Barriers to Cervical Cancer Screening among Women of Child-Bearing Age in Thyolo District, Malawi

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Abstract: Cervical cancer is a major global health issue and the second leading cause of cancer deaths among women. Few women have undergone screening in Malawi. Reasons for low uptake of free screening services in rural Thyolo have not been investigated thoroughly. As such, a cross-sectional study was carried out to examine barriers to cervical cancer screening. The questionnaire and focus group discussions were used to collect data. A total of 421 women of child-bearing age were recruited for the survey and 24 women participated in three focus group discussions. SPSS version 22 was used to analyze data using Chi-square statistical test and qualitative data was analyzed thematically. The study established that respondents had low level of knowledge of cervical cancer and screening. Though respondents had positive perceptions, the rate of cervical cancer screening was low (38%). From the quantitative analysis, the study established that some of the barriers to screening were 'fear' (emotions) (50.3%), laziness (23.4%) and perceived painful procedures (11.4%). The main themes arising from qualitative analysis were fear, painful feeling and embarrassment. Furthermore, the socio-demographic factors, level of knowledge on screening procedure and psychological factors associated with the screening, showed to hinder the uptake of cervical cancer screening. Community Health Nurses and Health Surveillance Assistants have a great task of sensitizing the rural masses on the importance of cervical cancer screening and encouraging them to get screened.

Keywords: Cervical Cancer, Cervical Cancer Screening, Pap smear, Barrier, Malawi

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1. Introduction

According to the World Health Organization (2020), cervical cancer is regarded as a major global health issue and the second leading cause of cancer deaths among women. Pap smear is a cervical cancer screening test aiming at detecting the disease at its early stages (Rasul, 2016). Awareness and uptake of cervical cancer screening services has remained poor over the years in low-income countries (Ekane, 2015). Mayo Clinic (2018) defined cervical cancer as a type of cancer that occurs in the cells

of the cervix — the lower part of the uterus that connects to the vagina. Cervical cancer is preventable and curable if detected early through Visual Inspection, with acetic Acid (VIA) (Lee, 2019). Malamulo Adventist Hospital (MAH) conducts cervical cancer screening using Pap smear and VIA. According to Specimen sent Logbook 2018 produced by the cervical cancer screening center at Malamulo, it was found that only few women accessed the screening services. The catchment area of MAH had a childbearing women population of 9,017 and 9,251 in 2017 and 2018 respectively, from 13 villages of Traditional Authority Khwethemule. In 2017, 587 women (6.5%) and in 2018,

only 360 women (3.9%) respectively came for Pap smear screening. Despite the hospital being within their reach, cervical cancer screening services being free and conducted on daily basis, client turn - out has been extremely low hence, the study was done to investigate further barriers following the specific study objectives: establishing socio-demographic characteristics associated with low uptake of cervical cancer screening among women of child – bearing age; determining the level of knowledge on cervical cancer and screening using Pap smear and VIA among women of child - bearing and exploring the perceived socio-cultural and service-related factors that may be hindering cervical cancer screening in TA Khwethemule in Thyolo District.

2. Literature Review

Cervical cancer is the fourth most common cancer among women worldwide, with the highest incidence in Low-Income Countries (LICs), particularly in Sub-Saharan Africa and with almost 90% of cervical cancer deaths occurring in resource-constrained countries (Cubie & Campbell, 2020). According to Tongton (2017), age, level of education and income were significantly associated with a higher knowledge level. Younger women with higher education and income levels were more likely to have adequate knowledge on cervical cancer. A study in Ghana found that there was an association between age and cervical cancer screening utilization, but the relationship was found to be statistically insignificant, $P = 0.09$ (Kokuro, 2017). Al-amro (2020), in a study done in Jordan, expressed that the socio-demographic factors associated with cervical cancer screening uptake were age, education level, and income level. Yang (2019) reported poor awareness of the benefits of routine health checks of cervical cancer screening where the majority 219 (56%) had knowledge of symptoms of cervical cancer. According to Mengesha, (2020) mass media was the major source of information on cervical cancer while in a study done in Botswana, respondents indicated that they had some knowledge on cervical cancer through brochures, posters and other printed material, whilst 320 (95.5%) from the news media (Tapera, 2017). According to (Getahun, 2013), in Northern Ethiopia, respondents' source of information was television and radio 301 (60.8%) followed by health professionals 173 (34.9%) and friends/relatives 107 (21.6%).Though there are measures put in place to prevent cervical cancer burden world-wide, there are several barriers to the uptake of cervical cancer screening in developing countries such as low levels of knowledge of cervical cancer, limited awareness of prevention and early detection methods (Modibbo, 2016). Al-Nagger (2010) stated that failure to screen has been associated with race and ethnicity, lower income status, limited education, non-English-speaking immigrants, and lack of health insurance.

