AWARENESS OF PROSTATE CANCER AND ASSOCIATED FACTORS AMONG MEN OLDER THAN 40 YEARS RESIDING IN mizan aman town, BENCH SHEKO ZONE, SNNPR SOUTH WEST ETHIOPIA, 2019


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JIMMA, ETHIOPIA

JIMMA UNIVERSITY INSTITUTE OF HEALTH, FACULTY OF HEALTH SCIENCES, SCHOOL OF NURSING AND MIDWIFERY

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#### Abstract

Background: Prostate cancer is the common cause of morbidity and mortality among men population older than 40 years. Evidence has shown that awareness about Prostate cancer plays a greater role in early detection of prostate cancer. However, there is a paucity of information regarding prostate cancer awareness level in Ethiopia in general and in Mizan Aman town in particular.

Objectives: To assess the awareness of prostate cancer and its associated factors among men older than 40 years in Mizan Aman town Bench Sheko Zone, SNNPR, South West Ethiopia, 2019.

Methods: Community based cross- sectional study was conducted from April 1-30, 2019 Mizan Aman town. A total of 322 Study subjects was selected from the total population of 1242 by using simple random sampling in Mizan Aman town. Data was collected by face to face interview using a structured questionnaire. Data was entered into Epi Data version 3.1 and analyzed by SPSS version 20. Descriptive statistics were used to summarize socio-demographic characteristics and personal history. Bi variable and multi variable logistic regression analysis were used to explore further variables that were associated with the level of awareness. Significant associations were declared at $P$-value <0.05. And results were presented in text, table, and chart.

Results: Of the total of 322 study subjects, $64 \%$ had a high level of prostate cancer awareness. Age (AOR=6.16, 95\%CI=2.62-14.47), occupation ( $A O R=4.684,95 \% ~ C I=(1.56-13.97)$ and economic status $(A O R=12.45, C I=95 \%(3.2-47.77)$ were significantly associated with the level of awareness.

Conclusion and recommendation : This study have revealed that $36 \%$ of men residing in Mizan Aman town had a low awareness of prostate cancer. Those older age,low economic status and,un employment were less likely hoodness of awareness. This indicates the need for collective effort to enhance the awareness of men regarding prostate cancer.


## Key words: Prostate cancer, awareness, men

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## Acronyms And Abbrevation



## CHAPTER ONE: INTRODUCTION

### 1.1 Background

Prostate cancer is an adenocarcinoma of the male prostate gland that developed due to certain predisposing risk factors.
Age: Sixty percent of cases of prostate cancer arise in men over 65 years of age. The disease is rare in men under 40(1).

Race or ethnicity: African-American men and Jamaican men of African ancestry are diagnosed with prostate cancer more often than are men of other races and ethnicities. Asian and Hispanic men are less likely to develop prostate cancer than are non-Hispanic white males(2).

Family history: Prostate cancer can run in families. A man whose father or brother has or had prostate cancer is twice as likely to develop the disease. The younger the family member is when he is diagnosed with prostate cancer, the higher the risk is for male relatives to develop prostate cancer. The risk of developing prostate cancer also increases with the number of relatives affected(2).
Nationality: Prostate cancer is more common in North America, Europe (especially northwestern countries in Europe), the Caribbean, and Australia. It is less common in Asia, Africa, and South and Central America(2).
Other factors: Diets high in red meats and fatty foods and low in fruits and vegetables appear to be associated with a higher risk of developing prostate cancer(2).

A patient with prostate cancer may have the several signs and symptoms but not limited to difficulty and frequency of urination, urinary retention, and decreased size and force of the urinary stream, blood in the urine or semen, painful ejaculation, hematuria, hip pain, perineal and rectal discomfort, anemia, weight loss, weakness, nausea, and oliguria(1).

Prostate cancer is diagnosed through Digital rectal examination (DRE), Prostate specific antigen (PSA) blood test, and Prostate biopsy(1).

Digital rectal examination (DRE): As part of a physical examination, health professional inserts a gloved and lubricated finger into your rectum and feels toward the front of your body. The prostate gland is walnut or larger sized gland immediately in front of the rectum, and beneath your bladder. The back portion of the prostate gland can be felt in this manner. Findings on this exam are compared to notes about the patient's prior digital rectal examinations(3).

PSA blood test: measures the level of a protein found in the blood that is produced by the prostate gland and helps keep semen in liquid form. The PSA test can indicate an increased likelihood of prostate cancer if the PSA is at an increased or elevated level or has changed significantly over time, but it does not provide a definitive diagnosis. Prostate cancer can be found in patients with a low PSA level, but this occurs less than $20 \%$ of the time(3).

Prostate biopsy: A biopsy refers to a procedure that involves taking a sample of tissue from an area in the body. Prostate cancer is only definitively diagnosed by finding cancer cells on a biopsy sample taken from the prostate gland(3).

Like any form of cancer, prostate cancer is managed by one or a combination of the following therapies. These are surgery, radiation, chemotherapy, and biological modifiers(1). The prognosis of the patient with prostate cancer depends on the time of detection. Earlier the detection of prostate cancer, the good prognosis, Thus, Screening is the only effective method of reducing prostate cancer associated morbidity and mortality. However, in most of the cases screening is done for self-referred individuals. Individuals who self-referred themselves have better awareness level compared to who usually do not. Thus, men who had awareness of risk factors (age older than 40 years) more likely seek early diagnosis and treatment of prostate cancer. A study has also shown that men with good awareness were more likely to have screened than men with poor awareness(4)

### 1.2 Statement of The Problem

Prostate cancer ranked as the second most frequent and the fifth leading cause of cancer death in the male population. Globally, in 2018 alone, there are an estimated 1.3 million new cases and 359,000 prostate cancer associated deaths (5). In Africa, a Pooled estimated Prostate Cancer Incidence Rate indicates 22.0/100,000 population with a Median Incidence Rate of 19.5/100,000 population(6). Cancer of the prostate is an important public health problem(7). The incidence of prostate cancer for those Africa America is high and an increasing trend in prostate cancer incidence with advancing age, as report show that the highest known incidence rates for prostate cancer in the world come from among African Americans(8). The incident of prostate cancer in Africa is high according to Systematic Review and Meta-Analysis on prostate cancer. According to 2014 WHO report, there are 1,318 cases of prostate cancer in Ethiopia (9). A cross-sectional study done in Addis Ababa Black Lion Hospital prostate cancer accounts for $2.6 \%$ of all cancer(10). Currently, the burden of prostate cancer in Ethiopia is high. According to the latest WHO data published in 2017, prostate cancer deaths in Ethiopia reached 1,335 or $0.21 \%$ of total deaths and ranks Ethiopia 154 in the world and the 34 leading cause of death in Ethiopia (11).

