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Abstract

Back ground: Cervical cancer remains the most common cancer in women in Eastern Africa. The estimated Incidence of Cervical Cancer was about 42.7 and Mortality rate of 27.6 per 100,000. In Ethiopia, Current estimates indicate that every year 7095 women are diagnosed with cervical cancer and 4732 die from the disease. Due to lack of awareness about the disease, inadequacy or lacking of screening programs in less developed countries-Ethiopia, the incidence of the disease is increasing alarmingly. This study Assessed the Knowledge about cervical cancer and its associated factors among reproductive age women at Robe and Goba towns, Bale zone, south east Ethiopia, 2015.Methodology: A community based cross-sectional survey was conduct from February to May 2015 in Robe Goba towns, southeast Ethiopia. Three Hundred sixty three households having at least one women aged 15 -49 were included in the study. Systematic sampling method was used to select the households. A structured questionnaire was used to collect the data. Ten trained Urban Health Extension workers were collected the data. Binary and Multiple Logistic regression methods were use to identify independent predictors of the knowledge of women on the cervical cancer.

Index terms—

1 I. Introduction

ervical cancer is the second most common cancer in women worldwide. Globally, cervical cancer accounted for an estimated 528,000 new cancer cases worldwide and for 266,000 deaths in 2012 accounting for 7.5% of all female cancer deaths. Almost nine out of ten (87%) cervical cancer deaths occur in the less developed regions (1). Of these new cases of cervical cancer, 80% occur in developing countries, where it accounts for almost 12% of all female cancers (2).

The burden of cervical cancer is potentially large in Sub-Saharan Africa (3).Cervical cancer remains the most common cancer in women in Eastern Africa. The estimated Incidence of Cervical Cancer was about 42.7 per 100, 000 with highest cumulative Risk for Incidence of cervical cancer (4.56) and Mortality rate of 27.6 per 100,000 with the highest cumulative risk of cervical cancer mortality (4).

In Ethiopia, Current estimates indicate that every year 7095 women are diagnosed with cervical cancer and 4732 die from the disease. The projected number of new cervical cancer cases will almost double by 2025 (5).

The age standardized incidence rate of cervical cancer in Ethiopia was 26.4 per 100,000 and ASMR was about 18.4 per 100,000. Facility based studies have shown that cervical cancer was the leading types of cancer in Ethiopia (6).

Human papillomavirus (HPV) is a necessary cause of cervical (7). There are several risk factors for cervical cancer. Cervical cancer is commonly linked to sexual behaviours and risk factors, such as unprotected sex, having multiple sexual partners, high parity, having experienced a weakened immune system, Family history of cervical cancer, diets low in fruits and vegetables and poverty, Early age at first sex and early age at first pregnancy and long term use of oral contraceptive (8).

Though; cervical cancer is fully preventable and curable at low cost and at low risk, when screening to Methodology: A community based cross-sectional survey was conduct from February to May 2015 in Robe &

Goba towns, southeast Ethiopia. Three Hundred sixty three households having at least one women aged 15 -49 were included in the study. Systematic sampling method was used to select the households. A structured questionnaire was used to collect the data. Ten trained Urban Health Extension workers were collected the data. Binary and Multiple Logistic regression methods were use to identify independent predictors of the knowledge of women on the cervical cancer.

2 Results:

The response rate for this study was 100%. This study identified that 280(77.1%) of respondents had heard of cervical cancer, However, About 54% of women had inadequate knowledge about the disease. About 273(75.2%), 207 (57%) and 265 (73%) of the respondents were didn't know the main presenting sign and symptoms, prevention methods and treatment options of cervical cancer respectively. About 265(73%) of women did not know HPV that is the most common causes of cervical cancer. Women who ever visited HI were 8times more likely knowledgeable than who did not. Women who knew HPV are 9 times more likely knowledgeable than who did not and women who knew anyone with the case are 3.4 times more likely knowledgeable than those who did not know anyone with the disease.

3 Conclusion and recommendations:

This study found that knowledge about cervical cancer was inadequate though majority of the women had heard about the disease. Hence, Providing Health Education about the disease on its risk factors, sign and symptoms and prevention methods for the women has a crucial role in increasing their Knowledge and E facilitate the timely detection of early precursor lesions in asymptomatic women is available together with appropriate diagnosis, treatment and follow-up (3).

However, due to lack of awareness about the disease, inadequacy or lacking of screening programs in less developed countries-Ethiopia, the incidence of the disease is increasing alarmingly.

So, this study assessed the level of knowledge about cervical cancer among women at Goba and Robe towns of Bale Zone, Oromia region, Southeast Ethiopia.

