Health and the respective heads of participating health facilities.

III. RESULTS AND DISCUSSION

3.1 Response Rate

Out of the 340 questionnaires administered, a total of 228 women (67%) agreed to participate in the study and signed the consent form, while 112 women (33%) declined to be included in the study.
According to Babbie (2004) response rates of 60% is good A further 10 women seeking PAC services were identified and consented to participate in the in-depth interviews. Twenty four health providers were interviewed as key informants.

3.2 Attitude towards abortion

The study revealed that 43% of the respondents felt that termination of pregnancy was not a right of every woman in their community while 57% felt otherwise. 62% felt that it was not ok for a woman to have an abortion if she was married and did not want any more children with 38% felt it was ok for married women to have an abortion for the same reason. The results further showed that 97% of the respondents agreed that it was ok for a woman to have an abortion if the woman's own health was seriously endangered by the pregnancy.

Table 3.1: Attitude towards abortion

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Termination of pregnancy is the right of every woman in my community	64 (28%)	34 (15%)	0(0)	100 (44%)	30 (13%)
It is ok for a woman to have an abortion if she is married and does not want any more children	93 (41%)	48 (21%)	(0)	41(18%)	46(20%)
It is ok for a woman to have an abortion if the woman's health is seriously endangered by the pregnancy	0 (0%)	7(3%)	0 (%)	109(48%)	112(49%)
Abortion is ok if the family has a very low income and cannot afford more children	108 (47%)	30 (13%)	(0)	90(39%)	0 (0%)
Abortion is ok if she became pregnant as a result of rape	24 (11%)	54 (14%)	5(2%)	39 (17%)	128(56%)
It is ok for a woman to have an abortion if she is not married and does not want to marry the man	57(25%)	42 (18%)	(0)	57 (25%)	72(32%)
Abortion in the first trimester (0-12 weeks)	34(15%)	48 (21%)	7(3%)	36(16%)	103(45%)
Abortion is ok in the second trimester and third (13-28 weeks)	55(24%)	52 (23%)	18(8%)	27(12%)	76(33%)

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
It is ok to terminate a pregnancy in the third trimester (29-40 weeks)	109(48%)	96(42%)	(0%)	11(5%)	34(15%

In addition, a total of 60% of the respondents disagreed with the statement that it was ok for a woman to have an abortion if the family has a very low income and cannot afford any more children with 47% strongly disagreeing. However, 73% were of the opinion that it was ok for a woman to have an abortion if she became pregnant as a result of rape.

The results further showed that 57% of the respondents disagreed with the statement that it was ok for a woman to have an abortion if she is not married and does not want to marry the man responsible for the pregnancy. The table further shows that 61% of the respondents agreed that it was ok to terminate a pregnancy in the first trimester (0-12 weeks) with 3% being neutral. However the attitude to have an abortion changes with the age of the pregnancy with 45% and 20% agreeing that it was ok to terminate a pregnancy in the second (13-28 weeks) and third (29-40 weeks) trimester respectively.

The theory of planned behaviour states that attitudes reflect an overall positive or negative evaluation of the behaviour. The study therefore asked the respondents to state whether they considered their attitude towards abortion positive or negative. Table 3.2 presents the summary of the responses.

Table 3.2: Respondents overall attitude towards abortion

Variable	Category	Frequency (n)	Percentage (%)
Attitude	Positive	84	37
	Negative	144	63
	Total	**228**	**100**

3.3 Sources of health messages

The respondents were asked to indicate their main source of reproductive health information and more specifically their source of abortion information. The results are shown in table 3.3.

Table 3.3: Main source of reproductive health and abortion information

Variable	Peer n (%)	Social group n (%)	Family n (%)	Media n (%)	Health Provider n (%)	Total n (%)
Main source of reproductive health information	67 (29)	73 (32)	6 (3)	34 (15)	48 (21)	**228 (100)**
Main source of abortion information	95 (42)	76 (33)	13 (6)	21 (9)	23 (10)	**228 (100)**

The study findings indicate that women considered their social group as a key source for reproductive health information while family members were least sought at 32% and 3% respectively. These findings agreed with that of Brown, et al., (2001) who found that parents are frequently not the primary source of information.