Prostate cancer diagnosis, prevention, and treatment in recent decades has been heavily influenced by awareness. Men who were aware of the DRE/ PSA test were more likely to have screened compared to men who were not aware of it(4). A good awareness or understanding of diseases is generally associated with a better health care-seeking attitude and behavior(12). According to a study in Uganda in (2014) and (2013), prostate cancer is detected at a more advanced stage in men living in Africa as they have low awareness(13)(14). Lower mortality is reported in developed countries due to early detection, while in developing countries, most cancer victims are diagnosed with late-stage incurable tumors (14).
However, though information about men level of awareness about prostate cancer is necessary to promote screening behavior, there is a paucity of information regarding prostate cancer awareness level in Ethiopia in general and in Mizan Aman town in particular. Thus, the main objective of this study is to assess the awareness level of prostate cancer and its associated factor.

### 1.3 Significance of The Study

The results from this study create baseline data for the health manager which helps to develop appropriate preventative measures and awareness programs. The study finding will alarm the community about screening from prostate cancer. Health professional was in an ideal position to use these research findings to improve the health of Mizan Aman men by teaching and counseling them about prostate cancer. It was providing data used as a basis for subsequent academic research.

## CHAPTER TWO: LITERATURE REVIEW

### 2.1 Awareness of Prostate Cancer

A good level of awareness of prostate cancer is likely to lead to early presentation of cases with a resultant reduction in the overall morbidity and mortality associated with the disease(15). Study shows that Level of awareness of prostate cancer and PSA screening was significantly higher in those with tertiary education and the awareness of prostate cancer is associated with educational level(15). The awareness level of prostate cancer is different throughout the world. A study was done in Riyadh, Saudi Arabia more than $80 \%$ of all ages had heard about prostate cancer and a higher level of education is significantly associated with the level of awareness(16). According to the study done in Nigeria among older men in oyo state, Most respondents (80.0\%) were aware of prostate cancer and Sources of information were friends/relatives ( $24.2 \%$ ), the mass media $(21.0 \%)(17)$. based on study in Kenya Most of the respondents $84.6 \%$ were aware of prostate cancer disease(18). A study was done in America (56.1 \% ) of them are a low awareness of prostate cancer and it is an association with marital status, educational level, income level. Education was positively correlated with participants' level of knowledge about prostate cancer (19).

### 2.2 Associated Factors

### 2.1.1 Age

The awareness of prostate cancer is a different in different age groups. Older Respondents are poor awareness than others on prostate cancer(18). However, according to the study done in Nigeria Older men scored better than younger men in awareness questions about prostate cancer(20).

### 2.1. 2 Ethnicity

A study done In South African show that there is a statically significant association between awareness of prostate cancer(13).

### 2.1.3 Religion

According to a study was done in Ghana, there is a significant association between religion and awareness of Prostate cancer. These are due to most churches in Ghana also engage in health talks for their congregation which could account for the high level of awareness among Christians(16). Religious status was significantly associated with the awareness of the respondents towards

Prostate cancer. Good awareness was observed among higher proportions of Christians compared to the other religious groups (16).

### 2.1.4 Income Level

General awareness of prostate cancer is high on those whose income is high and positively related to the level of income(19). Study done In Namibia show that there are associations between that monthly income and awareness of Prostate cancer(21).

### 2.1.5 Occupational

Occupational status had significant associations with the level of awareness of prostate cancer(22). According to a study was done in Namibia Occupational is associated with awareness(21).

### 2.1.6 Educational Status

Study in America shows that awareness is significantly associated with educational status(19). According to the study done in Nigeria educational status influenced screening practices(22). Studies in men staff in Nigeria suggests that the level of education is significantly related to the level of prostate cancer awareness. The level of awareness increased with increasing educational levels(20). A study done in Namibia shows that Educational status is associated with awareness(21).

### 2.1.7 Marital Status

Study in America shows that awareness is significanty associated with marital status(19). According to a study was done in Namibia marital status is associated with awareness(21).

### 2.1.8 Family History

A Study done in America show that Statistically significant associations were found between family history and screening for prostate cancer via the PSA method and being interested in screening in the future for prostate cancer. Although respondents with a family history of prostate cancer were willing to have future prostate cancer-screening tests (19).

### 2.1.9 Smoking

The level of awareness in Malaysia shows a significant association with the respondents' smoking habit. The percentage of good awareness is higher among those who smoked compared to those who were non-smokers. This could be due to the effect of anti-smoking messages that had been targeted at smokers. Smokers may have higher awareness of cancer as cancer is one of the diseases highlighted in the anti-smoking campaign(23).

### 2.5. CONCEPTUAL FRAMEWORK



Figure 1:Conceptual framework on the study of awareness of prostate cancer Redesigned from OLIVIA nakwafilaapril 2017

## CHAPTER THREE: OBJECTIVES

3.1 General Objective

* To assess the awareness of prostate cancer and its associated factors among men older than 40 years in Mizan Aman town Bench Sheko Zone in SNNPR southwest Ethiopia, 2019.
3.2 Specific Objectives

1. To determine the level of awareness of prostate cancer among men older than 40 years in Mizan Aman town Bench Sheko Zone in SNNPR southwest Ethiopia, 2019.
2. To identify factors associated with awareness of prostate cancer among men older than 40 years in Mizan Aman town Bench Sheko Zone in SNNPR southwest Ethiopia, 2019.