4 II. Methodology a) Study area and period

Bale Zone is located in Oromia National Regional State, Ethiopia. According to the National Population and Housing Census projection carried out in 2012, the population of the town was 57031. Out of this 28,968 (50.8%) were males and 28,063 (49.2%) were females. The Zone has three administrative towns. There are three hospitals in these three towns, one for each town. The study was conduct from February to March 2015. Study design: Community based cross-sectional survey was employed. Population: All Households having reproductive age group women of Goba and Robe towns. Study populations were randomly selected women of age 15 -49 from the source population. Women who had cervical Cancer at a time of study were excluded.

5 b) Sample size determination

Sample size was determined based on one proportion formula considering 31% of knowledgeable level about the disease at Gonder town (10), 95% confidence level, and 5% marginal error.

The final sample size was 330. By including 10%, non-response rates the final sample size became 363.

Sampling procedures: Robe town has three kebeles and Goba town has two main kebeles. Two kebeles was taken randomly from Robe town and one kebele from Goba Town. Total number of Households found in each kebele was determined and sampling frame prepared. Then sample size was allocated proportionally to each kebele assuming that at least one eligible subject present in each Household. Finally, systematic sampling method was use to get the Household with eligible subjects. Whenever more than one eligible respondent in selected household, only one respondent was selected using lottery method.

Study Variables: Independent variable includes: Age, women educational status, husband educational status, occupation, Parity, History of Tobacco Smoking, Ever visiting Health institutions, History of Cervical cancer in the family, Sources of the information on cervical cancer and History of Sexually transmitted diseases. Dependent Variable was Knowledge level about cervical cancer. Operational definition: A series of questions regarding risk factors of cervical cancer, main sign & symptoms, treatment options and prevention measures was asked to assess the respondents' knowledge about cervical cancer. The reliability coefficient of these questions tested and has Cronbach's Alpha of 0.8. Then Mean score was used to classify the study subjects as having Adequate knowledge if they score above mean score and otherwise not.

6 c) Data collection tool and data collection procedures

Data collection tool was developed by reviewing different literatures. A Structured, pre-tested and interviewer administered questionnaire in Afaan Oromo language was used to collect data. This tool includes socio demographic part, questions regarding cervical cancer including its risk factors, main presenting sign and symptoms and its treatment options of cervical cancer. Ten diploma level health extension workers were collected the data.

7 Data quality Assurance:

Pretest performed on the tool on reproductive women at one of kebele in Goba town to check some ambiguous questions and unclear question and necessary amendment was made. Reliability test was done. Intensive training was given to data collectors regarding the purpose of the study and interview technique and subject selection for interview. The collected data were reviewed and checked for completeness on day of each data collection by assigned supervisors.2 ?? = Z p(1 ? p) d 2

Data analysis: Data were coded, entered and cleaned using SPSS version 19.0 for windows. The frequency distribution was made. Binary logistic regression was made to identify significantly associated independent variables to the dependent variable and those significantly associated on binary logistic regression was included in multivariable logistic regression. Stepwise method was used to identify independent predictors' knowledge level of women on cervical cancer. Statistical significance was declared at probability value of fewer than 0.05.

8 Ethical consideration: Madda Walabu University

Research and ethical committee was reviewed the Proposal to ensure that how ethical issues was handled. The town health office was asked for permission to conduct the study. Then kebele leader was given a permission letter before the actual study commenced.

Informed consent was obtained from each study

In case no eligible candidate in a selected household or the selected household was close, the interviewer were revisited on next day and collected data.

9 III. Results

10 a) Socio Demographic Characteristics of Respondents

The response rate for this study was 100%. The Age range of respondents were from 18-49, with mean of 28yearr (SD=7.5). One hundred thirty eight (38%) of respondents were at age category of 25-34.

A housewife was the most common occupation reported by respondents. Regarding the highest educational attainment, 113 (31.2%) of respondents were at secondary school (7)(8)(9)(10). Two hundred sixty Eight (73.8%) of them were Ever married (Table **??**).

11 b) Family history of cervical cancer and Sexually Transmitted Infection

This study revealed that only three respondents reported family history of cervical cancer. Five respondents reported history of Sexually Transmitted Infection.

12 c) Awareness of Cervical Cancer, its risk factors, sign and prevention and treatment option of cervical cancer

This study showed that 280(77.1%) of respondents had heard of cervical cancer and 83(22.9%) had not heard of it. The main sources of information for those who heard of cervical cancer were mass media 177(60.4%), friends/colleagues 64(21.8%) and Health Professionals 36(12.3%)(Table 3). Seventy one (19.6%) had knew anyone with cervical cancer. One hundred twenty seven (35.2%) knew that all women are at risks of developing cervical cancer.

