WOLKITE UNIVERSITY

COLLEGE OF MEDICINE AND HEALTH SCIENCES

DEPARTMENT OF PUBLIC HEALTH

HEALTH CARE SEEKING BEHAVIOUR TOWARDS CERVICAL CANCER SCREENING USING HEALTH BELIEF MODEL AND ASSOCISTED FACTORS AMONG GURAGE ZONE WOMEN, CENTRAL ETHIOPIA

INVESTIGATOR: SIRAJ HIYAR

MAY, 2025

Wolkite Ethiopia

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A THESIS SUBMITTED TO WOLKITE UNIVERSITY COLLEGE OF MEDICINE AND HEALTH SCIENCES DEPARTMENT OF PUBLIC HEALTH FOR THE REQUIREMENT OF PARTIAL FULFILLMENT OF THE MASTER OF PUBLIC HEALTH IN REPRODUCTIVE HEALTH

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We here by certify that we have read and evaluated this thesis titled **"Health care seeking behavior towards cervical cancer screening using health belief model and associated factors among Gurage Zone women, Central Ethiopia"** prepared under our guidance by **Siraj Hiyar**, we recommend that the thesis shall be submitted as a fulfilling the requests for the award of MPH degree in Reproductive health.

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As member of the board of examination of the master of public health thesis open defense examination we hear by certify that the thesis is accepted for fulfilling the requirement for the award of MPH degree in reproductive health.

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Final approval and acceptance of the thesis is contigent up on the submission of its final copy to the council of postgraduate program(CPG) through the candidate's department or school graduate committee (DGC OR SGC).

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By my signature below, I declare and confirm that this thesis, titled "**Health care seeking behavior towards cervical cancer screening using health belief model and associated factors among Gurage Zone women, Central Ethiopia"** is my own work. I have followed all ethical principles of scholarship in the preparation, data collection, data analysis and completion of this thesis. All scholarly matter that include in the thesis has been given recognition through citation. I affirm that I have cited and referenced all sources used in the document. Every serious effort has been made to avoid any plagiarism in the preparation of this thesis.

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ACRONYMS AND ABBREVATION

ANC- Antenatal care

CC- cervical cancer

CCS-CERVICAL CANCER SCREENING

CI- confidence interval

EPI- Expanded program of immunization

FGD- focused group discussion

HBM-Health belief model

HIV- human immune deficiency virus

HPV- human papilloma virus

IDI- in-depth interview

MCH- mother to child health

OCP- oral contraceptive pills

OPD- Out patient department

SD- standard deviation

WHO- world health organization

Abstract

Introduction: - *Cancer is a diverse group of diseases characterized by the uncontrolled growth and spread of abnormal cells. Cervical cancer, specifically, begins in the cervix which is the narrow passage connecting the uterus to the vagina. Globally, cervical cancer ranks as the fourth most common cancer among women. World Health organization strongly recommends that women adhere to regular screening protocols established by their local healthcare systems. In Gurage zone as well as central Ethiopia, there are limited studies available on health seeking behavior toward cervical cancer screening.*

Objectives:-*To assess the health care seeking behavior towards cervical cancer screening and to identify its associated factors among Gurage zone women, Central Ethiopia*

Method: - *A community based cross sectional study was conducted in Gurage Zone from December 1, 2024-January 30, 2025 among 591 participants using multistage sampling method and 6 FGD was done with 50 participants. Following data collection, information was entered into Epi Data software then exported to SPSS for statistical analysis. Descriptive statistics utilized frequency distributions, while analytical methods included binary logistic regression to examine relationships between various factors and screening behaviors.*

Result: - *Among participants of this study 30.8% (95% CI: 27% - 35%) had positive health care seeking behavior. Government employees showed 78% (AOR = 0.22, 95% CI: 0.09–0.53; *p* = 0.001) lower and housewives were 55% (AOR = 0.46, 95% CI: 0.22–0.93; *p* = 0.031) less likely to have health care seeking behavior towards cervical cancer screening compared to farmers. Women who believed treatment was available were 11.4 times more likely to have health care seeking behavior towards cervical cancer screening (AOR = 11.44, 95% CI: 5.32–24.60; *p* < 0.001).*

Conclusion and recommendation*:* - *based on this study, the health care seeking behavior towards cervical cancer screening is low. It is significantly associated with occupation, perceived severity, the availability of treatment and prevention and perceived barriers. Availing services in nearby facility and optimizing transportation system to service area will increase the performance.*

Key words: - *cervical cancer screening, health care seeking behavior and health belief model*

1. Introduction

1.1. Background

Cancer is a diverse group of diseases characterized by the uncontrolled growth and spread of abnormal cells, which can originate in any organ or tissue and invade surrounding structures and may metastasize to other parts of the body(1). Cervical cancer, specifically, begins in the cervix which is the narrow passage connecting the uterus to the vagina (2).

Globally, cervical cancer ranks as the fourth most common cancer among women. In 2023, approximately 660,000 new cases were reported, with around 350,000 deaths, 94% of which occurred in low- and middle-income countries(3). Within the WHO European Region, over 66,000 women are diagnosed annually, and more than 30,000 die to the disease (4). Despite existing prevention and treatment tools, cervical cancer claims a woman's life every two minutes (5).

Accounting for one in four female cancers worldwide, cervical cancer causes over 340,000 deaths each year, with nearly 500,000 reported cases (6). In Sub-Saharan Africa, it is the leading cause of cancer-related mortality among women(7). However, these figures likely underestimate the true burden, as many countries lack adequate diagnostic capacity to implement large-scale screening programs, making cervical cancer a silent yet deadly threat (5,6).

In August 2020, the World Health Assembly adopted a global strategy to eliminate cervical cancer as a public health concern (4). The WHO's initiative sets 2030 targets to progress toward elimination by the century's end, including: 90% HPV vaccination coverage for girls by age 15, 70% screening with high-performance tests for women by age 35, and 90% treatment access for women with cervical disease by age 45 (8).

The United Nations' global program emphasizes HPV immunization, pre-cancer screening and treatment, and invasive cancer management (9). While eliminating cervical cancer in Africa requires collaboration among governments, international agencies, and private sectors, integrating cervical cancer control into national health plans aligned with global strategies is crucial (8). UNICEF supports these efforts by advocating for healthcare expansion, resource mobilization, and programmatic assistance(6).

Despite being preventable and treatable, cervical cancer continues to claim lives (4). Scaling up HPV vaccination and screening-particularly in low- and middle-income countries-is essential, as these are among the most cost-effective interventions (4,10).

Screening involves testing asymptomatic populations to identify early-stage disease or pre-cancerous conditions (11). Early detection reduces incidence, mortality, and morbidity by enabling less aggressive treatments and improving quality of life (12).

1.2. Statement of problem

While the World Health Organization has introduced a comprehensive strategy to eradicate cervical cancer, implementation remains inadequate, particularly in Sub-Saharan Africa where disease occurrence rates greater than WHO's elimination benchmarks by ten times (8). World Health organization strongly recommends that women adhere to regular screening protocols established by their local healthcare systems (13). The WHO's objectives include achieving 70% screening coverage among women by age 35, with follow-up testing by age 45, using high-accuracy diagnostic methods (8).

Significant disparities exist in cervical cancer incidence worldwide (4). Research indicates that screening participation in Sub-Saharan Africa remains critically low at approximately 12.9% (14). European data reveals annual incidence rates ranging from 3.4 to 26 cases per 100,000 women, with mortality figures showing substantial regional differences: Western Europe (2.0 deaths/ 100,000), Northern Europe (2.2), Southern Europe (2.3), Central-Eastern Europe (6.1), and Central Asia (7.0) (4).

Multiple factors influence women's engagement with screening services in Sub-Saharan Africa: Health literacy (understanding of HPV, screening availability, disease consequences), Demographic characteristics (educational attainment, age group, insurance status), Behavioral and social considerations (apprehension about results, sexual history, contraceptive use) and Healthcare system factors (provider characteristics, facility type, counseling quality) (14). Studies conducted in Arsi Zone, Southern Ethiopia demonstrate that while women recognize the value of screening, substantial obstacles prevent service utilization (15). Evidence confirms that educational initiatives effectively enhance screening rates (16).

In Gurage zone as well as central Ethiopia, there are limited studies available on cervical cancer screening status and associated factors or health seeking behavior toward cervical cancer screening. Due to Gurage zones people is highly mobile and different from other areas

through socio cultural factors the risk is high. In this area multiple marriages is common which is one of the risk factor for cervical cancer.

As hospital data indicates, Screening for cervical cancer was very low. Although the service was available throughout the year, performance was not improved the cause was not clear while the patient flow to hospital was increasing. This research identifies health care seeking behavior toward cervical cancer screening using health belief model and associated factors among Gurage zone women, central Ethiopia.