## CHAPTER FOUR: METHODS AND MATERIALS

### 4.1 Study area and period

The study was conducted from April 1-30, 2019 on men residents of Mizan Aman town. Mizan Aman, a capital town of Bench Sheko Zone, is located at 561 km far from Addis Ababa, the capital city of Ethiopia, Bench Sheko Zone is part of SNNPR Regional State. The town has a total population of 72860 from which 34765 are men and females are 38095 women. The total population of men older than 40 years is 1242 .

### 4.2 Study design

* A community based descriptive cross-sectional design was used to assess the awareness of prostate cancer and its associated factors among men older than 40 years in Mizan Aman town Bench Sheko Zone in SNNPR south west Ethiopia


### 4.3 Population

### 4.3.1. Source population

All men older than 40 years and residing in Mizan Aman town.

### 4.3.2. Study Population

Sampled men older than 40 years and residing in Mizan Aman town.

### 4.4. Eligibility criteria

### 4.4.1. Inclusion Criteria

Men whose age is older than 40 and residing in Mizan Aman town for more than 6 months.

### 4.4.2. Exclusion criteria

Men who were critically ill to give a response and who had known hearing impairment and mental illness.

### 4.4 Sample size determination and sampling technique

### 4.5.1. Sample size determination

The sample size was computed based on a single population proportion formula and using the prevalence of awareness $50 \%$ because of no study done in Ethiopia. Z-value of 1.96 at $95 \%$ confidence interval and margin of error $5 \%$.
$\mathrm{n}=\left(\underline{\mathrm{Z}}_{1-\alpha / 2}\right)^{2 *} \mathrm{P}(1-\mathrm{P})$
Where $\mathrm{n}=$ sample size
$\mathrm{N}=$ Total number of the study population
$\mathrm{Z}=$ The standard normal value at $(1-\alpha) \mathrm{CI}, \mathrm{z}=1.96$ at $95 \% \mathrm{CI}$
$\mathrm{P}=$ Estimate of the prevalence of drug use, $\mathrm{p}=0.5$
$\mathrm{D}=$ margin of error $=0.05$
$\mathrm{n}=$ the number of sample size is $\underline{384}$
The study population is less than 10,000 so I used reduction formula then $\mathrm{n}=293$ and $10 \%$ nonresponse rate may final n is 322 .

## 4..5.2. Sampling techniques

A simple random sampling method was used to Men in Mizan Aman town for the study until a target sample size of 322 was achieved.


### 4.5 Study variables

### 4.6.1. Dependent variables

$>$ Awareness of prostate cancer

### 4.6.2. Independent variables

* Age
* Education levels
* Occupation
* Religion
* Economic status
* Ethnicity
* Marital status
* Personal history
* Family history
* Physical inactivity
* Smoking
* Alcohol


### 4.6 Operational definitions

Awareness refers to: being aware of a situation or fact(24). In this study, it was measured by 24 item awareness questions adapted after reviewing of relevant literature.
High level of awareness: respondents who were able to answer greater than or equal to $50 \%$ of the total awareness questions appropriately(25).

Low level of awareness: Those respondents who were able to answer less than $50 \%$ of the total awareness questions appropriately(25).

### 4.7 Data Collection procedure

### 4.7.1. Data Collection Instrument

A data collection instrument was adapted from other similar studies done in other countries (16)(25). The tools have 24 items and arranged for four parts. Part I: sample characteristics (seven items), part II: history (two items), part III: risky lifestyle (three items), and part IV: prostate cancer awareness (12 items). The questioners translated from English to local language " Benchagna and Amharic by two language experts and then re-translated, back to English by other language experts to check for consistency.

### 4.7.2. Pretesting

The pretest was conducted on $5 \%$ of the sample ( 16 individuals) in neighboring Temenjeyaje town which is 18 Km from the study area. 1 week before the actual data collection takes place. The purpose of pretesting was to identify any ambiguity, consistency, and acceptability of the questionnaire, and then necessary corrections were made before the actual data collection. The validity of the questioners is cheeked by two experts. The reliability of the items had done through Cronbach alpha with ( 0.84 ) for awareness question.

### 4.7.3. Data collection techniques

Data were collected by three trained nurses through face to face interviews using Amharic and Benchagna version questionnaires. The data collection process was supervised by one supervisor and principal investigator. The roles of Supervisors were checking the completeness of the collected data daily.

### 4.8 Data quality control

To assure the quality of data, the following measures was undertaken, including pre-testing of the questionnaire, orientation was given to the data collectors and supervisors by the principal investigator on the objective of the study, maintenance of ethical standards, the methods of data collection, how to recruit simple random sampling, and data collectors were familiarized with data collection tools with respect to the study with practical exercises. The collected data was checked for its completeness at the end of the interview and at the end of the day by the principal investigator.

### 4.9 Data processing and Analysis

The completed questionnaire was checked for completeness, consistency and coded by the principal investigator. The principal investigator was entered the data using Epi-Data statistical software version 3.1 analysis through spss version 20. Then data cleanup was performed to check for, accuracy, consistency, \& values. Descriptive statistical analysis such as simple frequencies, measures of central tendency and measures of variability were used to describe the characteristics of participants such as socio-demographic characteristics, risk factors on prostate cancer.

Then, information was presented using frequency distribution table and chart. For analysis of the outcome variable, high-level awareness recoded as 1 and low-level of awareness recoded as 0 . Bi variate analysis was used to assess the association between each independent variable and the dependent variable by using Binary logistic regression. All variables with p-value $\leq 0.25$ were taken into the multivariable model to control for all possible confounders and the variables were selected by all method. The multi co-linearity test was carried out to see the correlation between independent variables using the co-linearity diagnosis test of standard error. The odds ratio was used as the primary measure of strength and direction of the relationship between the independent variables. Odds ratio along with $95 \%$ CI was estimated to identify factors associated with the level of awareness multivariate analysis in the binary logistic regression. The level of statistical significance was declared at p -value $<0.05$.

### 4.10 Ethical consideration

The proposal was submitted to the college of Health Sciences Research and Ethics Committee, of Jimma University for approval. Then, supportive letter of cooperation was obtained from Bench Sheko Zone Health Office and Mizan Aman Health Office, then objective and purpose of the study was verified briefly to the study participant and confidentiality was assured. Finally, verbal consent was obtained from study participants before conducting the interview.