A study done in Botswana 72.5% of the respondents did not have a Pap smear test done due to several reasons such as not knowing where the tests were done, some thought it was expensive to go for a test while some did not see the need to go for screening (Tapera, 2017). Kokuro (2017), reported that even with adequate knowledge of cervical cancer and a positive perception of cervical cancer screening, utilization of cervical cancer screening services was significantly low among women in the Kumasi metropolis of Ghana. Another study in Kenya highlighted that the majority (80.0%) of female study participants had never undergone a cervical screening exam (Gatumo, 2013). Al-amro (2020), in a study done in Jordan expressed that the socio-demographic factors associated with cervical cancer screening uptake were age, education level, and income level. Emotional responses to the screening procedure (fear, embarrassment, pain) were raised by many women, the potential for these emotions to be barriers seemed more prominent among Asian women (Marlow, 2015). Pain and discomfort associated with screening and embarrassment were also cited in a previous study in Malaysia (Al-Nagger, 2010). Nyamambi, (2020), reported that the majority of respondents had a positive perception, but rate of cervical cancer screening was very low. According to Msyamboza (2016), Malawi has the highest cervical cancer incidence and mortality in the world with age-standardized rate (ASR) of 75.9 and 49.8 per 100,000 population respectively. The National Cervical Cancer Control strategy, (2016 – 2020) by Malawi Government through Ministry of Health (MoH) revealed that cervical cancer accounts for 40% of all cancer cases among women and is estimated that 3, 684 women develop cervical cancer and 2, 314 die from the disease annually (Mwagwira, 2017).

3. Methodology

Study approach, design and population

The study employed a mixed methods study employing both quantitative and qualitative data collection methods, with a cross-sectional design. According to Cresswell (2014), this approach involves collecting, analyzing, and "mixing" both quantitative and qualitative research methods in a single study to understand a research problem. The study area was Traditional Authority Khwethemule, in Thyolo District, Malawi. This is the catchment area of MAH. The Hospital is 20 km away from Thyolo Boma and about 60 km away from Blantyre City. The study population comprised of women (421 in a survey and 24 in FGDs) of child – bearing age residing in this area. The economic activities of the people include farming and small businesses. The area has a total population of 40,284, and 9,275 women of child – bearing age as of February 2020.

Sample size determination

A random sampling procedure was used to sample 383 participants for an interview using a structured questionnaire. After adjusting the 383-sample size by 10% for non-response, 421 was reached. Women of child – bearing age 18 to 49 and above were recruited from each village. All participants were conveniently sampled as they were all found in their particular villages that were visited. The 24 women of child – bearing age that participated in focus group discussions were selected randomly among those who participated in the survey.

Data collection Tools

Validity and reliability

Validity and reliability improve the trustworthiness of the results obtained from a study. Basically, validity should consider the degree to which evidence and theory support the interpretation of results as obtained from some data collection tool (AERA et al.2014) and reliability should guide the consistency of obtaining the same or similar results if the tool is used multiple times on the same population or sample. Cronbach (1971) adds on to say that validity should account the evidence that the measure in question is related to other external variables or to predict future outcomes.

In order to ascertain this, a pilot study which included 32 women of child-bearing age was done, to establish the effectiveness of the data collection tools. Preliminary data was analyzed, and some questions were rephrased, updated, removed or new questions were included to ascertain that the data collected should be what was needed for the study. Further to this, four assistant researchers from Malamulo Hospital were trained on how best to administer the tools. Explanations were made to the participants so that they understand the essence of the study. All this was done in order to minimize errors which would otherwise affect the validity and reliability of the study's' results.

