DETERMINANTS OF CLIENTS' SATISFACTION, TOWARD VISUAL INSPECTION WITH ACETIC ACID FOR THE PREVENTION OF CERVICAL CANCER AMONG WOMEN VISITING HEALTH FACILITIES IN JIMMA ZONE, SOUTH WEST ETHIOPIA

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ABSTRACT

Introduction

Recently FMOH considering as cervical cancer is a public health problem, introduced SVA with STA for CC screening programme as routine care of reproductive health services. Assessing patient satisfaction, toward the care or attribute of care has a programmatic importance.

Objectives

Health facilities based study in jimma zone to asses client satisfaction toward VIA service and to identify challenges for timely intervention in Jimma zone, 3 selected Hospitals ,South West Ethiopia, from January to may , 2016/17

Methods

A survey with a mixed method of data collection was used. A complete enumeration of data collection with exit interview of 333 screened women was determined using single population proportion formula (P=68.33%-of women very satisfied which was done previously in Malawi), with margin of error 0.05, and 95% CI.Descriptive statistics computed, summarized for essential Characteristics of participants , checked for fitness to Chi-square test & P value of 0.25 used to declare statistical power at univariate level significant variables selected for multiple logistic regression, at P value 0.05, 95 % CI conducted to assess their relationship with client satisfaction level.

Results

Out of three hundred thirty three screened women the VIA positivity rate over a given study period was 16(4.8%). At least all women were satisfied to the service, majority 228 (68.5%) being very satisfied. It is only having positive attitude toward curability of cervical cancer (AOR = 0.517[0.299-0.894] at 95% CI) which showed statistically significant association to be very satisfied.

Conclusion & recommendation

Almost all women were satisfied with the service. Still lack of Knowledge and awareness related to cervical cancer and its preventive strategies including VIA were seen prominently. Already started Community awareness on cervical cancer and its preventive strategies including availability of VIA service has to be further strengthened by possible means and with great effort.

Key word:Visual inspection with acetic acid,Client satisfaction ,Jimma.

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List of Tables & Figures

ABBREVIATIONS

CIN- cervical intraepithelial neoplasia

VIA- visual inspection with acetic acid

SPSS – Statistical Package for Social Science

LMICS- low middle income countries

SSA- sub-Saharan countries

HPV- Human pappiloma Virus

LBC- liquid based cytology of Pap smear

FMOH- Federal ministry of health of Ethiopia

VIAC- visual inspection with acetic acid & cervicography

CI- confidence interval

AOR- adjusted odds ratio

OD- odd ratio

PI – Principal Investigator

SD – Standard Deviation

WHO – World Health Organization

HIV- Human immune virus

GC- Gorgonian calendar

ART- Anti-retroviral treatment

HAART-highly anti-retroviral treatment

IARC- International agency research for cancer

CCP- cervical cancer

STA- see & treat approach

SCJ- squamocolumnar junction

JUMC-jimma university medical center

JUSH-Jimma University specialized Hospital

RHS/C-Reproductive health service/clinic

FGA- Family Guidance association of Ethiopia

CHAPTER 1

INTRODUCTION

1.1. Background

Cancer of cervix (CC) is the second most common cancer among worldwide, with about 500,000 new cases diagnosed and over 250,000 deaths every year. In low and middle income countries (LMICS),including Ethiopia, CC is the commonest cancer affecting reproductive organs and also the leading cause of death from cancer among women (1) .Africa has a population of more than 750 million women aged 15 years and older who are at risk of developing cervical cancer. In 2008, there were 75,000 women diagnosed with CC in Sub-Saharan Africa (SSA) and over 50,000 women died from the disease. CC incidence rates in SSA are the highest in the world and the diseases the most common cause of cancer death among women in the region. The high incidence of CC in Ethiopia estimated to be 62 /1000000 women (2).

According to the 2009 World Health organization (WHO) report, the age-adjusted incidence rate of cervical cancer in Ethiopia is 35.9 per 100,000 patients with 7619 annual number of new cases and 6081 deaths every year (3). In 2010, it was estimated that 20.9 million women were at risk of developing CC in Ethiopia and the estimated annual number of CC cases and deaths was 4,648 and 3,235, respectively. It is projected that the number of new CC cases will almost double by 2025 (4). Facility based studies have shown that CC was the leading cause of cancer in Ethiopia and other studies had also shown that CC accounted for 25.8% to 32% of all female malignancies (5).

Cervical cancer is a long-term outcome of infection with a high-risk HPV type (HPV 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, and 68), particularly HPV 16. Peak frequency of HPV infection occurs in adolescence and early adulthood, with a life-time probability of infection of approximately 80%−90%. The frequency of incident HPV infections declines steadily with age. HPV infection persists in 5%−15% of the infected women, while 85%−90% of the infections becomes undetectable within two years. Those with persistent HPV infection are at high risk for cervical cancer and HPV 16 and 18 cause 70%−75% of the cervical cancer cases across the world (6, 7, and 8) which is assumed to be transmitted via sexual contact in most of the cases and skin to skin contact of genital areas.

Cervical cancer is considered as one of the most preventable cancers. The determination of the cause of cervical cancer, its slow progression coupled with the development of the first

cancer vaccine; cervical cancer prophylactic vaccine, makes cervical cancer the most preventable cancer and one that can even be eradicated. Despite this fact however, considerable mortality rates are being recorded, particularly in developing countries (9). There is a wide discrepancy in mortality and morbidity rates between developing and developed countries. The gaps have been widening in recent decades as screening and effective preventive strategies have led to a dramatic decline in the prevalence and mortality rates in developed countries. The gaps have been widening in recent decades as screening and effective preventive strategies have led to a dramatic decline in the prevalence and mortality rates in developed countries. For instance, in the United States between 1955- 1992 the mortality rate for cervical cancer declined by nearly 70% and the rates have continued to drop by 3% annually. Similarly in the United Kingdom, the rates of cervical cancer were lowered by 70% in 2008 compared to 30 years ago (10).

In developing countries like Ethiopia attention to non-communicable diseases, particularly cancer, was given due attention in regards to policy only since 2009/10. It was not even a decade when cervical cancer screening and treatment in Ethiopia pioneered. Pathfinder International/Ethiopia has taken the lead in introducing new screening and pre-cancer treatments. It has strengthened the capacities of university hospitals in five regions of the country: Addis Ababa, Oromiya, Amara, and Tigria & SNNEP.

It is also currently giving screening and pre-cancer treatments for HIV positive women in 14 hospitals located in 4 regions and one city council. Using these facilities and their trained personnel's as training sites, other nongovernmental organizations have also started providing screening services. Family Guidance Assossaction of Ethiopia (FGAE) started giving VIA screening service in 2012 and has reported screening 600 people using VIA so far. In Ethiopia, pre-cancer treatments have only been introduced since 2010. In previous years, screening was ineffective in preventing cancer since it was not linked to pre-cancer treatment including in FGAE .And patients with abnormal pap smears in previous years were followed up until their lesion was big enough for an operation and patients received radical treatments such as hysterectomy.

Currently, the FMoH planned expanded and provide screening and pre-cancer treatments in 118 treatment facilities around the Country. VIA service was started as part of FMOH expanded programme of CCP, STA 2015 GC. (11).

In addition to health policy other explanation for wide spread disease burden in developing countries like Ethiopia was low level community knowledge and awareness of cervical cancer &its preventive strategies in the region.(12) Among 500 attendees of a maternal and child health clinic in Lagos-Nigeria only 4.3% were found to be aware of cervical cancer. (13.) In 2004, also in Lagos-Nigeria, 81.7% of 139 patients with advanced cervical cancer had never heard of cervical cancer before, and 20%, 30% and 10% respectively thought the symptoms they had were due to resumption of menses, lower genital infection and irregular menses. Almost all the women (98%) believed that their advanced disease was curable, 12% thought it was not a serious disease and only 9% understood that it was cancer and therefore serious (14).

Similar studies in Kenya and Tanzania also reported very poor knowledge of the disease in patients (15). Poor knowledge is not limited to patients alone, however; health care workers who are supposed to be better informed do not have good knowledge of the disease either.

In Ethiopia, Northwest, Gondar, Gondar town in April 2010, community based knowledge assessment of women age 15 years & above done by structured questionnaire modified from American cancer society, on 633 done, only 31% were knowledgeable of the cancer(others scored below pooled mean),495(78.5%) heard of CC,only 195(31%) were found to be knowledgeable on comprehensive analysis don for CC,cause,risk factor & Clinical picture ,Preventive & treatment options, despite hearing of the disease the overall knowledge of the disease was poor (16).