### 4.11 Dissemination of findings

The findings of the study were presented to Jimma University Institute of Health. Hard and soft copies were submitted to the School of Nursing then, it was disseminated to Bench Sheko Zone Health Office, Mizan Aman town Health Office, and other concerned bodies through reports. Further, the findings of the study were published in a national or international journal.

## CHAPTER FIVE:RESULTS

### 5.1 Socio-Demographic Characteristics

A total of 322 respondents participated in the study with $100 \%$ response rate. The respondents have different socio demographic characteristics. The ages of the respondents ranged between 40-97 years with a median age of 49 years and the majority ( $63 \%$ ) of them were in the age category between $40-55$ years. The majority of $70.2 \%$ were married, $39.4 \%$ completed tertiary education, More than half $52.2 \%$ were government employers. Regarding religion majority of them were orthodox and protestant150(46.6\%),130(40.4\%) respectively and half them were Bench by ethnicity. Concerning their socioeconomic status, the mean monthly income of the study participants 3470 Birr for better on information(see table 1).

Table 1:Socio-Demographic Characteristics of men older than 40 years in Mizan Aman town Bench Sheko Zone in SNNPR south west Ethiopia ,2019.

| Variable | Categories | Frequency | Percent(\%) |
| :---: | :---: | :---: | :---: |
| Age | 40-55 | 203 | 63 |
|  | 56-65 | 57 | 17.7 |
|  | >65 | 62 | 19.3 |
| Marital status | Single | 23 | 7.1 |
|  | Married | 226 | 70.2 |
|  | Widowed | 33 | 10.2 |
|  | Divorce | 40 | 12.4 |
| Educational status | Illiterate | 26 | 8.1 |
|  | Literate | 49 | 15.2 |
|  | Primary | 55 | 17.1 |
|  | Secondary | 65 | 20.2 |
|  | Tertiary | 127 | 39.4 |
| Occupation | Unemployment | 30 | 9.3 |
|  | Daily worker | 39 | 12.1 |
|  | Merchant | 65 | 20.2 |
|  | Government employer | 168 | 52.2 |
|  | Farmer | 20 | 6.1 |
| Religion | Orthodox | 150 | 46.6 |
|  | Muslim | 18 | 5.6 |
|  | Protestant | 130 | 40.4 |
|  | Hawaryat | 24 | 7.5 |
| Ethnicity | Bench | 161 | 50 |
|  | Keffa | 71 | 22 |
|  | Amhara | 32 | 9.9 |
|  | Oromo | 18 | 5.6 |
|  | Sheko | 40 | 12.4 |
| Income | <2000 | 75 | 23.3 |
|  | 200-5000 | 219 | 68 |
|  | >5000 | 28 | 8.7 |

### 5.2 History and Risk factor

A relatively small number of participant reported the potential risk factors of prostate cancer. However, the reported magnitude was varied by the type of risk factors. For more detail information, please see table 2 below.

Table 2: History and risk factor of prostate cancer of men older than 40 years in Mizan Aman town Bench Sheko Zone in SNNPR southwest Ethiopia ,2019.

| Variable | Frequency | Percent |
| :--- | :--- | :--- |
| Relative have prostate canncer |  |  |
| Yes | 20 | 6.2 |
| No | 302 | 93.8 |
| Who have prostate cancer | 4 |  |
| Father | 7 | 1.2 |
| Brother | 9 | 2.2 |
| Other | 30 | 2.8 |
| Regular physical exercise | 292 | 9.3 |
| Yes | 90.7 |  |
| No | 30 | 9.3 |
| Drinking alcohol regularly | 292 | 90.7 |
| Yes |  |  |
| No | 49 | 15.2 |
| Smoke regularly | 273 | 84.8 |
| Yes |  |  |
| No |  |  |

### 5.3 Prostate cancer awareness

Regarding prostate cancer awareness question the few respondents know about the screening method, alcohol, high-fat diet and smoking are the risk factor for prostate cancer. for further see table 3.

Table 3: Awareness question about prostate cancer in men older than 40 years in Mizan Aman town Bench Sheko Zone in SNNPR southwest Ethiopia ,2019

| Awareness question | Yes(no\&\%) | No (no\&\%) |
| :--- | :--- | :--- |
| Prostate cancer is a common malignancy | $198(61.5)$ | $124(38.5)$ |
| Risk of prostate cancer increases with age | $206(64)$ | $116(36)$ |
| Is It important to be screened for prostate cancer | $219(68)$ | $103(32)$ |
| DRE\&PSA tests is prostate cancer screening or diagnosis | $14(4.3)$ | $308(95.7)$ |
| The difficulty of micturition a complaint of prostate cancer | $190(59)$ | $132(41)$ |
| Prostate cancer is curable | $220(68.3)$ | $102(31.7)$ |
| Prostate cancer is preventable disease | $213(66.1)$ | $109(33.9)$ |
| Physically inactive people are risky for prostate cancer | $204(63.4)$ | $118(36.6)$ |
| Prostate cancer can cause death | $212(65.8)$ | $110(34.2)$ |
| Drinking alcohol is a risk factor for prostate cancer | $32(9.9)$ | $290(90.1)$ |
| A high-fat diet is a risk factor for prostate cancer | $43(13.4)$ | $279(86.6)$ |
| Smoking is a risk factor for prostate cancer | $36(11.2)$ | $289(88.8)$ |

## LEVEL OF AWARENESS



Figure 3: Level of awareness of prostate cancer in men older than 40 years in Mizan Aman town Bench Sheko Zone in SNNPR southwest Ethiopia ,2019

### 5.4.1. Bi variate logistic regression analysis

On bi variate logistic regression analysis the finding showed those men whose age is (40-55) was 4.65 times more likely in awareness level than compare to those whose age is ( $>65$ )( $\mathrm{COR}=4.65$ ); educational status those whose educational level is tertiary level was 6.99 times more likely in awareness than compare to those who was illiterate(COR=6.99), regarding to monthly income participant whose income level is greater than 5000 was 16.5 times more likely in awareness of prostate cancer than those whose income is less than two thousand(COR=16.5); concerning to occupation respondent who was government employer was 15.7 times more likely awareness in prostate cancer than those of unemployed $(\mathrm{COR}=15.7)$;those who had positive history in prostate cancer was 3.39 times more likely in level of awareness than compare to those who had no history(COR=3.39).