The study used both quantitative and qualitative approaches. FGDs and questionnaires were used. Actual data collection was done by the researcher, and the 4 Health Surveillance Assistants (HASs) who were trained in data collection. Data collection was done in such a way that care was ensured to identify and reflect on any bias relating to differential status between the researcher and participants, using introductory explanations of the researcher and colleagues, their neutrality and the study purpose, ensuring simple comprehensible language and maintaining careful non-judgmental listening, in order to minimize bias during the interview process.Three FGDs, each having 8 participants were conducted with women of child – bearing age from Chaoneka village, which had 47, Nkusa 53 and Nkunda 46 participants. Time taken for each group included 33:16 minutes, 13:51 minutes and 32:26 minutes, respectively. They were conducted on different days. Discussions were conducted in local language, Chichewa. The notes taken in Chichewa were translated into English and then transcribed, verbatim and subjected to thematic analysis. This was done manually. Both FGDs and survey were conducted in vernacular language.

Data analysis

Data analysis was done in two approaches, the quantitative and qualitative approaches. The merging of the two approaches gave a better and balanced understanding and a good platform for comparative analysis from the two approaches, to obtain a unified meaning. Quantitative data were analyzed using Statistical Package for Social Science (SPSS) Version 22. Analysis was done based on the research objectives. Descriptive statistics were obtained. The Chi-square test was done to check if there was association between knowledge cervical cancer and demographic data of the respondents and logistic regression analysis was done to ascertain the relationship between demographic factors and knowledge of cervical cancer and cervical cancer screening. Qualitative data analysis involved recording FGDs, which were later transcribed verbatim and subjected to thematic analysis. The data was analyzed through thematic analysis whereby one tries to find out something about people's views, opinions, knowledge, experiences or values from a set of qualitative data (Caulfield, 2019). Before analyzing the data, the transcripts were checked for accuracy and any mistakes corrected against the original recording. Analysis was performed in Chichewa language and only important quotes were translated to English for reporting purposes. The thematic analysis of the literature included: knowledge of cervical cancer, knowledge of cervical cancer screening, importance of cervical cancer screening and Barriers.

4. Results and Discussion

Demographic factors and their association with knowledge of cervical cancer

The Chi-square test was used to check if there was any association between knowledge of cervical cancer and demographic data of the respondents (mother's age, marital status, level of education, employment status and monthly income). The results are presented in Table 1.