1.3. Significance of the study

Assessment of perception of mothers about cervical cancer screening, use to identify the cause, which decreases the achievement and protects from achieving goal as well as to address area of intervention. Cervical cancer screening is mandatory to achieve our countries as well as global plan of elimination of cervical cancer in 2030. Without initiating women health seeking behavior it couldn't be achieved, because without identifying the gap couldn't address the problem. This research will use as baseline for zonal, wereda and town administrators to plan their direction of health care and intervention and hospital managements as well as public health institutions for their plan and intervention.

1.4. Objectives

1.4.1. General objectives

- To assess the health care seeking behavior towards cervical cancer screening among Gurage zone women, Central Ethiopia

1.4.2. Specific objectives

- To determine health seeking behavior towards cervical cancer screening among Gurage zone women, Central Ethiopia;2025
- To identify factors associated with health care seeking behavior towards cervical cancer screening among Gurage zone women, Central Ethiopia

2. LITERATURE REVIEW

2.1. Over view

Research from Ugrachandi Nala, Kavre (Nepal) revealed high awareness levels, with 94.4% of women heard about cervical cancer and 80.6% aware of screening options (17). In contrast, Nigerian studies showed significantly lower knowledge, with only 29.4% of women understanding cervical cancer and merely 15.5% aware of screening procedures(18).

Botswana's Mahalapye District Hospital reported a 39% screening rate, with 64% of these screenings occurring within three years - substantially below the national 75% target(19). Nepal's data indicated that 47.6% of women had undergone screening, primarily (69.6%) due to healthcare providers' recommendations(17). Nigerian urban residents demonstrated higher screening knowledge (63.5%) compared to rural counterparts (36.5%) (18).

Studies in Wolaita Zone found most participants unfamiliar with cervical cancer (20), while Arbaminch research showed 79.5% awareness(21). Wolaita participants primarily associated the disease with reproductive factors (multiple births, unprotected sex) rather than HPV, with only four interviewees recognizing symptoms (20).

Amhara Region research identified several significant factors: 30-39 year-olds (2×) and 40-49 year-olds (4×) more likely to screen than 21-29 year-olds; secondary-educated women 4× more likely; parous women 9× more likely; Urban dwellers 2.6× more likely; Women with multiple partners 3× more likely to undergone cervical cancer screening than their counterparts(22). Addis Ababa studies identified additional risk factors: multiple sexual partners, HIV positivity, marital status, and early sexual debut as predictors of precancerous lesions (23).

Wolaita participants predominantly viewed cervical cancer as: Incurable and unpreventable (20) similarly in southern Ethiopia study indicates it is fatal and caused by various factors including: Socio-cultural influences, reproductive and sexual history, hygiene practices, spiritual beliefs (24).

2.2. Health care seeking behavior

2.2.1. Perceived susceptibility and severity of cervical cancer

A Malaysian study found that 71.8% of women had a strong perception of their vulnerability to cervical cancer (5). In contrast, research in Wolaita revealed that most women did not consider themselves at risk and believed screening was unnecessary (20).

In Arbaminch, women who recognized their susceptibility were 3.63 times more likely to seek cervical cancer screening than those who did not (21). Additionally, demographic factors showed a significant correlation with perceived susceptibility (25).

The Malaysian study further indicated that approximately 71% of women acknowledged their potential risk for cervical cancer (25). However, in Nepal, only 11.7% of participants felt highly susceptible, while 44.4% perceived the disease as severe (17).

In Malaysia, Women who viewed themselves as susceptible were more likely to take preventive measures compared to those who did not (25). Similarly, in Arbaminch, those who recognized the severity of cervical cancer were 65% more likely to seek screening services (21).

There are limited studies on perceived susceptibility and severity. No enough literatures found to elaborate the status. More over these all literatures are out of this study area and were conducted in different areas in sociocultural and socioeconomic aspects from this study area. There was a gap of information about health seeking behavior towards cervical cancer screening and associated factors in this study area.

2.2.2. Perceived benefits

A 2020 study conducted in Jordan found that the average perceived benefit score for cervical cancer screening was 17.80 ± 2.23, with scores ranging from 5 to 20 (26). Similarly, a cross-sectional study in Ghana on barriers to cervical cancer screening revealed that while 87% of women expressed interest in screening, 94.5% did not believe it could be prevented through vaccinating young girls (27).

In Nepal, 74.4% of participants had a high perceived benefit of screening (17). A Malaysian study reported that 89.5% of respondents believed screening could detect precancerous cervical changes, and 88.1% agreed that early detection improves treatment success (25). Another study in Arsi Zone found that only 49.3% of women considered cervical cancer screening important (15).

Additional research highlighted various perceived prevention methods, including hygiene practices (e.g., washing the vagina and underwear), healthcare services (e.g., family planning, regular checkups, vaccination), and safe sexual behavior (e.g., avoiding multiple partners)(24). A study in Amhara Region referral hospitals showed that women with a positive attitude toward screening were twice as likely to use screening services, while those with good knowledge were four times more likely compared to others (22).

In Arbaminch, 47.6% of respondents exhibited healthcare-seeking behavior for cervical cancer screening, and 66.2% had a positive perception of its benefits(21). Conversely, in Hadiya Zone (Hosanna), only 14.2% of participants require screening (28). Studies in Southern Ethiopia found that women saw no need for screening unless symptoms appeared, whereas in Arsi Zone, most screened women recognized its benefits (15,24). All of the literatures mentioned above indicate that, women in these study area had low perceived benefit towards cervical cancer screening, but different place to place.

2.2.3. Perceived barriers

A cross-sectional study in Ghana found that only 18% of participants had sufficient knowledge about cervical cancer screening (27). Similarly, research in Khartoum identified lack of awareness and fear of pain as major obstacles(29).

In rural India (2021), women often avoided screening, ignored symptoms, or delayed medical care due to lack of family support, low awareness, religious beliefs, stigma, financial constraints, low education, and occupational status (30). A systematic review in low- and middle-income countries highlighted lack of awareness, embarrassment, cost, and fear of cancer diagnosis (due to inability to afford treatment) as key barriers (31). Health implementers also noted that women's fear and negligence toward their health contributed to low screening rates (30).

In southeastern Nigeria, barriers included: uncertainty about screening frequency (32%), fear of test results (31%), limited knowledge of Pap tests (27%), and lack of information on where/when to screen as most strongly agreed(32)

In Nepal, only 32.2% perceived significant barriers (17). A qualitative study among Pakistani and Somali immigrants in Oslo revealed that many believed screening should only be done if symptoms were present (33).

Research in southeastern Nigeria showed an inverse relationship between perceived barriers and screening uptake, lower barriers led to higher participation (32). In Ghana, obstacles included personal beliefs, socioeconomic factors, and healthcare system limitations (27). Pakistani and Somali women in Oslo faced additional challenges like sociocultural stigma, fear of cancer, low health literacy, financial issues, religious beliefs, and discomfort with male doctors (33).

In Ethiopia, low perceived risk, high stigma, and lack of knowledge among patients and providers delayed cervical cancer screening (34). In Addis Ababa, lack of awareness, service inaccessibility, cultural/religious beliefs, and fear of screening procedures were major constraints (23).

In Arsi, 40.3% cited lack of available services as a barrier, while in southern Ethiopia, lack of information was the primary reason for low screening rates (15,24). Additional obstacles included: fear of stigma and discrimination, shame about exposing private body parts, household priorities outweighing screening, transportation costs and need for husband's consent (24)

In Arsi, 53.8% of women reported high perceived barriers (15). Ethiopian studies also revealed health system inefficiencies, poor patient-provider communication, and inadequate provider training as critical challenges(34).