### 5.4.2 multivariate logistic regression analysis

On multivariate logistic regression analysis age, occupation and economic status were showed statistically significant association with level of awareness of prostate cancer.
Regarding age respondents whose age(40-55years old) was 6.16 times more likely awareness in prostate cancer than those whose age is $(>65)(\mathrm{AOR}=6.16)$.

Concerning to occupation were those who had government employer was 7.57 times more likely awareness in prostate cancer than unemployers(AOR=7.57).

Regarding to economic status, those whose monthly income level had >5000 Birr were 12.45 times more likely awareness in prostate cancer compare to those whose income is <2000 Birr.

Table 4:Bivarite and multi variate logistic regression for the study participant men older than 40 years in Mizan Aman town Bench Sheko Zone in SNNPR southwest Ethiopia ,2019

| Variables | level of awarn low level of awarnes in Number, \% | ness <br> high level of awarnes in <br> Number, \% | $\operatorname{COR}(95 \% \mathrm{CI})$ | P*val ue | AOR( 95\% CI) | $\mathbf{P} * \text { val }$ <br> ue |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  |  |  |  |  |  |
| $40-55$ | 49(24.1) | 154(75.9) | 4.65(2.55-8.48) | 0.00 | 6.2(2.91-13.21) | <0.001 |
| 56-65 | 30(52.6) | 27(47.4) | 1.33 (0.64-2.75) | 0.44 | 1.65(0.69-3.9) | 0.26 |
| >65 | 37(59.7) | 25(40.3) | 1 |  | 1 |  |
| Marital Status |  |  |  |  |  |  |
| Single | 7(30.4) | 16(69.6) | 1 |  |  |  |
| Married | 73(32.3) | 153(67.7) | 0.91(0.36-2.33) | 0.86 |  |  |
| Widowed | 20(60.6) | 13(39.4) | 0.28(0.09-0.88) | 0.03 |  |  |
| Divorce | 16(40) | 24(60) | 0.66(0.22-1.95) | 0.45 |  |  |
| Religion |  |  |  |  |  |  |
| Orthodox | 53(35.3) | 97(64.7) | 1 |  |  |  |
| Muslim | 10(55.6) | 8(44.4) | 0.44(0.16-1.17) | 0.1 |  |  |
| Protestant | 45(34.6) | 85(65.4) | $1.03(0.63-1.69)$ | 0.9 |  |  |
| Hawaryat | 8(33.3) | 16(66.7) | 1.09(0.44-2.7) | 0.85 |  |  |
| Income |  |  |  |  |  |  |
| <2000 | 55(73.3) | 20(26.7) | 1 |  |  |  |
| 2000-5000 | 57(26.0) | 162(74.0) | 7.8(4.3-14.16) | 0.000 | 4.51(2.18-9.34) | <0.001 |
| >5000 | 4(14.3) | 24(85.7) | 16.5(5.09-53.5) | 0.000 | 12.45(3.2-47.77) | <0.001 |
| Educational Status |  |  |  |  |  |  |
| Illitrate | 17(65.4) | 9(34.6) | 1 |  |  |  |


| Litrate | $29(59.2)$ | $20(40.8)$ | $1.3(0.49-3.5)$ | 0.6 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Primary | $21(38.2)$ | $34(61.8)$ | $3.06(1.16-8.1)$ | 0.024 |  |  |
| Secondary | $22(33.8)$ | $43(6.2)$ | $3.69(1.4-9.62)$ | 0.008 |  |  |
| Teritary | $27(21.3)$ | $100(78.7)$ | $6.99(2.8-17.4)$ | 0.000 |  |  |
| Occupation |  |  |  |  | 1 |  |
| Unemploye | $22(73.3)$ | $8(26.7)$ | 1 |  |  |  |
| d |  |  |  |  |  |  |
| Daily | $28(71.8)$ | $11(28.2)$ | $1.08(0.37-3.14)$ | 0.89 | $0.84(0.25-2.75)$ | 0.77 |
| Merchant | $27(41.5)$ | $38(58.5)$ | $3.87(1.5-9.99)$ | 0.005 | $2.45(0.82-7.27)$ | 0.106 |
| Governent | $25(14.9)$ | $143(85.1)$ | $15.7(6.3-39.2)$ | 0.000 | $7.58(2.7-21.23)$ | $<0.001$ |
| Farmer | $14(70.0)$ | $6(30.0)$ | $1.18(0.34-4.13)$ | 0.797 | $0.79(0.19-3.23)$ | 0.74 |
| Ethnicity |  |  |  |  |  |  |
| Bench | $60(37.3)$ | $101(62.7)$ | 1 |  |  |  |
| Keffa | $19(26.8)$ | $52(73.2)$ | $1.63(0.88-3)$ | 0.12 |  |  |
| Amhara | $10(31.2)$ | $22(68.8)$ | $1.3(0.58-2.95)$ | 0.52 |  |  |
| Oromo | $11(61.1)$ | $7(38.9)$ | $0.38(0.14-1.03)$ | 0.06 |  |  |
| Sheko | $16(40)$ | $24(60)$ | $0.89(0.44-1.81)$ | 0.75 |  |  |
| Any relative who have prostate problem |  |  |  |  |  |  |
| Yes | $3(15)$ | $17(85)$ | $3.39(0.97-11.88)$ | 0.06 |  |  |
| No | $113(37.4)$ | $189(62.6)$ | 1 |  |  |  |
| Drinking alcohol |  |  |  |  |  |  |
| Yes | $14(46.7)$ | $16(53.3)$ | 1 |  |  |  |
| No | $102(34.9)$ | $190(65.1)$ | $1.63(0.77-3.5)$ | 0.21 |  |  |
| Smoke |  |  |  |  |  |  |
| Yes | $18(36.7)$ | $31(63.3)$ | 1 |  |  |  |
| No | $98(35.9)$ | $175(64.1)$ | $1.04(0.55-1.95)$ | 0.91 |  |  |

## CHAPTER SIX: DISCUSSION

The findings of the study show that $64 \%$ of men residing in Mizan Aman town have a high level of prostate cancer awareness.