Qualitative study , From November ,2010 to January 2011 ,to assess HPV vaccine acceptability & determinants & pattern of Health seeking behavior on CC by making FGD as means of data collection ,randomly selected districts from jimmy zone (2/17)were selected ,and from Addis Ababa again two Kifle ketama selected their ideas related CC were recorded with Tape cassette. Most participants from Addis Abeba heard of Cancer, but none mentioned CC spontaneosly.From rural awareness of Cancer was non-existent.

The community's awareness of CC was low, but when the symptoms were explained, the participants recognized that the condition was common, with most participants being aware of women affected by this condition. Majority have no awareness for available service for CC and The majority of the study participants were not aware about prevention of the disease including screening services for early detection and treatment of precancerous lesions .When perceived treatment seen, the majority of participants believed

that modern medicine cannot cure CC, In contrast, very few participants from Jimma believed that early stage CC is curable by modern surgical or radiotherapy treatment.

Similarly, nearly half of the participants from Addis Ababa stated that the disease could be cured if treatment was given before reaching an advanced stage. Approximately half of the participants who thought CC could be cured believed that traditional medicine and holy water would be an effective treatment. When their health seeking behavior were assessed, even when symptoms are present, health seeking is further delayed due to stigma based on local perceptions of the cause where the main finding though at individual level lack of awareness of the disease & treatment facilities were other mentioned factors affecting health seeking behavior of affected ladies (17).

The results of test accuracy in cross-sectional study settings indicate that the sensitivity of VIA to detect high-grade precancerous lesions ranges from 66–96 % (median 84%); the specificity varied from 64–98% (median 82%); the positive predictive value ranged from 10–20% and the negative predictive value ranged from 92–97% but most of this finding had verification bias. Moreover Despite different study settings, providers, study protocols and definitions of positive tests, the estimates of VIA sensitivity cluster around a mean value of 76% (18).

1.1.1. The concept of patient satisfaction toward VIA service

There is no consensus between the literatures on how to define the concept of patient satisfaction in healthcare. In Donabedian's quality measurement model, patient satisfaction is defined as patient-reported outcome measure while the structures and processes of care can be measured by patient-reported experiences (19).

Many authors tend to have different perceptions of definitions of patient satisfaction "patient satisfaction mostly appears to represent attitudes towards **care or aspects of care"** (20).

On the other hand, other authors defined patient satisfaction as a degree of congruency between patient expectations of ideal care and their perceptions of real care received used to compare different health programs or systems, evaluate the quality of care, identify which aspects of a service need to be changed to improve patient satisfaction and also to assist health service providers to identify which patients are least likely to continue in a screening or therapeutic program (20, 21). Patients who are satisfied with their providers' performance are more likely to continue seeing their care provider, and those who are dissatisfied are more likely to leave (22). Patient satisfaction studies have shown to have a

significant impact on the attitude and behaviors of health care providers and are prone to induce improvement measures in the provision of health care (23).

It is regarded as a result of an evaluation process (and comparison) of the service (24).

Obtained from a health care provider and the environment in which care is given. It is also related to the extent to which general health care needs and condition-specific needs are met (25)

1.1.2. Measurement of patient satisfaction

Patient satisfaction represents a key marker of communication and health-related behavior. In contrast, some of the literature dismisses patients' views as a wholly subjective evaluation and an unreliable judgment of the quality of care. Basically, there are two approaches for evaluating patient satisfaction-qualitative and quantitative but triangulation of both methods (mixed type study) for informative.

The quantitative approach provides accurate methods to measure patient satisfaction.

Standardized questionnaires (either self-reported or interviewer administrated or by telephone) have been the most common .Concerning assessment tool for conducting patient satisfaction studies, selecting an appropriate patient satisfaction instrument, with one fits for all is a critical challenge for healthcare organizations. Commonly employed tools were Ware *et al.* determinants of patient satisfaction (26, 27).

In Ware's framework, patient satisfaction is affected by factors such as interpersonal manner, technical quality, accessibility/convenience, finances, efficacy/outcome, continuity of care, physical environment and availability of care and resources (27).

So the aim of this study is to predict compliance of clients to VIA service by assessing their satisfaction toward the service & improve on areas of potential challenges toward the service.

Convenience of services, which include clinic hours, ability to get an appointment, access to services, and the time spent waiting in the clinic to see the health care provider have been shown to be related to women' satisfaction with cervical cancer screening services (28, 29).

Hence as SVA with VIA is at its nascent stage in Ethiopia exploring determinants of client satisfaction & challenges of women to get VIA service has paramount to improve the quality of the programme.

1.2. Statement of the Problem

As part of programme performance monthly/quarterly report of VIA service from client register format as well the report of two monitoring indicators seldom helps the stakeholders assess the functionality of the programme. From the report it is unthinkable to assess clients' perceptions and experiences, as well as to determine their satisfaction with screening. And amenities, safety, interpersonal relationship of health care provider & client, provider knowledge & skill, accessibility of the service which are important dimension of quality of service are not addressed by these indicators as well the already made data reporting system by ministry. Hence in addition to monitoring system, timely & frequent evaluation in which assessment of client satisfaction toward the service has paramount input for quality improvement as well as it uncover patient attitude toward the service local adjustment can be done for effective implementation of the programme.

From the report Service quality will be analyzed at different level by different stakeholders to take intervention on identified quantitative indicators of the quality of care that represents the needs, preferences and Subjective experiences of patients, which is patient based outcomes, are used increasingly in quality improvement initiatives. Addressing client concerns is as essential to good quality health care as technical competence of care provider. Quality largely depends on Client interaction with provider, such attributes as waiting time and privacy, ease of access to care and, at its most basic; whether they get the services they want. Health care quality assessment studies usually measure one of the three types of outcome: medical outcomes, cost and client satisfaction. For the last one, clients are asked to assess not their own health status after receiving care but their satisfaction with the service delivered. Assessing only medical outcome of heath delivery system has merit both as an indicator of the effectiveness of different interventions and as a part of monitoring system directed to improving quality of care as well as detecting its deterioration it is in the era of physician centered care.

In both developing and developed countries a growing body of research is discovering what clients want and how to measure client satisfaction: quantitative, qualitative and mixed can be used. Respect, understanding, complete and accurate information, technical competence, access, fairness and result are what clients usually want (30).

Concerning principle of customer satisfaction measurement a large number of studies highlight the marketing reasons for collecting information : micro-macro model concept &

to standardize /measure traditionally Likert-type scale with endpoint anchors of "satisfaction" and "dissatisfaction" because it was thought that satisfaction and dissatisfaction were the ceiling and floor of the continuum of a one-dimensional satisfaction construct. A two dimensional model puts the validity of this attitude scale into doubt, considering the heterogeneity of one's study population makes still use of the liker type scale possible (31).

1.3 Significance of the study

As it was newly established Service by assessing clients' satisfaction level, experiences & perceptions on service & as part of evaluation process comparing VIA test result with other screening methods several challenges for area of improvement was identified .Hence the result is dully important as input for programme functionality, in such way that further indicators which are part of dimension of quality can be established from the study results considering validity & feasibility.

Equivocally by assessing client satisfaction we can predict whether the patient will stick to the algorithm of cervical cancer prevention by VIA test or if not one has to act accordingly, so that the overall programme of the project will be achieved.

CHAPTER 2

LITRETURE REVIEW

Overview of VIA

Visual inspection with acetic acid (VIA) A is one among inexpensive and accurate alternative to cytological screening of cervical precancerous lesion. In 1933, schiller published an article on applying an iodine solution to cervix to detect neoplastic cervical lesion. However As the more-specific cervical cytology became available (in 19 40-1945); the Schiller test was abandoned as a screening method. (32) yet, it is only since the beginning of the 1990s that necked eyed inspection after a cervical application lugol's iodine or diluted acetic acid has been extensively used to screen women, mostly in low resource area with high incidence of CC and mortality rate of cervical cancers. Although VIA has a low specificity resulting in a number of false positive assessments , performing VIA with immediate cryotherapy in women with a positive test result once in a lifetime has the potential to reduce the incidence of cervical cancer by 25% and that of mortality by 35% (33). When we see generally the efficacy of the programme with VIA as SVA to decrease the disease burden of cervical cancer, screening & treating positive VIA one in women's life especially after age of 30 decrease incidence of cervical cancer by 25% and mortality from the disease by 35%, and if a women screened 3-5 times in her life time this morbidity will decrease by 50%.The ACCP and a number of other organizations concerned with the prevention of cervical cancer strongly recommend VIA followed by cryotherapy in VIA-positive women as a basic model for the prevention of cervical cancer in low-income countries (34).