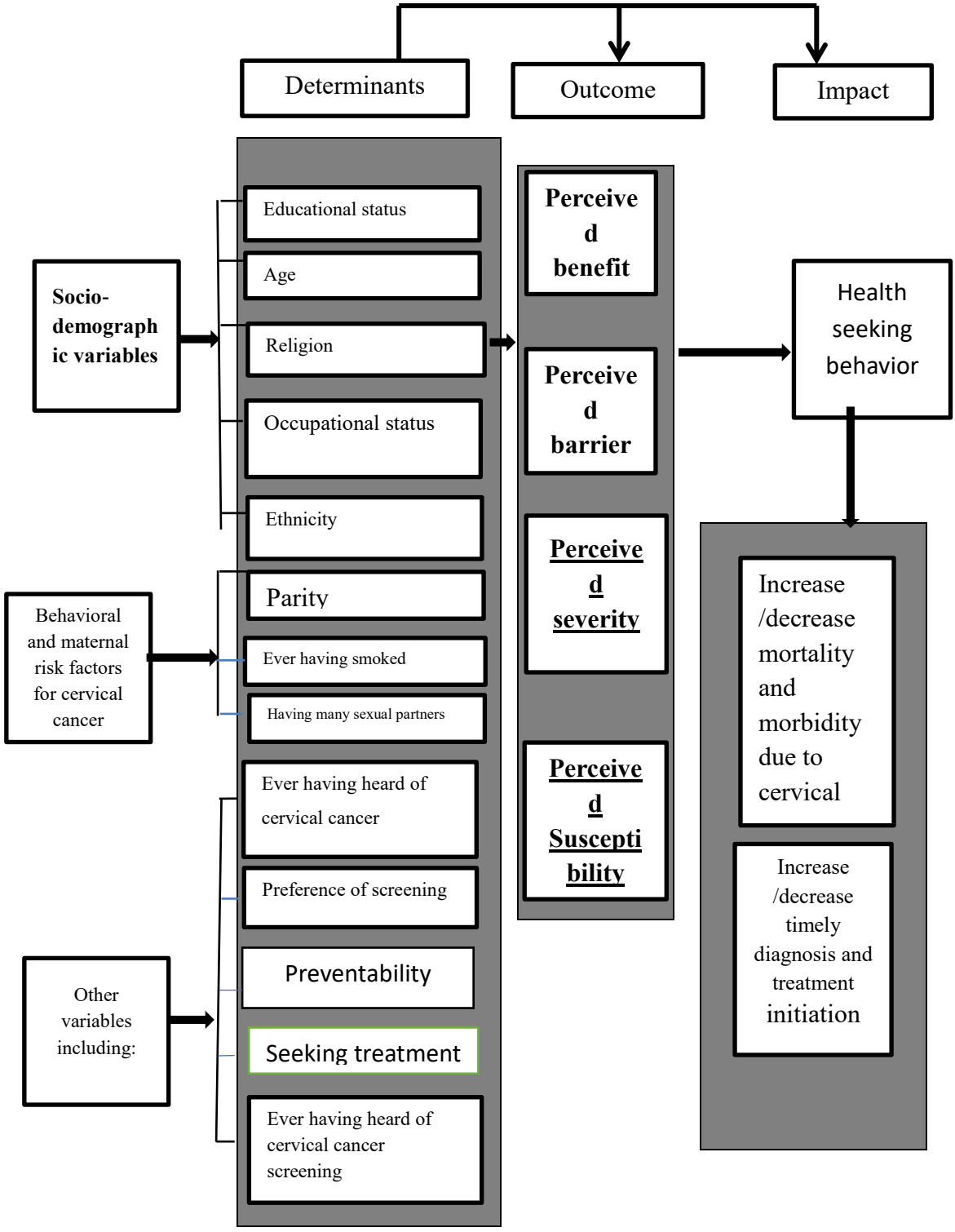


Figure 1: Conceptual frame work of the study

3. METHOD AND MATERIALS

3.1. Study setting and period

This research was conducted in western Gurage zone, which founds in Central Ethiopia region, the administrative town is Wolkite, located 157 km south of the capital city Addis Ababa. In Western Gurage zone there are 10 weredas and 5 town administrations. According to peoplegroups.org, 2024, there are an estimated 2,875,000 peoples (including eastern Gurage) live in Gurage zone. Western Gurage bordered by; Kebena special wereda and Oromia to north, to east eastern Gurage and Silte zone, to south Hadiya zone and to west Oromia (fig. 2). The study was done from December 1, 2024 up to 30, January, 2025.

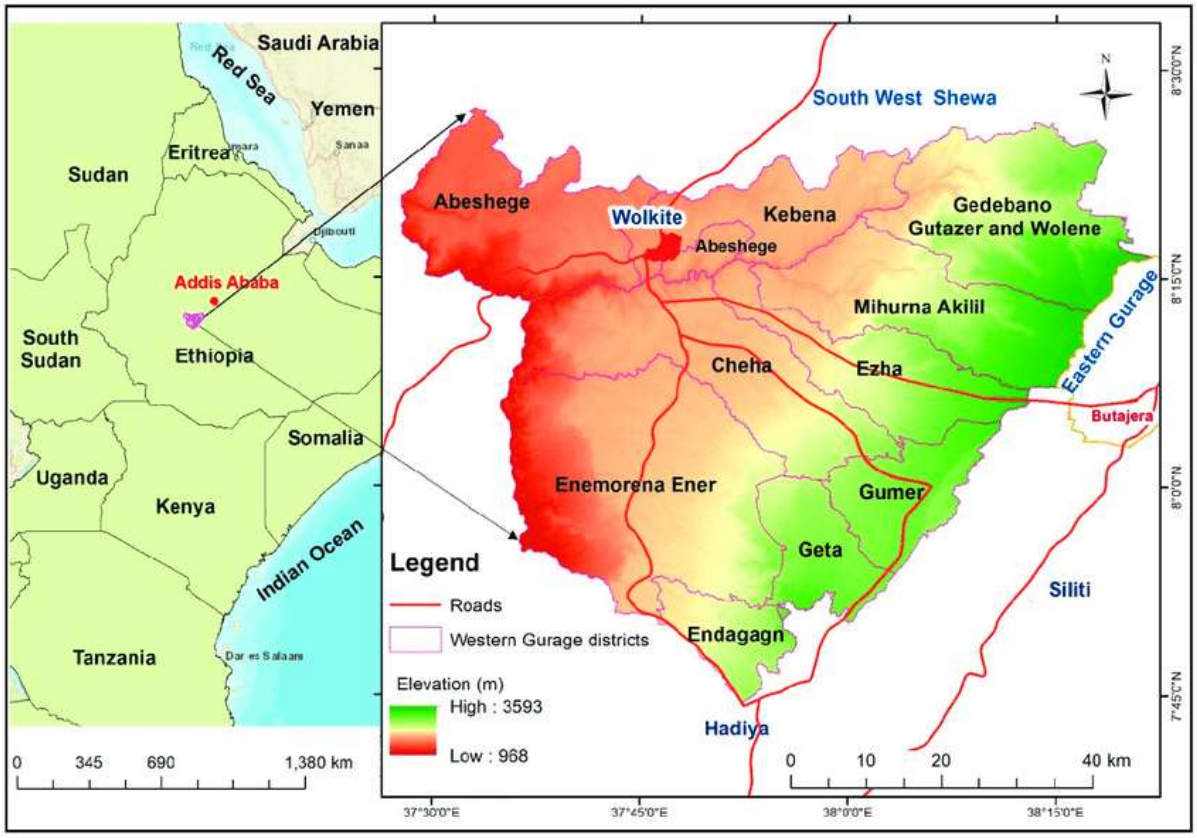


Figure 2:- Map of Western Gurage(35)

3.2. Study design

Community based explanatory qualitative and quantitative cross sectional study was done and the health belief model was applied (HBM).

Health belief model (HBM):- Developed in the early 1950s by U.S. Public Health Service social scientists, the Health Belief Model (HBM) was originally designed to investigate why individuals often fail to adopt preventive health measures or screening programs for early

disease detection. Over time, its application expanded to include understanding patients' responses to symptoms and adherence to medical treatments(36).

This psychological framework posits that an individual's health-related actions are influenced by their personal assessment of four key factors:

- Perceived severity of a health condition
- Belief in personal susceptibility
- Expected benefits of action
- Anticipated barriers to action

The HBM serves as a valuable tool for understanding health behaviors by examining the connection between personal convictions and actions. It helps predict how individuals will manage their health and comply with medical recommendations.

The model comprises six core components:

1. **Perceived susceptibility** - An individual's assessment of their personal risk for a health condition
2. **Perceived severity** - The belief about the potential serious consequences of a health problem
3. **Perceived benefits** - Confidence in the effectiveness of recommended health actions
4. **Perceived barriers** - Evaluation of potential obstacles to taking health action
5. **Motivation** - The drive to take health action based on personal values and beliefs
6. **Modifying factors** - Demographic, personality, and situational variables that influence perceptions (37).

Strengths of the HBM

- Health Belief Model suggests that Individuals' health behaviors argue that they will be affected by their beliefs, values, and attitudes
- The Health Belief Model is used to examine the causes of health behaviors in many cases such as breast cancer screenings, prostate, cervix, testicular cancer screenings, diabetes management, and compliance with treatment in hypertension. (38)

Limitations of the HBM

- Use of different versions of the Health Belief Model in scales evaluating health beliefs, the fact that the relationship between the components in the model has not been clarified,
- The model does not take into account the effect of barriers originating from the social environment or cultural norms(38)

In this study, the HBM framework was applied to evaluate Gurage Zone women's HSB regarding cervical cancer screening, particularly their recognition of susceptibility, severity, benefits, and identification of potential barriers, along with associated influencing factors.

3.3. Source population

All women in Gurage zone were the source population

3.4. Study population

All women from the designated kebeles who met the eligibility standards during the data collection period were the study population of this study.

3.5. Inclusion criteria

All women who lives 6 months or more in Gurage zone who are above >= 30 and <= 49 years old.

3.6. Exclusion criteria

Women who had prior history of cervical cancer or who are currently on the treatment for it and women who had received surgical removal of uterus were not been included in this study.