The awareness of prostate cancer is different. Most of the study participant had awar about prostate cancer is a common malignancy in men 198(61.5\%), the risk of prostate cancer increase with age 206(64\%), it is important to screen for prostate cancer 219(68\%), it is curable $220(68.3 \%)$, preventable $213(66.1 \%$ ) and it cases death ( $212(65.8 \%$ ). On the other hand, majority of the respondent had low awareness on screening method $14(4.3 \%)$ and the risk factor of prostate cancer such as alcohol 32(9.9\%), high fat diet 43(13.4\%), smoking 36(11.2\%). However, the study finding in Riyadh, Saudi Arabia shows that smoking is a risk factor for prostate cancer had (41.5\%) different might be due to sample characteristics of those of outpatient(16). However, prostate cancer causes curable is inline similar to those study Riyadh, Saudi Arabia (70.2\%)(16). However, the level of awareness regarding prostate cancer varies by sample characteristics such as age, economic status, and occupation. This may indicate that there is a significant number of men who might likely to have a late diagnosis of prostate cancer which could lead to poor prognosis. The level of prostate cancer awareness in the current study is by far less than the findings of the study conducted in Oyo State, Nigeria, which was $80 \%(26)$. This variation can be attributed to the difference in sample characteristics and information about prostate cancer. In Nigeria more research done on the awareness, perception, knowledge, attitude, and practice of prostate cancer, this may indicate that more cases of undiagnosed prostate cancer in Ethiopia than in Nigeria.
However, according to the a case study done in rural Mhondoro-Ngezi, Kadoma District, Zimbabwe the awareness of prostate cancer is $21 \%$ it might be due to difference in socio demographic status of the study participant due to the rural residency and study design that the study is used which show that those who live in urban were more aware about prostate cancer this implies they use screening service as better than those of rural(27).

Other important findings of the current study are age, economic status and occupation are significantly associated with the level of awareness. Relatively younger age, higher income and being government employed increase the chance of being award to prostate cancer. For example, poor awareness on prostate cancer were older relative to those with good awareness.

Regarding age, those whose age were 40-55 are almost six times more likely award about prostate cancer than who is $>65$ years. This is in line with the study findings on adult males over the age of 40 years in Turkish(28). This shows men whose age is greater than 60 was associated with awareness of prostate cancer in it diagnosis early it could be curability, treated, and for medical cheek up. This might show that older age was more awarded about prostate cancer than other these could be due to they had to get information more than others on the diagnosis and following cheek up which Imlay that older population more uses of screening service when they were knowledgeable about it(28).

Concerning to monthly income those whose income is between the range of 200-5000 were higher level of awareness than those whose income is <2000 this finding is similar to the study done in Turkish based on monthly income demonstrated that groups with middle-income level had undergone medical examinations statistically significantly more when compared with other groups $(\mathrm{p}=0.041)(28)$. This implicate that when the income level is increase leads to increase health seeking behavior.

According to a study was done in Ghana male teachers in the Sunyani municipality all men $(100 \%)$ study respondents were aware of prostate cancer. Which might be due to the occupation they get information more than others through media, reading different book and other sources of information which imply that being an employer is one of a factor to seeking health(29). Though this study is the first in its kind in Ethiopia in general and Mizan Aman in particular, many factors may limit the findings of this study. Response to Such kinds of study items may require health literacy and age-related experience. Besides the absence of information on health literacy status, there is not an age registry system in the country, they may underreport or over report their age.

## CHAPTER SEVEN: CONCLUSION AND RECOMMENDATION

### 7.1 Conclusion

This study has revealed that $36 \%$ of men residing in Mizan Aman town had a low level of prostate cancer awareness. Those elderly, low economic status and,un employment had less likely hoodness of awareness.

### 7.2 Recommendation

Based on the study findings the following recommendations were forwarded to a different concern bodies. The means to enhance the awareness of men regarding prostate cancer needs for a collective effort from different stakeholders.particularly should design an awareness creation strategy using an input of the current findings. In collaboration with Mizan Aman Education Bureau, Mizan Aman Health Bureau should develop adult-centered educational programs could be created for those low economics status, unemloyer and aged people in special. further more, a large scale multi-centered, mixed-method future research is required.

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## Anexes

## Jimma University

## School of Nursing and Midwifery

## Annex 1: Participant Information Sheet and Informed Consent Form

My Name is --------------------------. I am working as a data collector for the study being conducted in this community on the awareness of prostate cancer and its associated factors amongst men older than 40 years in Mizan Aman town by Ashenafi assefa, who is studying for his Master's degree at Jimma University, School of Nursing and Midwifery. I kindly request you to give your attention to explain about the study and being selected as a study participant.
The study title: To assess the awareness of prostate cancer and its associated factors amongst men older than 40 years in Mizan Aman town, Southwest Ethiopia

Purpose of the study: The purpose of the study was to determine the awareness of prostate cancer and its associated factors amongst men in Mizan Aman town, Thus, the findings was used as evidence and as input for the Mizan Aman health office and as well as Zonal health bureau and other organizations to address the problems related to Prostate Cancer. The findings will also use as an input for developing policy and strategy. Moreover, the aim of this study is to write a thesis as a partial requirement for the fulfillment of a Master's of Adult health nursing for the principal investigator.

Procedure and duration: I am interviewing you using questionnaire to investigate determinants of Prostate Cancer. Therefore, provide me with pertinent data that is helpful to the study. All of your responses and procedures done are completely confidential. You are kindly requested to answer every question and all the procedures, but you may stop at any time you want to. However, your honest answers to these questions were help for better understanding of determinants of Prostate Cancer. The total time needed for answering the questions was about 20 to 30 minutes. Risks and benefits: The risk of participating in this study is very minimal, but only taking 20 to 30 minutes from your time. There would not be direct payment for participating in this study.

But the findings from this research may reveal important information for the Mizan Aman health office and government strategy implementers.

Confidentiality: The information you provide us was confidential. There is no information that is identifying in particular. The findings of the study are general for the study community and was not reflect anything particularly of individual persons. The questionnaire is coded to exclude showing names. No reference was not make in oral or written reports that could link participants to the research.