Table1: Chi-Square tests on demographics data

Variable	Knowledge of Cervical Cancer			
	No *n=29(6.9%)*	*Yes* *n=393(93.1%)*	Overall N=421	Chi-Square (p-value)
Age				
18-30	27(93.1%)	250(63.8%)	277(65.8%)	
31-40	1(3.4%)	105(26.8%)	106(25.2%)	11.7 (0.007)[S]
41-49	1(3.4%)	35(8.9%)	36(8.6%)	
50 and above	0(0%)	2(0.5%)	2(0.5%)	
Marital status				
Married	22(75.9%)	312(79.6%)	334(79.3%)	
Single	3(10.3%)	27(6.9%)	30(7.1%)	
Divorced	1(3.4%)	27(6.9%)	28(6.7%)	5.9(0.220)[NS]
Separated	0(0.0%)	7(1.8%)	7(1.7%)	
Widowed	1(3.4%)	15(3.8%)	16(3.8%)	
Cohabiting	2(6.9%)	4(1.0%)	6(1.4%)	
Education level (Respondent)				
None	4(13.8%)	33(8.4%)	37(8.8%)	
Primary	22(75.9%)	263(67.1%)	285(67.7%)	
Secondary	3(10.3%)	92(23.5%)	95(22.6%)	3.6(0.287)[NS]
College/University	0(0.0%)	4(1.0%)	4(1.0%)	
Education level (Husband)				
None	5(17.2%)	43(11.0%)	48(11.4%)	
Primary	14(48.3%)	145(37.0%)	159(37.8%)	
Secondary	6(20.7%)	141(36.0%)	147(34.9%)	4.02(0.359)[NS]
College/University	0(0.0%)	10(2.6%)	10(2.4%)	
Not Applicable	4(13.8%)	53(13.5%)	57(13.5%)	
Ethnicity				
Lomwe	15(51.7%)	227(57.9%)	242(57.5%)	
Mang'anja	13(44.8%)	140(35.7%)	153(36.3%)	
Yao	0(0.0%)	10(2.6%)	10(2.4%)	1.52(0.738)[NS]
Ngoni	1(3.4%)	9(2.3%)	10(2.4%)	
Other	0(0.0%)	6(1.5%)	1.4%)	
Religion of respondents				
SDA/SDB	10(34.5%)	170(43.4%)	180(42.8%)	
CCAP	3(10.3%)	18(4.6%)	21(5.0%)	
Roman Catholic	3(10.3%)	55(14.0%)	58(13.8%)	5.27(0.217)[NS]
Muslim	1(3.4%)	3(0.8%)	4(1.0%)	
Other	12(41.4%)	146(37.2%)	158(37.5%)	
Employment status				
Employed	2(6.9%)	9(2.3%)	11(2.6%)	2.24(0.171)[NS]
Unemployed	27(93.1%)	383(97.7%)	410 (97.4%)	
Monthly income				
None	2(6.9%)	5(1.3%)	7(1.7%)	
<20 Thousand Kwacha	26(89.7%)	313(80.3%)	339(80.9%)	
21-40 Thousand Kwacha	0(0.0%)	56(14.4%)	56(13.4%)	12.3(0.010)[S]
41-60 Thousand Kwacha	1(3.4%)	3(0.8%)	4(1.0%)	
61+ Thousand Kwacha	0(0.0%)	13(3.3%)	13(3.1%)	

S: Significant at 0.05 significance level

NS: Not Significant at 0.05 significance level

The findings show that age and monthly income have a statistically significant impact on the knowledge of cervical cancer and that the social-demographic factors of marital status, level of education, ethnicity, employment and religion have no statistically significant impact on the knowledge of cervical cancer.

Demographic factors and their relationship with knowledge of cervical cancer

The Logistic Regression analysis was used to check if there was any relationship between knowledge of cervical cancer and demographic data of the respondents (mother's age, marital status, level of education, employment status and monthly income). The results are presented in Table 2.

Table 2: Logistic Regression analysis on demographic factors

Variable	OR (95% C.I)	p-value
Age		
18-30	Ref	
31-40	24.42(2.13-279.76)	0.010
41-49	9.49(0.91-99.19)	0.060
50 and above	(empty)	-
Marital status		
Married	Ref	
Single	1.83(0.15-22.72)	0.638
Divorced	2.04(0.12-33.98)	0.619
Separated	(empty)	-
Widowed	0.49(0.02-9.13)	0.633
Cohabiting	0.09(0.01-0.70)	0.022
Education level (Respondent)		
None	Ref	
Primary	2.24(0.47-10.56)	0.309
Secondary	3.34(0.42-26.23)	0.252
College/University	(empty)	-
Education level (Husband)		
None	Ref	
Primary	1.22(0.30-5.03)	0.781
Secondary	2.43(0.47-12.42)	0.286
College/University	(empty)	-
Not Applicable	1.80(0.17-18.43)	0.620
Ethnicity		
Lomwe	Ref	
Mang'anja	0.64(0.26-1.59)	0.336
Ngoni	0.12(0.01-1.82)	0.128
Other	(empty)	-
Yao	(empty)	-
Religion of respondents		
CCAP	Ref	
SDA/SDB	3.30(0.68-16.11)	0.140
Roman Catholic	6.79(0.87-52.85)	0.068
Muslim	0.47(0.02-10.24)	0.632
Other	4.04(0.84-19.48)	0.082
Employment status		
Employed	Ref	
Unemployed	4.07(0.57-29.21)	0.162
Monthly income		
None	Ref	
<20 Thousand Kwacha	11.08(0.90-136.00)	0.060
21-40 Thousand Kwacha	(empty)	-
41-60 Thousand Kwacha	1.13(0.02-60.11)	0.952
61+ Thousand Kwacha	(empty)	-

Age category 31 – 40 years, OR 24.42 with P value < 0.01 is statistically significant. Category 41 – 49 OR 9.49 with P value < 0.1 is statistically significant. Those cohabiting OR 0.09 with the P value < 0.05 is statistically significant. The rest of the variables (education level, ethnicity, religion and employment status), their P values > 0.05, are statistically not significant.