Visual inspection method is however a subjective method and prone to different interpretations by different observers depending on experience and competence of the performer, hence proportion of VIA positivity varies depending on local burden of the disease and associated factors. The optimum VIA test positivity test is 5-10 % in women between ages of 30- 60 years (35).

To site few of them :a cross sectional study on 448 women HIV positive from October 2012 to February 2013 in three hospitals l yirgalem hospital , Awassa University hospital & wolayita soddo hospital to determine prevalence of precancerous lesion by VIA positivity & associated factors showed that VIA positive rate was 22.1%(99) (36

Similarly a survey conducted at Jimma model clinic of FGAE , from September 11, 2013 to October 11, 2013,to see prevalence of VIA positivity & its predictors showed among 334 screened clients, 43 (12.9 %) were found to be VIA positive, result while 287 (85.9 %) had negative test, the remaining four (1.2 %) were found to have lesions suspicious for cancer (37).

When we see other sub-Saharan country, Rwanda, where incidence rate of cc were 49 per 100,000 showed a prevalence of precancerous cervical lesion to be 5.9 %. The study was 3 years cross-sectional involving women's age ranging from 30-50 years in 3 district parts of Rwanda and involved heath workers in screening were doctors, nurses & midwives. They had 3 years of experience in maternity service that had been trained for 2 weeks in theory and practice in cervical cancer screening (38).

For programme effectiveness of SVA client compliance to follow up is essential. This can be achieved by Client feedback is a powerful way of finding out how services at a given site are perceived by clients. Feedback can be obtained by interviewing clients, keeping a suggestion box in the clinic, and/or having a notebook in the waiting area. Exit interviews can be conducted as clients leave the clinic, or interviews can be conducted by visiting clients at their homes to listen to their ideas on how to improve services (39).

Accordingly in February 2, 2007 to august 12, 2008 a comparative cross-sectional study to asses client attitude toward Cervical cancer screening with VIA/VILI done in two family planning clinic in Mulago hospital,Uganda.The type of screening where opportunistic, a total of 384 clients were involved in study. Exit interview of clients attending the clinic done to asses acceptability of VIA/VILI: clients were asked whether to undergo screening again if need arose and whether they can recommend the screening to other women. Women were actually divided into two wings who accept screening & who declined, in which small Focus group Discussion(FGD)-6-8 women ,having 2 from each wing involved. And when we saw agreed to be screened & undergone screening, 229 from 384, they got positivity rate of 16.3%. When these were asked about their attitude, 91.3% responded as they would recommend the test to their relatives/other and 223 out of 226 (98.7%) will undergo the test again if a need arose. Nearly all of the respondents gave positive feedback to the care givers, who were all females, showing high acceptability of the test. In this study few women not recommending to other

women. Cited reason was discomfort during speculum insertion & chemical irritation. Most of them accept this as it is inevitable per health believe model. Again the interviewer is not part of screening team clients result of high acceptability toward VIA/VILI can seems courtesy bias, but they were clearly told at the time of selection that truthful responses were valuable for future planning of improved healthcare services, hence has minimal effect. Ideas obtained from FGD when heard from recorded with tape, contains Some participants believed that cervical cancer has no cure and so did not see the benefit of screening. A number of participants were of the opinion that family planning increased the risk of developing cervical cancer. Other participants thought that the health worker would also check for HIV while screening for cervical cancer and they did not want to know their HIV status. Many cited fear of outcome (positive test results) and thought that knowing they had cervical cancer would result in an early death. Lack of privacy and long waiting time were also reasons for declining to be screened. Here the point is difficult to conclude these challenges to be screened were from declined wing (40).

Similarly a survey was done to asses the safety, feasibility, and acceptability of single visit approach programme by VIA & cryotherapy in Laos, a landlocked country in rural south east Asia bordered by Thailand, Vietnam, china mynemar, & cambodia.The survey was a form of prospective cross-sectional studies, done at February 15-april 19 and June 14 –August 18 2009 after following clients treated with cryothearpy for one year. The economic development, health system infrastructure as that time was more or less comparable with our settings. The type of VAI screening was opportunistic in type ,carried out in 2 provinces of the region in which 3 gynecologists & 2 nurses involved in STA programme.All staffs involved were trained for 10 days by expert of VIA & cryotherapy using manual prepared by Alliance of cercal cancer prevention(ACCP).

They screened a total of 1931 with mean age of 34+_6 year, got VIA positivity r ate of 134(7%) and STA rate was 113(84.3%).Acceptability toward service was measured by determining the proportion of women who were satisfied to their initial visit discoing and who were successfully adhere to the home care instructions as well complications related to VA test & cryotherapy treatment. And accordingly, when women's attitude toward STA (n=1926), were assessed, 1918(96.6) of the screened women were satisfied or Very satisfied to the pretest counselling.In 1718(89.2%), the test experience was better than

expected. All got & treated with cryotherapy were satisfied or very satisfied (113,100%). When asked whether to recommend the test to other women, 1918(99.6%) of them responded as they would recommend and 1913(99.3 %) agreed to had a test if a need arose. When their perception toward their healthy provider service was assessed ,all women were very pleased 1759(91.3%) or pleased 164(8.7%).The data collectors were here 1gyenecologist & 2 nurse after up to 1 year of stay in who have appointment at the end of the year. Hence recall bias were inevitable (41).

Here in this two studies client attitude toward the VIA test was more or less similar, i.e. client were at least satisfied to the service. The question now is really the clients' were provided high quality care or what brought this similarity or what really determines satisfaction level toward the VIA service? A survey was done in Malawi; 4 months study period starting from July, 2013 to assess satisfaction level toward VIA screened women & its determinants in 16 screening centers. Malawi, being divided in 29 health districts, having 43 screening centers with more than two decade experience of cervical cancer screening, 11 districts were selected randomly from which 16 screening centers were selected by purposive sampling method. Semi-structured questionnaire with mixed open & closed type format were used to collect information from the study participants. The content of the questions were clients' attitude toward attribute of care of VIA service(derived from ware's frame work of health system evaluation), two dimension ranking & a 5 point liker type scale used to asses attitude toward attribute of care & overall satisfaction to the service. The data collector was not a member of professional nurses trained in screening service, 120 were enrolled during study period with a median age of 32, and range-15-70 years and. seven of them got treatment. Almost all screened women were satisfied 68.33% being very satisfied. All except one among screened clients responded positively to privacy during the test, neatness& cleanness of examination room and felling care giver were good at their work.97% of screened women responded as they were counseled pre-& post test .Previous knowledge of VIA, physical distance of VIA clinic to client home & Waiting time were found to be negative predictor, while having appointment were found to be the only positive predictor of very satisfaction.

This implied the clients' were not sure or doesn't except appropriate provision on attributes of care (42).

Assessment of clients' satisfaction with health service deliveries at jimma university Specialized hospital a cross sectional study was conducted in the 1st week of March ,