Table 3.3 further presents study findings on the main source of abortion information for the respondents. The table shows that peers play a significant role when women are seeking information on abortion. The study revealed that 42% of the respondents saw their peers as a main source of abortion information, while only 6% indicated family members as their main source on the same. Further findings indicate that only 10% sort information from health providers, hence showing the power of peers as opposed to seeking health messages from professionals. These findings agreed with those of Correia (2009) who found that most people received abortion information from their friends and peers. Results further indicate that though respondents sought information on abortion from various sources, their actions were the same as all the respondents in the study had experienced an abortion.

The study sought to establish if the respondents had access to reproductive health services including information from their nearest facilities.

Table 3.4 Access to reproductive health from nearest facility

Variable	Strongly disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly agree n (%)	Total n (%)
I have access to reproductive health services at my nearest facility	1 (1)	2 (1)	2 (1)	105 (46)	118 (51)	**228 (100)**

Almost all 223 (98 percent) disagreed that they had easy access to reproductive.

The qualitative responses indicated that they don't talk much about abortion. This therefore confirmed the reason as to why most women opted to have unsafe abortions since they were not exposed to health messages regarding the issue since the health care providers were not comfortable talking about abortion.

> Participant 1 '*We do not talk much about abortion but we talk about FP. I think not talking about it makes women terminate pregnancy without full information on their options and dangers of abortion in cases of unplanned pregnancies*'

3.4 Source of health messages and attitude toward abortion

The outcome association with attitude towards abortion was then measured using the Pearson chi-square test of association with source of health messages at 95% confidence level. P-values less than 0.05 for the independent and dependent variables were considered to be statistically significant at 95% confidence level.

The model used for logistic regression analysis of the moderating variables on independent variables against the dependent variable was expressed in the general form as given below;

$$\mathrm{Ln}\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 \dots + \beta_P X_P + \varepsilon$$

where :

$\left(\frac{p}{1-p}\right)$ = odds of attitude towards abortion

β_0 = constant

β_i' s = Regression coefficients

X_i' s = Predictor variables (source of health message)

ε = error term

Table 3.5 Association between source of health messages and attitude towards abortion

source health messages verses attitude towards abortion	P-Value	Test Statistic, Pearson Chi (df)
Source of health message		
Main source of reproductive health information	<0.0001	67.81 (4)
Main source of abortion information	<0.0001	36.03 (4)

Table 3.5 represents the association between source of health messages and attitude towards abortion categorized as positive or negative. The main source of reproductive health information and abortion information were significantly associated with the attitude of the women towards abortion (P-value <0.0001).

3.6. Logistic regression analysis between source of health message e and attitude towards abortion

Multivariate analysis used to examine the influence of source of health message and attitude towards abortion through binary logistic regression. The interpretations for this section are based on the odds ratios. Specifically, if the odds ratio is 1 it means that there is no effect hence they don't have p-values and 95% confidence intervals.

Table 3.6: Influence of health message sources on attitude towards abortion

Characteristic	Odds ratios	P-value	95% Confidence Interval
Source of health message			
Main source of reproductive health information			
Peer (Reference)	1		
Social group	0.011	<0.0001	0.001-0.086
Family	1		
Media (social/mass)	0.721	0.438	0.315-1.649
Health provider	1.351	0.436	0.634-2.881

Table 4.23 shows how sources of health messages influenced attitude towards abortion. Attitude was measured as either positive or negative with negative attitude being the reference dummy variable selected based on order levels. The results indicate that respondents whose main source of reproductive health information was a social group were 99 percent less likely to have a positive attitude towards abortion (OR=0.011; 95% CI=0.001-0.086) compared to those who had the information from a peer. However,

respondents whose main source of reproductive health information was media (social/mass) and health provider effect on attitude towards abortion was not statistically significant (OR=0.721; 95% CI=0.315-1.649 & OR=1.351; 95% CI=0.634-2.881 respectively) compared to those who had the information from a peer. Respondents whose main source of abortion information was a social group were 89 percent less likely to have a positive attitude towards abortion (OR=0.111; 95% CI=0.001-0.086) compared to those who had the information from a peer. Those who got the information from family were 75 percent less likely to have a positive attitude towards abortion (OR=0.248; 95% CI=0.064-0.959) compared to those who had the information from a peer. Respondents whose main source of abortion information was media (social/mass) and health provider effect on the attitude towards abortion was not statistically significant (OR=0.752; 95% CI=0.292-1.938 & OR=0.636; 95% CI=0.254-1.593 respectively) compared to those who had the information from a peer.