Demographic factors and their association with uptake of cervical cancer screening.

Among 421 study respondents, only 38% of women of child - bearing age have been screened for cervical cancer. In FGDs, the majority of participants indicated that they had not gone for cervical cancer screening before.

Knowledge of Cervical Cancer

Out of 393 respondents, 219 (55.7%) mentioned symptoms of cervical cancer while 174 (44.3%) did not. Some of the responses given were; 'Continuous bleeding from the vagina'. 'Offensive smell from the vagina.' 'Feeling pain when doing sex'. Those who were able to give symptoms of cervical cancer, represented 55.7%. This means more than half of the respondents showed knowledge of symptoms of cervical cancer. On cervical cancer screening procedure, out of 393 respondents, 175 (44.5%) managed to explain the cervical cancer screening procedure while 218 (55.6%) did not manage to explain. The majority of respondents 241 (62%) in the study could not mention the causes of cervical cancer. This meant that many women had low knowledge of causes of cervical cancer.

Table 3: Logistic Regression analysis showing relationship between demographic factors and their association with cervical cancer screening.

Variable	OR (95% C.I)	p-value
Age		
18-30	Ref	
31-40	4.19(2.44-7.22)	<0.001
41-49	6.61(2.64-16.50)	<0.001
Marital status		
Married	Ref	
Single	0.22(0.05-1.06)	0.059
Divorced	1.26(0.34-4.64)	0.727
Separated	0.20(0.02-2.65)	0.225
Widowed	1.05(0.21-5.21)	0.953
Cohabiting	2.07(0.22-19.20)	0.520
Education level (Respondent)		
None	Ref	
Primary	2.55(1.03-6.31)	0.042
Secondary	4.23(1.46-12.23)	0.008
College/University	11.10(0.66-185.70)	0.094
Education level (Husband)		
None	Ref	
Primary	0.78(0.33-1.83)	0.567
Secondary	0.72(0.28-1.84)	0.495
College/University	1.25(0.18-8.52)	0.814
Not Applicable	1.42(0.39-5.19)	0.592
Ethnicity		
Lomwe	Ref	
Mang'anja	0.77(0.47-1.28)	0.317
Yao	2.15(0.51-9.06)	0.296
Ngoni	0.89(0.21-3.83)	0.878
Other	0.17(0.01-2.15)	0.172
Religion of respondents		
CCAP	Ref	
SDA/SDB	2.19(0.62-7.76)	0.223
Roman Catholic	1.22(0.31-4.78)	0.780
Muslim	4.57(0.26-79.12)	0.296
Other	2.52(0.70-9.11)	0.158
Employment status		
Employed	Ref	
Unemployed	0.65(0.14-3.11)	0.588
Monthly income		
None	Ref	
<20 thousand	(empty)	-
21-40 Thousand	2.97(1.53-5.74)	0.001
41-60 Thousand	(empty)	-
61+ Thousand	0.80(0.20-3.14)	0.747

Age category 31 – 40 years, OR (4.19) with P value < 0.001, is statistically significant. They are more likely to have knowledge of cervical cancer screening than those in reference category. Category 41 – 49 years OR (6.61) with P value < 0.001 also is statistically significant.
Education level of respondents with OR (2.55) primary level with P value < 0.042, and OR (4.23) secondary level and P value < 0.008 were statistically significant. Monthly Income in category 21 – 40 thousand, OR (2.97) with P value < 0.001 is statistically significant. Marital status, education level of husband, ethnicity, religion and employment status, statistically not significant for their P value is > 0.05.