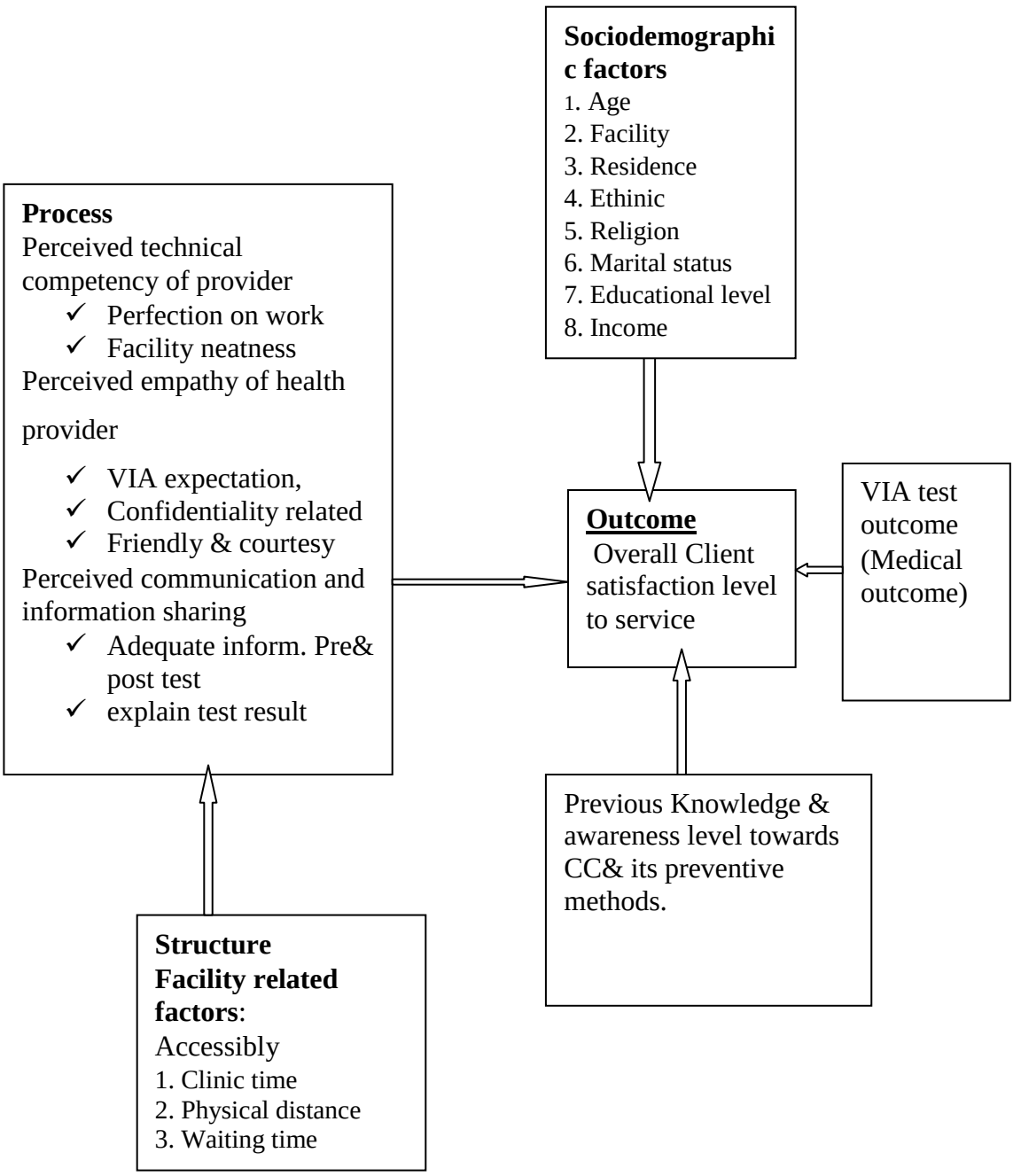
2010 on a sample of 422 service showed overall client satisfaction level with the health services rendered at the hospital was 77%. Satisfaction was reported to be highest (82.7%) with the way the doctors examined them and on the other hand dissatisfaction was reported to be highest (46.9%) by respondents with the time spent to see a doctor.

Furthermore, satisfaction with the health care was found to have a significant association with the age of the respondents (p=0.034) and educational level of the respondents (p=0.003). Lack of drugs and supplies, poor information provision, long waiting time, poor cleanliness, lack of privacy and inadequate visiting hours, were found to be the major causes of dissatisfaction (43).

Here in summary satisfied patient to the service may not to mean the service is high quality. Equivocally satisfied client will adhere to treatment & follow up. Therefore determining satisfaction level toward a service and its determinants such as demographic factors, knowledge & attitude level toward the service & healthy delivery system have invaluable advantage as part of monitoring & evaluation system.

Shown Fig.2.1. Below. Showing summary of conceptual frame work.

Conceptual frame work



CHAPTER 3

OBJECTIVE

3.1 General objective

This study is to explore clients' perceptions and experiences, & their satisfaction level toward VIA screening.

3.2 Specific objectives

1. To determine VIA positive rate.
2. To explore the level of satisfaction among VIA screened clients
3. To identify determinants of satisfaction towards VIA screening among clients.
4. To identify areas of potential improvement affecting women's satisfaction toward VIA screening service.

CHAPTER FOUR:

METHODS AND MATERIALS

4.1. Study design

A cross-sectional study design with a mixed method will be used.

4.2. Study area

The study will be in 3 health facilities found in jimma zone, which provide See & treat approach (STA) for VIA test along other reproductive health service. These facilities include Marie stop international jimma branch, FGA Jimma university medical center (JUMC). Jimma zone is comprised of 17 districts, each with primary healthcare units. The study will be carried out for a total of 5 months January 2016 to may of 2017

The zone has a total population of 2.5 million, among these target age group women 25/30-50 years of who have different risk profile for CC and residing both in urban and rural areas. Although the zone has six hospitals in addition to above 3 selected facilities, health center in jimma & other will be selected during outreach & in all cases the selection of these sites is by convenience

4.3. Population

4.3.1. Source population

1. All women who came to the selected facilities for any Reproductive health services, including ART care.

4.3.2. Study population

Sample of women who came to the selected study facilities for any Reproductive health services, including ART care.

4.4. Inclusion & Exclusion criteria

4.4.1. Exclusion criteria

1. Women with a total hysterectomy
2. History of cervical cancer (pathology proven report invasive cervical cancer)
3. Currently pregnant

4. Post partum of less than 3months period
5. Women who got the service but refused or impossible for participation (mentally Women who ill, dumb, deaf)
6. Women who come for reproductive health service with age less than 30
7. Women who come for ART service with age less than 25

4.4. Sampling method

4.4.1. Sampling design & size

Sample size(n) was determined based on the previous finding in Malawi were 68.33% clients were found to be very satisfied to the VIA screening service , expected margin of error (d) of 0.05 and with 95% confidence level (Zα/2) and . And a total of 333 screened women were enrolled during study by complete enumeration method

$$n = \frac{Z^2 p q}{d^2} = (1.96)^2 0.6833(1-0.6833)/(0.05)^2 = 333$$

Z^2 = is the Standardized normal distribution curve value for the 95% confidence interval which is 1.96

d = is the desired level of precision, 0.05.

p = is the previous study proportion of client who were very satisfied toward the service and is 0.6833

q = is 1-p= 0.32

n = is the sample size, of the study = 333

4.5. Data collection Instrument & procedure

4.5.1. Data collection instrument

Semi structured check list adapted after review of relevant literatures and modified to the local situation was used for data collection.

Skelton of Survey instrument for measuring client satisfaction was taken by critical literature review of Malawi. Adjusted to our setting using the contents National CCP protocol of FMOHE on principle of counseling & put on likert scale to format.

Knowledge and awareness questions modified from American cancer society, and some content of the questions which measure causes of CC, & clinical picture were dropped

after pretest. The pre-test was be done on 5% of sample size study instrument was revised; translation into Afaanoromo&an Amharic version was done for consistency of study tools. Data collectors a total of 11 Bachelor science nurses selected from the selected health facilities

4.5.2. Data Collection Procedure

Data were collected through exit interview using semi structured format by trained data collectors in separate room, who was not involved directly in cervical cancer screening Using VIA and reporting system per IARC.The VIA service provision follows same principle as other General gynecologic exam & things peculiar to VIA test fulfilled.

The remaining part of data was recorded per finding of the test & exam result.

Opinion & suggestion whether gratitude or complaints from open ended questions will be captured in their own language & recorded on dummy table.

4.6. Study variables

4.6.1. Dependent variable

Client satisfaction level

- Very satisfied
- Satisfied

4.6.2. Independent determinant variables

1. Perceived technical competency of provider
2. Perceived empathy of health provider
3. Perceived communication and information sharing
4. Perceived convenience of facility related factors
5. Interpersonal relationship.
6. Clients ‘opinion, suggestions & recommendation

4.6.3. Independent variables

1. Socio-demographic Characteristics

Age

Marital status

Residence

Facility

Occupation

Income

Educational status

2. Knowledge& awareness assessment questions (belief CC, and its preventive measures)

Ever heard CC before

Believe on curability

Perception on preventability

Mentionining at one /above

Ever heard of cervical cancer screening/VIA

Ever heard of HPV vaccine

Source of information if any

4.7. Operational definition & key terms

1. VIA positivity rate - client who test positive/suspicions of cancer per IARC definition divided by all screened women over a specified study period.

2. Precancerous cervical lesion – A test positive of VIA or suspicious of cancer on VIA test, and treated per protocol.

3. VIA test reporting-per IARC manual

A.VIA positive-positive Raised and thickened white plaques of aceto-white epithelium, usually near the SCJ

B.VIA negative-Smooth, pink, uniform and featureless; ectropion, polyp, cervicitis, inflammation, Nabothian cyst

C.Suspicions of cancer-Cauliflower-like growth or ulcer fun gating mass

4. Satisfied to the service- Attaining one's need or desire-Who score below the pooled mean

5. Very satisfied- Attaining above one's expectation-.who score above pooled mean.

6. Knowledge- The understanding and the respondents have about carcinoma of the cervix with respects, awareness of the disease, preventive methods, curability and screening method.