Rights: Participation for this study is fully voluntary. You have the right to declare to participate or not in this study. If you decide to participate, you have the right to withdraw from the study at any time and this is not labeling you for any loss of benefits which you otherwise are entitled. You do not have to answer any question that you do not want to answer.

Contact address: If there are any questions or enquires any time about the study or procedures, please contact in this address.

Principal investigator: Ashenafi assefa, Email: asheashu21@gmail.com or Mob. 0947094256
If respondent agree:

## If respondents disagree then stop here.

Annex 2: Questionnaires (English Version) Study participants
Code $\qquad$
Date $\qquad$
Keeble $\qquad$
PART I: SOCIO DEMOGRAPHIC CHARACTERISTICS

| Items no | Items | Response |
| :---: | :---: | :---: |
| 101 | Age? | - |
| 102 | Marital status? | 1. Single <br> 2. Married <br> 3. Widowed <br> 4. Separate or divorced |
| 103 | Educational status? | 1. Illiterate (can't read \&write) <br> 2. illiterate (read \& write) <br> 3. primary <br> 4. Secondary tertiary education |
| 104 | Occupation? | 1. Unemployed 2. Daily labor <br> 3. Merchant 4. Government Employee <br> 5. Others(specify) |
| 105 | Religion? | 1. Orthodox <br> 2. Muslim <br> 3. Protestant <br> 4. Others(specify) |
| 106 | Ethnicity? | 1. Bench <br> 2. keffa <br> 3. Amhara <br> 4. Oromo <br> 5. Others(specify) |
| 107 | What is your average monthly income? | $\qquad$ birr |


|  |  |  |
| :--- | :--- | :--- |

## PART II: PROSTATE CANCER RISK FACTORS

| Items no | Items | Response |
| :--- | :--- | :--- |
| $\mathbf{2 0 1}$ | Do you have any relative/s who ever had <br> prostate problems? | 1. yes <br> 2. no |
| $\mathbf{2 0 2}$ | IF yes to question 201, who is? | 1. Father <br> 2. brother <br> 3. other specify |

## PART III: RISK FACTOR FOR PROSTATE CANCER

| $\mathbf{3 0 1}$ | Do you do regular physical exercise? | 1. Yes <br> 2. No |
| :--- | :--- | :--- |
| $\mathbf{3 0 2}$ | Do you drink any form alcohol regularly? | 1. Yes <br> 2. No |
| $\mathbf{3 0 3}$ | Are you a regular a regular smoker? | 1. Yes <br> 2. No |

## PART IV: ASSESS THE AWARENESS OF MEN ON PROSTATE CANCER

| Items no | Items | Response |
| :--- | :--- | :--- |
| $\mathbf{4 0 1}$ | Prostate cancer is a common malignancy <br> occurring in men? | 1. yes <br> 2. no <br> 3. I don't know |
| $\mathbf{4 0 2}$ | The risk of prostate cancer is increases with age? | 1. yes <br> 2. no <br> 3. I don't know |
| $\mathbf{4 0 3}$ | Is It important to be screened for prostate <br> cancer? | 1. yes <br> 2. no |


|  |  | 3. I don't know |
| :---: | :---: | :---: |
| 404 | Digital Rectal Exam and/or PSA test are the two most available methods of prostate cancer screening or diagnosis? | 1. yes <br> 2. no <br> 3. I don't know |
| 405 | Person with prostate cancer usually complain difficulty of micturition? | 1. yes <br> 2. no <br> 3. I don't know |
| 406 | Prostate cancer is curable? | 1. yes <br> 2. no <br> 3. I don't know |
| 407 | Prostate cancer is preventable disease? | 1. yes <br> 2. no <br> 3. I don't know |
| 408 | Physically inactive people can develop prostate cancer | 1. yes <br> 2. no <br> 3. I don't know |
| 409 | Prostate cancer can causes death? | 1. yes <br> 2. no <br> 3. I don't know |
| 410 | Drinking alcohol is a risk factor for prostate cancer? | 1. yes <br> 2. no <br> 3. I don't know |
| 411 | High-fat diet is a risk factor for prostate cancer? | 1. yes <br> 2. no <br> 3. I don't know |
| 412 | Smoking is a risk factor for prostate cancer? | 1. yes <br> 2. no <br> 3. I don't know |


| Research team | Name | Signature | Date |
| :--- | :--- | :--- | :--- |
| Interviewer |  |  |  |
| Supervisor |  |  |  |
| PI |  |  |  |

Started time of interview
Interviewer Name
Signature
Checked by supervisor: Signature Date $\qquad$
Questionnaire Identification Number $\qquad$

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## Annex 3：Questionnaires（Amharic Version）Study participants


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| 302 |  |  |
| 303 |  |  |



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| 401 |  <br>  |  <br> 3. $\grave{\lambda \omega} \boldsymbol{\phi} \not \boldsymbol{q}^{\mathrm{D}}$ |
| 402 |  <br>  |  <br>  |
| 403 |  <br>  |  <br> 3. $\hbar \wedge \omega \cdot \dot{q} \boldsymbol{q}^{0}$ |
| 404 | ヶ. <br>  <br>  |  <br> 3. $\grave{\lambda} \omega \omega \dot{\square}$ |
| 405 |  <br>  |  <br> 3. $\grave{\lambda} \lambda \omega \dot{\$ 0}$ |
| 406 |  <br>  |  <br>  |
| 407 |  <br>  |  <br> 3. $\grave{\lambda} \omega \bar{\phi} \$ \mathrm{D}$ |
| 408 |  <br>  |  <br> 3. $\hbar \wedge \omega \cdot \dot{q}$ |


| 409 |  |  |  |  <br> 3．$\hbar \lambda \omega \cdot \${ }^{0}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 410 |  <br>  |  |  |  <br>  |  |
| 411 |  <br>  |  |  |  <br> 3．$\hbar \lambda \omega \cdot \dot{\phi} \boldsymbol{q}^{0}$ |  |
| 412 |  <br>  |  |  |  <br> 3．$\hbar \lambda \omega \cdot \dot{q} g^{0}$ |  |
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## Annex 4: Questionnaires (Bench Version) Study participants

Ochaga kutssa esh yesemakush fetushaga hutss
Ta summe -------------------------fetagushe asheafi assrfaye kaytseskushaga erte kaytseze yetekey tam karsesuweshe yetekeze ochaa taa yisskuwee
Ertaga afee: prostate cancer masteskush eynaga shesh bone keskush bura yii nabii harew masteskush eyane 40 berge debbe yeskushan feteskuwe.