Demographic factors and their association with uptake of cervical cancer screening

The findings illustrate that the majority of respondents did not undergo cervical cancer screening in this study. Among 421 study respondents, only 38% of women of childbearing age had been screened for cervical cancer. In FGDs, the majority of participants indicated that they had not gone for cervical cancer screening before.

Source of Information

The majority, 277 (70.3%) got information from the health workers and 83 (21.1%) got information from their friends. This indicates that most of the information about cervical cancer is given by health workers in this community. Health workers, 277 (70.3%) were the main source of information in this study.

Knowledge of cervical cancer and screening

Few respondents, 145 (13%), had low knowledge on causes of cervical cancer in this study. The majority 219 (56%) respondents had knowledge of symptoms of cervical cancer. The majority of the respondents 264 (67%) in this study had knowledge of preventive measures and 175 (45%) were able to explain the procedure for either Pap smear or VIA screening. Those with high percentage had high knowledge than those with low percentage. The findings in FGDs in qualitative data showed that the majority of participants had knowledge of cervical cancer. Most women indicated that they had knowledge of the causes and symptoms of cervical cancer like: having multiple sexual partners, feeling pain during sex and having blood discharges.

On knowledge of cervical cancer screening, data in qualitative (FGD) showed that majority of participants had low knowledge of cervical cancer screening while those who had knowledge were only few. The findings revealed that only few women stated the importance of cervical cancer screening. The results showed that the majority of participants in FGDs stated barriers like: fear that the womb will be removed and will not be able to have children.

Hindrances to cervical Cancer Screening.

The majority (50.3%) responded that "Fear" was the main reason for not attending cervical cancer screening. This was followed by "just laziness" (23.4%). Most women did not want to attend the screening services because of laziness. The third main reason in the findings was that screening was "painful" (11.4%). The main barriers cited in qualitative data were "fear," "feeling pain" and "embarrassment."

Table 4 shows that most women disagreed to the perceptions that were given than those who agreed. The percentages which represented "agreed" were very low compared to those who "disagreed". The findings revealed that the majority of the respondents had positive perception on cervical cancer screening though the rate of cervical cancer screening was found to be low.

Table 4: Reported perceptions towards cervical cancer screening

Perception	Agree	Neutral	Disagree
Cervical cancer Screening is embarrassing	56(14.2%)	2 (0.5%)	336 (85.2%)
Cervical cancer is painful	76(19.3%)	12(3.0%)	306(77.7%)
Doing cervical cancer screening suggests that the person is having sex	43(10.9%)	4(1.0%)	347(88.1%)
Doing cervical cancer screening makes one worry	58(14.7%)	2(0.5%)	334(84.7%)
Cervical cancer screening takes away virginity	29(7.4%)	4(1.0%)	361(91.6%)
Not knowing where to go is the reason for not screening	61(15.5%)	3(0.8%)	330(83.7%)
Only those with babies need to do cervical cancer screening	31(7.9%)	1(0.3%)	362(91.9%)
Partner resisting cervical cancer screening	54(13.7%)	1(0.3%)	339(86%)
Cervical cancer screening is good for those with HIV	55(13.9%)		339(86%)
Only menopausal women are screened for cervical cancer	26(6.6%)	2(0.5%)	366(92.9%)
My church does not allow screening	27(6.9%)	3(0.8%)	364(92.4%)
My culture does not allow screening	22(5.6%)	1(0.3%)	371(94.2%)
Lack of female screeners contributes for not screening	40(10%)	1(0.3%)	353(89.6%)
Attitudes of health workers discourages screening	116(29%)	2(0.5%)	276(70%)
Lack of convenient clinic time is a barrier to screening	46(11.7%)	5(1.3%)	343(87%)
Fear is a barrier to screening	73(18.5%)	2(0.5%)	319(80.9%)
Fear of outcome/fatalism is barrier to screening	44(11%)	2(0.5%)	357(90.6%)