3.7. Sample size determination and sampling method

The minimum sample size for this investigation was calculated using the single population proportion formula:

$$n = \frac{(Z\alpha/2)^2 \times p(1-p)}{d^2}$$

Where:

n = Estimated sample size

Zα/2 = 1.96 (95% confidence interval)

d = 0.05 (5% margin of error)

p = 0.476 (47.6% prevalence of healthcare-seeking behavior for cervical cancer screening, derived from a comparable 2023 Arbaminch study) (21)

The initial calculation yielded 383 participants:

$(1.96)^2 \times 0.476(1-0.476) / (0.05)^2 = 383$

To account for potential non-response, this baseline was increased by 10%, resulting in a final sample size of 421 respondents (383 + 38).

3.7.1 Sample size for associated factors

By using Epi-info sample size calculator for cross sectional study, from previous study of similar topic in Arbaminch town, southern Ethiopia, 2023 (21)

Table 1:- Summery table for sample size

Factor	CI	Power	Exposed	Non-exposed	Odds ratio	Total	Non response rate	Final Sample size
Perceived susceptibility	95	80	27.9%	12.9%	2.5837	252	10%	277
Perceived severity	95	80	59.9%	41%	0.52637	334	10%	367
Perceived benefit	95	80	79.2%	54.4%	0.31331	128	10%	141
Health care seeking behavior	95	P(estimated proportion)=47.6				383	10	421

The calculated sample size was multiplied by 1.5 for design effect

421x1.5 = 631

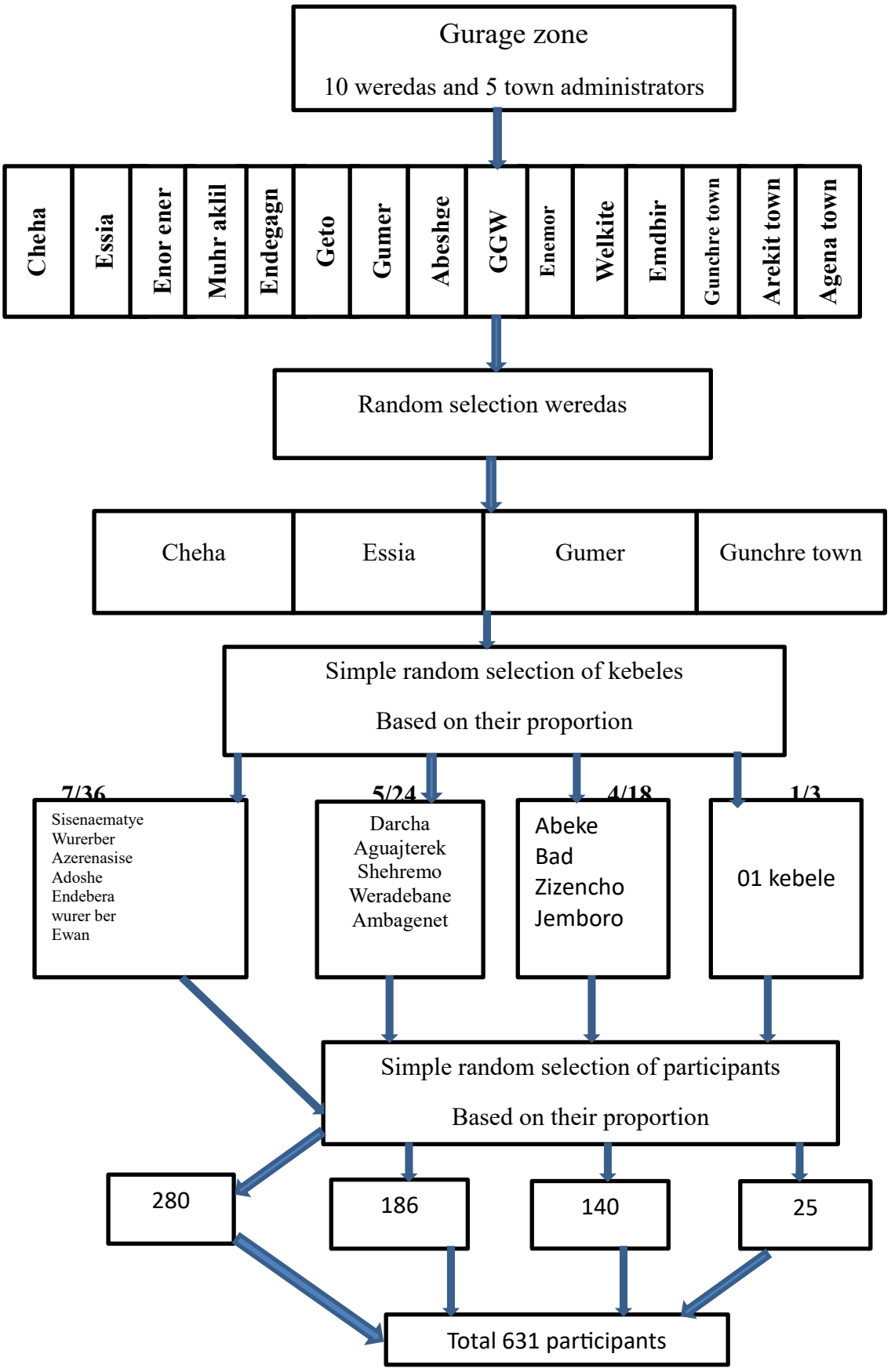
The final sample size of this study was 631 which is the largest value.

3.8. Sampling procedure

The participates were selected using multistage random selection from Gurage zone among 10 weredas and 5 town administrators, 3 weredas and one town administrator was selected randomly. Among these selected weredas and town kebeles was selected using simple random selection technique. The number of kebeles was selected was based on their proportion of the number of kebeles in each wereda. Respondents were selected by using

simple random selection technique from the selected kebeles proportionally. Focused group participants were selected from each kebeles using convenience Samplin

3.8.1. Schematic presentation of sampling procedure



3.9. Study Variables

3.9.1. Outcome variables

- Healthcare seeking behavior for cervical cancer

3.9.2. Independent variables

- Socio-demographic characteristics
  - Educational attainment
  - Age in years
  - Religion
  - Ethnic background
  - Employment status
  - Marital situation
- Behavioral and reproductive risk factors
  - Number of pregnancies
  - History of tobacco use
  - Early sexual debut
  - Having many sexual partners
- Additional variables including:-
  - Prior awareness of cervical cancer
  - Prior awareness cervical cancer screening
  - Screening preference
  - Seeking treatment
  - Preventability

3.10. Operational definitions and measurements

Likert scale – it is a measurement approach to assess perceptions toward cervical cancer and cervical cancer screening. A 5 item likert scale was used (strongly agree, agree , neutral, disagree, strongly disagree)

Perceived benefit- is perception of the benefits of performing cervical cancer screening perception of the benefits of undergoing cervical cancer screening.

Perceived barriers- are perception about obstacles for performing cervical cancer screening.

Screening- is a procedure used to detect cervical cancer lesions among asymptomatic individuals (15).

Health care seeking behavior- is defined as participants who have been screened for cervical cancer at least once.

Positive perception answers- strongly agree and agree

Negative perception answers- strongly disagree, disagree and neutral.

3.11. Data collection tool and procedure

In this study data were collected through an interview-based structured questionnaire and focused group discussion. The tool was designed based on the study objectives and reviewing previous literatures with modifications (27,28). Data collectors were health professionals starting from diploma nurses and above with health extension workers. The interviewers were interview eligible participants using the questionnaire. Six FGDs were done with in different parts of the study area and the number of FGD decided by the data saturation. The moderator gave codes to each participants before the start of the discussion. The codes were used as a name during the conversation, transcription, and translation. The voice of discussion were recorded and note were taken by discussion coordinator.

3.12. Data quality control measures

To maintain data quality standards, orientation about the data collection material was given for the data collectors. Supervision was done closely during data collection and will check each questionnaire for completeness and consistency. The instrument was pre-tested on 5% of the sample size among women from out of the study area to check the understandability and reliability of the questionnaires and FGD guide was test with two group of similar group of women with study participants from other kebeles which are out of study area. The clarity of the questionnaire and its logical consistency was modified accordingly. The questionnaire was translated in to Amharic language to make the interview clear for the respondents and back to English to check for consistency.

3.13. Data analysis

In this study, the information collected from FGD transcribed from Guragigna/Amharic to English by individuals fluent in both languages and entered in to Microsoft word document based on thematic content. The thematic analysis followed a systematic coding approach where key patterns were extracted from the transcribed qualitative data. Through this process, seven distinct categories emerged: participants' understanding of cervical cancer, their familiarity with available screening methods, recognized contributors to disease

development, identifiable clinical manifestations, personal attitudes toward the disease, views on screening procedures, and awareness of management strategies. This categorization framework enabled comprehensive organization and interpretation of the qualitative findings while maintaining the richness of participants' perspectives.

The study employed a 5-point Likert scale (ranging from strongly agree to strongly disagree) to evaluate participants' perceptions regarding cervical cancer screening, including perceived benefits, severity, susceptibility, and barriers. To ensure data quality, multiple verification measures were implemented: manual review of collected questionnaires for completeness, legibility, value ranges, and internal consistency, along with systematic data screening during entry. A comprehensive backup protocol preserved all data throughout processing stages.