Ertaga gatstee:prostate cancer (masteskush eynaga shesh bone keskush bura yii) nabii harew bade atse erstush gesh Mizan Aman sotasagushaga tsaf ketanona fetagaq eratush no atensusha ye afam kaytsa kytsensuweshe bde eutsensuwee.

Aba yess beshennsuwe:atse keyannge useskush karte ertashesh soye fetuweshe atse ebaeamush karse karsensuwesh ocha tayiskuwe.
Yega gatsa etaa: yess koysteskush abee 20-30 dekika becha gezew.
Ache gaa:hasha ocha ochaseskushe erasagone erase hasez bekensarguwe.
Mebtii:ocha ochashen melse atse karsensushe baga shunamagezew hawush satenagon yefetan bakoyargu yefetan dobi akensuwe.
Tayez yentekein yami makann:yintekin yeam yafensushe
Ahenafi assefa emaili asheashu21 @ gmail.com usergu yefetan taselka 0947094256 feteskuwee.

Bench nonn ochee
Kodd
Abee
Kebaalee
Ochaagaa mate yega yetsendeze noteskush
101,niberge ammewee? $\qquad$
102,maynez wosew? 1.eyarsartanuwe 2.eyarsantanuwe 3.hayyka boka 4. Astna noboka
103,timirtaga wosasew 1.nababayind tsafin akartanuwe2.nababama tafa taakeskuwee 3. Matnush
derejayee 4. Namush derejaye 5.. Kazeushh derejayee
104, kaytsa wosew? 1. Kaytse taten kayguwe 2. Abaga kaytsasee 3. Gitnasee 4. Mangeest kaytsasee

## 5. Dumarsee

105, gibate wosew? 1. Orthodoxee 2. Muslimme 3. Protestantee 4. Dumarsee

106,zarii hareww? 1. Benchh 2. Gomarr 3. Amaharee 4. Oromooye 5. Dumarse 107, eyrfe ame yakistagawo? $\qquad$
Namnasush zara bana deymageskush ochee
201,prostate cancer (masteskush eynaga shesh bone keskush bura yii) yetenken zarkan yistage? 1.
Yew 2. Kayguw
202, yistaban oneww? 1. babee 2. Echee 3. Dumarsee
Kaznasush eratabana bana deymageskush ochee
30, sport kaytsestane ?1. Yewa 2. Kaytsartanuwe
302, aush aushkistane? 1. Yew 2. Aushartanuwee
303,dambayy aushkistane? 1.yew 2. Aushartanuwe

Odnasush:prostate cancer (masteskush eynaga shesh bone keskush bura yii) ertaga ochh 401, prostate cancer (masteskush eynaga shesh bone keskush bura yii) eyann bichan fugestagee? 1, yew 2. Sesar tanuwe 3. Terarguwe
402. prostate cancer (masteskush eynaga shesh bone keskush bura yii) berge kazan ase utestage?

1, yew 2. Sesar tanuwe 3. Terarguwe
403, prostate cancer (masteskush eynaga shesh bone keskush bura yii) bestenenuwey koystestage? 1, yew 2. Sesar tanuwe 3. Terarguwe
404,DRE/PSA baname yea prostate cancer (masteskush eynaga shesh bone keskush bura yii)
Ersteskush fetush erestane? 1, yew 2. Sesar tanuwe 3. Terarguwe
405, prostate cancer (masteskush eynaga shesh bone keskush bura yii) sheshez eratasestagee? 1, yew 2. Sesar tanuwe 3. Terarguwe

406, prostate cancer (masteskush eynaga shesh bone keskush bura yii) hakkamasestage.
1 , yew 2. Sesar tanuwe 3. Terarguwe
407. prostate cancer prostate cancer (masteskush eynaga shesh bone keskush bura yii) hakkamasestage afaren detsase atensarguwesh atasngee? 1, yew 2. Sesar tanuwe 3. Terarguwe 408,sport kaytsargushe bayam (masteskush eynaga shesh bone keskush bura yii) bedensuwee?

1, yew 2. Sesar tanuwe 3. Terarguwe
409.,sport kaytsargushe bayam prostate cancer (masteskush eynaga shesh bone keskush bura yii) hakkamasestage weteskuwe?

1, yew 2. Sesar tanuwe 3. Terarguwe
4010, prostate cancer (masteskush eynaga shesh bone keskush bura yii) aushkiskush ase debe besheshtage? 1, yew 2. Sesar tanuwe 3. Terarguwe

4011 ₹prostate cancer (masteskush eynaga shesh bone keskush bura yii) ko wumeskend atse debe besheshtage? 1, yew 2. Sesar tanuwe 3. Terarguwe

4012 ₹ prostate cancer (masteskush eynaga shesh bone keskush bura yii) dambay aushkeshkend atse dembe besheshtage ? 1, yew 2. Sesar tanuwe 3. Terarguwe

Oches gadasush satt $\qquad$
Och uchuss $\qquad$
Sattt $\qquad$
Abee $\qquad$
Kodd $\qquad$
Wanaga summ $\qquad$
Selk kuterr $\qquad$
Declaration by researcher

I, the undersigned, MSC Adult health nursing Student declare that this proposal is me Original work in partial fulfillment of the requirements for Master's degree in Adult health Nursing
Place of submission: School of Nursing and Midwifery, Faculty of Health Science, Institute of health science, Jimma university.

Date of submission: june , 209Gc
Researcher Name; Aashenafi Assefa
June/ 2019Gc
signature:
:-------------------------

## APPROVED BY MY ADVISORS

1. Name $\qquad$
DATE -----/------------
SIGNATURE: ----------
2. Name $\qquad$ DATE -----/------------
SIGNATURE: $\qquad$

## APPROVED BY MY INTERNAL EXAMINOR

1. Name $\qquad$ DATE ----------------SIGNATURE: -----------