Discussion

The study made an attempt to explore barriers to cervical cancer screening among women of childbearing age. On demographic factors and their association with knowledge of cervical cancer, the findings show that age and monthly income have a statistically significant impact on the knowledge of cervical cancer. The findings are consistent with a study done in Eastern China where age, level of education and income were significantly associated with a higher knowledge level. Younger women with higher education and income levels were more likely to have adequate knowledge. It is possible that younger women pay more attention to their health and have more opportunities to obtain relevant information and thereby increase their knowledge (Tongton, 2017). The age, education level and monthly income of respondents have a significant impact on cervical cancer screening. The results are consistent with what was reported in the study in Ghana where there was an association between age and cervical cancer screening utilization, but the relationship was found to be statistically insignificant, $P = 0.09$ (Kokuro, 2017). Al-amro (2020) found similar results in a study done in Jordan where it was expressed that the socio-demographic factors associated with cervical cancer screening uptake were age, education level, and income level.

As observed from the study, majority of the participants had knowledge about symptoms of cervical cancer, represented 55.7%. More than half of the respondents showed knowledge of symptoms of cervical cancer. This is different to what was found in a study done in Ethiopia by Mengesha (2020), where only 19.9% of the respondents who had heard about it claimed they knew the symptoms of cervical cancer. The difference could be the setting of the study. This study was done in the catchment area of Malamulo Adventist Hospital, which is a health institution which gives health talks in all clinics compared to Gondar in Ethiopia. Most respondents 241 (62%), in the study had no knowledge on the causes of cervical cancer. This meant that many women had low knowledge of causes of cervical cancer. Similarly, only 93 (18.6%) of the participants who had heard about it knew causes of cervical cancer in a study done in Ethiopia which was also low (Mengesha, 2020). Majority of respondents (55.6%) had low knowledge on cervical cancer screening procedure. This has not been cited in the literature that was reviewed. The reason for low knowledge could be because of not attending the cervical cancer screening. The majority of the participants in FGDs could not state the importance of cervical cancer screening. The findings are similar to the study done in Eastern China which reported poor awareness of the benefits of routine health checks of cervical cancer screening (Yang, 2019). The majority 219 (56%) respondents had knowledge of

symptoms of cervical cancer. This is different to what was found in a study done in Ethiopia where only 100 (19.96%) of the participants who had heard about it claimed they knew the symptoms of cervical cancer (Mengesha, 2020). The difference could be the setting of the study. This study was done in the catchment area of Malamulo Hospital which is a health institution which gives health talks in all clinics compared to Gondar Town in Ethiopia. There was knowledge gap on importance of screening. Only 42% of participants were able to state the importance of cervical cancer screening. Similarly, in a previous study in Eastern China reported poor awareness of the benefits of routine health checks of cervical cancer screening (Tongton, 2017). This knowledge deficit among women of child – bearing age of Khwethemule can contribute to less uptake of cervical cancer screening hence, high morbidity and mortality among these women.

Health workers, 277 (70.3%) were the main source of information in this study. This is not consistent with the study done in Gondar Town, Ethiopia where mass media was the major source of information (Mengesha, 2020). Also, a study done in Botswana, all the respondents indicated that they had some knowledge on cervical cancer and that they got that knowledge from brochures, posters and other printed material, whilst 320 (95.5%) from the news media (Tapera, 2017). This indicates that most of the information about cervical cancer was given by health workers in this community. The availability of health workers, especially health surveillance assistants in the community enhance the spread of information about cervical cancer through health talks in different outreach clinics. As a result, this can increase the uptake of cervical cancer screening services at the hospital. The findings did not concur with the study done in Northern Ethiopia when respondents were asked about the source of information, television/radio was the predominant source 301 (60.8%) followed by health professionals 173 (34.9%) and friends/relatives 107 (21.6%) (Getahun, 2013).