Following data collection, information was entered into Epi Data software before being transferred to SPSS version 22 for statistical analysis. Descriptive statistics utilized frequency distributions, while analytical methods included binary logistic regression to examine relationships between various factors and screening behaviors. The analysis assessed both crude and adjusted associations for all study variables, with statistical significance determined through odds ratios (95% CI) and a p-value threshold of <0.05.

Variable selection for regression modeling followed a two-stage process: initial screening via Pearson's chi-square test identified potentially significant variables, which were subsequently included in multivariate logistic regression analysis. This approach allowed for comprehensive evaluation of factors influencing cervical cancer screening perceptions and behaviors. The quantitative findings were further elaborated and validated by qualitative findings.

3.14. Ethical consideration

Prior to conducting the study, ethical approval and official authorization were obtained from the College of Health Sciences, as well as from the respective woreda and kebele administrative offices, to ensure compliance with research protocols. During data collection, informed consent was received from all participants. To protect participant confidentiality, personally identifiable information, including names, was excluded from all questionnaires, thereby preserving anonymity throughout the study.

4. RESULT

4.1. Socio-demographic characteristics of respondents

In this study 591 mothers with age ranging of 30-49 years were participated, giving a response rate was 93.6%. More than two third, 401(67.9%) were between age group of 30-39 years old and the remaining 190(32.1%) were between 40-49 years old. Most respondents were housewives in occupation 335 (56.7%) followed by merchants 103 (17.4%) and government employees 86 (14.6%). A significant portion of respondents 228 (38.6%) were illiterate, whereas only 83 (14.0%) attained college and above.

The majority of respondents 318 (53.8%) were identified as Muslim in religion followed by Orthodox followers 172 (29.1%), while Protestants account for 61 (10.3%). The vast majority of respondents 531 (89.8%), belonged to the Gurage ethnic group. Other ethnic groups include Amhara 23 (3.9%), Oromo 18 (3.0%), Hadiya 14 (2.4%), Kembata 3 (0.5%), Kebena 1 (0.2%) and Other 1 (0.2%). Most respondents 507 (85.8%) were married.

Table 2:- Socio demographic characteristics of the study participants in Gurage Zone, Ethiopia; 2025

Variable		Frequency	Percent
Age	30-39	401	67.9
	40-49	190	32.1
Occupation	house wife	335	56.7
	Merchant	103	17.4
	government employer	86	14.6
	Farmer	51	8.6
	Other	16	2.7
Education	Illiterate	228	38.6
	Can read and write	138	23.4
	Grade 1-8	107	18.1
	Grade 9-12	35	5.9
	College and above	83	14
Religion	Muslim	318	53.8
	Orthodox	172	29.1
	Protestant	61	10.3
	Catholic	40	6.8
Ethnicity	Gurage	531	89.8
	Hadiya	14	2.4
	Amhara	23	3.9
	Oromo	18	3.0
	Other*	5	0.85
Marital status	Married	507	85.8
	Single	20	3.4
	Divorced	24	4.1
	Widowed	39	6.6
	Informal union	1	.2

**-Kembata Kebena and Tigray*

4.2. Knowledge about cervical cancer

Overall, 53.5% (95% CI: 49-58%) of respondents had good knowledge about cervical cancer. The majority of respondents were aware that cervical cancer is preventable (72.1%) and curable when diagnosed early (74.6%). About half (49.9%) identified it as a sexually transmitted disease, while (26.7%) of respondents were unsure about this. Additionally, 67% agreed that vaccination of young girls can prevent cervical cancer, while a notable percentage (21.2%) remained uncertain.

Among the respondents (51.6%) had poor knowledge of the risk factors for cervical cancer, while only 11.3% had a very good understanding. Similarly, more than half of the respondents (55.5%) had poor knowledge of the symptoms of cervical cancer, while only 15.2% had a very good understanding.

The majority of respondents (84.8%) were heard about cervical cancer, and slightly smaller but still significant majorities (79.2%) were heard about cervical cancer screening. However, a notable portion of respondents (15.2% and 20.8%, respectively) were unaware of cervical cancer and its screening.

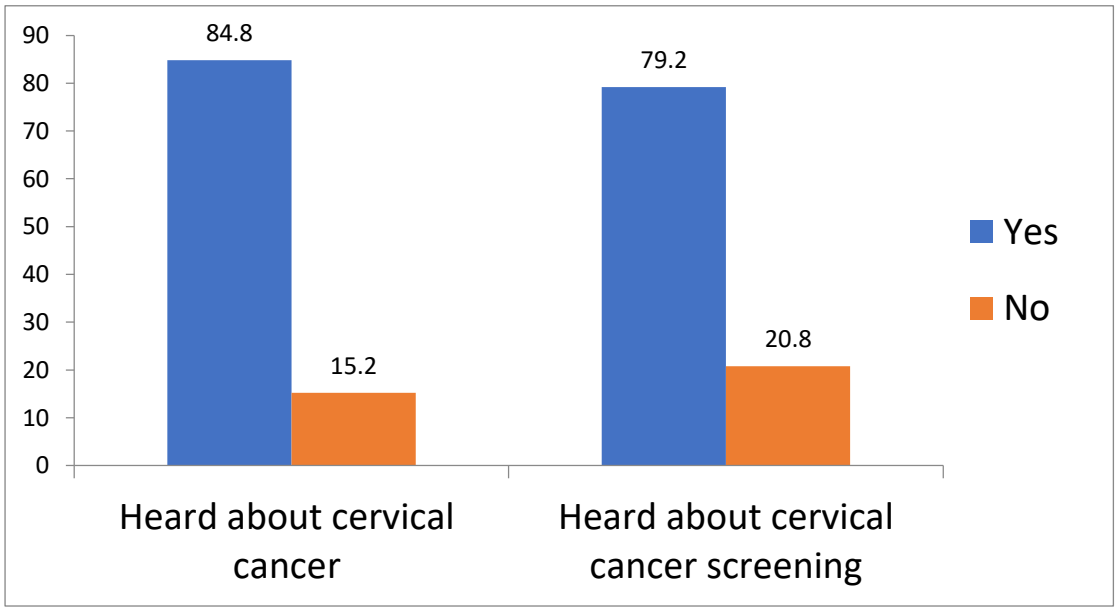


Figure 3: **Awareness about cervical cancer**

Based on FGD data, in FGD-1 most participants said that we didn't hear about cervical cancer but one participant said that, "*we are learning about different things including cervical cancer but we were forgotten it*" (FGDP-7). One of the participants says that "*it is serious and non-curable disease"* and other participants of the FGD-1 agree on this because it is cancer and they thinks as cancer has no cure (FGDP-1, 2). As well as it was mentioned in all

groups except in FGD 5. But in FGD-4 it mentioned but 3 participants refused and said "*why we screen, if it is not curable? It is curable, if it is diagnosed early*" (FGDP-26, 27, 30).

4.3.Perceived Susceptibility

The participants' response was categorized in to two levels: positive and negative, along with the distribution of answers in percentages and raw numbers. More than half of (55.7%) respondents had positive perceived Susceptibility on cervical cancer while 44.3% had negative response. A significant portion of respondents (49.7%) believed they are at risk of developing cervical cancer, but fewer (18.5%) thought it is possible for them to develop the disease. Only a small percentage of respondents (21.4%) were concerned about their risk, and even fewer (11%) felt vulnerable to developing cervical cancer.

In FGD 1 all participants were agree on that "*it is a disease come from lack of proper sanitation*" and they think as it is related with bringing up and carrying heavy things. The second idea was shared by other FGD members. In FGD-2 one participant said it is related with grand multiparity and others share the idea (FGDP-11). In FGD-3 one participant said *"as we learned, it is sexually transmissible disease during unsafe sex* (FGDP-21). Other participants also agree on the idea. This idea also shared by FGD- 5 and 6 (FGDP-35, 37, 45, 48).

4.4.Perceived severity

Based on the responses of participants, to five statements about participants' perceptions of the seriousness and impact of cervical cancer, 43.1% had positive perceived severity. The majority of respondents recognized cervical cancer as a serious health problem (87.3%) and life-threatening (80.7%). Many respondents also acknowledged that cervical cancer can significantly shorten life (77%) and has a significant impact on life (66.7%). A significant portion (62.6%) expressed concern about the long-term consequences of cervical cancer.

4.5.Perceived benefits

The majority of respondents (74.6%) recognized the benefits of cervical cancer screening, including: Early detection (93%), Improved treatment outcomes (89.2%), providing peace of mind (88.7%), Contributing to a longer and healthier life (86.8%), Preventing the disease (90.2%). Nearly seventy five percent of respondents had positive Perceived benefits on cervical cancer screening. These results indicate high awareness and positive perceptions of cervical cancer screening among respondents. However, a small percentage of respondents were neutral or disagreed with these statements.