7. Attitude: the belief and feeling of the respondents about preventability & curability. Cervical lesions. Rather than separate same questions used as the following

8. Positive attitude toward CC& its prevention-which scored equal & above pooled mean for indicated awareness questions

9. Negative attitude toward CC& its prevention-scoring below mean on cervical knowledge & attitude question.

10. Good knowledge –scoring 80-100% for indicated knowledge questions9

11. Moderate knowledge on CC& its prevention- scoring 60%-79% for indicated knowledge questions

12. **Poor knowledge on CC& its prevention-scoring** < 60% for indicated knowledge questions

13. Unfavorable experience toward attribute/s of care-scoring - whose satisfaction score is less than pooled mean of rated proportion of attribute of care.

14. Favorable experience toward attribute of care -whose satisfaction score is greater than pooled mean of rated proportion of attribute of care?

15. Waiting time –A time elapsed from being counseled till the actual service completed (doesn't include time for other services).

4.8. Data enter and analysis

The data were entered and analyzed using SPSS version 16.0 statistical package. Data cleaning was performed by running simple frequency distributions, summary statistics and cross-tabulation to identify and correct out-of-range, missing and inconsistent values. Descriptive and summary statistics were used to describe the data in relation to relevant variables. Depth interview on areas of improvement & suggestion given was schematized per their concept & triangulated with quantitative finding. The quantitative findings on patient sociodemographic characteristics recorded & categorized according to per need. The clients' level of knowledge and awareness toward cervical cancer and its preventive strategies were measured by a form so called Nahida's KAP (knowledge, attitude, and practice) study, as follows: For knowledge the score out of 6 on indicated questions changed to percent were used to describe descriptively as well to validate association of individual item:(I) 80–100%: good knowledge;(ii) 60–79%: moderate knowledge;(iii) <60%: poor knowledge. For belief and feeling of the respondents (attitude) about cervical cancer and its prevention the responses were summed up and a total score was obtained for each respondent. The mean score was calculated and those who scored equal to or greater than the mean (2.70) were categorized as having a positive attitude and those who scored below the mean were categorized as having a negative attitude towards CC and its prevention.

Similarly for attitudinal response on attribute of care 13 questions related to patient counseling during VIA test & facility related factors were recorded on using

Likert type scale system, which ranges from score 5 (strongly agree) to score 1 (strongly disagree). For a client 13 and 65 will be a final possible score. Moreover pooled mean were used (62.566) to categorize into satisfied (who scored below) & very satisfied (scored equal and above pooled mean) category. Overall satisfaction to the service was

used to validate this category. It was on this binary outcome for which we checked effect of sociodemographic & cervical cancer knowledge & awareness level.

Individually rated attribute of VIA service by all the clients were compared changed to percent, again the pooled mean was calculated to distinguish which areas of VIA service will need improvement. A cut off point of distinguishing for this category was 96.66 %(pooled mean).The minimum value rated for given an attribute/component of VIA service 333(333*1 provided she rated strongly dissatisfied) and the possible maximum rating given another attribute of care(cleanness & neatness=333* very satisfied(5):changed into percent for all clients for each 13 attribute of care ,finally compared with one another using pooled mean, lowest value defined operational as toward dissatisfaction, hence area of improvement).

Bivariate and Multivariate analyses were performed to test associations. Variables having p value < 0.25 in the bivariate analyses were entered into a multiple logistic regression model to control the confounding effect amongst the variables. Odds ratio with their 95% confidence intervals were computed to identify the presence and strength of association, and statistical significance was declared if $p < 0.05$.

4.9. Data quality assurance

The Principal investigator checked 10% of the data for accuracy and completeness, consistency any jumped & missed. Data collectors were given on the following points prior to start of data collection:

To understand what each question means, to know how it is administered. Make sure the clients understood what they were asked. &. How the responses will be recorded

In addition to provision of interview guide which was prepared by Afaan Oromo & Amharic version? Every 2-3 days the supervisor and data collectors Contact each other & Discussed if any problem < solve if there was any faced problem as early as possible and to take corrective measures accordingly.

4.10. Ethical Considerations

Ethical clearance for the proposed study was obtained from the ethical review committee of Institute of health science, Jimma University. Communication with the different administrators was be made through formal letter obtained from jimma university research directorate office. The purpose and importance of the study was explained to the participants as well as administers of healthy facility. Data collected after full informed verbal consent was obtained. Confidentiality of the information was maintained throughout by excluding names as identification in the questionnaire and keeping their privacy during the interview. To maintain the privacy of the participants, each interview was done in an examination room in the absence of the health service provider. To maintain confidentiality, information obtained from participants was handled only by data collectors & principal investigator. And finally clients were requested to pass information about the service (person to person health message).

4.11. Dissemination Plan

The final results of this study will be submitted to department of OBGYN and post-graduate coordinating office. The study revealed low level knowledge and awareness on cervical cancer & its preventive strategies. Again increasing community awareness toward curability of precervical cancer & cervical cancer definitely improve VIA client satisfaction. Hopefully JUMC will arrange this as part of community service more than ever.

And finally all possible effort will be made to publish in peer review journal.

CHAPTER .5

RESULTS

Sociodemographic characteristics

A total of 333 participants were given exit interviews and screened for precancerous cervical lesion .Mean age of respondent were 35.15(SD=5.49). Regarding ethnicity of respondents; 178(53.33) Oromo & 91 (27.33) Amara followed by 28(8.41) Dawuro .The median parity of study participants were 3 ranging from null parity to grandmultiparity (The maximum parity being 9). Out of 333 women screened 317(95.2%) of women were turned test negative, while 14(4.2%) of them were VIA positive and 2 test result were suspicious of cancer. Majority were screened 214(59.4) at JUMC followed by at FGA 105(29.2).Religious wise almost half were followers of 163(48.95) Orthodox Christian followed by muslim127 (38.13). Almost majority 267(80.4%) of clients were currently married.

See table 5.1. Sociodemographic characteristics of study participants (n=333).

Table 5.1. Sociodemographic characteristics of study participants (n=333).

S.N	Sociodemographic characteristics		Count N	Percent
1	Age	25-30	114	34.2
		31-40	166	49.8
		41-50	53	15.9
2	Ethinicity	Oromo	178	53.453
		Asmara	91	27.33
		Douro	28	8.405
		Garage	18	5.405
		Others+++	18	5.405
3	Facility	FGA	105	29.2
		JUMC	214	59.4
		Marie stop International	14	3.9
4	Residency	Jimmy	245	73.6
		Out of Jimmy	88	26.4
5	Marital status	Currently married	267	80.423
		Currently Unmarried*	65	19.6
6	Religion	Orthodox	163	48.95
		Muslim	127	38.13
		Protestant	39	11.71
		waqefeta	4	1.2
7	Educational	No formal schooling	74	22.22
		primary school	174	52.3
		secondary school	34	10.2
		More than secondary	51	15.32
8	Occupation	Housewife**	178	24.6
		Employee	82	53.5
		Merchant	36	10.8
		Daily laborer	20	6.00
		Others****	17	5.1
9	Income (N=244)^	200-2000	136	60.7
		>2001	88	39.3

Key: Ethnicity=++++=Tigre.Agnuwak, yem, waloiata, keffa, Benjamin, ^-Missed value (109)
**Housewife and farmer,
**** (job seeker & student),,*-widowed, divorced, co-habiting/separated.

Reproductive History

The mean age of coitarche, age at marriage and age at first pregnancy were 17.38(SD=2.75), 18.40(SD=3.27) & 19.48(SD=3.24) years respectively. Among 333 screened women 79(23.72%) reported their serostatus for HIV to be reactive, among which VIA abnormal test result was found in only 1 client. Cryotherapy was done for 13 cases (92.8%) & in 1 case the cryothearpy was postponed as the lesion was wider than cryo probe. For cases of suspicious of cancer biopsy was taken immediately, for the other she was referred to JUMC. Among screened women 280(84.1%) have no history of abortion while 53(15.9%) had one & above abortion. 79(23.7%) of study subjects reported as using hormonal contraceptives using during study period. While 254(76.3%) of them not .When asked about Current or previous history of STI, 50(15%) responded as they had .History of vaginal discharge was commonly reported symptoms. 203(60.8%)of women perceived as their husband/partner involved in polygamous extramarital /relation, the remainining believe they are monogamous relation, in contrary to the report as 201(60.4%) of screened women report as only having one life time sexual partner,116(34 %)reported having Life time sexual partner 2,And 4.8(16) 0f them reported as having 3 and above Life time sexual partner. Having Current Pelvic inflammatory disease was reported in 18 clients who were reporting vaginal discharge when asked. Speculum findings: cervical polyp was reported in 3 cases, evidence of cervicitis 9 cases, 6 cases of suspicious of cancer found, of which only 2 were suspected to be cancer on VIA test. In 7 cases of clients SCJ was not visualized well. Table 5.2.