On demographic factors and uptake of cervical cancer screening only 38% of women of childbearing age had been screened. In FGDs, the majority of participants indicated that they had not gone for cervical cancer screening before. The findings are consistent with a study done in Botswana where almost three quarters (72.5%) of the respondents did not have a Pap smear test done due to several reasons such as not knowing where the tests were done, some thought it was expensive to go for a test while some did not see the need to go for screening (Tapera, 2017). A similar finding was reported in Malaysia where only 22% of female university students had a Pap smear test done (Al-Nagger, 2010). The findings concur with a study which reported that even with adequate knowledge of cervical cancer and a positive perception of cervical cancer screening, utilization of cervical cancer screening

services was significantly low among women in the Kumasi metropolis of Ghana (Kokuro, 2017). Another study in Kenya highlighted that the majority (80.0%) of female study participants had never undergone a cervical screening exam (Gatumo, 2013). A study done in Zimbabwe, also found that 5.8% of the women had undergone cervical cancer screening while the rest had not. The number of the respondents who were not screened for cervical cancer was rather too high taking into account the fact that cervical cancer is the leading cause of death among women in Zimbabwe (Nyamambi 2020). Similarity in findings could be because the setting of the study was in rural areas. The participants in this study did not have the knowledge of cervical cancer screening because they did not attend the screening services where health workers like nurses teach about cervical cancer to clients who have gone for screening. The age of the respondents, education level of respondents and monthly income in the study were found that they had a statistically significant impact on cervical cancer screening. The results are consistent with what was reported in the study in Kumasi Ghana where there was an association between age and cervical cancer screening utilization, but the relationship was found to be statistically insignificant, p=0.09 (Kokuro, 2017). Similar findings are found in a study done in Jordan where it was expressed that the socio-demographic factors associated with cervical cancer screening uptake were age, education level, and income level (Al-amro, 2020). These factors influence women's screening practices and have been investigated by many researchers interested in the promotion of cancer screening. Further similar findings stated that socio-demographics such as age, marital status and educational level were reported in many studies as having an impact on women's choice and readiness to be screened for cervical cancer (Kokuro, 2017).

The findings on hindrances to cervical cancer screening, the majority cited "Fear" (50.3%) as the main reason (barrier) for not attending cervical cancer screening in the study. The results are consistent with what was reported in a previous study where emotional responses to the procedure (fear, embarrassment, pain) were raised by many women, the potential for these emotions to be barriers seemed more prominent among Asian women (Marlow, 2015). Interestingly, laziness (23.4%) came second as a barrier. This has not been cited in other previous studies that I have gone through. This could be perhaps because of the setting of the study which is in a rural area. Another reason could be because of illiteracy since the majority of the respondents were of low education. A feeling of 'I am not sick' could contribute to laziness for not accessing the cervical cancer screening service. "Pain" (11.4%) came third as a reason for not attending the screening service. Similar findings pain and discomfort associated with screening and embarrassment were also cited in a previous study in Malaysia (Al-Nagger, 2010). In this study both

qualitative and quantitative data revealed that few respondents had cervical cancer screening done. The majority of the respondents in this study had positive perception on cervical cancer screening though the rate of cervical cancer screening was found to be low. The findings are similar to those found in Kumasi Ghana (Kokuro, 2017) and Botswana (Nyamambi, 2020), where the majority of respondents had a positive perception but rate of cervical cancer screening was very low.

5. Conclusion and Recommendations

5.1 Conclusion

The study established that respondents had low level of knowledge in cervical cancer and cervical cancer screening. Though the respondents had positive perceptions, the rate of cervical cancer screening was low (38%). The study further established that majority of respondents (50.3%) cited the main reason for not attending cervical cancer screening to be "fear". This was followed by "just laziness" (23.4%) and the third main reason was that "it is painful" (11.4%). The main barriers cited in qualitative data were "fear", "feeling pain" and "embarrassment". The responses of the participants gathered during the FGDs indicated that most of these barriers to cervical cancer screening were not socio – cultural and health service – related as was anticipated, but psychological (emotional). The Socio-demographic factors, knowledge and psychological (emotional) factors, hindered the uptake of cervical cancer screening in the study.

5.2 Recommendations

Community health nurses and Health surveillance assistants should intensify the awareness campaign of cervical cancer and the importance of screening during outreach clinic days. On laziness, community health nurses and health surveillance assistants should intensify health talks on cervical cancer and screening in their communities to encourage women to access the screening service. Finally, further research to be conducted in other districts.

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