In FGD-1, participants agree on that screening helps to know self-status, to take care for future prevention and to follow medical advice (FGDP-3, 4). The first and second idea shared by all FGDs (FGDP-9, 19, 30, 33, 34, 39, 44, 49). In FGD-3 one participant says "the screening and knowing of the status uses for child heath for future (FGDP-23). In FGD-4 one participant mentions that, *"screening helps to identify the status. If it is positive result, it helps to receive treatment early; if it is negative gives peace of mind"* (FGDP-35). *This idea shared by all FGD-5 members.*

4.6.Perceived barrier

Based on this study the overall perceived barrier was 58.6%. Nearly half of the respondents (47.6%) expressed concern about pain and discomfort during screening, making it a notable barrier. Only a small percentage (15.4%) felt embarrassed or shy about screening. A significant majority (68.7%) were unsure about what to expect during screening. Among participants (9.1%) were think as screening contradicts with their religion and (5.5%) were think as culture forbids screening.

Based on this study, only 18.7% of respondents were concerned about the cost, while 75.6% were not worried, indicating that cost is not a major barrier for most. Similarly Only 17.3% felt they lacked time for screening, while 80.1% did not see time as an issue and 10.7% respondents believed screening is expensive but A notable portion (32.8%) found transportation difficult, but the majority (63.8%) did not, indicating that transportation is a barrier.

The majority of respondents (81.7%) were agree or strongly agree that there is a health facility offering cervical cancer screening and (67.1%) disagree or strongly disagree that it is difficult to find health personnel for cervical cancer screening. This suggests that the availability of trained personnel is not a major concern for the majority. About one-third of respondents (31.1%) were agreed or strongly agreed that they feel uncomfortable with male health personnel performing the screening. About (26.2%) agree or strongly agree that waiting times at health facilities are long, while the vast majority of respondents (72.7%) disagree or strongly disagree that it is difficult to communicate with health personnel.

In FGD data, in FGD-1, participants agree on that "*lack of knowledge is the main barrier to screening"* which was raised from one participant first then shared by all participants as well as in all FGDs (FGDP-7). Two participants said that "the cost is one of its barriers" and three of them mentions transport cost. As said by other one participant post ponding their health

need is the main barrier to seeking health care in mothers as general (FGDP-8). They agree on increasing awareness increases screening performance. In FGD-3 one participant said "*the cost of transportation challenges the most because the service founds only some areas*" and other members agree on it (FGDP-25). The barrier mentioned in this group is mothers are busy in house hold works they have no time to seek care for their health. This idea was at first mention by FDG-1and it also shared by FGD-5and 6 (FGDP-8, 42, 45). In FGD-5 mentioned that *"the role of husbands should be great to improve the screening. If they encourage their wife on screening and helps on household responsibility it can be improved"* (FGDP-35). All members of FGD-5 were agreed on this. Awareness, Transportation cost, scarcity of screening area was identified repeatedly in most FGDs**.**

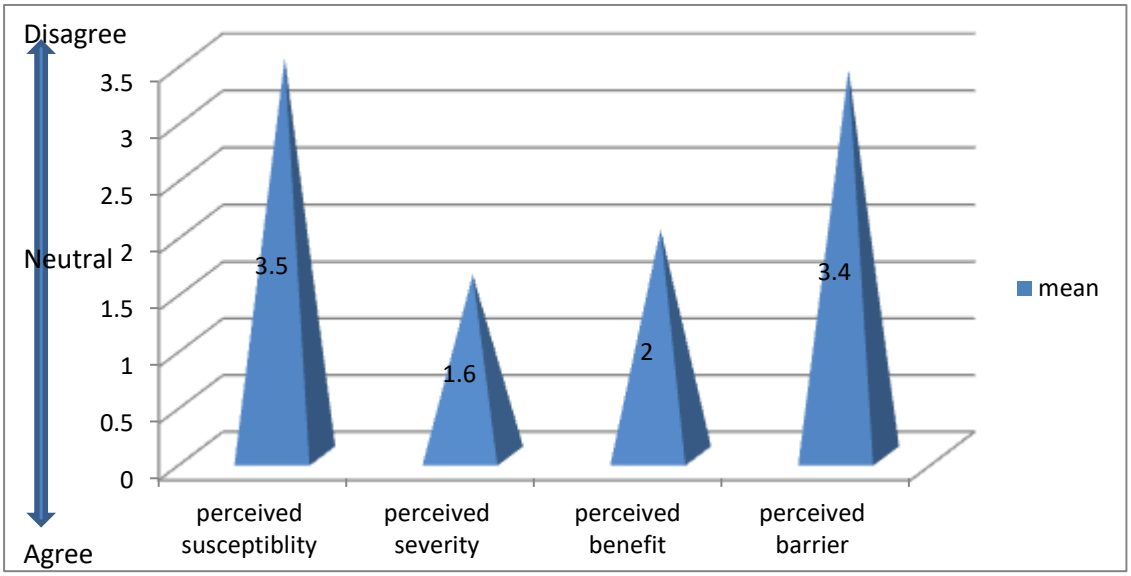


Figure 4:-HBM

As indicated on the table below (table: 5), 55.7% of women felt at risk of cervical cancer, while 44.3% did not. Similarly 43.1% perceives cervical cancer as sever health problem. Among the respondents 74.6% believed in the benefits of screening 58% faced obstacles while 42% reported no major barriers.

Table 3: Descriptive statistics for likert scale questions

HBM components	Perception	Frequency	Percent
Perceived susceptibility	Positive	329	55.7
	Negative	262	44.3
Perceived severity	Positive	255	43.1
	Negative	336	56.9
Perceived benefits	Positive	441	74.6
	Negative	150	25.4
Perceived barriers	Positive	343	58
	Negative	248	42

4.7.Health care seeking behaviors towards cervical cancer screening

Among participants of this study 30.8% (95% CI: 27% - 35%) were positive health care seeking behavior who are screened for cervical cancer (actual health care seeking behavior), but above 85% of them had interest to participate on cervical cancer screening and 77.3% of them thinks they can get treatment for positive result while 22.7%(137) were not.

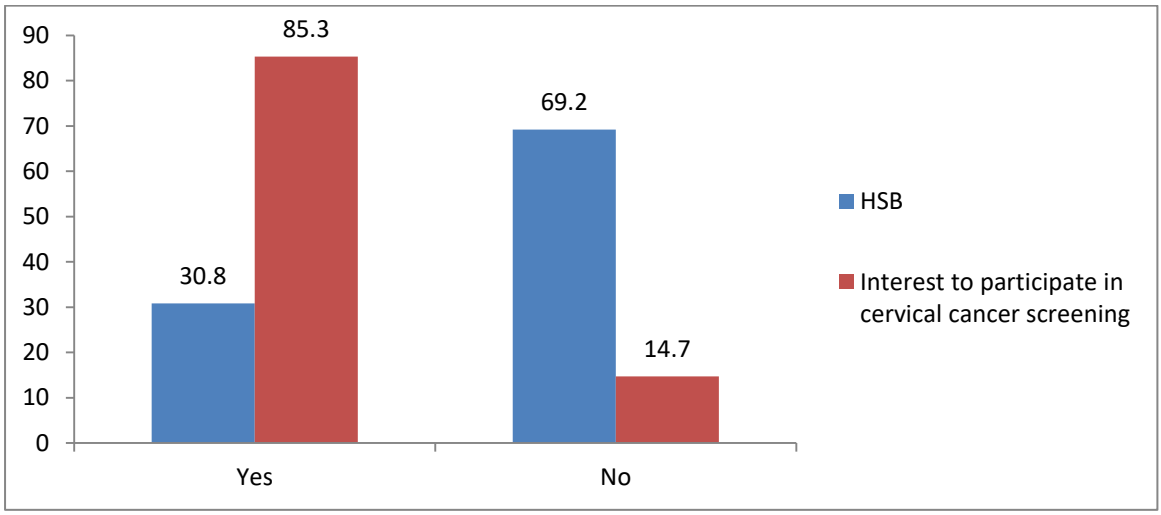


Figure 5:- Interest to participate in cervical screening

Majority of respondents (516 (87.3%)) believe ensuring patients awareness of available facility for cervical screening improves screening behavior. similarly 494(83.6%) agrees on seeking female health personnel to provide screening services increase screening acceptance.