Majority, 311(86.6%) did not knew possible detection of cervical cancer before its manifestation and 234(65.7%) did not knew the early detection cancer for easily cure of the cervical cancer. One Hundred ninety three (53.3%) knew that cervical cancer could result in infertility. Two hundred thirty five (65.1%) were reported that they were not knew the main risk factors of cervical cancer. About 273(75.2%), 207 (57%) and 265 (73%) of the respondents were didn't know the main presenting sign and symptoms, prevention methods and treatment options of cervical cancer respectively (Table **??**)

Of who knew the sign and symptoms of cervical cancer, about 27% of them knew offensive vaginal discharge, about 23% knew bleeding after coitus and 22.53% of them knew pain as the sign and symptoms of cervical cancer (Fig. **??**).

Among respondents who knew the prevention methods of cervical cancer, about 57% of them reported regular medical checkup followed by being faithful, delaying sexual debut, consistent condom uses and Vaccine for HPV (Fig. 2).

13 d) Knowledge of Cervical Cancer

One hundred ninety five (53.7%) of the respondent had Inadequate knowledge and 168(46.3%) were had adequate knowledge about cervical cancer.

14 e) Predictors of Knowledge of Cervical Cancer among women of Reproductive age group

To identify factors associated with knowledge cervical cancer among the respondents, first binary logistic regression was made. Then, those variables became significant on binary logistic were entered for Multivariable Logistic regression with Step wise method. Finally, Heard of HPV, Ever Visit of Health Institution and knowing any one with cervical cancer were found significant predictors of knowledge level of cervical cancer among the respondents.

Those women who had visited Health Institution were more likely knowledgeable compared to their counter parts (AOR=3.6, 95%CI: 1.69-7.85). Women who knew anyone with cervical cancer were more likely knowledgeable compared to those who didn't know anyone with cervical cancer (AOR=3.4, 95%Ci: 1.52-7.44). Who heard about HPV were more likely knowledgeable about cervical cancer than women who didn't heard of HPV (AOR=9.1, 95%CI: 4.15-20.12) (Table 3).

15 IV. Discussion

The risk of developing cervical cancer is high in the third world due to atypical socio-economic characteristics including poverty, illiteracy, high parity and less availability and utilization of screening facilities (9).

This study was assessed the knowledge of cervical cancers, its associated risk factors among Women age from 15 to 49 at Southeast Ethiopia because knowing cervical cancer, its causative/risk factors, symptoms and preventive measures of a cervical cancer can make all the differences, without this prevention is far more difficult. In this study 77.1% of respondents had heard of cervical cancer which is consistent with study conducted in North West Ethiopia, Gondar town (78.7%) (10) Lower than finding from Ghana (93, 0%) (11) and Kenya (87%) (12). However, higher than the findings from Nigeria (40.8%) (13). This gap might be due to the difference in study time, study setting and nature of the population involved in the studies conducted.

Mass Media (Television, Radio) (60.4%) was the main sources of information followed by Friends/Colleagues (21.8%), Health professionals (12.3%) and Health Extension Workers (5.5%). Even though there was figurative difference, this finding is consistent with finding of study conducted in Gondar town (10), the finding of the study in Nigeria (13) and Friends as the main sources of information for cervical cancer.

The common risk factor is sexually transmitted infection caused by Human Papilloma Virus (HPV) and it is estimated that 50 to 80 percent of sexually active women are infected at least once in their life time with the virus (14). However, this study found that 265(73.6%) respondents not knew or heard of HPV as causative agents of cervical cancer.

Prevention and early detection are keys to the reduction of incidence and progression of many chronic diseases including cancer (14). This study revealed that about 43% of the respondents knew that cervical cancer can be prevented. This finding is lower than the finding from Gondar town and South Africa (10,15).

This study found that about 67% of the respondents believe that cervical cancer can be cured if detected Early, which is higher than finding from Gondar town (10). About thirty four percent of the respondents believe that cervical cancer cannot be cured. This difference can be explained by the difference in the background of the study participants and differences in study setting. It also indicated the misconception and lacks of awareness about the disease in this community which may hinder prevention efforts.

Though majority of the respondents had heard of cervical cancer, Above half of the respondent were found to have Inadequate knowledge about cervical cancer. This is consistent with finding of studies from Nigeria (11), North Ethiopia, (10) and Ghana (13) which revealed that comprehensive knowledge about cervical cancer is low.