Table 5.2. Distribution of reproductive characteristic of the participants'=333

S.N	Reproductive characteristics		Count N (%)
1	Number of parity	Nulliparous	33(9.9)
		1-3	183(55)
		4 & above	117(35.1)
2	Number of Abortion history	No abortion history	280(84.1)
		1	37(11.1)
		2 &above	16(4.8)
3	Family planning /ocp use	yes	79(23.7)
		No	254(76.3)
4	Coitarche	10-16	149(44.7)
		17 and above	184(55.3)
5	Age of marriage*	14-17	140(42.6)
		18 and above	189(57.4)
6	Age at 1st pregnancy**	14-20	274(83.3)
		21 and above	55(16.7)
7	VIA test result	Negative	317(94.89)
		Positive	14(4.2)
		Suspicious cancer	2(0.6)
8	Number of sexual partners	1	201(60.4)
		2	116(34.8)
		3 and above	16
9	client's partner no sexual partner	1	130(39.04)
		2 and above	203 (60.8)
10	Self report HIV test result	Unknown	113(33.9)
		reactive	79(23.7)
		Non-reactive	136(40.84)

Knowledge and awareness status of clients toward cervical cancer & its prevention

Clients' Level of knowledge and awareness toward cervical cancer & its preventive strategies (Per Nahidas KAP measurement below) showed majority 227(68.4%) had poor knowledge, among which only 188(56.5%) of them had positive attitude toward Cervical Cancer & is preventive methods.

Table 5.3. Knowledge & awareness level of study participants.

S.N	Variable with categories	Count N		Percent	
		Yes	No	YES	NO
1	Ever heard of cervical cancer before	242	91	72.7	27.3
2	Belief Curable if detected early	172	161	51.7	48.3
3	Perception on disease preventability	96	237	28.8	72.2
4	Mentioned at least One way of prevention	111	222	33.33	66.66
5	Ever heard of cervical cancer screening before/VIA	232	101	69.7	30.3
6	Heard of Vaccine for cervical cancer/HPV	43	290	12.912	87.087
a.	Poor knowledge	227		68.4	
b.	Moderate knowledge	42		12.6	
c.	Good knowledge	64		27.3	
d	Positive attitude	188		56.5	
e	Negative attitude	145		43.5	

When asked source of information for CC screening with VIA and or about HPV vaccine (n= 241), 89(36.6%) of clients' reported as heard from radio,66(27.5%) from health worker, 51(21.4%) from neighbors /relatives, 32(13.2%) from television ,few read from posted poster 3(1.2%).

Satisfaction Status, its determinant factors & Challenges

When women's satisfaction level toward the service was assessed, at least all screened women were satisfied, majority 228 (68.5%) of them were very satisfied.

Table 5.6 showed client level of satisfaction with attribute/components of the VIA service. When screened clients were asked to rate the overall service they got 311(93.4% of them rated as very satisfied and 21(6.3%) of them rated as satisfied. Only one client being on neutral category. Again 296(88.9%) strongly agree to recommending the service to their relatives/neighbors, while 4(11.1%) of them agree to same idea.

When asked what to improve or any suggestion about the service 141 (62%) of 228 (68.5%) very satisfied group gave the verification as they were satisfied by saying, "Betam tiru newu,bizihu qexxilu" and the like that.

Statistical test was declared after data distribution was checked ,with histogram, kurtosis & skewness ,validity & assumption of chi-square where appropriate Fisher exact test verified for selected variable: age, facility ,residency,marietal status, educational status income, occupation & source of information , questions for knowledge & awareness of Cervical cancer & its prevention, test result outcome was selected ,checked for fitness to binary logistic regression, $p<0.25$ Value used to declare statistical power at 95% CI .

Age, residency, and facility they got screening, marital status, occupation, monthly income, source of information failed to show association with satisfaction level. ($P>0.25$) at bivariate analysis. Being to had positive attitude toward cervical cancer & its prevention was found to be associated with being to be very satisfied ,but it is only being knowledgeable on curability (AOR =0.517[95%CI ; 0.299-0.894])which showed statistically significant association with to be very satisfied. When we compare with those without knowledgeable on curability by adjusting all other covariates.

Table 5.4 &5.5 showing Association of satisfaction level with background variables at both Univariate & Multivariate logistic regression

Table 5.4. Bivariate and Multivariate analysis of association of satisfaction level with background variables.

Variables with categories		Outcome Variables(%=N/n(total)		COR with 95% CI	AOR 95 %CI
		Satisfied N (%)	VerysatisfiedN		
Age	25-30	38(11.41)	76(22.82)	0.807[0.483-1.348]	
	31-40	47(14.11)	119(35.7)	1.00	
	41-50	20(6.00)	33(9.9)	0.701[0.363-1.351]	
Residency	Jimma	71(21.32)	172(51.65)	1.471[0.885-2.444]	
	Out Jimma	34(10.2)	56(16.82)	1.00	
Facility	JUMC	69(20.72)	145(43.54)	1	
	FGA	29(8.71)	76(22.82)	1.247[0.745-2.087]	
	Marietp.Inter	7(2.1)	7(2.1)	0.476[0.161-1.410]	
Marital status	Currently	89(26.72)	178(53.45)	1.00	
	Currently Unmarried	16(4.8)	50(15.01)	1.437[0.790-2.747]	
Educational level	No Formal school	32(9.61)	42(12.61)	0.529*[0.301-0.931]	0.663[0.319-1.380]
	Primary school	50(15.01)	124(37.23)	1.087[0.608-1.942]	1.182[0.637-2.191]
	Secondary	23(6.91)	62(18.62)	1.00	1.00
Occupation	Employe	21(6.31)	61(18.32)	1.173[0.577-2.384]	
	House wife	63(18.92)	115(34.53)	0.737[0.408-1.333]	
	Others	21(6.3)	52(15.62)	1	
Income(N=224)	200-2000	47(20.98)	89(39.73)	0.67[.371-1.212]	
	>2001	33(10.28)	65(20.93)	1.00	
Ever heard CC	Yes	68(20.42)	174(52.25)	0.589*[0.355-0.977]	1.040[0.550-1.966]
	No	37(11.11)	54(16.23)	1.00	1.00
Belief Curability	Yes	39(11.71)	133(39.93)	0.442*[0.262-0.679]	0.517**[0.299-0.894]
	No	66(19.82)	95(28.53)	1.00	1.00
Perce. Preventability	Yes	21(6.31)	75(22.52)	1.00	1.00
	No	84(25.22)	153(45.94)	1.961*[1.129-3.406]	1.207[0.640-2.276]
List .method Prevention	Yes	39(11.71)	72(21.62)	1.280[0.789-2.078]	
	No	66(19.82)	156(46.85)	1.00	
Ever heard screening	Yes	63(18.92)	169(50.75)	1.910*[1.170-3.118]	0.814[0.439-1.510]
	No	42(12.61)	59(17.72)	1.00	1.00
Heard HPV vaccine	Yes	7(2.10)	36(10.81)	1.00	1.00
	No	98(29.43)	192(57.66)	2.625*[1.127-6.113]	2.028[0.838-4.907]
Source information (N=240)	Media	32(13.33)	88(36.67)	1.00	
	Health	16(6.67)	50(20.83)	0.880[0.440-1760]	
	Person-person	18(7.5)	36(15)	0.640[0.288-1.422]	

Key:1 *showed significant association at P value of <0.25 on binary logistic model
2.**showed significant association at P value of <0.05 on multiple logistic model.

Table 5.5: Bivariate & multivariate analysis of satisfaction level with knowledge and awareness level of participants.

Main Variable categories		Outcome variable		COR 95% CI	AOR 95% CI
Educational level		Satisfied N (%)	Very satisfied N (%)		
	No formal education	32(43.24)	42(56.76)	0.529*[0.301-0.931]	0.405[0.296-1.194]
	Primary education	50(28.73)	124(71.26)	1.087[0.608-1.942]	1.084[0.589-1.995]
	Secondary & above	23(27.05)	62(72.94)	1.00	1.00
Knowledge level	Poor knowledge	78(34.36)	149(65.63)	1.334**[0.648-2.750]	0.311[0.322-1.474]
	Moderate knowledge	12(28.57)	30(71.43)	1.906 **[0.993-3.3661]	0.286[0.291-1.755]
	Good knowledge	14(21.87)	50(78.13)	1.00	1.00
Attitude	Negative attitude	54(37.76)	89(62.23)	1.00	1.00
	Positive attitude	51(28.84)	139(73.16)	0.605*[0.379-0.94]	0.721[0.396-1.313]

Key 1. *showed significant association at P value of <0.25 on binary logistic model.