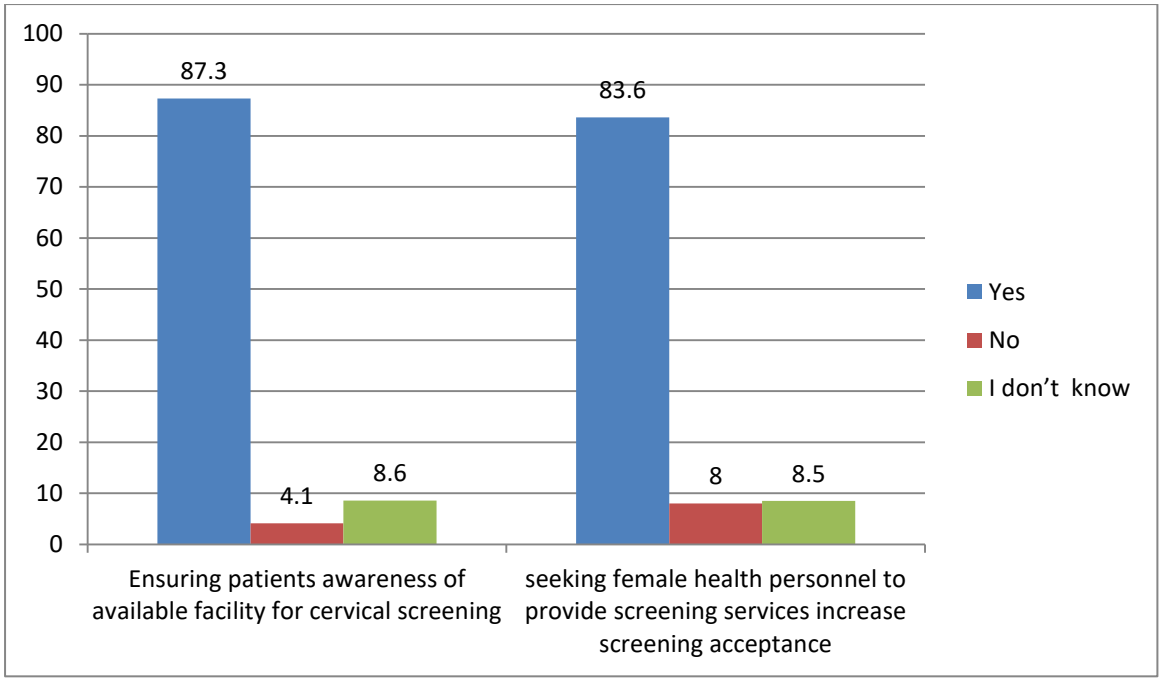


Figure 6:- Cues to improve

4.8.Determinant Factors of health care seeking behavior towards cervical cancer screening

As presented in Table 5, the analysis revealed significant associations between occupational status and screening behavior. Government employees showed 78% lower odds of utilizing cervical cancer screening services compared to farmers (AOR = 0.22, 95% CI: 0.09–0.53; *p* = 0.001). Similarly, housewives were 55% less likely to seek screening than farmers (AOR = 0.46, 95% CI: 0.22–0.93; *p* = 0.031). Notably, women who recognized the availability of treatment demonstrated substantially higher engagement, being 11.4 times more likely to participate in screening (AOR = 11.44, 95% CI: 5.32–24.60; *p* < 0.001). Conversely, those with heightened perceptions of disease severity exhibited 64% reduced screening uptake (AOR = 0.36, 95% CI: 0.22–0.60; *p* < 0.001). Women who perceived screening barriers actually had 59% greater odds of participating (AOR = 1.59, 95% CI: 1.01–2.51; *p* = 0.047). However, knowledge levels about cervical cancer showed no statistically significant impact on screening behavior (AOR = 0.76, 95% CI: 0.48–1.20; *p* = 0.23).

Table 4:-Associated factors for health care seeking behavior towards cervical cancer screening

Variables	category	Screened	Not screened	COR	AOR	Sig.
Age	30-39	133	268	Reference	Reference	
	40-49	49	141	0.700 (0.934-1.030)	.654(.411-1.041)	.073
Occupation	Farmer	20	31	Reference	Reference	
	Government employer	17	69	0.645 (0.208-1.997)	.220 (.092-.528)	.001
	Merchants	62	41	0.246 (0.081-0.751)	1.812 (0.003-4.021)	.144
	House wife	79	256	1.512 (0.526-4.349)	.455 (0. .222-.932)	.031
	Other	8	8	0.309 (0.112-0.849)		.995
Heard about cervical cancer	No	0	90	Reference	Reference	
	Yes	182	319	25.539 (6.215-104.953)		.996
Heard about screening	no	0	123	Reference	Reference	
	yes	182	286	0.026 (0.006-.0104)		.992
Can get treatment	No	10	124	Reference	Reference	
	yes	172	285	7.484 (3.824-14.647)	11.440 (5.320-24.599)	.000
Perceived susceptibility	Negative	71	191	Reference	Reference	
	Positive	111	218	1.370(.960-1.955)	1.456(.920-2.305)	.108
Perceived severity	Negative	78	177	Reference	Reference	
	Positive	104	232	1.017(.715-1.448)	.362(.220-.596)	.000
Perceived benefit	Negative	29	121	Reference	Reference	
	Positive	153	288	2.217(1.413-3.477)	1.299(.689-2.448)	.418
Perceived barrier	Negative	104	239	Reference	Reference	
	Positive	78	170	1.054(.741-1.501)	1.590(1.006-2.513)	.047
Knowlwdge about cervical Ca	Poor	86	230	Reference	Reference	
	Good	96	179	.697(.491-.990)	.755(.477-1.195)	.230

5. DISCUSSION

In this study women's health seeking behavior were assessed by using service utilization and health belief model (perceived severity, perceived susceptibility, perceived benefit and perceived barrier). The women were asked about their service utilization, interest to utilize the service and perceptions as general in Gurage zone central Ethiopia and associated factors for both screening and for each concepts of health belief model. In this study determining factors for health care seeking behaviors were assessed by asking socio demographic factors and women's perception.

Mothers who had screened for cervical cancer in this study were 30.8% (95% CI:27-35%) which is actual HSB but in the study in Arbaminch women's health care seeking behavior towards cervical cancer screening was 47.6% (95% CI: 42.7-52.5%) which is higher than current study. WHO strategy targets for 70% of women screened using a high performance test by 35 years of age and again by 45 years of age (8). The study identifies 84.7% of the respondents were heard about cervical cancer, while 79.2% were heard about cervical cancer screening which is lower than from the study in Nepal (94.4%) had heard about cervical cancer and (80.6%) had heard about cervical cancer screening(17). It was higher than from the study in Arbaminch which finds 79.5% heard about cervical cancer (21). In Wolaita, almost all participants perceived that cervical cancer is incurable and assumed that it cannot be prevented (20) in this study about 74.6% were perceives it is curable and 72.1% perceives it is preventable.

In this study 56.9%(mean 2.0254 and 2 median) of respondents had positive response in perceived severity of cervical cancer screening and 74.6 % (with 1.6244 and 1.6 median) of participants has positive perceived benefit which is high compared to the study in Arsi Zone, Southeastern Ethiopia among >= 15 yrs. old women which is 62.6%(15) in Arbaminch 66.2(21) and 74.4 % in Nepal (17). But only 30.8% participants were screened previously. In Arbaminch 27.9% and 56.9% of respondents have positive answer for perceived susceptibility and perceived barrier respectively; but in this study it was 55.7% & 42% respectively. In Nepal 11.7% of respondents had high perceived susceptibility (17) which is lower than current study.

In Ghana, more than half 174 (87%) of the women evaluated said they were interested in participating in CC screening(26) while in this study finding 85.3% of respondents had interest to participate. In this study 67% of respondents mentioned prevention of cervical

cancer through vaccination of young girls but in Ghana 94.5% of the respondents mentioned it could not be prevented through vaccination of young girls while 71.5 % were knew it is curable in hospitals when diagnosed early(26) which is lower than our finding which is 74.6%.

In the study in Arbaminch perceived severity has positive association with health care seeking behavior by 65%, but in this study it has negative association by 64% (AOR = 0.36, 95% CI: 0.22–0.60; *p* < 0.001. This may related with thinking of no treatment and cure as well as fear of result (FGDP-1, 2). Perceived severity has significant association with treatment and prevention. Women who perceive cervical cancer has treatment 77% (AOR: 0.332, 95% CI: 0.203- 0.543, *P* <0.001) and it is preventable has 41% (AOR: 0.588, 95% CI: 0.360- 0.958, *p*: 0.033) less likely had perceived severity.

In this study perceived susceptibility has no association with health care seeking behavior towards cervical cancer screening but in previous study it had positive association (63%) (AOR: 3.63, 95% CI: 2.06–6.42*P*: <0.001) (21). On the other hand, surprisingly perceived barrier had positive association 59% with health care seeking behavior towards cervical cancer screening. This means

women who preface barriers had higher health care seeking behavior than who has negative perceived barriers. This may due to lack of awakening to screening site. Women who live in nearby areas with screening site has no transportation service from government during screening campaign and less awakening to screening compared to distant areas from the site (FGDP-6,25). Although knowledge has no statistically significant association with health care seeking behavior (AOR = 0.76, 95% CI: 0.48–1.20; *p* = 0.23), women who participate in FGD mentions it as main factor.