This study found that women who had ever visit health Institution were 3.6 times more likely knowledgeable about cervical cancer than their counterparts. This finding is in line with the finding from Gondar town, which revealed that women who ever visited Health Institutions were 8 times more likely knowledgeable about cervical cancer.

This might be due to that women who visited health institutions have a greater chance of getting more information from health professionals in the form of health education/information at the health Institutions.

In addition, Women who knew someone affected with cervical cancer were about 3.4 times more likely to have above median knowledge than who did not. This indicates that knowing person/women with the case helps the other people/women to know more about the diseases by reading or getting the information/ education from those women who are affected by the disease.

16 V. Conclusion

This study found that knowledge about cervical cancer was inadequate though majority of the women had heard about the disease. Knowing anyone with the cervical cancer, heard of HPV and ever visiting HI were found significant predictors of Knowledge of cervical cancer.

Hence, Providing Health Education about the disease on its risk factors, sign and symptoms and prevention methods for the women has a crucial role in increasing their Knowledge. This in turn reduces the morbidity and mortality of women due to this preventable and curable disease.

Launching public awareness program to further their knowledge by educating women about risk factors and benefit of screening using Pap smear test. The role of mass media campaign (use of FM radio which is currently

very available) should be considered in creating public awareness to further the knowledge by educating about risk factors, sign and symptoms, prevention methods of the cancer and benefit of pap smear test.

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Figure 1:

[1]

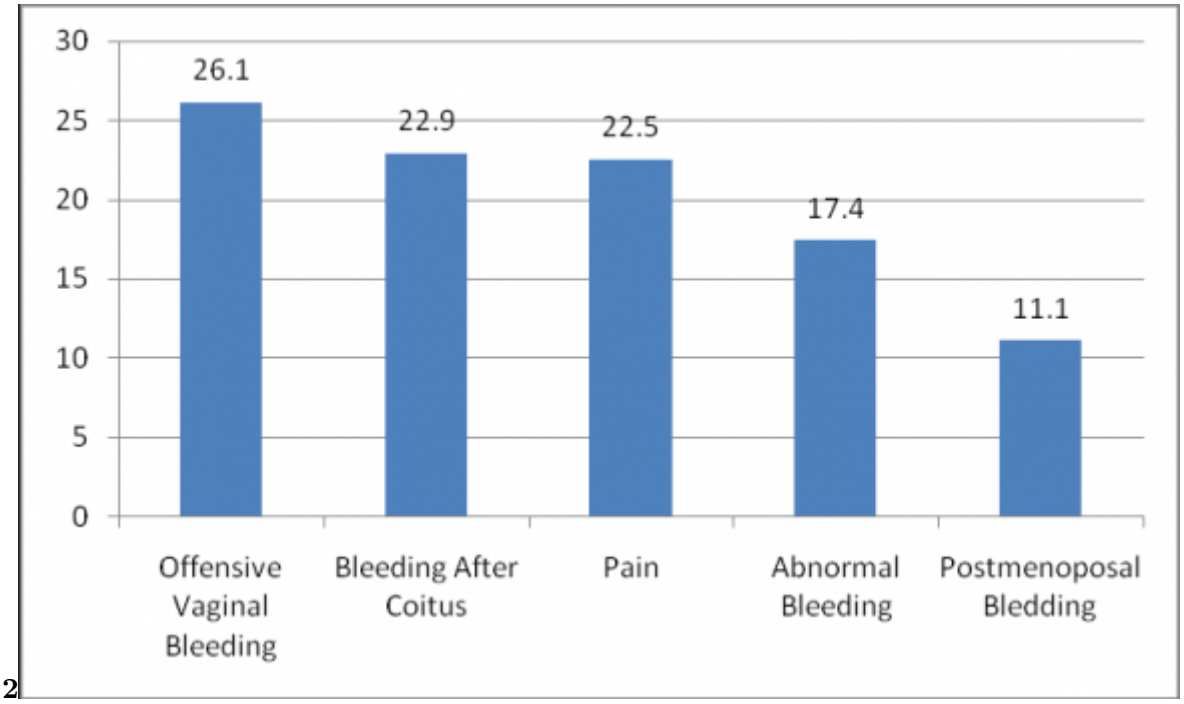

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Figure 2: Figure 2 :