2. **- checked at Multiple Logistic regression considering Clinical significance (from Health belief model Point of view)

When wee see areas of potential improvement (from table 5.6) the mean rated attributes of care was 96.66% with highest (97.89%) level of satisfaction toward being

Well counseled to post test & the lowest (90.52%) level of satisfaction; being dissatisfied to the physical distance of their home to the VIA clinic was rated. Appropriateness of waiting time to get VIA service was the next least rated against higher satisfaction (94.53%).

The challenges toward higher satisfaction of VIA service rated for physical distance of VIA clinic from clients' home was verified on qualitative part as several screened women Paraphrased as "betam tirunewu,desibilonal,neger gin be aqirabiyachin bikefetilin"..

Table 5.6. Table on clients' rated level of satisfaction to each attribute /components of VIA service

Variables	5(%)	4(%)	3(%)	2(%)
Pretest Counseling was well	299(89.8)	32(9.6)	2(0.6)	
Posttest counseling was well	299(89.8)	33(9.9)	3(0.3)	
Experience of VIA test per expectation	277(83.2)	54(16.2)	2(0.6)	
Informed well about clinic hour	238(71.5)	86(25.82)	9(2.7)	
Told well what negative test result mean	294(88.3)	37(11.1)	2(0.6)	
Told well what positive result mean	287(86.2)	47(12.9)	3(0.9)	
confident in the skill of her care giver	267(80.2)	66(19.8)		
informed related to next appointment	287(86.2)	41(12.3)	5(1.5)	
Your privacy maintained well	293(88.8)	37(11.2)		
Exam room Neat &clean	286(85.9)	45(13.5)	2(0.6)	
Distance from your home to this service was Appropriate	216(64.9)	83(24.9)	28(8.4)	6(1.8)
Waiting time after being told& counseled to get the test was appropriate	253(75.98)	66(19.8)	11(3.3)	2(0.9)
The service was provided in courtesy& friendly manner	293(88.3)	36(10.6)	3(0.9)	
Overall very satisfied to the cervical cancer prevention services at this facility	311(93.4)	21(6.3)	3(0.3)	
Willingness to recommend the service to others	296(89.9)	37(11.1)		

CHAPTER 6

6.1 DISCUSSION

The accepted prevalence of precancerous lesion in the community ranges from 5-10%. (32, 39).In our study the overall proportion of VIA positivity was 4.8 %(16) which was lower when we compare with the finding in other settings. This is not surprising as ours were over a short period of time as well facility based.

For programme functionality of VIA service, as part of monitoring & evaluation, patient satisfaction survey is invariably a valid option. Accordingly patients were assessed for their satisfaction level towards the service. When their overall satisfaction level was seen, all screened women were at least satisfied, the majority 228(68.5%) being very satisfied to the service. Almost a similar finding in Malawi, when patients were asked their overall satisfaction to the VIA facility service 82(68.33%) of them rated being very satisfied. The figure in both settings were almost comparable, probably as educational status & health care workers involved in the service were nurses in both cases,thuogh in Malawi the service stayed more than a decade.

When clients asked of on attributes of care almost all agree to recommend the test to their relatives/neighbors, 89.9 rated strongly agree & 11.1 rated agree. Concerning being well informed to pre & post test counseling 97.84 % of them were very satisfied & satisfied. When clients were asked of about courtesy & friendly care of their care givers, 98.9% clients were strongly agree to agree. This findings were highly consistent with of Mulago hospital, Uganda & Laos, a landlocked country with comparable infrastructure & economic development to our country, the finding assessed from prospective cross-sectional study to saw safety, feasibility and acceptability /attitude toward of SVA on 384 & 1926 screened women respectively.

Privacy, neatness& cleanliness of facility & competency of care giver were rated toward highest level to be satisfied which was also same in Malawi where only one client for each was lacking. This highest rate might not necessarily show clients were provided high quality care as in our setting the service was recent as well clients may mercy to know their health rights from the service provision. The similarity across countries probably clients lack clinical knowledge to critique the service being provided or recall bias such as in Mulago & Laos (retrospective asking of service provision), and importantly difficult to rule out courtesy bias.

Patient attitude /satisfaction is a mental process of user, here screened women about the service he/she got. The attitude can be affected by different factors. And in our study we got only being knowledgeable on curability of cervical cancer (AOR =0.517[95%CI 0.299-0.894]) was independently related to being to be very satisfied when we compare with who don't knew adjusting with all covariates.

Though a proportion of screened women who had positive attitude toward curability(51.6%), to who had negative attitude to curability (48.3%) were almost comparable; women who had negative attitude toward cervical cancer CC and its prevention were about 30% less likely to be very satisfied when compare with those having positive attitude toward Cc and its prevention(AOR=0.721[0.396-1.313] at 95 % CI).Knowledge wise women who had good knowledge were & 70% more likely to be very satisfied when we compare with both those had moderate & poor knowledge(AOR= 0.286[0.291-1.755] , 0.311[0.322-1.474] at 95% CI) respectively. All these figures were not statistically significant implying very low level knowledge & awareness in the screened clients. This finding also comparable with research done in Malawi where previous knowledge of cervical cancer and VIA screening failed to show statistically significant association with to be very satisfied. This similarity may be in the latter women were found to be concern with having appointment to be very satisfied, hence focusing on process of care and what we got in our case was curability as independent predictor to be very satisfied, these finding proofs though comparable and low level Community awareness on CC & its prevention, clients in Malawi showed to value process of the service not only to the purpose of the test unlike in our settings.

Considering the strength of assosciation,of curability to be very satisfied, women's attitude were comparable And association were statistically significant which was to imply encouraging women's attitude toward cervical cancer invariably improves being very satisfaction level toward VIA service.

At community level, the knowledge on curability may not similar with our finding. For example a community based study done in 2 Jimma woredas & two kifle ketama of AA showed treatment for cervical cancer was blurred in the society. Half Participants from AA belief that the disease will be cured if diagnosed early, and this almost half preferred holy water & traditional medicine. The participants from Jimma, majority responded as cervical cancer was not curable & fatal and few participants mentioned by modern treatment if detected early.

Perception on curability found to be statistically significant here patient will be more satisfied from the service if they knew the purpose of the service in addition to the severity of the disease.

Women who had primary education were less likely to be very satisfied almost by 100% when we compare with those being educated to secondary and above(AOR=1.084[0.589-1.995],95 % CI) and with no formal education were about 40% times less likely to be very satisfied when we compare with those who attained higher education (AOR0.405[0.296-1.194],95 % CI). However this finding lacks statistical significance with to be very satisfied probably clients' satisfaction toward the service mainly depends on assessment of personality of care givers, and not on procedural actions followed by care givers. Again about more than half of screened clients were attained primary schools, which may not enable them to ask their missing reproductive health rights. This finding were actually not surprising as there were comparable result In Malawi on same topic ; where highest educational level lacks significant relation with very satisfaction to VIA service most probably communities awareness of Cervical Cancer prevention were low.

And Health education related to RHS in general and cervical cancer & its prevention in particular will bring positive change to outlook of societies' and has to encourage more than ever.

Lack of insight of women ere jusfied again, when women who had information of cervical cancer prevention before may excepect much and failed to get her expectation turned to be less satisfied when we compare with those who don't. Having information before and lacking relation with satisfaction was same as same research done in Malawi where previous knowledge of VIA screening failed to show significant association with to be very satisfied in relation those who don't and was also incriminated as expectation was the probable cause or clients' almost all to be satisfied with service may imply as clients were got improved quality service equivocally low level awareness on Cervical cancer and its preventive strategies including VIA service. Hence Increasing community awareness on cervical cancer & its preventive strategies definitely improves client satisfaction toward the VIA service.

Patient satisfaction studies have shown to have a significant impact on the attitude and behaviors of health care providers and are prone to induce improvement measures in the provision of health care .Accordingly when item score of attributes of VIA service was rated & categorized to two, above mean & below mean.

Attribute/s of care below mean were taken as clients frequently encountered negative experience, dissatisfied, hence needs improvement for achievement better satisfaction level.Appriopriatness of physical distance of clients' home to VIA facility, appropriateness of waiting time to get VIA service, and being told well clinic hour were found to be rated below mean, and where found to be attributes of inducing improvement measures in VIA service provision.

These were verified by qualitative study when several clients explain their idea when asked on suggestion on the service: "betam tiru newu,gin akirabiya bekefetttilin." Again when one client explains her idea: "itti gammadera, garuu nami baaye'en hin beeku kana".she was to mean as she was pleased, others has no information of the clinic.