Based on this study finding, government employees had 78% lower odds of health care seeking behavior towards cervical cancer screening than farmers (AOR = 0.22, 95% CI: 0.09–0.53; *p* = 0.001) and had lower perceived severity 71.5% (COR: 0.295,95% CI: .143-.609,P-001). Similarly housewives were 55% less likely to have health care seeking behavior towards cervical cancer screening than farmers (AOR = 0.46, 95% CI: 0.22–0.93; *p* = 0.031). These might be due to high load of house hold duty and lack of involvement of husbands and failed to encourage their wives to screening (FGDP-8, 35, 42, 45).

Women who recognized the availability of treatment 11.4 times more likely to have health care seeking behavior towards cervical cancer screening than their counterparts (AOR =

11.44, 95% CI: 5.32–24.60; *p* < 0.001). Based on the qualitative data health care seeking behavior of women were highly influenced by thinking as “cervical cancer is non-curable and non-treatable disease” (FGDP- 1, 2). They think as screening has no importance if it is non-curable (FGDP-26, 27).

5.1. Strength and Limitation

Regarding the strength of the study, the application of health believe model, which helps to identify women’s believe through four categories: perceived susceptibility, perceived severity, perceived benefits and perceived barriers. This is a good approach to examine women’s believe in a depth way. The limitation of this study was the nature of cross sectional study design which is challenging to determine whether the outcome or predictor variable come first.

CONCLUSTION

The health care seeking behavior towards to cervical cancer screening was low. It was affected by occupation, women's perception about whether it has treatment and it is preventable or not, Perceived severity and perceived barrier in this study. There is high perceived benefit in this study. From identified barriers health care seeking behavior towards to cervical cancer screening: - transportation and service un-availability from nearby facility were repeatedly mentioned issues in all focused group discussions. Occupation, women's perception of its treatability and preventability, and perceived barriers were the most significant factors influencing health care seeking behavior towards cervical cancer screening. The other issue which mentioned in all focused group of discussions were lack of awareness about service availability and poor awakening to screening site persistently.

RECOMMENDATION

Availing services in nearby facility and optimizing transportation system to service area will increase the performance. Public administrators should give attention to avail and maintain transportation to health facility. Public health practitioners, policy makers, researchers, health institutions, non- governmental organizations those work in health and all responsible bodies must priority to create awareness for mothers through persistent education about service availability and awakening to service utilization. The education should address the preventive methods and treatment of the disease.

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APPENDIX

Appendix: A. QUESTIONNAIRE

This questionnaire is for academic research and designed to find out health seeking behavior towards cervical cancer screening and associated factor among Gurage zone women. The data you will provide is very helpful to achieve the intended objectives of the study. Your responses will be treated confidential and all information will be reported as aggregated data. Hence, you are not required to write your name. Involvement in this study is optional and is only in voluntary basis and you can drop any individual question or the whole questionnaire. But your participation and contribution in the study is very important to come up with important findings. There are no wrong or right answers. This is just to seek your opinion on the subject.

Do you agree to participate in this study?

Yes, continue No, thank you!

Kindly tick the appropriate spaces provided or write what you think in the open-ended questions. I will be grateful if you can answer all questions to the best of your ability.

Thank you.

SECTION A: SOCIO-DEMOGRAPHIC DATA

1. Age; …….
2. Occupation; ……
3. Educational background

1. Illiterate (____) 2. capable to reading writing 3. Primary (____)

4. High School (____) 5. Secondary School (____) 6. College (____)

7. University (____)

4. Religion

1.Muslim (____) 2. Christian (____) 3. protestant (____) 4. Others……

5. Ethnicity

1. Guragie 2. Kembata 3. Hadiya 4. kebena 5. Amhara 6. Oromo 7. Others (specify)_____

6. Marital status

1. Married (____) 2. Single (____) 3. Divorced (____) 4. Widowed (____) 5. Informal union (____)

7. Number of child birth……
8. Family history of cervical cancer. 1. Yes (____) 2. No (____)

SECTION B: AWARENESS OF CERVICAL CANCER

9. Have you heard about cervical cancer? 1. Yes (___) 2. No (___)
10. How did you first learn about cervical cancer?

1. Never heard of it before today (___) e From a family member (___)
2. From a friend (___) 5. From a doctor/ nurse (___)
3. From school personnel (___) 6. From radio, TV, magazine (___)
4. I don't remember (___) 7. Other sources…….

11. Cervical cancer is a sexually transmitted disease. 1. Yes (__) 2. No (__) 3. I don't know (__)
12. Cervical cancer is preventable. 1. Yes (__) 2. No (__) 3. I don't know (__)
13. Cervical cancer is preventable through vaccination of young girls. 1. Yes (__) 2. No (__)

    3. I don't know (__)

14. Cervical cancer is curable in hospitals when diagnosed early. 1. Yes (__) 2. No (__) 3. I don't know (__)
15. Please tick the risk factors of cervical cancer.

1. Early onset of sexual activity. (__)
2. Infection with a sexually transmitted germ/virus (HPV). (__)
3. Multiple male sexual partners. (__)
4. Smoking cigarettes/tobacco. (__)
5. Grand multiparity. (__)
6. Other specify_____

16. Please tick the symptoms of cervical cancer.(more than one answer is possible)

1. Intermenstrual vaginal bleeding. (__)
2. Post-menopausal bleeding. (__)
3. Vaginal bleeding. (__)
4. Post-coital vaginal bleeding. (__)
5. Excessive vaginal discharge, often with offensive smell. (__)
6. Lower abdominal pain. (__)
7. Pain in the genital during sexual intercourse. (__)
8. Other specify_____

17. Have you heard of cervical cancer screening? 1. Yes (__) 2. No (__)

18. Have you been screened of cervical cancer before? 1. Yes (__) 2. No (__)

19. If yes, when was the last time you had it? ……

20. How often do you go for screening?

1. Once a year (__) 3. Less often than every 5 years (__)
2. Every 2-5 years (__) 4. I don't know (__)
5. Other specify _____

21. Are you interested in participating in cervical cancer screening? 1. Yes (__) 2. No (__)

SECTION C: PERCEIVED SUSCEPTIBILITY OF CERVICAL CANCER

22. I believe I am at risk of developing cervical cancer.

1. Strongly agree 2. Agree 3. Neutral
4. Disagree 5. Strongly disagree

23. I think it's possible for me to get cervical cancer in the future.

1. Strongly agree 2. Agree 3. Neutral
4. Disagree 5. Strongly disagree

24. I am concerned about the risk of cervical cancer for myself.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

25. I feel vulnerable to developing cervical cancer.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

SECTION C: PERCEIVED SEVERITY OF CERVICAL CANCER

26. I believe cervical cancer is a serious health problem.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

27. I think cervical cancer can have a significant impact on my life.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

28. I am worried about the long-term consequences of cervical cancer

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

29. I think cervical cancer can be life-threatening.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

30. I believe cervical cancer can significantly shorten the life.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

SECTION D: PERCEIVED BENEFITS OF CERVICAL CANCER SCREENING

31. I believe getting a cervical cancer screening can help detect the disease early.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

31. I think early detection of cervical cancer through screening can improve treatment outcomes.

32. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

33. I believe getting a cervical cancer screening can give me peace of mind about my health.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

34. I believe cervical cancer screening can help me live a longer and healthier life.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

35. I think getting a cervical cancer screening can prevent the disease from developing or progressing.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

SECTION E: PERCEIVED BARRIERS OF CERVICAL CANCER SCREENING

Psychosocial barrier of cervical screening

36. I am concerned about the discomfort or pain of a cervical cancer screening.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

37. I am embarrassed or shy about getting a cervical cancer screening.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

38. I am not sure what to expect during a cervical cancer screening.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

39. A cervical cancer screening is against my religion

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

40. My culture forbids cervical screening

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

Socioeconomic barriers to screening

41. I am worried about the cost of getting a cervical cancer screening.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

42. I don't have enough time to schedule a cervical cancer screening.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

43. Cervical cancer screening is expensive?

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

44. Transport system to the health facility is difficult?

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

Healthcare system barriers to screening

45. There is health facility offering cervical screening services.

1 Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

46. I find it difficult to find a health personnel who performs cervical cancer screenings.

1 Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

47. I don't feel comfortable with male health personnel rendering screening services.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

48. There is long waiting time at the health facility.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

49. It is difficult to communicate with health personnel.

1. Strongly agree 2. Agree 3. Neutral

4. Disagree 5. Strongly disagree

Additional questions

50. I have previously had a cervical cancer screening.

1. Yes 2. No

51. If I had a positive cervical cancer screening result, I would be likely to seek treatment.

1. Yes 2. No

Open-Ended Questions:

52. What are the main benefits you see in getting a cervical cancer screening?

_____

53. What are the biggest barriers that prevent you from getting a cervical cancer screening?_____

SECTION F: CUES FOR ACTION

54. Do you think ensuring that patient's awareness of available facility for cervical screening improves behaviors of screening?

1. Yes ( ) 2. No ( ) 3. I don't know ( )

55. Will seeking female health personnel to provide screening services increase screening uptake?

1. Yes ( ) 2. No ( ) 3. I don't know ( )

56. What measurements should be taken to improve cervical cancer screening service?

_____

_____

_____

_____