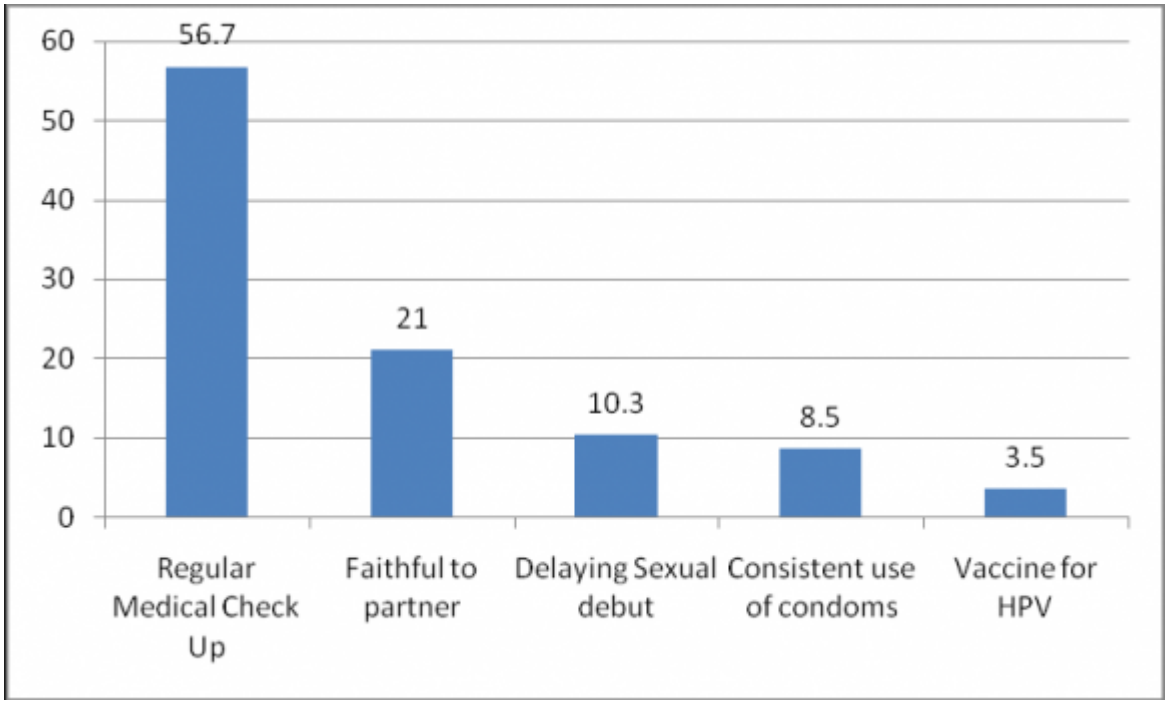

Figure 3:

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Figure 4: E

Year 2016 D D D D) (	Socio demographic variables Age of Women	15-24	Frequency 128	Percent 35.3
		25-34	138	38.0
		35 and above	97	26.7
	Occupation of women	Housewives	96	27.4
		Daily labor	47	13.4
		Students	79	22.6
		Teacher	34	9.7
		Merchant	61	17.4
		Health professionals	20	5.7
		Others**	13	3.7
	Education status of Women	Do not read and write	44	12.2
		Read and write	27	7.5
		Primary(1-6)	48	13.3
		Secondary(7-.10)	113	31.2
		Grade 11-12	50	13.8
		Certificate	8	2.2
		Diploma	55	15.2
		Degree above	18	5.0
	Marital status	Single	95	26.2
		Ever Married	268	73.8

** Indicates House maids, Farmers and Hair Dressers

Figure 5: E

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Independent predictors		P-Value	AOR	95.0% CI
Heard about HPV	Yes	0.000	9.1	4.15-20.12
	No		Reference	
Ever Visit Health Institution	Yes	0.001	3.6	1.69-7.85
	No		Reference	
Knew anyone with cervical cancer	Yes	0.003	3.4	1.52-7.44
	No		Reference	

AOR= Adjusted Odds Ratio, CI=Confidence Interval, P=Probability Value

Figure 6: Table 3 :

We thank the Madda Walabu University for Allowing Us to conduct this Research. We also thank the Madda Walabu University for financial support. We also thank the Bale zone Goba and Robe Towns health bureau of South East Ethiopia and the kebele administrators for facilitating the study. We also thank individuals who have participated in the study.

TB conceived and designed the study, analysed the data, interpreted the results and prepared the final version of the Manuscript. AA, DB and MT have contributed to the acquisition of data and drafting and critically revising manuscript. All authors read and approved the final manuscript.

.1 Competing interests

We declare that there are no any types of competing interest.

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[Lists of Tables and Figures Table 1: Socio Demographic Characteristics of Respondents ()] *Lists of Tables and Figures Table 1: Socio Demographic Characteristics of Respondents*, 2015. Bale Zone, Goba and Robe Towns, Southeast Ethiopia.

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