IV. CONCLUSIONS

The findings revealed that sources of health messages had a positive and significant influence on the respondent's attitude towards abortion and ultimately their decision making on abortion. The study also concluded that though the respondents had access to reproductive health information in facilities near them, they did not consider these facilities as their main source of health information on abortion and other reproductive health issues. The findings revealed that women's risk of abortion was associated with unreliable sources of information that led to poor knowledge.

It is evident from the study that there is need to strategically plan on the sources of health message and more specifically on reproductive matters including abortion for women of reproductive age. The study recommends support to health providers with health communication skills and tools so that they can address topics that are considered a taboo in the society like abortion.

The study also recommends development of reproductive health messages specifically targeting young people that can be easily accessed through social media.

REFERENCES

1. Ajzen, I., Fishbein. M. (1975). "A Bayesian analysis of attribution processes". Psychological Bulletin. 82 (2): 261. doi:10.1037/h0076477
2. Babbie, Earl R. (2009). The Practice of Social Research (12th Ed.). Wadsworth. pp. 436
3. Campbell O, Cleland J., Collumbien M., Southwick K. (1999).Social Science Methods for Research on Reproductive Health. World Health Organization.
4. Correia D.S., Monteiro V.G., Cavalcante J.C., Maia E.M. (2011). Female Teenager Students: What They Know About Induced Abortion Complications. Rev. Gaucha Emferm
5. Guest, G., Bunce, A., & Johnson, L. (2006). How Many Interviews Are Enough?: An Experiment with Data Saturation and Variability. Field Methods, 18(59), 5982
6. Mohamed, S. F., Izugbara, C., Moore, A. M., Mutua, M., Kimani-Murage, E. W., Ziraba, A. K., Bankole, A., Singh, S. D., & Egesa, C. (2015). The estimated incidence of induced abortion in Kenya: a cross-sectional study. BMC pregnancy and childbirth, 15, 185. https://doi.org/10.1186/s12884-015-0621-1
7. Kamala, B.A. & Aboud, S. (2006) Knowledge, attitudes and practices on HIV Prevention among Secondary School Students in Bukoba Rural, Kagera region, Tanzania. Dar es Salaam Medical Students Journal 14, 14-18.
8. Patton, M. Q. (1990). Qualitative evaluation and research methods (2nd ed.). Sage Publications, Inc.
9. Rehnström Loi, U., Lindgren, M., Faxelid, E. *et al.* (2018) Decision-making preceding induced abortion: a qualitative study of women's experiences in Kisumu, Kenya. *Reprod Health* **15,** 166.https://doi.org/10.1186/s12978-018-0612-6
10. Teddlie, C. & Tashakkori, A. (2010). Overview of contemporary issues in mixed methods research. In Tashakkori, A., & Teddlie, C. *SAGE handbook of mixed methods in social & behavioral research* (pp. 1-42). Thousand Oaks,CA: SAGE Publications, Inc. doi: 10.4135/9781506335193

AUTHORS

First Author – Agnes Mercy Muthoni Wahome, M.A Medical Sociology, Department of Media Technology and Applied communication, School of Mass Communication and Development Studies, College of College of Human Resource Development ,Jomo Kenyatta University of Agriculture and Technology, Kenya, mercywahome6@gmail.com.

Second Author – Prof. Hellen Mberia, PhD in Mass Communication, Department of Media Technology and Applied communication, School of Mass Communication and Development Studies, College of College of Human Resource Development, Jomo Kenyatta University of Agriculture and Technology, Kenya, hellenmberia@gmail.com.

Third Author – Dr. Geoffrey Serede Sikolia, PhD in Mass Communication, Assistant Professor of Mass Communication, Department of Journalism and Communication in the School of Communication, Cinematics and Animation, USIU, Kenya, gserede@usiu.ac.ke

Correspondence Author – Agnes Mercy Muthoni Wahome, mercywahome6@gmail.com. +254722802429.