This finding was similar in which long waiting time before getting the service was one cause of dissatisfaction in several surveys. A one week survey on 422 patients, cross-sectional studies done 7 years ago to asses client's satisfaction toward health delivery system, showed long waiting time was found to be cause of dissatisfaction in Jimma outpatient department. The case in the latter may be patient overload ,but in our case the time to get VIA service may be perceived as longer as most patient who where screened for VIA had additional problem for which they have to stay longer, otherwise most of the time the two clinics were open ,do timely if patient arrives the clinic.

The other possible for longer waiting time to be perceived may, it was newly opened room, and much time may elapse otherwise shown by other health workers.

Unlike other studies discomfort during speculum insertion & irritation with acetic acid was not reported as in women Mulago hospital, Uganda. In Laos, when clients were asked about their impressions of care giver, care giver as friendly rated the highest (97.9) while respect ion of the privacy was rated the lowest (78.9%) which is indifferent in our case rated as (97.66%).probably due to currently there were separate VIA clink in the Hospital.

Limitation of the study.

1. Difficult to rule out effect of courtesy bias i.e. approval bias may result, as individuals are often reluctant to articulate their dissatisfaction

2.Difficult to rule out effect of Social desirability bias which to mean that patients may report greater satisfaction than they actually feel because they believe positive comments are more acceptable to survey administrators.

3. Client response subjective-we studied what were being said not exactly their feeling

4. Facility based generalization of descriptive results difficult.

Strength of the study

1. Motivates the care givers to provide toward high quality service.
2. Exit interview of clients with depth interview used(mixed)
3. Laid down baseline information for observational study.

CHAPTER 7

7.1.Conclusion:

VIA positivity rate during this specified study period were 16(4.8%). Almost all women were satisfied with the service. Having positive attitude toward cervical cancer was independently associated to be very satisfied in when we compare with who don't. Within study subjects there were clear evidence as there were low level of Knowledge & awareness regarding to cervical cancer and preventive strategies including VIA service.

Convenience of VIA clinic with regard to physical distance & familiarization of the clinic for the clients were found to be areas of improvement.

7.2. Recommendation:

Increasing community awareness on curability of the cervical cancer & preventive strategies including VIA service will definitely improve satisfaction towards the VIA service.

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ANNEXES

B.Questionnarrie

Section I. Socio-demographic factors

*101.Date of Interview/test: ……. Card no……VIA reg, no:--

*102.Age……years

103. Type of facility: JUSH ☐FGA ☐ Maries stop ☐ other specify------

104. Religion Orthodox ☐ Muslim ☐ protestant ☐ waqefata ☐ others____

105. Ethnicity. 1 Oromo ☐ 2.Amhara☐ 3.Gurage☐ 4.Dawuro☐ 5.Tigre☐

6. Other (specify) _____

106. Residency Jimma ☐Out of Jimma☐specify----------

*107.Marital status: (tick the appropriate choice) Single ☐ Married☐ Co-habiting ☐ Divorced ☐Widowed

*108.Educational status: (enter last grade completed) ----- No formal schooling ☐ can't read & write☐

109. Occupational status 1. Farmer ☐ 2.House wife ☐ 3. Government Employ ☐ 4. Student ☐ 5.merchent ☐ 6. Daily laborer ☐ 7. No job 8. Other…. .

1010. Monthly income of her family…… (estimate in birr)

Section: 2.Knowledge about cervical cancer and its prevention?

201. Did you have heard of cervical cancer before? Yes☐ No ☐

202. Could you please describe what you understand about the disease? Is it curable? Yes☐ No☐

203. Previously did you know that this disease can be prevented? Yes☐No ☐

204 If yes, did you tell me how it can be prevented? ----------

205. Before you came for screening did you have you heard /undergone of cervical cancer sceeerining? Yes☐No ☐

206. Do you know about HPV vaccine for Primary prevention of cervical cancer? Yes☐No ☐

207. If yes to above last two questions, where did you hear it from?

Health workers ☐ Relative/neighbors ☐ Billboard/poster ☐ Radio ☐

Television☐Newspapers ☐

Section 3: Attitude- Indicator

Strongly agree 1 2 3 4 5 strongly disagree

A. Interpersonal relationship	1	2	3.	4.	5
1.Counseled well on VIA Test before undergoing the test .(language you understand					
2.Counseled well on VIA Test after undergoing the test					
3.Experience of VIA test was Ok(per expectation)					
4. Informed well the time when VIA clinic is opened and closed.					
5.Informed well what VIA negative test result mean					
6.Informed well what VIA positive test result mean					
7. The health worker who tested you was perfect at his/her work.					
8. Informed & given an appointment when you are going to be tested?(irrespective test result)					
B. Facility related factors					
9. The examination center was neat & clean					
10. Your privacy during examination was adequately maintained.					
11.The time you spend to travel from your home to the center & to get VIA test was appropriate					
12.The time you spend to get VIA test was appropriate(waiting time)					
C. overall satisfaction level to the service					
14.Very satisfied to the cervical cancer prevention services at this facility					
15.willingness to recommend the service to your relatives/neighbors					

Very satisfied 1 2 3 4 5 very dissatisfied

16. Your VIA test result VIA negative ☐ VIA positive ☐ Suspicious for Cancer ☐

. 17. Any suggestions which you think might improve the service?

Section 4: Reproductive history of the client

401. Number of *Parity* ……..

402. Number of abortion induced/spontaneous……..

403. Use of OCP yes ☐ No ☐

405. Age at first intercourse :…….(years),

406. Age at marriage….

407. Age at 1st pregnancy….

408. STI History client's 1.Hx of vaginal discharge☐ 2.Hx of genital ulcer☐ 3.None☐

409. STI History partner 1.hx of urethral discharge☐ 2.HX of genital ulcer ☐ 3.None☐

4010. Number of sexual partner(s) of Client (life time sexual partner):__2 ☐ 3-6 ☐ >7 ☐ 1 ☐

4011. Number of sexual partner(s) of her Partner_____2 ☐ 3-6 ☐ >7 ☐ 1 ☐ (perception)

4012. HIV/AIDS testing/3month Unknown ☐. Known☐(self report)

413. If Precancerous, Cryotherapy done immediately/ (same day) Yes ☐ No☐

Name of data Collector---------- Signature----------

Thank you for cooperation!

b.Consent forms

Informed Consent

Name of principal investigator: Dr Demisew Amenu

Research title**:** Cervical cancer prevention in Jimma Zone, 2016/17

1. I confirm that I understand the information sheet for the above study and have had the opportunity to ask questions.

2. I understand that my participation is completely voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.

3. I agree to take part in the above study. I would like to confirm my agreement by signing.

Participant's name _____ Signature_____ date_____
Name of the data collector: _____ Signature: _____date_____
Thank you for your participation and cooperation!

Information sheets

Participants' information sheet and informed consent form
Name of the principal investigator: Dr Demisew Amenu
Name of study area: Jimma Zone
Research budget covered by: Jimma University
Research objective: Determinants of Client satisfaction toward VIA service, 2016/17
Significance of the study: Will identify gabs affecting client satisfaction for timely intervention.
Data collection procedure: The data collectors will interview participants using questionnaire after obtaining Verbal informed consent from the participants. All data are accessible to researchers, supervisors and data collectors. Only research team members will have access to full data of study participants. The data from participants will used for research purpose only.
Risks: There will be no risks to participants
Beneficial: The study is beneficial for participants' in improving the quality service delivery for cervical cancer prevention and control.
Participants' right: The participants have a right to stop the interview at any time, or to skip any question that he/she does not want to answer.
Incentives: The participants will not be provided any specific incentive for taking part in the research other than acknowledgment.
Confidentialities: The study result will not include participants name and address.
Agreement: Participants are expected to be fully voluntary and give written consent to participate in the study.
Whom to contact: for any queries, anybody can contact any of the three individuals:

Dr Demisew Amenu: 0911811468
Desta Hiko Gemeda: 0913136390

Dr Yes Ahmed: 0911004736
Mr. Abdulhalik Workicho: 0913407305
Mr. Aderajew Nigussie: 0912914777
Dr.Aaga wakgari :092207489

c.**Declaration**

I, the undersigned, declare that this thesis is my original work, has not been presented for a degree in this or any other university and that all sources of materials used for the thesis have been fully acknowledged.

Name: __Dr.__Aaga wakgari_____

Signature: _____

Name of the institution: _____

Date of submission: _____

This thesis has been submitted for examination with my approval as University advisor

Name and Signature of the first advisor _____

_____

Name and Signature of the second advisor _____